

A CONTRASTIVE ANALYSIS OF THE
PHONOLOGIES OF GEDEO AND AMHARIC

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ABSTRACT

The Process of this study has gone through four main stages. The first stage covers the introductory part of the paper, which deals with the statement of the problem, the value of the study and its limitations. It also presents a literature review of prior works on the phonologies of Gedeo and Amharic, on contrastive studies between Amharic and other Ethiopian languages, and on the theories of Contrastive Analysis.

The second stage, which includes chapters two and three, is the description of the phonologies of Gedeo and Amharic. At this stage, the segmental phonemes and their allophonic variants as well as their distributions in a word or pause group are described. The non-segmental elements are also analysed systematically.

The third stage deals with the work of error predictions, based on the hypothesis of Contrastive Analysis. This stage, which covers the whole of the fourth chapter deals with the prediction of errors expected to be made by Gedeo native speakers learning Amharic.

The fourth stage, which covers the whole of chapter five and six, deals with error analysis to verify or falsify the prediction of errors based on Contrastive Analysis, and it presents a summary of the results. In this section the questions "which approach of Contrastive Analysis should we use?" and "what are the actual areas of difficulty for Gedeo native speakers learning Amharic?" will be answered.

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CHAPTER I

INTRODUCTION

1. THE PROBLEM, AND DEFINITION OF DIACRITICAL MARKS USED

1.1. STATEMENT OF THE PROBLEM

For many years, linguists have been arguing about the possibility of using Contrastive Analysis for the prediction of difficulties for foreign language learners. It is therefore the purpose of this study; (1) to test the area of possibilities and limitations of Contrastive Analysis in the prediction of difficulties for foreign language learners by means of error analysis; (2) to find the area of actual phonological difficulties for Gedeo native speakers in learning Amharic by means of an analysis of the structural differences between the phonologies of Gedeo and Amharic languages; (3) to give some answers from the phonological point of view concerning these two languages.

1.2. IMPORTANCE OF THE PROBLEM

Gedeo, formerly called Derassa, is one of the Sidamo languages of the southern group of the Highland East Cushitic Languages. According to Bender, it is spoken by about two hundred fifty thousand people.¹ But, according to the report of Central Statistical Office, the number of Gedeos is about half a million.² The language area stretches south from Dilla surrounded by Oromo speakers on all sides except the northern tip where it touches the Sidamo speakers.³

With the understanding that Amharic which has a higher social function in Ethiopia at present, is given as medium of

if it included an analysis of errors caused by grammatical, lexical and social factors.

For instance, it is revealed in this paper that /t/ of Amharic (which is absent in Gedeo) is substituted by /i/ when Gedeo native speakers begin to learn Amharic - this is a substitution which is linguistically expected. But those who are well exposed to Amharic and are conscious of their language, substitute /i/ by /t/ - which is explained by social factors. Although these factors, along with others, are necessary, the writer of this paper has limited himself, because of the short time available, to the description of segmental phonemes, suprasegmentals (except intonation) and distribution of the phonemes in his work.

1.4. DEFINITION OF DIACRITICAL MARKS USED

1. The diacritical mark /-/ indicates trill when it occurs on the phoneme /r/:

[turs̺]

But it also indicates palatal nasal when it occurs on the phoneme /n/:

[man̺jĩɔ]

This mark is chosen simply for convenience for typing.

2. The diacritical mark /' / indicates glottalization when it occurs with a voiceless consonant: /p', t', k',/. But it also indicates implosiveness when it occurs with a voiced consonant: /d' /.

3. The diacritical mark [˘] indicates stress when it

occurs on a vowel:

[gagà]

4. But the diacritical marks [' '] indicates translation when they occur at the beginning and ending of a word:

[gagà] ' wax'

2. REVIEW OF THE LITERATURE

2.1. LITERATURE ON AMHARIC AND GEDEO LANGUAGES

Much has been written about the phonology of Amharic, while there is little concerning Gedeo. Prior to this study, Martino Moreno (1937) made an effort in working on Gedeo language entitled *Appunti Sulla Lingua Darasa*, which means Notes on the Language Darasa, which is written in Italian. All other literature on Gedeo is written by Klaus Wedekind. The literature includes lexical, grammatical and phonological studies.

The studies are sketches entitled "a Preliminary Survey of the Basic Structures of Gedeo" which treats the basic generative rules of the language, "A Test of Gedeo orthography" (1977) which deals with reading problems in the Sidamo Languages, "A Short Trilingual Dictionary" (1978) which consists of four thousand frequent words, and "Sidamo, Gedeo, Burji - phonological differences and likenesses" (1980) which provides phonological information.

