

A CONTRASTIVE ANALYSIS OF  
THE PHONOLOGIES OF ARBORE AND ENGLISH

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A thesis  
Presented to  
School of Graduate Studies  
Addis Ababa University

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In Partial Fulfillment  
of the Requirements of the Degree  
Master of Arts in Teaching English as a Foreign Language

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by  
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June 1982

ADDIS ABABA UNIVERSITY  
SCHOOL OF GRADUATE STUDIES

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THE PHONOLOGIES OF ARBORE AND ENGLISH

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## ABSTRACT

This study has five main parts. The first part is the introduction which gives an over-all description of the phonological nature of Arbore. This part also tries to explain the purpose and scope of the study.

The second part is a description of the phonology of Arbore in more detail. It describes the segmental phonemes together with their respective allophonic variants and their distributions, the suprasegmentals, and lastly the distribution of the phonemes.

The third part is a description of English phonology which covers the segmental phonemes and their respective allophones, the suprasegmental phonemes along with the distributions of the phonemes and allophones in a parallel form like that of the description given for Arbore.

The fourth chapter is a contrastive Analysis of the phonologies of Arbore and English. This part deals with the predictions of errors from the point of view of the Arbore speaker.

The fifth and last chapter of this study consists of a conclusion. It presents a summary of the preceding parts and also attempts to point out the need for an additional and more complete study of Arbore.

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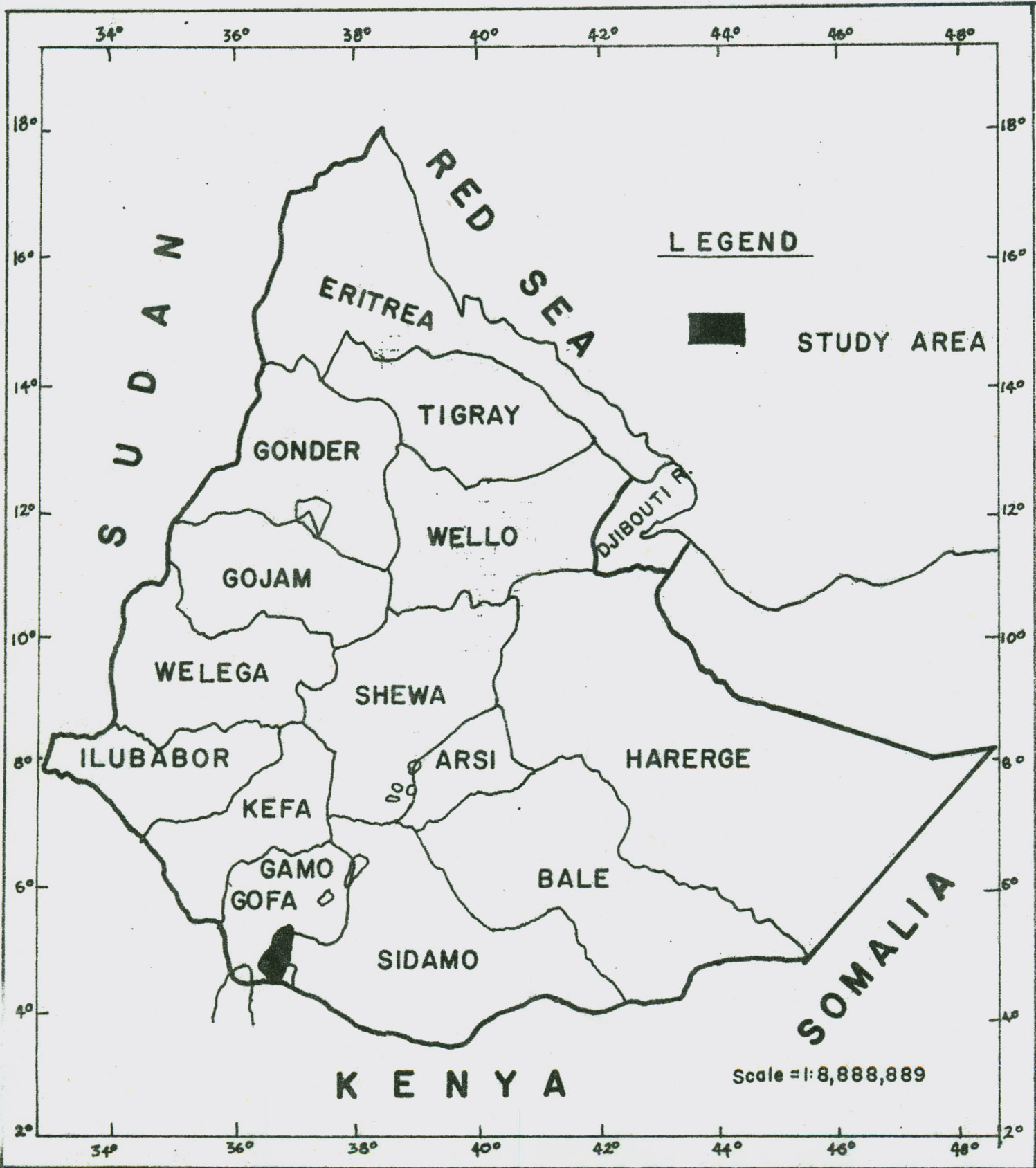
## ACKNOWLEDGEMENT

The writer of this paper wishes to thank Dr. Gerard Despatie, his thesis advisor, for the pains he took in reading the draft and final copies of the paper and for his invaluable comments and guidance and Dr.<sup>R.</sup>J. Hayward, of the University of London, for his guidance during the collection of the data in the field.

It is the writers pleasure to acknowledge his debt to Dr. Taddese Beyene for his suggestion that the writer work on Arbore phonology and for facilitating the field trip which the writer undertook between June and August, 1981.

The writer is also indebted to the Swedish Agency for Research and Co-operation (SAREC) for its financial aid to cover part of the expences of the research.

The writer also wishes to thank Arshal Gebabo, Hailu Duki, Ergere Hukka, and Taddele Alemayehu, Arbore informants, and all those who had ahand in seeing this work through.



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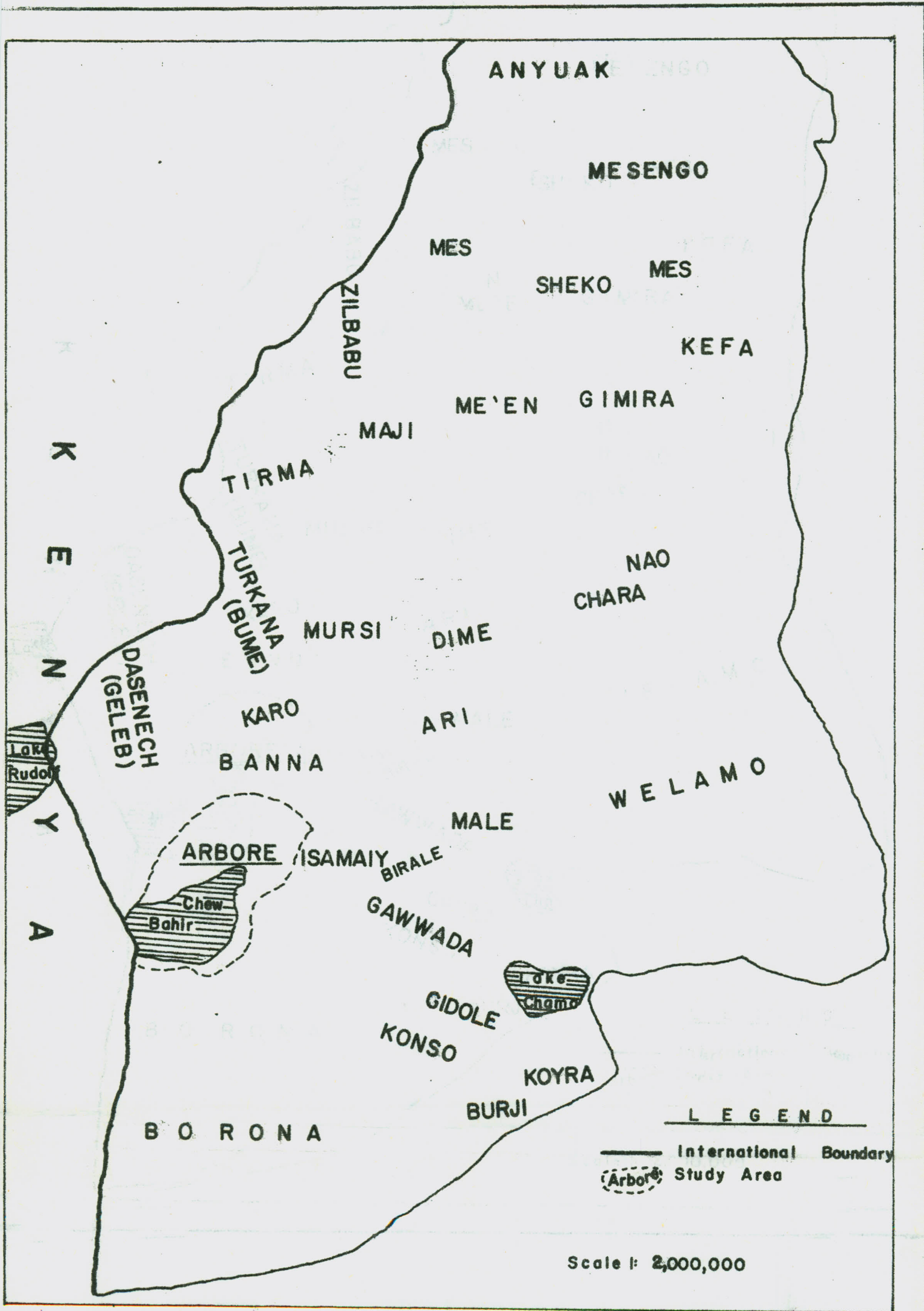
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## CHAPTER I

### INTRODUCTION

#### 1.0 THE PROBLEM AND DEFINITION OF DIACRITICAL MARKS

##### 1.1 STATEMENT OF THE PROBLEM

Comparing the sound systems of two different languages is a tedious time consuming and somewhat abstract undertaking. It is more difficult still when one of the languages is unknown or no written record of it is available.<sup>1</sup> Dry and tiresome though the work might be, it is hoped that the findings of the analysis will make some contribution toward the teaching-learning process by understanding the problems of the learner and preparing relevant text books and exercises in the target language.<sup>2</sup>

The writer of this paper believes that the efforts of English language teaching to an Arbore student could be more successful if the teachers concerned have some information concerning the sound system of Arbore. In other words, to predict the student's problems in learning English and to help him overcome those difficulties, the teacher's first step should be towards an understanding of the general nature of the Arbore sound system. Unless the teacher has some understanding of the sound patterns of Arbore and of English, the target language, it would be difficult to understand the student's problems.

The main purpose of this research is thus

- (1) to find out the phonological problems that the Arbore native speaker faces whilst learning English. This will be accomplished by means of the analysis of the phonological differences that exist between the phonologies of Arbore and English.
- (2) to be able to suggest possible ways which could be employed in the teaching process based on these phonological findings,

## 1.2 IMPORTANCE OF THE PROBLEM

Arbore belongs to the Omo-Tana group of the Lowland East Cushitic language group.<sup>3</sup> The language area stretches from the northern tip of Lake Chew Bahir on the Kenyan border to the south of the Tsemay country in the north; and from Borena in the East to Hamar in the West. The Arbore are found on both sides of the Wayto River.

In a survey conducted in 1976, Bender and others estimated the number of Arbore native speakers to be about one thousand five hundred.<sup>4</sup> The figure that the writer of this paper obtained from Arshal Gebabo, chairman of the peasant association of the area and who was one of the writers informants, is approximately five thousand five hundred. These figure do not include those Arbore who live on the other side of the Wayto River who are estimated to be around three thousand. The writer could not get an official figure from the central

Statistical Office as they do not have any figure for the Arbore.