The writer of this paper used most of this work, especially the phonology. Although there is no prior study on the Contrastive Analysis between Amharic and Gedeo, there are

comparable studies of Amharic and other Ethiopian languages.

The writer of this paper has used the "Amharic English Segmental Phonemes: A Contrastive study," provided by Taddese Beyene (1968) as a model of his analysis.*

Some students have carried out a Contrastive study between Amharic and other Ethiopian languages for their senior essays as partial fulfillment for the degree of Bachelor of Arts at the Addis Ababa University. All of these are written in Amharic. Some of the papers concern the relation between Amharic and Oromo- which is close to the Contrastive Analysis between Amharic and Gedeo.

The Contrastive Analysis of segmental phonemes of Amharic and Oromo languages has been studied by Fshetu Kshede (1963 E.C.). It is solely based on error predictions like that of Taddese Beyene. Gulte Hailu (1968 E.C.) has also carried out a Contrastive analysis of the same languages. His paper is concerned with error analysis based on the errors committed by eighth grade Oromo native speaking students in learning Amharic. His paper tends to justify the validity of error predictions. However, the writer of this paper feels that it is inadequate to reach such a conclusion. Yilma Kshede (1956 E.C.) has also done an error analysis on the same languages. Others like Tariku Lema (1965 E.C.) Negasa Ejeta (1965 E.C.) and Debebe Hailegiorgies

*The writer of this paper has minor differences on some points such as a glottalized stop in Amharic is strongly aspirated in all positions, and the non-glottalized voiceless stops are also aspirated in all positions, there are no initial consonant clusters ...etc. which the writer of this paper does not accept.

2. that the difficulties are chiefly, or wholly, due to the differences between the two languages;
3. that the greater these differences are the more acute the learning difficulties;
4. that the results of a comparison between the two languages are needed to predict the difficulties and errors which will occur in learning the foreign language;
5. that what there is to teach can best be found by comparing the two languages and then subtracting what is common to them, so that what the student has to learn equals the sum of the differences established by the Contrastive Analysis.⁴

With this framework, the following hypotheses, concerning the prediction of errors in phonological categories are suggested by linguists:

1. that a new phoneme in the target language constitutes a difficulty for the native language speakers.
2. that learning a completely new phoneme is much easier than learning one which is partially in a similar class in the target language.
3. that all new phonemes are not equally difficult to learn since some may be more difficult than others due to the differences in articulation at the phonetic level of production and perception.
4. that a new phonetic difference between the native and the target language is sometimes more difficult than phonemic differences.
5. that differences in allophonic variations of the corresponding phonemes, and differences in the distributional variants may result in wrong perception of the same phonemes through confusion with others, as well as wrong pronunciation.⁵

Those who are following the second approach of Contrastive Analysis use the method of error analysis. According to their practice, errors made by a foreign language learner are listed, and then the conflicts between the structures of the native and the target languages are described for discovering the source of interference. Those who are of this opinion reject the idea of error predictions. Their argument is based on the following points:

1. Errors which cannot be predicted by means of Contrastive Analysis can be discovered by error analysis.
2. Contrastive Analysis does not predict difficulties which were previously unknown.
3. "error prediction is not only in most cases unnecessary, but also unfeasible without prior error analysis which has led to generalization in error genesis."

It is therefore the intention and interest of this writer to ask which way of approaching a Contrastive Analysis is more dependable for revealing difficulties of Gedeo native speakers learning Amharic. The only way of answering this question was to use the two approaches, i.e., to predict errors on the basis of Contrastive Analysis and then check against error analysis to verify or falsify the prediction.

CHAPTER II

DESCRIPTION OF GEDEO PHONOLOGY

In this chapter, the phonemes and their allophonic variations as well as their distributions in words or pause groups will be described. The non-segmental elements will also be analysed, and the pattern of vowel sequences and the syllable patterns will be described.

1. AN ORDERED LIST OF GEDEO PHONEMES WITH THEIR ALLOPHONIC VARIATIONS

There are twenty-eight segmental phonemes in Gedeo. Twenty-three of which are consonants, and five of which are vowels. The phonemes are listed below with their phonetic variants, ordered according to point and manner of articulation.

1.1. CONSONANTS

1.1.1. STOPS

/b/: A phoneme with two allophones:

[β], a voiced bilabial fricative, occurring immediately after a vowel:

[gaβɛ] 'trap'

[b] a voiced bilabial stop, occurring elsewhere:

[baɛ] 'hole'

/p'/ A phoneme with the phonetic realization [p'], a voiceless glottalized bilabial stop:

[kʰap'ɛ] 'thatch'

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

[dida] 'to run'

[hid:a] 'root'

/t/: A phoneme with two allophones:

[t^h], a voiceless aspirated dental stop, occurring word initially:

[t^haʔà] 'to break'

[t], a voiceless non-aspirated dental stop, occurring elsewhere:

[but:à] 'bottom'

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

[t'ɛ:nà] 'rain'

[t'ʔt'à] 'to roast'

/ɖ/: A phoneme with the phonetic realization [ɖ], a voiced implosive dental stop:

[ʔaɖ':i] 'take'

[ɖ'ɔk'è] 'mud'

/g/: A phoneme with two allophones:

[ɣ], A voiced velar fricative, occurring in fast speech as a free variant of /g/:

[ɣaxà] 'wax'

g, a voiced velar stop, occurring elsewhere:

[gagà] 'wax'

[ʔaŋgà] 'arm'

/k/: A phoneme with three allophones:

[k^h], a voiceless aspirated velar stop, occurring word initially:

[k^hap'ɛ] 'thatch'

[x], a voiceless velar fricative, occurring in fast speech as a free variant of /k/:

[ɕuxà] 'to carry'

[k] a voiceless non-aspirated velar stop, occurring elsewhere:

[ɕukà] 'to carry'

[kutà] 'to cut'

/k'/: A phoneme with the phonetic realization [k'], a voiceless glottalized velar stop:

[k'ubə] 'ring'

[k'uk'a] 'to cover'

/ʔ/: A phoneme with the phonetic realization [ʔ], a voiceless glottal stop, which becomes elided in fast speech:

[nʔʔ] or [nʔ] 'we'

[ʔad':i] or [ʔad':i] 'take'

1.1.2. FRICATIVES

/f/: A phoneme with the phonetic realization [f], a voiceless labiodental fricative:

[fay:a] 'to become well'

[ʔafa] 'to get'

/s/: A phoneme with the phonetic realization [s], a voiceless dental fricative:

[sa:da] 'to wonder, admire'

[k^hasa] 'tip'

/s̥/: A phoneme with the phonetic realization [s̥], a voiceless palatal fricative:

[haš̥:à]	'night'
[s̥afa]	'leaf'

/h/: A phoneme with the phonetic realization [h], a voiceless glottal fricative:

[haš̥:à]	'night'
[hid̥:à]	'root'

1.1.3. AFFRICATES

/j̥/: A phoneme with the phonetic realization [j̥], a voiced palatal affricate:

[jḁj̥à]	'to be amazed'
[ʔin̥j̥ifatà]	'to win, conquer'

/č̥/: A phoneme with the phonetic realization [č̥], a voiceless palatal affricate:

[mḁn̥j̥ič̥:ə̃]	'person'
[mḁ:č̥:ə̃]	'what'

/č̥ʰ/: A phoneme with the phonetic realization [č̥ʰ], a voiceless glottalized palatal affricate:

[č̥ʰal̥:à]	'only'
[huč̥ʰ:à]	'to work'

1.1.4. NASALS

/m/: A phoneme with two allophones:

[m̥], a voiced labio-dental nasal, occurring immediately before /f/:

[gə̃mf̥ə̃]	'they cooked'
------------	---------------

[m], a voiced bilabial nasal, occurring elsewhere:

[madà]

'wound'

[timà]

'piece of food'

/n/: A phoneme with three allophones:

[n̄], a voiced palatal nasal, occurring immediately before palatals:

[mañjic:ɔ]

'person'

[ɲ], a voiced velar nasal, occurring immediately before velar consonants:

[lɛŋgà]

'two'

[n], a voiced dental nasal, occurring elsewhere:

[ʔanɪ]

'I'

[nagɛʔà]

'peace, health'

1.1.5. LIQUIDS

/r/: A phoneme with two allophones:

[r], a voiced dental flap, occurring intervocalically:

[k^hɔrà]

'dirt'

[r̄], a voiced dental trill, occurring elsewhere:

[r̄aʔà]

'ripe', 'ready'

[tuɾsà]

'to let wait'

/l/: A phoneme with two allophones:

[l̥], a voiceless dental lateral liquid, occurring in word final unstressed syllable:

[hɔl̥:ɪ]

'boast'

[l], a voiced dental lateral liquid, occurring elsewhere:

[ma:là]	'meat'
[jálɔ]	'cattle'

1.1.6. SEMIVOWELS

/w/: A phoneme with the phonetic realization [w], a voiced labiovelar semivowel, which becomes elided in fast speech:

[ʔuw:à]	or	[ʔuà]	'to give'
[wa:wò]	or	[wað]	'not'

/y/: A phoneme with the phonetic realization [y], a voiced palatal semivowel which becomes elided in fast speech:

[həy:ə]	or	hə	'yes sir'
[rɛ:yò]	or	[rɛò]	'to die'

1.2. VOWELS

1.2.1. FRONT VOWELS

/i/: A phoneme with two allophones:

[i̯], a voiceless lax unrounded high front vowel, occurring word finally and with a stressed penultimate syllable

[hun̩j̯ɛ:ni̯]	'They worked'
---------------	---------------

[i], a voiced lax unrounded high front vowel, occurring elsewhere:

[ʔan:i]	his father'
[ʔilɛnà]	'to be born'

/ɛ/: A phoneme with three allophones:

[ɛ̯], a voiceless lax unrounded mid-open front vowel,

occurring word finally and with a stressed penultimate syllable:

[baʔlak₀] 'wide

[ʔit₀] 'he ate'

[e], a voiced slightly lax unrounded mid-closed front vowel, occurring immediately after /y/:

[yeʔe:ni₀] 'he called'

[ɛ], a voiced lax unrounded mid-open front vowel occurring elsewhere:

[t^hʔ:m:ɛ] 'ten'

1.2.2. CENTRAL VOWELS

/a/: A phoneme with two allophones:

[a₀], a voiceless lax unrounded low open central vowel, occurring in word final with a stressed penultimate syllable:

[haʃ:a₀] 'night'

[a], a voiced lax unrounded low open central vowel, occurring elsewhere:

[ʔan:a] 'father'

[ma:ʔnà] 'youngest son'

1.2.3. BACK VOWELS

/u/: A phoneme with the phonetic realization [u], a voiced slightly tense rounded high closed back vowel:

[ʔum₀] 'head'

[ʔuw:a] 'gift'

/ɔ/: A phoneme with three allophones:

[ɔ̥], a voiceless lax rounded mid open back vowel, occurring word finally and with a stressed penultimate syllable:

[wa:wòʔɔ̥] 'no'

[o], a voiced lax rounded mid closed back vowel, occurring after /w/:

[wog:a] 'year'

[ɔ], a voiced lax rounded mid-open back vowel, occurring elsewhere:

[ʔɛlɔ] 'tire some'

[tʰm:ɛ] 'ten'

2. SUPRASEGMENTALS

The suprasegmentals of Gedeo consist of vowel length, consonant gemination and stress. The first two are Phonemic, while stress appears to be a phonetic feature whose position is predicable most of the time.

2.1. VOWEL LENGTH

Phonemically, all vowels can be long and short. Both the long and short vowels occur in all environments in word medial position. The short vowel can also occur word finally. It can also be devoiced word finally and with a stressed penultimate syllable.

A phonetic chart of Gedeo vowel-like segments

	Front vowels			Central vowels			Back vowels		
	vl	short	long	vl	short	long	vl	short	long
	i o	i	i:					u	u:
Mid-high		e	e:					o	o:
Mid-low	ɛ o	ɛ	ɛ'				?	?	ɔ:
Low				a o	a	a:			

Chart 2

A phonemic chart of Gedeo consonants

		bila- bial	labio- dental	dental	pala- tal	retro- flexive	velar	glottal
STOP	vd	b		d			g	
	vl			t			k	ʔ
Glottalized	vl	p'		t'			k'	
implosive	vl					d'		
AFFRICATE	vd				ɟ j			
	vl				ɟ' j'			
	vl				ɟ' j'			
FRICATIVE	vl		f	s	ʃ s			h
NASAL	vd	m		n				
LIQUID Trill	vd			r				
	vd			l				
SEMIVOWEL	vd	w			y			

Chart 3

A phonemic chart of Gedeo vowels

	Front	Central	Back
high	i		u
mid	ɛ		ɔ
low		a	

Chart 4

The following examples are listed to show the short and long vowels occurring in minimal pairs