One might question the relevance of this study looking at it from the point of view of the number of speakers of the language. But the aim of the Socialist Ethiopian Government, as has been stated in the National Revolution Programme, is as follows:

The right to self-determination of all nationalities will be recognized and fully respected. No nationality will dominate another one since the history, culture, language and religion of each nationality will have equal recognition in accordance with the spirit of socialism.<sup>5</sup>

Thus, it is not the number of speakers of a language that counts but the need to study the different national languages so as to be able to prepare teaching materials for the ongoing nationwide education. In addition, since primary education, up to grade six, is now being given in Arbore villages and English is taught as a subject, this study will thus have a dual purpose in paving the way for both Amharic and English language educators.

### 1.3 LIMITATIONS

The writer of this paper has limited himself to error prediction rather than undertaking both error prediction and error analysis mainly because Arbore as has been mentioned earlier, has not been previously studied and thus it was

difficult to investigate the language right from the beginning and carry out error analysis at the same time. Hoping that this first hand material will lay the ground for future analysts, the writer has tried to give a lengthy description of Arbor phonology where ever he found it necessary.

#### 1.4 DEFINITIONS OF DIACRITICAL MARKS

1. [̣] indicates palatalization
2. [ʔ] indicates glottalization and [ˈ] indicates high tone:  
barriˈ
3. [.] placed beneath a symbol indicates implosiveness
4. ( ) enclosing a sound or phoneme **indicates** that the sound or phoneme is optional.
5. [-] indicates morpheme boundary:

Ex. beeʔ-taw                      'my wound'

consonant length is indicated by doubling the consonant itself.

## 2. REVIEW OF THE LITERATURE

Though much has been said and much has been written on the phonology of English either in isolation or in a contrastive form, the writer has used extensively Taddese Beyene's "Amharic and English Segmental Phonemes" for the English part of this paper.<sup>6</sup>

As a guide while doing his field work, the writer has benefited much from Samarin's Field Linguistics.<sup>7</sup>

For purposes of organization, the writer has made use of Lulseged Erkihun's paper, "A Contrastive Analysis of the Phonologies of Amharic and Gedeo", with some changes.<sup>8</sup>

## CHAPTER II

### DESCRIPTION OF ARBORE PHONOLOGY

#### 2.0 GENERAL

Arbore consists of twenty-six consonant phonemes /b, p, d, t, t', d̥, g, k, k', ʔ, f, s, š, h, j, č, č', m, n, ñ, r, l, w, w<sup>2</sup>, y, z/ and five vowel phonemes /i, e, a, u, o/. The phoneme /w<sup>2</sup>/ though very rare in the language is found to be a separate phoneme contrasting with /w/: káw<sup>2</sup> 'empty' and káw 'put down!'. The phonemes /p/ and /t'/ are also found to be very rare as far as the data collected reveal. These two phonemes are found only in few words. Some of the words have the same meaning in Oromo spoken by the neighbouring Borana people. This is not surprising because almost every Arbore man speaks Oromo from childhood. Infact out of the corpus collected, during the writers field work, at least one-third of the lexicon are similar to Oromo. To give examples for these two phonemes, we have [pá:rsɔ] in Arbore and [farsɔ] in Oromo 'local beer', and k'atur:e/ ʔat'ur:e in Arbore and [ʔadur:e] in Oromo which means 'cat'

2.1 AN ORDERED LIST OF ARBORE PHONEMES WITH THEIR  
ALLOPHONIC VARIATIONS

2.1.1 CONSONANTS

2.1.1.1 STOPS

/p/: a phoneme with two allophones:

[p<sup>h</sup>] lightly aspirated voiceless bilabial stop occurring  
morpheme initially and before vowels.

[p<sup>h</sup>arso] 'local beer'

[p] voiceless unaspirated bilabial stop occurring elsewhere.

[?arap] 'elephant'

[k'orsepe] 'plough'

[jɔpse] 'dive into water'

/b/: a phoneme with two allophones:

[β] a voiced bilabial fricative occurring immediately  
after a vowel and nasal consonant, but never found  
word initially:

[na:β] 'enemy'

[gimβa]F. 'heel'

[b] voiced bilabial stop occurring elsewhere:

[be:k'] 'fish'

[d<sub>3</sub>ib,e] 'hate'

/t/: a phoneme with two allophones:

[t<sup>h</sup>] lightly aspirated voiceless dental stop occurring word initially

[t<sup>h</sup>o:f] 'snake'

[t] voiceless unaspirated dental stop occurring elsewhere

[he:læt] pl. 'sheep'

/d/: a phoneme with the phonetic realization [d], a voiced dental stop

[de:rit] m. 'baboon'

/t'/: a phoneme with the phonetic realization [t'], a voiceless glottalized dental stop:

[ʔat'ur:e] 'cat'

/d/: voiced implosive alveolar stop

[di:k'] m. 'blood'

/k/: a phoneme with two allophones:

[k<sup>h</sup>] voiceless aspirated velar stop occurring word initially and before long vowels.

[k<sup>h</sup>ɑ:kɔ] m. 'great grandmother'

[k] voiceless unaspirated velar stop occurring elsewhere:

[fo:lʔuk] F. 'future'

/g/: voiced velar stop

[gelɔuma] pl. 'lover'

/k'/: voiceless glottalized velar stop:

[k'aʔko] 'how much'

/ʔ/: a phoneme with the phonetic realization ʔ, a voiceless glottal stop.

[ʔadada] F. 'father's sister'

### 2.1.1.2 FRICATIVES

/f/: voiceless labiodental fricative:

[far:it] m. 'finger'

/s/: a phoneme with two allophones:

[ɕ] voiceless alveolopalatal fricative occurring after //  
[ʔilɕate] 'became heavy'

[s] a voiceless alveolar grooved fricative occurring elsewhere:

[sa:k'a] m. 'malaria'

/s'/: a phoneme with the phonetic realization [s'], a voiceless palato-alveolar grooved fricative:

[ʃsʃan:i] F. 'not heavy; light'

/h/: a phoneme with two allophones:

[h] glottal fricative found in inter-vecalic position with a breathy noise

[ʔoho] m. pl. 'mouth'

[h] voiceless glottal fricative found initially and finally:

[hak:ó]	m pl.	'eggs'
[bah]		'bow'

/z/: a phoneme with the phonetic realization [z], voiced alveolar grooved fricative:

[záh]	F.	'death'
-------	----	---------

#### 2.1.1.3 AFFRICATES

/tʃ/: a phoneme with the phonetic realization [tʃ], a voiceless palato-alveolar affricate:

[tʃa:rabo:t]	'civet'
[giratʃ]	'rhino'
or [giraj]	

/tʃʰ/: a phoneme with the phonetic realization [tʃʰ], a voiceless alveopalatal affricated ejective.

[tʃʰak'ase]	'listen' (past)
[fitʃʰise]	'sip' (past)

/dʒ/: a phoneme with the phonetic realization [dʒ], voiced palato-alveolar affricate:

[dʒib:e]	'hate'
[bardʒe]	'passed the night'

2.1.1.4 NASALS

/m/: a phoneme with two allophones:

[ $\bar{m}$ ] a voiced labiodental nasal found before the voiceless fricative /f/:

[ $\bar{m}$ ] [ʔimfak'ade] 'I became distant'

[m] voiced bilabial nasal occurring elsewhere:

[m] [mek'e] m. 'name'

[m] [ $\underset{n}{dum}$ ] m. 'tail'

/n/: a phoneme with three allophones:

[ $\bar{n}$ ] voiced alveolar nasal, found immediately before liquids and stops:

[ $\bar{n}$ ] [ʔa $\bar{n}$ rafa] 'I will sleep'

[ $\bar{n}$ ] [hi $\bar{n}$ de:ru] pl. F. 'fluet'

[ $\bar{ŋ}$ ] voiced velar nasal occurring immediately before glottal and velar stops.

[ $\bar{ŋ}$ ] [ʔa $\bar{ŋ}$ ʔo:ma] 'I will float'

[ $\bar{ŋ}$ ] [ʔa $\bar{ŋ}$ ʔohme] 'I ate'

[ $\bar{ŋ}$ ] [ʔi $\bar{ŋ}$ k'•] F. 'sleep'

[ $\bar{n}$ ] voiced dentalveloar nasal occurring elsewhere:

[ $\bar{n}$ ] [ $\bar{n}$ afa] m. 'body'

[ $\bar{n}$ ] [ $\bar{n}$ u] m. 'coffee'

/ $\bar{n}$ /: a phoneme with a phonetic realization [ $\bar{j}$ ], a voiced palatal nasal:

[ $\bar{j}$ ] [ $\bar{j}$ a $\bar{j}$ :eʔete] F. 'door of sticks'

[ $\bar{j}$ ] [ $\bar{j}$ a $\bar{j}$ :ote] '(he) became old'

2.1.1.5 LIQUIDS

/r/: a phoneme with two allophones:

[r̄] a voiced dental trill occurring after long vowels:

[ma:r̄] 'calf'

[mi:r̄] 'ant'

[r] a voiced dental flap, occurring elsewhere:

[ʔubaj] F. 'soul'

[k'á] m. 'wood'

/l/: a phoneme with two allophones:

[ɬ] a voiceless alveolar lateral fricative occurring immediately before /s/ and /s/.

[ʔilɬate] 'become heavy'

[kalfɛ] F. 'day after tomorrow'

[l] voiced alveolar lateral (clear) found elsewhere:

[dak'al] m. 'cheek'

[lás:a] pl. F. 'bread'

2.1.1.6 SEMIVOWELS

/w/: voiced bilabial semivowel:

[wa:k] F. 'God; sky'

[ka'w] 'put down!'

/wʔ/: a phoneme with a phonetic realization [wʔ], voiced post-glottalized labiovelar glide:

[kʰwʔ] 'empty'

/y/: voiced palatal semivowel:

[ak:áʔ] F. 'fine'

[hí::a] M. 'orphan'

A Phonetic Chart of Arbore Consonants

		Bilabial	Labio-dental	Dental	Denti-alveolar	Alveolar	Palato-alveolar	Palatal	Velar	Glottal
STOP	vl	p		t					k	ʔ
	vd	b		ɖ					g	
	Aspirated vl	p <sup>h</sup>		t <sup>h</sup>					k <sup>h</sup>	
	Glottalized vl			t'					k'	
	Implosive vd					ɗ				
FRICATIVE	vl		f				ɕ			h
	Grooved vl					s	ʃ			
	vd	β				z				
AFFRICATE	vl						tʃ			
	vd						dʒ			
	Glottalized vl						tʃ'			
NASAL	m	ɱ		n	ɳ		ɲ	ŋ		
LIQUID	Lateral vl					l				
		vd				ɭ				
	Flap vd			r						
	Trill vd			ʀ						
SEMI VOWEL	w						j	wʔ		

A Phonemic Chart of Arbore Consonants

		Bilabial	Labio dental	Dental	Denti-alveolar	Alveolar	Palato-alveolar	Palatal	Velar	Glottal
STOP	vl	p		t					k	ʔ
	vd	b		ɗ					g	
	Glottalized vl			t'					k'	
	Implosive vd					ɓ				
FRICATIVE	vl		f							h
	Grooved	vl				s	ʃ			
		vd					z			
AFFRICATE	vl						tʃ			
	vd						dʒ			
	Glottalized vl						tʃ'			
NASAL		m			n			ɲ		
LIQUID	Lateral	vd				l				
		vd			r					
	Flap	vd								
SEMI-VOWEL		w					y	w?		

2.1.1.7 SOME MORPHOPHONEMIC ASPECTS

2.1.1.7.1 Word finally, /č̣/ may be replaced by /y/

hiyyač̣ or hiyyay m. 'orphan'

zerbač̣ or zerbay m. '(sg.) cross piece of a house'

2.1.1.7.2 In word final position voiced stops may be replaced by their voiceless counterparts.

?eeg → ?eek 'fire'

naap̣ → naap m. 'enemy'

2.1.1.7.3 When a consonant suffix is added to words ending in /č̣, č̣', s/, these consonants are changed to /y/.

garrac̣ + -me ---- garray -me F. Pl. 'thieves'

guus + -te ----- guuy-te '(she) undressed herself'

2.1.1.7.4 When suffixed to a word ending in the laryngeal consonant, /h/ is elided.

baamir + -haw ---- baamir-əw 'my friend'

m. 'friend'

cf. ?ohohaw 'my mouth'

- 2.1.1.7.5 Long consonants are shortened in word final position or when followed by a suffix beginning with a consonant.

hiss + -te ----- histe 'she cooked'

- 2.1.1.7.6 A long vowel before /h/ is shortened when followed by a vowel suffix. Further more, vowels on either side of /h/ will always be in harmony.

k'aah + -a ---- k'aha '(he) resembles'  
'resemble'

kaleh + -e -- kalehe '(this) is an old goat'

- 2.1.1.7.7. When the phonemes /b, t, d, g, k, k'/, in final position, are followed by a suffix beginning with a bilabial nasal, they are assimilated to the following nasal.

dukub + -me --- dukumme F. 'sickness'

hak'at + -me ---- hak'amme F. 'rope'

- 2.1.1.7.8 Glottalized stops change to /ʔ/ before nonidentical consonant.

neek' + -te ----- neeʔte F. 'lioness'  
m. 'lion'

- 2.1.1.7.9 When /t/ and /d/ are followed by a lateral, they are assimilated to the following lateral.

wonnit + -lo wonnillo pl. 'you!(women)'  
m. 'woman'

CONSONANTAL ASSIMILATION

Word Internal Consonantal Assimilation of Arbore

Second Consonant

	p	b	t	d	t'	d'	k	g	k'	?	f	s	š	h	z	č	č'	j	m	n	ñ	r	l	w	w <sup>2</sup>	y
p																										
b			tt																	mm	nn					
t																				mm						
d			tt																		nn					
t'																										
d'			?t																		nn					
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g			tt																	mm	nn					
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m																										
n		mb					k	g												mm						
n'																										
r																										
l			tt																							
w																										
w <sup>2</sup>																										
y																										

CHART 3

A Parenthesis ( ) Means 'Optional'

## 2.1.2 VOWELS

Arbore has the usual Cushitic five vowel system: /i, e/ are front vowels, /a/ is a central vowel, and /u, o/ are back vowels

### 2.1.2.1 THE FRONT VOWELS

/i/: is a class of somewhat lowered unrounded front vowels:

[kirmáte?] pl. F. 'bird' [gori] pl. 'pidgeon'

/e/: is a class of somewhat raised mid front unrounded vowels:

[bed<sup>h</sup>] 'bad' [d<sub>z</sub>ib:e] 'hate'

### 2.1.2.2 THE CENTRAL VOWEL

/a/: is a class of lax fully open central vowels:

[k'aba] 'have' [sinda] pl. m. 'urine'

### 2.1.2.3 THE BACK VOWELS

/u/: is a class of somewhat lowered slightly tense rounded back vowels.

[k'ub] m 'hand' [duudu] F. 'jigger flea'

A Phonemic Chart of the Vowels of Arbore

	FRONT	CENTRAL	BACK
HIGH	i i:		u u:
MID	e e:		o o:
LOW		a a:	

CHART 4

— [sugu:ḍ:ạ] F. 'salt' [martụ] 'round worm'

/o/: is a class of somewhat raised lax half open back vowels:

— [ḍọr] pl. 'feathers' [deʔjọ] m. 'herder'

## 2.2. DIPHTHONGS

Vowels in Arbore do not come in sequences and thus do not glide into a diphthong. Phonetically, diphthongs are observable when a vowel and a semi-vowel come in sequence during fast speech. The following types of diphthongs have been recorded from the data collected.

ei	[zeʔti]	→	[zeiti]	F.	'oil'
ai	[dew:ajnet]	→	[dew:ainet]		'beggar'
au	[bil:áw] m.	→	[bil:áu]		'knife'
ui	[herúmgujte]	→	[herúmguite]		'took rest'
oi	[sándoʔte]	→	[sándoite]	F.	'grave'

## 2.3 SUPRASEGMENTALS

The phonemic suprasegmentals in Arbore include consonant length, vowel length, and tone. A brief summary of these features follows.

### 2.3.1. CONSONANT LENGTH

Gemination here stands for consonant length. All consonants except /p, t', ʔ, s, h/ geminate word-internally and many of them are found to geminate word finally. A geminate consonant may be preceded by either /f/ or /r/ as in:

bafttá m. 'compartment for goat'

kerkermmé pl. 'front of the chin'

It has also been found that geminate /r/ is trilled.

### 2.3.2 VOWEL LENGTH

All vowels in Arbore may be short or long. As has been mentioned earlier (see 2.0) no word in Arbore begins with a vowel. Both short and long vowels can occur in word medial position. In final position, however, only short vowels occur.

The following examples indicate minimal pairs of short and long vowels.

/i/     ɖise        'build'

/ii/    ɖiise        'be enough'

/e/     ʔel          'mountain'

/ee/    ʔeel        'well (water hole)'

/a/	same	'(he) inherit'
/aa/	saame	'rob'
/u/	sude	'(he)hang (tr.) (pred.)
/uu/	suude	'(he) got married' (pred.)
/o/	dowe	'(he) taste (past)'
/oo/	dcowe	'(he) try (past)'

### 2.3.3 TONE

Though it is out of the scope of this paper to discuss the difference between intonation and tone, the writer wishes to say a few words that would help to prove that Arbore is a tone language. Robert Lado defines these two terms as:

"... when pitch is used with phrases and sentences, we call it intonation. When pitch is used to identify and differentiate words, we call it tone."<sup>9</sup> In tone languages the pitch or tone level with which each word or morpheme is pronounced is important in identifying the meaning of the word. But in stress languages, like English, the pitch changes will not change the lexical meaning of the word except some aspects of meaning. The pitch is distributed not on individual words but on groups of words or phrases and sentences. Many pairs of words in Arbore have been found to differ in meaning only by tone differences. A few of these words are given below:

ser	m.	'diarrhoea'
ser		'dust'
birda	m. pl.	'top of something'
birda		'stolen food'
beek	m.	'fish'
beek	F.	'small wound'
daac	pl.	'rat'
daac	m.	'muscle'
fool		'infront'
fool	m.	'face'

A word can have one or more high tone (H) or no high tone. There can only be one H on a syllable.

hiz		'root'
?adada	F.	'father's sister'
kure	pl.	'dance'

We can thus see that Arbore is a tone language having two tones High (H) and Non-High (NH). The presence of tone in that part of Ethiopia is not at all surprising. It has been mentioned by Pike back in 1948.<sup>10</sup> The following facts have been

observed concerning the Arbore tone system:

- (1) Nouns ending in a consonant having no high tone in the word remain NH both in the predicate and in the object form.

<u>Isolation</u>	<u>Predicate</u>	<u>Object</u>	
boolan	boolanta	boolan	'cloud'

- (ii) Nouns ending in a consonant having a nonfinal high tone retain the high tone.

hundub	hunduba	hundub	'backyard'
--------	---------	--------	------------

- (iii) Nouns ending in a consonant containing final high tone retain the high tone throughout.

serém	seréma	serém	'kudu'
-------	--------	-------	--------

- (iv) Nouns ending in a vowel consisting of final high tone with an optional glottal stop (-v (?)) lose the high tone in the predicate.

worlé(?)	worle	worlé(?)	'bird'
----------	-------	----------	--------

- (v) Nouns ending in a vowel plus a glottal stop and consisting of final high tone retain the high tone throughout. The glottal stop is deleted in the predicate.

maddá?	maddaḁa	maddá	'wound'
--------	---------	-------	---------

- (vi) Nouns containing a non-final high tone and ending in a vowel retain the high tone.

kórju      kórjo      kórju      'mongoose'

- (vii) Nouns containing a non high throughout and ending in a vowel remain unchanged.

k'anḁa      k'anḁa      k'anḁa      'pregnant cow'

2.4 PHONEME DISTRIBUTION

2.4.1 CONSONANT CLUSTERS

Below is a Chart Showing the Possible Consonant Clusters in Arbore

Word Internal Consonant Clusters of Arbore

		Second Consonant																											
		p	b	t	d	t'	d'	k	g	k'	ʔ	f	s	ʃ	h	z	ʒ	ʒ'	ʝ	m	n	ɲ	r	l	w	w'	y		
First Consonant	p																												
	b		+	(+)									(+)									(+)			(+)				
	t			+																			(+)						
	d				+																		(+)						
	t'																												
	d'		(+)				+																						
	k							+																					
	g								+																	+			
	k'									+																			
	ʔ			(+)			+						(+)									(+)	(+)		+			+	
	f			+			+	+			+		+									+	+		+				
	s			(+)							+		+									(+)	(+)		+				
	ʃ																												
	h			(+)																									
	z		+														+								+				
	ʒ																	+				+							
	ʒ'																		+										
	ʝ																												
	m		+	(+)								+		+								+	+		+				
	n			+	+		+				+	(+)	+									+	+		+				
	ɲ																		+	+	+			+					
	r		+	+	+		+	+	+	+	+		+	+	+						+	+	+		+	+			
	l		+	+		(+)	+			+	+	+	+	+							+	+	+		+				
	w			+	+		+															+	+			+	+		
	w'			+																						+			
	y			+	+		+	+	+				+									+	+		+				

CHART 5

A plus in parenthesis indicates Optional clusters, the unmarked space indicates that no cluster has been found

As we can see in the chart, the phonemes /p/ and /t'/ do not form clusters at all. /s/ can form a cluster as a second member but not as a first member. /h/ forms a cluster optionally as a first member with /t/ but doesn't form a cluster as a second member. Other phonemes are more or less distributed as first and second member.

#### 2. 4. 2 SYLLABLE STRUCTURE

All Arbore consonants occur in syllable initial position and all except /j, n, s, t',/ are found to occur in syllable final position. The syllabic structures of Arbore are shown below:

Syllabic Structure	Example	
cv	mq	'man'
cvc-	bér	'trembling'
cvv -	buurú	'poridge'
- cv	duudu	'jigger flea'
cvcc	hikk F.	'breast bone'
cvc <sub>1</sub> c <sub>2</sub>	bomb	'pond'
cvvc	maar	'calves'

KEY

c<sub>1</sub>c<sub>1</sub> = Gemination

c<sub>1</sub>c<sub>2</sub> = Consonant cluster

[t<sup>h</sup>] voiceless aspirated alveolar stop occurring initially and internally before a stressed vowel:

tidy [taɪdi]      petition [pə'tɪʃən]

[t] voiceless unaspirated alveolar stop occurring after /s/ and elsewhere:

strong [strɒŋ]      net [net]

/d/ a phoneme with a phonetic realization [d], voiced alveolar stop:

dance [da:ns]      studio [stju:diu]      add [æd]

/k/ a phoneme with two allophones:

[k<sup>h</sup>] a voiceless aspirated velar stop occurring initially and medially:

keep [k<sup>h</sup>i:p]      market [ma:k<sup>h</sup>ɪt]

[K] a voiceless unaspirated velar stop occurring after /s/ and elsewhere:

sketch [sketʃ]      dark [da:k]

/g/ voiced velar stop

go [gou]      began [bi'gæn]      dog [dɒg]

### 3. 1.2 FRICATIVES

/f/ voiceless labiodental fricative

foot [fut]      after ['a:ftə]      loaf [louf]

/v/ voiced labio-dental fricative

vast [va:st]      driver [d:raivə]      drive [draiv]

/θ/ a phoneme with a phonetic realization [θ], a voiceless dental fricative:

thin [θin]      anthropology [ˈænthrəˈpɒlədʒi:]      breath [breθ]