/i/	[mid'a]	'seed'
/ii/	[mi:d a]	'to hurt'
/ɛ/	[mɛl:a]	'choose'
/ɛɛ/	[mɛ:l:a]	'to sing'
/a/	[bara]	'era, epoch'
/aa/	[ba:rà]	'fat'
/u/	[du:kà]	'to carry'
/uu/	[du:ka]	'follow'
/ɔ/	[mɔ:rà]	'foretell'
/ɔɔ/	[mɔ:rà]	'to steal'

2.2. CONSONANT GEMINATION

Phonemically, there are two degrees of consonant length: short and long. Gemination stands for the lengthening of consonants. With the exception of /h/, all consonants of Gedeo

can be geminated in word medial position. A geminated consonant of Gedeo can be preceded by a consonant like /r/ and /l/ in imperative plural forms.⁸ An example for this is:

[fulc:ɛ]

'take out'

2.3. STRESS

The rules for the occurrence of stress in a word of Gedeo are listed below.⁹

a/ The final syllable of the word stem is stressed:

[gɔgà]

'skin'

[gulbɔ]

'knee'

b/ Except in rare cases, stress remains in its stem final place even if a suffix is attached to it, in which case the penultimate syllable will be stressed:

[gogà-kɛ]

'it is a skin'

[gulbɔ-kɛ]

'it is a knee'

But rare suffixes like -a 'for' attract the stress, in which case the stress moves from the penultimate to the last syllable:

[ʔani-ʔà]

'for me'

[ʔati-ʔà]

'for you'

c/ There will be an additional stress on the penultimate when ever more than two suffixes are attached to the stem:

[huʃata-kɛ -m:àʔa]

'he was a hard worker'

[be:ka-kɛ-m:àʔa]

'he was a wise man'

But this rule does not work when a final suffix like [-ni] loses its vowel through devoicing, thus losing its syllabic

status:

[mine-kè-ni]
[hore-kè-ni]

'it is a house'

'they are cows'

3. PHONEME DISTRIBUTION

The position of /h/ is always word initial whereas that of /č/ is only medial. All the other consonants occur both in initial and medial positions.

3.1. CONSONANT CLUSTERS

In Gedeo, different types of consonant clusters are possible in a word medial position. The number of consonants to come in clusters is always two. But /r/ or /l/ may precede a geminated consonant. Nasals, liquids and glottal stops always occur as the first member of a cluster.¹⁰

The phoneme sequences of clusters are listed below:

Nasal plus stop

/m/ plus voiceless consonants	/mp/
/m/ plus voices	/mb/
/n/ plus voiceless	/nt, nt', nk, nk'/
/n/ plus voiced	/nd, ng, nd'/

Nasal plus Affricate

/n/ plus voiceless	/nč, nč'/
/n/ plus voiced	/nj/

Nasal plus fricative

/m/ plus voiceless	/mf/
--------------------	------

/n/ plus voiceless consonants /ns, n^hs /

Lateral plus stop

/l/ plus voiceless	"	/lt, l ^h t, lk, l ^h k/
/l/ plus voiced	"	/lb, ld, lg, /

Lateral plus Affricate

/l/ plus voiceless	"	/lč, l ^h č /
/l/ plus voiced	"	/lj/

Lateral plus fricative

/l/ plus voiceless	"	/lf, ls, l ^h s/
--------------------	---	----------------------------

Trill plus stop

/r/ plus voiceless	"	/rt, r ^h t, rk, r ^h k /
/r/ plus voiced	"	/rb, rd, rg/

Trill plus Affricate

/r/ plus voiceless	"	/rč, r ^h č /
/r/ plus voiced	"	/rj/

Trill plus Fricative

/r/ plus voiceless		/rf, rs, r ^h s, /
--------------------	--	------------------------------

/n/ is changed to /m/ when it occurs before a labial consonant.
A cluster of /ʔm, ʔn, ʔl, ʔy, ʔw/ is also possible in Gedeo.

3.2. DIPHTHONGS

The vowels of Gedeo do not glide into a diphthong and never come in sequences except that the vowels come in contact when the semi-vowels /w, y/ and the glottal consonants /ʔ, h/ are elided.¹¹ The following are the types of diphthongs formed phonotically across /h, ʔ, w, y/ phonemes in pause groups.

ia	/ani-ʔa/	[ʔania]	'for me'
----	----------	---------	----------

εa	/ʔise-ʔa/	[ʔisèa]	'for her'
εɔ	/reɣɔ/	[reɔ]	'die'
ɔa	/nɔʔɔ-ʔa/	[n.ɔa]	'for us'
au	/ʔiima-ʔuggi/	[ʔi:maug:ɪ]	'put it up'
aɔ	/ʔadda-woda/	[ʔad:aoda]	'when he takes'
ɔi	/waawo-hiyyeeni/	[wa:woiy:e:ni]	'no he said'
ɔu	/giddɔ-ʔuggi/	[gid:ɔug:ɪ]	'put it inside'
ai	/ʔitta-hiyyeeni/	[ʔit:aiy:ɛini]	'he said'