/ð/ a phoneme with a phonetic realization [ð], voiced dental fricative:

that [ðæt]      breathing [ˈbreɪðɪŋ]      breathe [breɪð]

/h/ a voiceless glottal fricative:

hat [hæt]      perhaps [pəˈhæps]

/s/ a voiceless alveolar grooved fricative:

sun [sʌn]      mask [mɑ:sk]      boss [bɒs]

/z/ voiced alveolar grooved fricative

zip [zɪp]      razor [ˈreɪzə]      nose [noʊz]

/ʃ/ voiceless palato-alveolar grooved fricative

short [ʃɔ:t]      marshal [ˈmɑ:ʃəl]      lash [læʃ]

/ʒ/ a phoneme with a phonetic realization [ʒ], voiced palato-alveolar fricative:

— leisure [ˈleɪʒə]      beige [ˈbeɪʒ]

3.1.3 AFFRICATES

/tʃ/: voiceless palato-alveolar affricate

church [tʃɜ:ʃ]      archbishop [a:tʃbiʃəp]      match [mætʃ]

/dʒ/: voiced palato-alveolar affricate

jump [dʒʌmp]      margarine [mɑ:dʒe'ri:n]      marriage ['mærɪdʒ]

3.1.4. NASALS

/m/: voiced bilabial nasal

man [mæn]      lampoon [læm'pu:n]      lamb [læm]

/n/: voiced alveolar nasal

name [neɪm]      pond [pɒnd]      man [mæn]

/ŋ/: voiced velar nasal

--- finger ['fɪŋgə]      strong [strɒŋ]

3.1.5 LIQUIDS

/l/: a phoneme with two allophones

[l]: voiced alveolar lateral, occurring in syllable initial position and after voiced consonants

lamb [læm]      bloom [blu:m]

/ɹ/. 1 voiced velarized alveolar lateral occurring syllable finally and pre-consonantly.

feel [fi:l̥]      milk [mi:k̥]      poultry 'poultri

/r/: Voiced alveolar non-lateral liquid with three allophones:

[r̥] voiced dental tap following /θ/

three ['θri:]

[ɹ] voiced alveolar fricative following /t/ or /d/

tree [tri:]      drag [dɹæg]

[ɹ̥<sup>w</sup>] voiced labialized alveolar found elsewhere.

red [r̥<sup>w</sup>ed]      write [r̥<sup>w</sup>ait]      lorry ['lɔ r̥<sup>w</sup>i:]

### 3.1.6 SEMIVOWELS

/w/: voiced labio-velar semi-vowel acting as an on-glide before vowels.

wound [wu:nd]      between [bi't<sup>h</sup>wi:n]

/j/: voiced palatal semi-vowel acting as an on-glide before vowels:

yard [ja:d]      pure [p<sup>h</sup>juə]

A Phonetic Chart of English Consonants

		Bilabial	Labio-dental	Dental	Alveolar	Palato-alveolar	Palatal	Velar	Glottal
STOP	vI	p			t			k	
	v <del>I</del>	b			d			g	
	Aspirated vI	p <sup>h</sup>			t <sup>h</sup>			k <sup>h</sup>	
FRICATIVE	vI		f	θ					h
	vd		v	ð					
Grooved	vI				s	ʃ			
	vd				z	ʒ			
AFFRICATE	vI					tʃ			
	vd					dʒ			
NASAL	vd	m			n		ŋ		
LIQUID	Lateral vd				l	ɫ			
	Nonlateral vd				r	ɹ			
SEMIVOWEL	vd	(w)					j	(w)	

CHART 6

A Phonemic Chart of English Consonants

		Bilabial	Labio-dental	Dental	Alveolar	Palato-alveolar	Palatal	Velar	Glottal
STOP	vl	p			t			k	
	vd	b			d			g	
FRICATIVE	vl		f						h
	vd		v						
	Grooved	vl				s	ʃ		
		vd				z	ʒ		
AFFRICATE	vl					tʃ			
	vd					dʒ			
NASALS	vd	m			n		ŋ		
LIQUIDS	Lateral vd				l				
	Nonlateral vd				r				
SEMIVOWELS		(w)					y	(w)	

CHART 7

### 3.2 VOWELS

#### 3.2.1 FRONT VOWELS

/i:/: lax unrounded high front vowel.

seat [si:t]

/i/ sit [sit]

/e/: a mid-front lax unrounded vowel:

set [set]

/æ/: low front lax unrounded vowel:

sat [sæt]

#### 3.2.2 CENTRAL VOWELS

/ə:/: mid central tense unrounded vowel:

cert [sə:t]

/ə/ mid central lax unrounded vowel

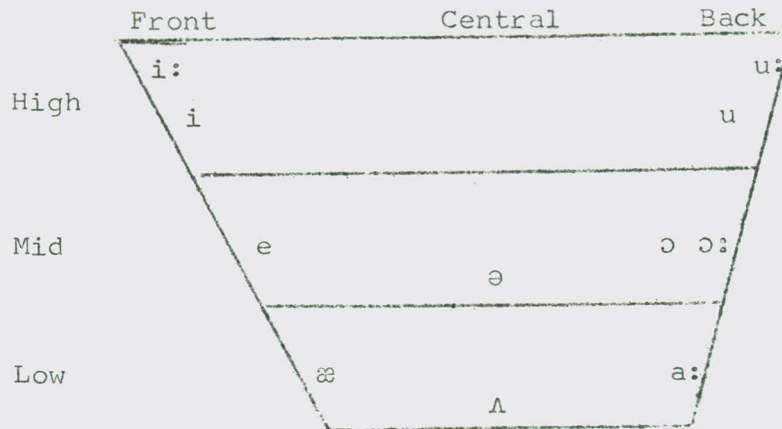
sofa [ˈsoʊfə]

/ʌ/: low central lax unrounded vowel

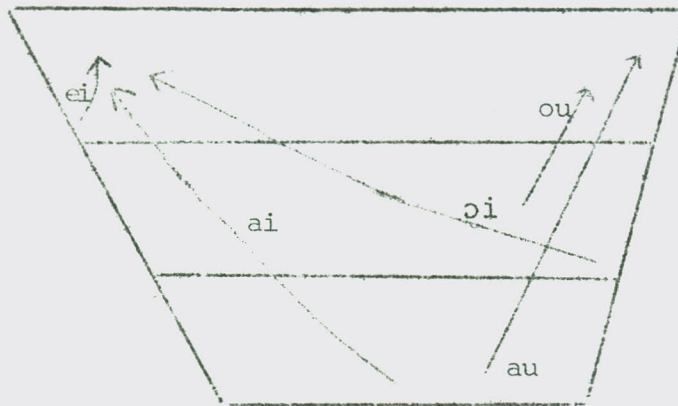
suck [sʌk]

A Chart Showing English Vowels and Diphthongs

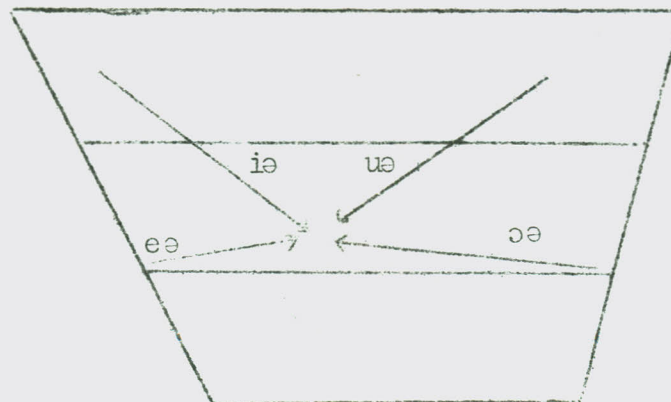
VOWELS



Non-Centering Diphthongs



Centering Diphthongs



### 3.2.3 BACK VOWELS

/a:/: low central unrounded vowel:

psalm [sa:m]

/u/: high back lax rounded vowel:

soot [sut]

/u:/: high back tense rounded vowel:

boot [bu:t]

/ɔ/: mid back lax rounded vowel:

sot [sɔt]

/ɔ:/: mid back tense rounded vowel:

sort [sɔ:t]

### 3.3 DIPHTHONGS

English vowels glide into diphthongs. On the basis of their glide formation, English diphthongs can be classified into two main groups: (1) non-centralized and (2) centralized diphthongs.

#### 3.3.1 NON-CENTERING DIPHTHONGS

/ei/ Mid to high front diphthong

gate [geit]

steak [steik]

/ai/ Low to high front diphthong

bike [baik]

Michael [maɪkəl]

/ɔi/ Mid to high front diphthong

boy [bɔi]

joy [dʒɔi]

/ou/ Mid to high back diphthong:

go [gou]                      moat [mout]

This may have a distinct alliphone [ɔu] before syllable-final /l/.

goal [gɔul]                      old [ould]

/au/ Low to high back diphthong

cow [k<sup>h</sup>au]                      towel [t<sup>h</sup>au]

### 3.3.2 CENTERING DIPHTHONGS

/iə/ High front to central diphthong

ear [iə]                      beer [biə]

/uə/ High back to central diphthong

lure [luə]                      cure [k<sup>h</sup>juə]

/eə/ Mid front to central diphthong

pear [p<sup>h</sup>eə]                      rare [w<sup>h</sup>eə]

/ɔə/ Mid back to central diphthong

soar [sɔə]                      more [mɔə]

### 3.4 SUPRASEGMENTALS

#### 3.4.1 STRESS

The following examples show us that stress in English is phonemic:

permit [pə:mit] (n)              permit [pə'mit] (v)  
import [impɔ:t] (n)              import [im'pɔ:t] (v)

English has four stresses: primary ('), secondary (^) weak (v), and tertiary (˘) or sentence stress.<sup>11</sup> The first three are fixed in the words or phrases while the tertiary stress is moveable.

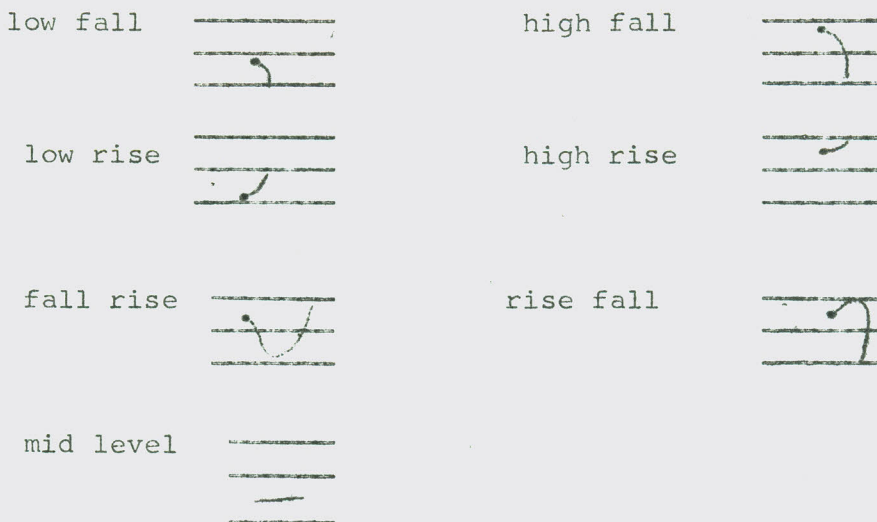
### 3.4.2 JUNCTURE

In English, juncture can create a semantic problem, like for example in the following pairs of words and phrases the pause plays an important role:

nitrate/night rate	pea stalks/peace talks
icecream/I scream	rapid/wrap it

### 3.4.3 PITCH

The use of pitch in English is only in intonation, which means that pitch variation functions over units which are more or less sentence sized. In British English (RP) there are seven distinct intonation nuclei (pitch movements):



These may be combined with certain other pitch features so as to give ten distinct intonation tunes (O'Connor & Arnold 1975 (revised ed.)).

### 3.5 PHONEME DISTRIBUTION

All English consonants except /ʒ/ and /ʒ̃/, which do not occur in initial position, occur in all positions.

#### 3.5.1 CONSONANT CLUSTERS

English consonants occur in all positions. Since Arbore also has word internal consonant clusters, only the initial and final clusters of English are shown in chart 9.

THE INITIAL AND FINAL CLUSTERS OF ENGLISH

SECOND MEMBERS

	p	b	t	d	k	g	f	v	θ	ð	s	z	ʃ	ʒ	c	j	m	n	ŋ	l	r	y	w	h	
p			-				-		-		-									+	+	+			
b												-									+	+	+		
t									-		-											+		+	
d									-			-										+		+	
k			-								-										+	+		+	
g											-	-									+	+			
f			-						-												+	+			
v																									
θ																						+		+	
ð				-								-													
s	+		+		+		+				-						+	+		+				+	
z	-		-		-																				
ʃ																						+			
ʒ																									
c																									
j																								+	
m	-				-		-					-						+						+	
n			-	-					-		-	-			-	-								+	
ŋ				-	-							-													
l	-	-	-	-	-		-	-	-		-	-	-		-	-	-								
r	-	-	-	-	-	-	-	-	-		-	-	-		-	-	-	-			-				

CHART 9

KEY

+ = indicates initial clusters

- = indicates final clusters

### 3.5.2 THE SYLLABLE STRUCTURE OF ENGLISH

In English every syllable contains either a simple or complex peak. Unlike in Arbore, English syllables can begin with a vowel. The syllable structures of English are shown below.

Syllable Structure	Example
v	I
vc	on
vcc	old
cv	go
ccvc	stop
cccvc	strong
cvc	sit
cvcc	bold
cvccc	midst
cccvccc	strengths

## CHAPTER IV

### ERROR PREDICTIONS

#### 4.0 INTRODUCTION

In the preceding chapters we have seen the phonological structure of the two languages. In this part the writer will try to predict the difficulties that the Arbore native speaker encounters in learning English sounds. The chapter has been divided into sub-headings so as to enable us to see the difficulties item by item.

#### 4.1 COMPARISON OF PHONEMES

The English phonemes /v, θ, ð, ʒ, / are not found in Arbore and thus show a zero category in Arbore both phonetically and phonemically.

The possible Arbore substitutes for these zero category phonemes would be /b/ for /v/, /t/ or /s/ for /θ/, /z/ for /ð/, /ṣ/ for /ʒ/.

The phoneme /b/ is a possible substitute for /v/ mainly on point of articulation as one is a voiced bilabial and the other a voiced labiodental, respectively. The English dental fricative /θ/ will be wrongly pronounced with the Arbore dental /t/ in environments like 'think' [θink] ----> [tink]. This English phoneme is a common problem for many non-native English speakers and it will be one of the difficult sounds of English for the Arbore speaker.

The same could be said of the English /ð/ which is absent in Arbore. Since /ð/ is a voiced dental fricative and the nearest possible substitute would be /z/ a voiced alveolar fricative and found in both languages.

The phonemes /š/ and /ž/ share similar features except that /š/ is voiceless whereas /ž/ is voiced. Since /š/ is present in both languages, it would be the nearest substitute for the English /ž/.

The English vowel phonemes /æ/ and /ə/ will also create difficulty for the Arbore native speaker. The possible substitute for the English front vowel /æ/ will be the Arbore equivalent /ɛ/. Similarly, the English /ə/ will be substituted by /a/ in all environments.

#### 4.2 COMPARISON OF PARTIALLY SIMILAR AND PARTIALLY DIFFERENT PHONEMES

This part will compare and contrast the allophonic distributions of the two languages. Since allophonic variations between the native and the target languages is as equally important as the phonemic differences, it is worth predicting the difficulties that would arise due to allophonic differences.

The English phoneme /ŋ/ exists, in Arbore as an allophone of /n/ and it usually occurs before a glottal stop and other glottalized stops where the glottal stop is fully pronounced. The problem concerning the English phoneme /ŋ/ is that the

Arbore native speaker tends to pronounce all sounds which come after /ŋ/ like in: 'songs', 'buildings' etc., where a fully pronounced -gs sound is heard.

The phoneme /l/ exists in both languages, but in English it has the [ɫ] allophone usually called velarized dark /l/. The difficulty concerning this sound arises due to the differences of articulation. English [ɫ] is dental whereas Arbore /l/ is alveolar. The same is true for the phonemes /t/ and /d/ which are alveolar in English but dental in Arbore. This difference of articulation will create a problem of pronunciation.

The English /n/ is alveolar, but the Arbore /n/ is dental alveolar. The possible substitute that the Arbore speaker has at that point is the allophone [n̄] which occurs before liquids and stops. Thus /n/ is expected to cause some pronunciation difficulty at least to a lesser degree.

Phonemic and phonetic charts of the two languages are shown on the next page.

#### 4.3 SIMILAR PHONEMES WITH SIMILAR

##### ALLOPHONIC VARIATIONS

The phonemes /g, z, ʧ, ʝ/ have only one phonetic realization in both languages, with more or less the same features and identical distributions. These phonemes will create no problem for the Arbore speaker. /p/ and /k/, too, though

they have two allophones each, both in English and in Arbore, will not cause difficulties.

/b/ and /s/ have allophones which do not exist in English. The ones that create difficulty or problem of transfer will be /s/. This phoneme has an allophone [ʒ] after /l/. Thus an Arbore speaker learning English will find it very difficult to pronounce the sequences -ls and -lʒ as in 'else' and 'Welsh' separately. As far as /b/ is concerned, the presence of the allophone /β/ in Arbore will not cause any significant difficulty in pronouncing the English /b/. The Arbore /h/ has the allophone /h/ which has a breathy (creaky) sound when it occurs between vowels. The assumption is that the Arbore speaker will produce a similar creaky sound when faced with a similar environment in English.

#### 4.4 COMPARISON OF THE SUPRASEGMENTALS

Under this sub-heading, the different suprasegmental features which have been mentioned in the two languages earlier will be contrasted.

##### 4.4.1 VOWEL LENGTH

As has been noted earlier (see 2.3.2) Arbore has short and long vowels. English has lax and tense vowels which could be said to correspond to the Arbore pairs more or less, so that contrary to such as English /i/ vs. /i:/ should give little difficulty. As far as production and pronunciation of long vowels is concerned, there doesn't seem to be any difficulty except, ofcourse, in the initial position where Arbore doesn't allow vowels.

Vowel initial words have an initial glottal stop /ʔ/.

A Phonetic Chart of Arbore - English Consonants

		Bilabial		Labio-dental		Dental		Dental veolar		Alveolar		Palato-alveolar		Palatal		Velar		Pharyngeal		Glottal		
		Ar	En	Ar	En	Ar	En	Ar	En	Ar	En	Ar	En	Ar	En	Ar	En	Ar	En	Ar	En	
STOP	vl	p	p			t				t						k	k			ʔ		
	vd	b	b			d				d						g	g					
	Aspirated	vl	p <sup>h</sup>	p <sup>h</sup>			t <sup>h</sup>				t <sup>h</sup>						k <sup>h</sup>	k <sup>h</sup>				
	Glottalized	vl					t'										k'					
	Implosive	vd									ɗ											
FRICATIVE	vl	ɸ		f	f	θ						ç								ħ	h	
	vd	β		v		ð																
	Grooved	vl							s	s	ʃ	ʃ										
	vd									z	z	ʒ	ʒ									
AFFRICATE	vl									tʃ	tʃ											
	vd									dʒ	dʒ											
	Glottalized	vl									tʃ'											
NASAL	vd	m	m	ɱ				n	n̄	n̄	n̄			ɲ		ŋ	ŋ					
LIQUID	vl									ɻ												
	Lateral	vd									l	ɻl										
	Flap	vd					r				ɻ	ɻ										
	Tril	vd					r̄															
SEMI-VOWEL	vd	w	(w)											ɹ	ɹ	w?	(w)					

CHART 10

KEY:- vl = voiceless vd = voiced Ar = Arbore En = English

A Phonemic Chart of Arbore-English Consonants

		Bilabial		Labio-dental		Dental		Denti-alveolar		Alveolar		Palato-alveolar		Palatal		Velar		Pharyngeal		Glottal	
		Ar	En	Ar	En	Ar	En	Ar	En	Ar	En	Ar	En	Ar	En	Ar	En	Ar	En	Ar	En
Stop	vl	p	p			t				t						k	k			ʔ	
	vd	b	b			d				d						g	g				
	Aspirated vl																				
	Glottalized vl					t'										k'					
	Implosive vd									d̥											
FRICATIVE	vl			f	f		θ													h	h
	vd				v		ð														
Grooved	vl									s	s	ʃ	ʃ								
	vd									z	z		ʒ								
AFFRICATE	vl											ʧ	ʧ								
	vd											ʤ	ʤ								
	Glottalized vl											ʧ'									
NASAL	vd	m					n		n					ɲ		ŋ					
LIQUID Lateral	vd								l	l											
	Flap vd					r				ɾ											
	Trill vd																				
SEMI-VOWEL		w	(w)											y	y	w?	(w)				

#### 4.4.2 CONSONANT GEMINATION

Unlike Arbore where the feature is phonemic English does not have gemination (except across word and (some) morpheme boundaries, ex. black cat [bl k:<sup>h</sup>at], unknown [ʌn:oun]). Since Arbore also has non geminates, the target language should present no difficulty in this matter.

#### 4.4.3 DIFFERENCES OF STRESS

It has been stated earlier (see 2.3.3) that Arbore is a tone language, whereas English is a stress language. Tone differences in Arbore imply meaning differences and parallel to these differences of stress in English imply differences of meaning. Every word in English will have at least one stress, but in Arbore not every word carries tone. Nevertheless since the primary means of perceiving stress in English is the pitch change the Arbore speaker could probably experience little difficulty in identifying his H tone with stress and his NH with lack of stress. In fact he might have fewer problems in this than speakers of Amharic.

The English intonation will also be another difficulty area which needs to be mentioned here. In his analysis of languages where one has a two-tone system and the other being an intonation language, Robert Lado writes:

.... there will be a serious problem when the speaker of the tone language tries to learn the intonation of the other. Both high and extra high pitch phonemes

will be heard as "same" by him. Mid and low will also be heard as same ... The student may not be able to produce the extra high and the low pitch phonemes if the range of his two native tones is narrow. Or he may sometimes interchange high and extra high, low and mid if the pitch range of the two native tones is wide. <sup>13</sup>

Because English has gliding pitches in the rise-fall and fall-rise intonations we may predict that the Arbore speaker will find difficulty for his own language has mainly level pitches.

#### 4.5 PROBLEMS OF DISTRIBUTIONAL PATTERNS

We know that unfamiliar sequences of phonemes in the target language would cause pronunciation problems. Knowing about the absent sequences of phonemes in the native language of the learner will pave the way to help him overcome the difficulties he encounters. Based on this fact it is worth comparing some of the distributional patterns of phonemes in the two languages.

##### 4.5.1 COMPARISON OF THE POSITIONS OF PHONEMES IN THE TWO LANGUAGES

In this section we will look at the phoneme distributions of the two languages to see if there would be difficult areas for the Arbore speaker.

ARBORE - ENGLISH PHONEME DISTRIBUTION CHART

English Phonemes	Initial	Inter-vocalic	Final	Nearest Arbore counterpart
p	+	+	+	p
b	+	+	+	b
t	+	+	+	t
d	+	+	(+) <sup>2</sup>	d
k	+	(-) <sup>1</sup>	(+) <sup>2</sup>	k
g	+	+	(+) <sup>2</sup>	g
f	+	+	+	f
v	+	+	+	-
θ	+	-	(+) <sup>4</sup>	-
ð	+	+	-	-
h	+	(+) <sup>4</sup>	+	h
s	+	+	+	s
z	+	+	+	z
ʃ	+	+	+	ʃ
ʒ	+	(+) <sup>4</sup>	+	ʒ
ʒ	-	+	(+) <sup>4</sup>	-
z	+	+	+	z
s	+	+	-	ʃ
h	+	+	+	h
l	+	+	+	l
n	+	(+) <sup>3</sup>	+	-
m	+	+	+	m
j	+	+	+	j
w	+	(+) <sup>4</sup>	+	w
y	+	(+) <sup>4</sup>	+	y
r	+	+	(+) <sup>5</sup>	r.
l	+	+	+	l
n	-	+	+	-
m	+	+	+	m
n	+	+	+	n
w	+	(+) <sup>4</sup>	+	w
i	+	+	open syllable	i
i:	+	-	-	i:
u	+	-	+	u
u:	(-)	-	-	u:
e	+	-	+	e
eɪ	+	-	+	e:
ʌ	+	-	+	a
a:	+	-	+	a:
ɔ	+	-	+	o
ɔ:	+	-	-	o:

- KEY:**
1. only occurs geminate
  2. occurs but undergoes devoicing
  3. very rare except at internal word boundary e.g. singer [sɪŋɟə]
  4. very rare
  5. only if the following word begins with a vowel

**Note:** None of the other English vowels have equivalents in Arbore

As chart 12 reveals, Arbore words do not begin with a vowel whereas English vowels do. From this, we can predict that the Arbore speaker will find English initial vowels difficult to pronounce and he will tend to attach /ʔ/ before it as it is the case in his language (see 4.4.1)

The vowel distributions are very different and therefore will create problem. This is because in general long vowels of Arbore which correspond to tense vowels of English, may not occur finally. On the other hand English lax vowels, which correspond to Arbore short vowels, may not occur finally. Therefore we predict that word-finally there will be many mistakes of pronunciation.

From the consonants common to both languages, /ʃ/ and /ʒ/ do not occur in final positions in Arbore while they do in English. Thus they will cause pronunciation difficulties for the Arbore native speaker.

#### 4.5.2 A COMPARISON OF SEQUENCES OF CONSONANT CLUSTERS

As shown in chart 13 the only clusters of Arbore consonants that do not occur in English are:

Affricate	plus	africate
Affricate	plus	nasal
Affricate	plus	liquid
Nasal	plus	glottal stop
Glottal stop	plus	stop/fricative/nasal/lateral

The last combination is not possible in English mainly because the glottal stop /ʔ/ doesn't exist in English (except in some dialects).

One type of cluster that English permits, but Arbore doesn't is stop + liquid. Therefore he will have difficulty in pronouncing            such as tree, pray, class, blame etc.

#### 4.5.3 COMPARISON OF VOWEL SEQUENCES

Since Arbore vowels do not come in succession phonemically like in English, the Arbore speaker will face phonemic and distributional problems. The phonemic problem arises due to the absent or zero category vowels. When these form glides, the Arbore speaker will have a distributional problem. As stated before (see 2.2.2.4), when unfamiliar sequences occur, he will tend to insert either a glottal stop or a semi-vowel.

ARBORE-ENGLISH CONSONANT CLUSTERS CHART

1 <sup>st</sup> member	2 <sup>nd</sup> member	ARBORE				ENGLISH			
		vl+vl	vl+vd	vd+vl	vd+vd	vl+vl	vl+vd	vd+vl	Vd+vd
STOP	stop	+	-	(+)	+	+	-	-	+
	fricative	-	-	(+)	-	+	-	+	+
	affricate	-	-	-	-	-	+	-	+
	nasal	-	-	-	(+)	-	-	-	-
	liquid	-	-	-	(+)	-	+	-	+
FRICATIVE	stop	+	+	-	+	+	-	+	-
	fricative	+	-	-	+	+	-	-	+
	affricate	-	-	-	-	-	-	-	-
	nasal	-	+	-	-	-	+	-	-
	liquid	-	+	-	+	-	+	-	-
AFFRICATE	stop	-	-	-	-	-	-	-	-
	fricative	-	-	-	-	-	-	-	-
	affricate	+	-	-	+	-	-	-	-
	nasal	-	+	-	-	-	-	-	-
	liquid	-	(+)	-	-	-	-	-	-
NASAL	stop	-	-	+	+	-	-	+	+
	fricative	-	-	+	-	-	-	+	+
	affricate	-	-	.	-	-	-	+	+
	nasal	-	-	-	+	-	-	-	+
	liquid	-	-	-	+	-	-	-	+
	?	-	-	-	+	-	-	-	-
LIQUID	stop	-	-	+	+	-	-	+	+
	fricative	-	-	+	-	-	-	+	+
	affricate	-	-	-	+	-	-	+	+
	nasal	-	-	-	+	-	-	-	+
	liquid	-	-	-	+	-	-	-	+
	?	-	-	+	-	-	-	-	-
?	stop	+	-	-	-	-	-	-	-
	fricative	(+)	-	-	-	-	-	-	-
	nasal	-	(v)	-	-	-	-	-	-
	lateral	-	+	-	-	-	-	-	-

CHART 13

KEY :- vl = voiceless      vd = voiced      (+) optionally possible

## CHAPTER V

### SUMMARY AND CONCLUSION

So far we have observed the phonological structure of the two languages under study. We have seen what they share in common and what they don't. Trying to find the difficulties that would arise from the point of view of the Arbore native speaker learning English, the writer has applied the method of error prediction and as a result problematic areas have been observed. The major areas of difficulty are summarized in this section.

First, the Arbore speaker will face phonemic problems. The English phonemes /v, θ, ð, ʒ, ə/ are new to the Arbore native speaker. In place of these phonemes he will tend to substitute /b, t, z, s, a/ respectively. In some cases the substitution can vary from a single substitute to many:



Second the English dark 'l' is velarized and has an allophone /ɫ/ whereas the Arbore /l/ is always clear alveolar thus it will create a problem of articulation.

Thirdly he will have problems with English diphthongs. Due to the absence of vowel sequences in Arbore, English diphthongs will be unfamiliar. As has been mentioned earlier, he will tend to insert a glottal stop or a semi-vowel between the vowel sequences.

The fourth difficulty area for the Arbore speaker will be the English suprasegmentals. English stresses as compared to Arbore tone will cause difficulty, too. The Arbore speaker will not be able identify the different stress patterns and will commit a mistake by overlooking the importance of stress in English. What he will expect is only a high tone type of sound.

Fifth will be the problem of distribution concerning English vowels which occur in quite different places to their nearest Arbore equivalents. Moreover, in Arbore vowels do not occur word initially. To overcome his problems of pronouncing vowel initial words, the Arbore native speaker will attach a glottal stop before the vowel. All other consonants being equally distributed in both languages, /j/ and /ʃ/ will not occur word finally in Arbore while they do in English. This situation will create a problem. English consonant clusters of the type: stop + liquid is not possible in Arbore. But because the reverse, liquid + stop, is possible in Arbore, the learner will tend to reverse the situation, forming a metathesis at least word internally.

Sixth, difficulties due to the differences of syllable structure. Arbore permits a maximum cluster of three consonants preceding a vowel whereas English consonants can come in succession up to five consonants word finally and up to three consonants word initially. The lengthy consonant clusters will cause difficulty of pronunciation to the Arbore speaker.

To sum up, though the writer of this paper has tried his best to bring first hand material concerning the sound nature of Arbore to the fore, he is not in a position to say that everything on Arbore phonology is completed. His aim is to lay the foundation for further research. Arbore phonology needs much more study and has a lot to contribute to our understanding of East-Cushitic languages.

It is an undeniable fact that more of the phonological features of a language will be unmasked when a full account of the language (phonology, morphology, syntax, and semantics) is fully covered. The writer of this paper cannot, at the moment, cover all these areas as the time allotted for the work and other factors won't allow him to do it.

FOOT NOTES

1. M.L.Bender (ed.) The Non-Semitic Languages of Ethiopia (East Lansing: Michigan State University, 1976) p. 17.
2. Robert Lado, Linguistics Across Cultures (Ann Arbor University of Michigan Press, 1957) p. 12.
3. That the closest linguistic relations of Arbore are languages of the Omo-Tana group (such as Dasenect, Elwolo, Rendille, Bayso and Somali) was first demonstrated by Sosse (1975). See also M.L.Bender (ed.) "Non-Semitic Languages", in Bender (ed.) Language in Ethiopia (London: Oxford University Press, 1976), p. 43.
4. Ibid./ p. 15.
5. Ethiopian Provisional Military Government, Programme of the National Democratic Revolution of Ethiopia. (Addis Ababa: Artistic Printing Press, n.d.), p.16
6. Taddese Beyene, "Amharic and English Segmental Phonemes: A contrastive Study," in Language Learning vol. 16, No, 1&2, pp. 93-120.
7. William J. Samarin, Field Linguistics: A Guide to Linguistic Field Work. (New York: Molt, Rinhart and Winston, 1967).
8. Lulseged Erkihun, A Contrastive Analysis of the Phonologies of Amharic and Gedeo. (unpublished M.A. thesis, Addis Ababa University, 1981)

9. Robert Lado, Op. cit. p. 36
10. Keneth L. Pike. Tone Languages. (Ann Arbor: University of Michigan Press, 1948), p.3.
11. Gerard Despatie. Introduction to Language and Linguistics (Addis Ababa University, 1978), P. 94. (Mimeo)
12. Taddese Beyene, Op. cit. p. 109.
13. Robert Lado, Op. cit. p. 46.

A P E N D I X

<u>Arbore</u>	<u>English</u>	<u>Arbore</u>	<u>English</u>
baabba' m.	step father'	barise	to pass the night
baabba' gaabba' m.	uncle	barje	passed the night
baabba' guuda' m.	father's old	barre	feel cold
	brother	barrí m.	tomorrow
baado F.	fruit	basne/bazne	to borrow
baamir m.	friend	bays F.	elder sister-
baamir m.	best man		in-law
baara' m.	hut/booth	bazzantu' m.	loan
baftta' m.	compartment	bičče' pl. m.	water
	for goats	biir F.	a woman who holds
bah F.	bow		the girl at
bahare	be thirsty		circumcision
bane	open	billaw m.	knife
barbare? F.	red paper	binan	wild animal
baw m.	lake	birda m. pl.	top
bed	bad	bitte	buy
beebe F.	punch	biy	soil/field
been F.	lie	birda'	point of something
beek' F.	sore/wound	boč'e	hew; curve
beek'/beeg	fish	bole	dress
bellac'/bellay	liar	bolk'e	to shine
bellak' m.	blind man	bolle	dress
ber	trembling	bolo?ose	set fire
bardač m.	day	bolok'se	to illuminate
bardaytira F.	nonn	bombac'/bombay	bark of a tree
bereed m.	warrior	boojje	to blender
baraha' F.	wild land	boolan m.	cloud
bari m.	down	boolo F.	wooden tray

<u>Arbore</u>	<u>English</u>	<u>Arbore</u>	<u>English</u>
boóm?	pond	č'ubbolac/	
boóre F.	the earth	č'ubbolay m.	greedy
boorí	fown	daáč/daay m.	muscle
bootanté? F.	bee hive	daáč sg.m.	rat
booy F.	mourning	daadl? F.	mead
Boranta(t) m.	Boran man	daanut m.	dumpling
bube	to ferment	dáben	branch
bu?ise	to open	dafar F.	cloth
bún m.	coffee	dak'ál m.	cheek
Buranta'(t) m.	Tsemay	damfe	to boil
burahe	scatter	dandaye	be able
burčú?use/burčuk'ese	tear bone by teeth	danfe	spring up, gush
burrase	make red	danisa? F.	beautiful
burrate	become red	dayako	strong desire
burri m.	red	deebí m.	vegetable
buuru	porridge	déek'at/déekat m.	grind stone
buute? F.	puffadder	deel F.	forest
čaarabóot	civet	deerit m.	baboon
čár	leopard	de?e	sprinkle
čiile	pass	dil'ayto F.	cobra
čiilse	to let pass	diide	(he) refuse
čilik F.	elbow	diink'ate	'he)stripe; stumble
č'aahé	(h)cut grass	dinica	potato
č'aarraté? F. pl.	oxpecker	dinnaar m.	cartridge belt
č'ak'ále F.	offshoots	dirrá m.	meat of lumber region
čakase	to listen	distinte? F.	pot
č'ak'alema' pl. m.		dorte? F.	feather

<u>Arbore</u>	<u>English</u>	<u>Arbore</u>	<u>English</u>
dowe	(he) taste	de?yo' m.	herder
doowe	try	delle	to give birth
dub F.	buttuck	desse	hide
dum m.	tail	dewwa(y)neh m.	beggar
duressa? F.	rich woman	dewwe?	beg
dure	dance	dewwí adj.	near
ḍabe	(he) missed	deyyá	female
ḍaḍabe	be able	difate	become full
ḍahe	exceed; be better	dife	to fill
ḍale/?ina dale	be born	dílk' m.	blood
ḍalse	help in birth	dikk'e	bleed
dane	beat; thrash	diir m.	male
date	hide	diirum m.	valour
day	to sing	dlh	enough
daye	happen; became	diise	be enough
daye	hit	dilo	flour
daymáye?) m.	bat	dolte? F.	hide
deedan m.	pasture	dise	build
deende' F.	palm of hand	dite	to kick
deeráse	make tall	donge	kiss
deerate	become tall	doote	burst
deere? F.	clay pot	dossok'	blister
deeri?	tall	dukub m.	sickness
deh m.	bone marrow	duub	whey
dehe/kadehe	to precede	duudu F.	jigger flea
dehete	to suck out	farrít m.	finger
de?e	throw(away)	farríta giič'a m.	little finger
de?ye	to herd; guard cattle	farríta guuda' m.	big toe

<u>Arbore</u>	<u>English</u>	<u>Arbore</u>	<u>English</u>
fayye	be save	galle/kagalle	understand
fakaata	it seems to me	ga?ame' F.	burial
fakase	make distan	gantésitto F.	spider
fak'ate	become distant	gará dayte	she became pregnant
fale	curse		
faraw F.	horse	gargalse	opress
farič/fariy	oryx	gargalnat	difficult
farro goga'	strong; hard	garlá m.	needle
farro gogate	become hard	garray/garrač m.	thief
faya	well	gaydan	hoe
faya daye	become well	gaye	touch
faya kagede	he did well	gede	dig; plough
fek'é	distant	geede	loose
fek'e	to water a cow	geer m.	old man; husband
fič'ise	sip	geeraw	my husband
fiil m.	tail	gehe	become fat
fila? F.	comb	gehen m.	fat meat
file	(he)comb(past)	gehese	make fat
fool m.	face	galsum m.	evening
fool m.	infront	gelduma' pl.	lover
fool?uk F.	future	gemú m.	maize
fosse	graze	gerde	steal
furic m.	cattle camp	gere? m.	belly
fuutta'	cotton	gez	thigh
gah m.	horn	giic'a/giic'i	small
gaal m.	vine	giic'ate	become small
gaange? F.	mule	gile?e	pray/beg
gaabba' F.	step mother	gimba F.	heel

<u>Arbore</u>	<u>English</u>	<u>Arbore</u>	<u>English</u>
gimba?u siite	(he) squab on	gudda	big; fat
gīna k'oret	trunk		
giráč sg.	rhino	gulman m.	calabash
gire	(he)is present	gúm m.	back of the neck
girrum m.	theft	gumáaz	ground squirrel
gitáma F.	potter; smith; tanner	guraára pl.F.	lizard
godda?ame	be injure	gurgure	sell
goferiyé pl.m.	mane	gurufnowa	give good smell
góga beeg	scale	guse	undress oneself
goge	become dry	guse	to pay
gogí m.	dry	guudi?	many; much
golfof m.	useless carcass	guudase	make big
golja m.	worthog	guudate	grow
góob	trushing ground	guuh m.	year
goolité? F.	thick	guut m.	point of a roof
góome/kagóome	become better	guuta d iirit	lunch
góos m.	chin	háalo pl.	group of stars
gor m.	road	haaraáy m.	newthing
gora?rse	lead	haaraayno#e	make new
goran F.	heifer	haaraaynowe	become new
gorjam m.	story	haariyde	to feel
gorí pl.	pidgeon	haasowe	chat
gosa F.	clan	hafuur m.	breath
gose	show	hakko m. pl.	eggs
gosse	dry something	hak'at m.	rope
gubba? F.	above	hako ?idelle	lay an egg
guda	uncle's wife	hakumme	flow
		hakumse	pour, spill

<u>Arbore</u>	<u>English</u>	<u>Arbore</u>	<u>English</u>
hakunse	spilled away	hélleč/hélley	butterfly
halk'e	be hungry	henc'ufó? F.	saliva
hamartat m.	Hamar man	henc'ur	navel
hamartaté F.	Hamar woman	hendullač/	
haraare	become in a hurry	hendullay	marabou
hararse	cause to hurry	hek'é F.	middle
haraarma' m.	haste ; hurrying	herdó pl.	poison
haraté F.	virgin; maiden	herdowa	become bitter
harbe	(he) insult (past)	here	sweep
hare	feel tired	hereege	think
harrízziri m.	day before yesterday	herrise	pull
hark'ama	feel sleepy	herrú m.	cliff; ravine
hark'amme	to fall asleep	herum guyte	he took rest
hatte	to fly; flee	heyte	(he) ask (past)
haw (suffix for m. N.)	my	heyte	become replete
haw m.	steer	hezzú m.	sign; mark
hayán	salt lake	hiyyac'/hiyyay m.	orphan
heeddi' m.	raw	hide	tie
heelat pl.	sheep	hidi F.	lip
heeli' m.	yesterday	hidita gine F.	lower lip
heeron m. pl.	flood	hidita gubba F.	upper lip
hefer' m.	wind	hi?e	boil (intr.)
heferse	blow(of wind)	hi?te	(he)gird on (past)
hekkanté F.	fence	hiik'e m.	to grind
hekkene	(he) fenced	hille	drousy
helleč/helley m.	rabbit	hiiro'	sun or moon light
		hik'iy/hikič m.	ax
		kikk F.	breast bone
		hilood m.	ember

<u>Arbore</u>		<u>English</u>	<u>Arbore</u>		<u>English</u>
hinafá	F.	fluet	?adada	F.	father's sister
hise	m.	(he)cook(past)	?afkaarro?	F.	moustache
hisk'i		chaff	?ahan	m.	labash
hit'a	F.	luck	?afufe		blow
hiz		root	?akka	F.	mother's or father's mother
hizze	pl.	blood vesels	?alaame		aim at
hojjattu?	F.	worker; slave	?amálo		now
hokkolan	m.	lame person	?amane		believe
hokkole		limp	?amanse		persuade
holle		to tan	?aaha		resemble
holsá		stalk	?áraab/?áraap		elephant
hoobte		to blossom	?ardaye		smell
hooli	m.	naked	?ardewwase		bring near
hoose		tell	?areyde		feel craving
hordofe		follow	?argufe		shake out
horre		chase away	?arnore		arrive
horte		breed	?arráw	m.	afternoon
hósan		digging pole	?aryehine		leak; spill
humbade		crowed	?atara	F.	pea
hundub/hundup		backyard	?at'urrante/ k'aturante	F.(sg.)	cat
hunna	pl. m.	physical strength	?awate	F.	sun
hurḍač/hurday		sling	?aw?		mother's brother
hurguban	m	bush back	?awohaw		my mother's brother
hurrat	m.	thick fog	?inl ?awoháw		my mother's brother child
huzzuk'	F.	star	?ayan(a)	m.	possession of spirit
?aar		bull	?ebélu	m.	so-and-so
?abás	m.	grain & pulse stew			

<u>Arbore</u>		<u>English</u>	<u>Arbore</u>		<u>English</u>
ʔeč'ec'	m.	lower jaw	ʔezzi	m.	plain
ʔeduma	pl.	udder or breast	ʔezzi		white
zaate		died	ʔezzose		make white
ʔeek/ʔeeg		fire	ʔezzote		become white
ʔeel		water hole; well	ʔige		drink
ʔeenu	pl.	milk	ʔikkine		swallow
ʔeer	m.	flower	ʔil	F.	inside
ʔeete		(he)take; receive (past)	ʔil	F.	spring
ʔegeʔ	F.	mother	ʔildeerí	m.	deep
ʔegarté	F.	sand	ʔilsase		to make heavy
ʔekkase		to count	ʔilsate		become heavy
ʔél		mountain	ʔilse	m.	heavy
ʔelday		chew	ʔiliʔanote		become green
ʔelkum	m.	bride price	ʔiliʔhewatta		blue
ʔellem	m.	ram	ʔili ʔi	m.	green
ʔellote		(he) fear (past)	ʔilk/ʔilg	m.	teeth
ʔenuk/ʔenug	m.	lamb; kid	ʔilmuri		shallow
ʔerbarayto	F.	centipede	ʔindot		worm
ʔereb	m.	tongue	ʔinda	pl.	vally
ʔergise		(he)lend (past)	ʔingir	m.	louse
ʔergiste		lend (int.)	ʔini ʔingotaw		my mother's sister's child
ʔermat		cold	ʔini	m.	child; young
ʔermet	m.	mucus	ʔink'o	F.	sleep
ʔeruč/ʔeruy	m.	vomit	ʔijnorse		dissolve (int.)
ʔeruje		(he)vomit (past)	ʔirl	m.	rain
ʔese		spread out    dry	ʔirig/ʔirik	m.	gum
ʔesse		protect oneself	ʔirjat	m.	smoke (int.)
ʔessi		mother's or father's father	ʔirte		bore

<u>Arbore</u>	<u>English</u>	<u>Arbore</u>	<u>English</u>
?irte	bore		
?iya m.	father	?udune	(he) pass dung (past)
?iyahaw	my father		
?iyya mah	owner of good	?ukkúmbehe	cuvet
?iyya wórit m.	head of house	?ulle	smell (tr.)
?iyyáta binan	cry of animal	?ullole	displease
?iyye	he cried	?umat m.	custom/ritual
?ize F. Pl.	gazelle	?ummo pl.	young of ----
?oho m. pl.	mouth	?ummo fuúta	cotton ball
?oho bulač m.	breakfast	?ummo lukku	chicken
?oho mále m.	dump person	?ummure	obey
?oho náani	point of the spear	?umoge ?ete	bear fruit
?ohol pl. m.	donkey	?urdehe	before
?okič pl. m.	cow	?urro m.	today
?okolén pl.	milk container	?utante? F.	bride
?ole	(he)pass the day	?utúb/?utup m.	pole of house
?ollah F.	village	?uume	(he) create; moke (past)
?ome	(he) float	ǂjahná	grey
?onkač/?onkay	chameleon	ǂjá?arté F.	old woman
?ooge	burn	ǂjabate	become old
?ohme/yohme	(he)eat (past)	ǂjed m.	scorpin
?ootte	burn (intr.)	ǂj dbarǂjǂ F.	morning
?oot m.	horned cattle	ǂjibbe	hate
		ǂji?e	fall
?orgl	male goat	ǂjil F.	mourning
?udu pl.	dung	ǂjim m.	peer group
?udu keret	dung of dog	ǂjirmá m.	cudgol
?udu modot	dung of man	ǂjoorám m.	wooden spoon

<u>Arbore</u>		<u>English</u>	<u>Arbore</u>		<u>English</u>
kaafannó?	F.	adulter	kedeté	F.	honey
kaako	m.	great grand- mother	ke?ayse		to winnow
kaako	m.	grand father/ mother	ké?e		begin
Kaanu	m.	sheath	keket	m.	hill
kaara	pl.m.	stool	kekete		swear (v)
kaaraaba		solitary woodbore bee	kelaabe		pour into
kaarité	F.	heifer goat	keléh		old goat
kacc	m.	chest	kelse	F.	day after tomorrow
ka?és	m.	youth	kelkelac		light(from fire)
ka?iraye		be defeated	kenn?eté	F.	mosquito
ka?irraye		defeat (tr.)	kensayte		use
kakano?	F.	oath	ker		dog
kalaabe		to return	kere		descend
kalanó	pl.	kidney	kerem	F.	calabash
kank'aba		seize	keri?idore		a dog barked
karam	F.	tray for winowing	kerker	m.	front of the chin
karmet	m.	Wata Wondo	kidis	m.	hearth
Karl	F.	hump	kirmate?	pl. F.	bird
kariso	pl.	molar	kissa	m.	dark; night
karse		to bake	kissannose		(he)pass evening (past)
kassa		give bad smell	kissanowe		become evening
katot	m.	left hand	kittiyya	F.	bedbug
kaw?		empty thing	kittóm	m.	jack-ass
kaye		place; put	kohle		laugh
kedaté	F.	læe	ko?	m.	collar bone
keddit	m.	fly	ko?ise		to pour out
kédic/kédiy	m.	boat	ko?ose		add (to)
			kokodde		drip
			kolgin hile		to support

<u>Arbore</u>		<u>English</u>	<u>Arbore</u>		<u>English</u>
kolam	F.	ditch	kunku	m.	large wooden trough
kolbay	m.	cockroach	kunuf	m.	hoof; claw
komba	m.	rushes	kure	pl.	dance
konč'ot	m.	water snail	kursat	m.	knee
konsó	F.	Konso man	kurúm	m.	milk container
koodde	F.	cow bell	kuytat	m.	termite hill
kooke	F.	throat	k'aarran		vervet monkey
kool	m.	shoulder	k'aba		have
kool	m.	leaf	k'ač/k'ay		stone; rock
koone		he brought	k'ačillasá	m.	skelet
kollá	m.	wing	k'addó	pl.	roof
koornat	m.	proud person	k'adiite		circumcision
koráankoráč	m.	frog	k'a?kó		how much
korat	m.	male goat	k'amman	m.	whey
korobó?	F.	door of wood	k'alaaya?	F.	bullet shell
korju	F.	mongoose	k'andlye		circumcise(v)
korsebtú?		weeds	k'ark'are		help
kudú	m.	grain store	k'awot	m.	witch doctor
kukute		to chop up	k'abbannose		make cold
kuldač/kulday		fever; hot thing	k'abat	m.	cold thing
kullose		make out	k'abbannowe		became cold
kulloye		become hot	k'abbat	m.	shadow
kulohe		he melted	k'abbate	modot	shadow of man
kulose		clarify	k'adaat	m.	lid
kuloye		feel hot	k'edaat	m.	lid
kummase		make short	k'edat	m.	knee cup
kummate		become short	k'adde		shut (past)
kumml?		short	k'edeh	F.	thorn
kumte		bow; bend down			

<u>Arbore</u>	<u>English</u>	<u>Arbore</u>	<u>English</u>
k'ehe	chop	k'oode	divide
k'ehete	split	k'oode	(he) cross (past)
k'ek'ebe	be broken	k'ook'	food
k'ele	flay	k'ooso'	thin
k'elk'ele	parch	k'or m.	wood
k'ak'etú m.	parched grain	k'óra mooyye m.	pestle
k'anda m.	pregnant cow	k'óre pl. F.	kite
k'ere	shave oneself	k'orkessa? F.	python
k'esse	break	k'or m.	fire wood; tree
k'ette	receive	k'orsepe sg.	plough
k'ewoti kedate	queen bee	k'úb m.	hand
k'eyyoot m.	mist	k'ub diik' m.	man slaughter
k'idat	dried meat	k'ule náani F.	spear shaft
k'il m.	leather	k'urat m.	skin
k'illánte? pl. F.	vulture	k'usse	cause to become wet
k'illat m.	palm	k'uure	geld; reap
k'inne	to bite	k'uyyl'	become wet
k'inne'	sting	laatu' m.	zigzag
k'ise	kill	lah	back; behind
k'ly F.	bullet	lassa pl. F.	bread
k'iy	small arrow	lawe	to milk (past)
k'iyе kirmate	arrow for killing birds	lec'e	lick
k'iyе kál F.	big arrow	lef F.	bone
k'iyolac'/k'iyolay	porcupine	leffe metteh F.	skull
k'ol F.	cattle	leh F.	ewe
k'ol horte	breed	le? m.	month; moon
k'ob	kraal	ličc'ó F.	whip
k'onč'ore	stir	lilám m.	thread

<u>Arbore</u>		<u>English</u>	<u>Arbore</u>		<u>English</u>
limmo	F.	river	mettéh	m.	head
lo?ose		to up root	middá	m.	right hand
lole		be angry	miicé		squeeze
lukk	F.	leg	miir		ant
lukku	F. pl.	hen	mín	m.	house
lukkunu		mole	mína kál		quiver
luk'e?ate		(he) walk (past)	mína kirmaté?		nest
madde	F.	yeast	mittá	pl.	knee
maar	F.	calf	mo	(sg.) m.	person
maccowe		got drunk	mo deyyá	m. (sg)	female
madefate		felt bad	mofeyyamalla	m.	sickman
makowa		taste good	moló?		bold
malayka	F.	evil spirit	mooyyé?	F.	mortar
mare		wrap round	morgl	m.	tender
mariy?ate		discuss	moydé	pl.	eye lid
marse		go round	múk?aygede		die suddenly
marsi	m.	arround	muluk'		dark brown
martú		round worm	mumuc'ó?		smooth
méh	m.	things; goods	muramurac'/muramuray		yellow
mehégere ?ilet	m.	visdera	murase		(he) make short (past)
me?el	F.	dwelap	murate		become short (of things)
mek'e	m.	name	mus/múz		banana
meleh	F.	pus	naaf	m.	leper
merde?	F.	tapeworm	naag		boy
merdenté	F.	stomach	naage		girl
mersat	m.	brother	nungul	pl. m.	boys & girls
mersaté		sister	naan	F.	spear

<u>Arbore</u>	<u>English</u>	<u>Arbore</u>	<u>English</u>
naantáw	my spear	ṽnawoló F. pl.	big nife
naddise	to thatch	ṽnanardote	become thin
nafa m.	body	ṽnenne?ete F.	door of sticks
nannig m.	watering trough	ṽnó m.	mud
nebbe mále m.	deaf	ṽnode	pinch (past)
nebbéh pl.	ear	ṽnooc' F.	barren
nebellé F.	stripped	ṽpac m.	full thing
nebel	ostrich	ṽparso F.	local beer
nedida	taboo	raayte	run out; finish
ṽneek'	lion	ra?et m.	goat
nehete	be startled	rakate	(he) troubled
nesse	accustom; teach	raraa?to F.	swarm
neybete	wake up	redaye	slap
nungo	slowly	reef m.	corpse
nunungase	made soft	reek'a pl. m.	spine
nunungate	become soft	rette? F.	female goat
nunungí	soft	ress F.	instep
nuuge	suck	rire	(he) shout (Past)
nuisse	suckle	ririmp	termite
ṽnaame	jump	ritte/ribte	withhold; hinder
ṽnaab/ṽnaap m.	enemy	rohó? F.	brain
ṽnaabe/ṽnaape	fight	róm m.	ash
ṽnaar m.	forehead	rubay F.	soul
ṽnakkorí	spotted	ruppó/ruppú	grain (gen)
ṽnalub m.	after birth	rupú m.	millet
ṽnardose	make thin	ruufan m.	hair
ṽnare	scratch	ruufanti nafat	body hair
ṽnaw	crocodile		

<u>Arbore</u>		<u>English</u>	<u>Arbore</u>	<u>English</u>
Saabit	m.	strap	simbe	sweat (v)
saak'a	m.	malaria	simpac/simpay	tying thing
saale		plaster a house	simk' m.	sweat
sallé?		wife; woman	sinda pl. m.	urine
saame		rob	sindalayto F.	gulblader
saas		prepare	sindaye	to urinate
saase		(he) fixed	sinse	strip; peel
same		inherit	sirgat m.	mad
sammó	F.	inheritance	sirl	bed
sandoyté	F.	grave	sopore m.	young male goat
sassabe		lie (v)	sodda m.	sister's husband
sáy tome		graze	soh m.	father-in-law
seddaab/seddaap		honey comb	sohe	twist
séker (sg)	F.	hip	so? m.	meat
senet	m.	hide sack	so?adeere m.	boild meat
serba	F.	skin	solol m.	neighbour
serém	m.	kudu	sombot m.	lung
séy (sg)		grass	sooml m.	chief
sibintekul?at		butter (prepared)	soonó pl.	nose
sibinna?ezze		butter (fresh)	sooriye	slaughter
sidám	m.	Amhara	subé?	heifer sheep
siib	,.	outside	suguddá F.	salt
siise		give	su?use	cause to marry
si?iite		(he) sat down	sude/?lnasude	be hung
si?yya		stay; live	sude/?lysuude	hand (tr)
silla	m.	first milk	suud m.	marriage
silme	F.	tick	sunde/?lysuude	(he) got married
			salsald F.	smallpox

<u>Arbore</u>		<u>English</u>	<u>Arbore</u>	<u>English</u>
šér	m.	diarrhea (N)	wáhlo	such-and-such
serre		diarrhoea(v)	waak'	F. God; sky
šesenní	F.	not heavy;light	waarát	m. side
šiftá	F.	bandit	wabúlih	nothing
taabe		like (past)	waddé?	F. roasted meat
taalá?		curds	wade	roast (past)
taank'é	pl.F.	dikdik	wágeréta?árraw	dinner
tafk'é?	F.	flea	waha bada?áno	useless
tárrí	pl. m.	duiker	wa?awa?iyó	F. blessing
tatabe		want	wa?awa?iyte	praise (past)
-taw(suffix)		my	walaye yama	to itch
teb		spoor	waleek'e	(he) scratch (past)
téb	m.	foot	walinyye?te	accompany (past)
tiire		ride	walluk ?ar láabe	gather; collect (tr.)
tiise	pl.	maize cob	walluk koone	(he) gathered together
tirá	F.	liver	walluk k'esse	fold
tokko dáye		unite	walluk yéécce	come together
tóof		snake	wamóok'	fool
tóomaté?	F.	water pot	wáñña	m. old (general)
tufe		spit	wáñnote	(he) become old
tulí?	m.	sickness	warac/waray	m. hyena
tuulle?		feel pain	wasiila	F. brother's wife
tumanté?	sg.	rib	wattí	black
tume		trush (past)	wattose	make black
tuml heelat		gelded ram	wattote	become black
tumtúmo	F.	fist	we?e	call
ture		delay (past)		
t'uraye		become dirty		
t'uré?	F.	dirty thing		

<u>Arbore</u>		<u>English</u>	<u>Arbore</u>		<u>English</u>
wéldere		mix (tr.)	zerbaytú		wall
werbe	m.	fetch water	zergat	m.	locust
woldere		knead	zeyti	F.	oil
worí	m.	family	zírriḡlyte		(he) deny (past)
wuumbe?		trunk	zurge		push
yakka?	F.	fine	zuuge		(he) sharpen (past)
yeelase		(he) separate			
		(past)			
yek'ase		kill			
yenllole		disappoint			
yettege		knew			
yibe		hippo			
yirr	F.	upper arm			
yok'e		(he) despise			
		(past)			
yolowa gade		agree			
yopse		dive into water			
yuub	m.	hole; cave			
zaage		(he) sow (past)			
záh	F.	death			
zanné	pl.	charcoal			
zawte		swim (past)			
zazzá?		heart			
zeehe		melt			
zéh	m.	nape			
zerbač/zerbay	m. sg.	cron piece			
		or a house			

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D E C L A R A T I O N

I, the undersigned, declare that this thesis is my work and that all sources of material used for the thesis have been duly acknowledged.

Name Negussie Abebe

Signature 

Place and date of submission June 14, 1982 I.L.S.