Diphthongs are possible on the phonetic level, but they are not possible phonemically. There is also an elision of identical vowels whenever they come in contact with each other across phoneme boundaries like in the above:

[nɔ:lab:ɔ] 'oh dear'

3.3. SYLLABLE STRUCTURE

All consonants take the syllable initial positions and no consonant takes the syllable final position. The syllabic structure of Gedeo is then interpreted as the open type.¹² The syllabic patterns of Gedeo are listed below:

Syllabic systems	Examples	
CV-	/fo-fa/	'to crose'
CVV-	/faa-na/	'foot step'
-CV	/fa-la/	'pray'
-CVV	/k'aa-nɛɛ-ssa/	'shame'
-CCV	/wo-lli/	'big'

-CCVV 11	/k'i- <u>tt</u> ee-sse-ma/	'to check'
-CCV 12	/ʔa- <u>nga</u> /	'arm'
-CCVV 12	ba- <u>rsii</u> -sa-mma/	'teacher'
-CCCV 122	/fu- <u>lcce</u> /	'take out'

Key

C = Consonant

V = Vowel

CC = Gemination
11

CC = Consonant clusters
12

VV = Long vowels

CHAPTER III

DESCRIPTION OF AMHARIC PHONOLOGY

1. AN ORDERED LIST OF ALL SEGMENTAL PHONEMES WITH THEIR ALLOPHONIC VARIATIONS

There are forty one segmental phonemes in Amharic. Thirty four of which are consonants; the other seven are vowels. The phonemes are listed below with their allophonic variants ordered according to point and manner of articulation. Phonemes which are the same as those of Gedeo in both phonemic and allophonic aspects are not described here to avoid unnecessary repetition. Such phonemes are simply listed with their examples against them, and reference is made to the corresponding segmental phonemes in Gedeo.

One of the most difficult tasks in determining the phonetic features of the allophones is to measure the degree of aspiration. The most objective way of measuring the feature of aspiration would be recording the pressure created in the mouth during the production of a specific sound of an utterance. Such measurement can be obtained by means of a kymograph, an instrument for obtaining graphs of certain aspects of connected speech. Explanatory bulbs and the study of sub-glottal pressure also would be helpful instruments to measure the pressure.¹³

However, the writer of this paper did not take these measurements due to lack of these instruments. Instead, he used a thin piece of paper which was held-close to the mouth of an informant. The movements of the paper caused by the puff of air

released during the production of a specific sound were observed. If this is to be taken as the criterion for measuring a feature of aspiration, then /p, t, k/ are aspirated in word initial position, but very slightly aspirated in other positions. The glottalized stop phonemes /p', t', k'/ are slightly aspirated in initial position and non-aspirated in all other positions. This is true for the ... dialect of Addis Ababa. On the basis of this experiment, it can be said that /p, t, k/ are aspirated word initially and /p', t', k'/ are non-aspirated in all positions; this, which the writer of this paper used for the purpose of comparison between Amharic and Gedeo languages, opposes the statement which says that /p, t, k/ are aspirated and /p', t', k'/ are strongly aspirated in all positions.¹⁴

1.1. CONSONANTS

There are thirty three consonants in Amharic. The labialization of velars g^w , k^w , k'^w , glottal $/h^w/$ and velarization of labials $/b^w$, f^w , $m^w/$ is phonemic. Dentals can also be rarely labialized. Other consonants except $/s'/$ and $/p'/$ can also be labialized across morpheme boundary.

1.1.1. STOPS

$/b, b^w, p, p', d, t, t', g, k, k', g^w, k^w, k'^w ?/$ are the stop phonemes of Amharic, $/p, p' ?/$ are found in loan words. $/p'/$ is very rare, occurring only in loan words from Greek. $/?/$ is commonly used in the Menz dialect of Amharic, replacing $/k'/$ after vowels.¹⁵ In the other dialects of Amharic, $/?/$ is

rare, occurring mainly in loan words from Geez, /p/ is also found in Anharic loan words from European languages. It is mostly used in free variation with the voiced counterpart /b/:

/b/: The same as that of Gedeo

[bahir] 'sea'

[aβəβa] 'flower'

/b^w/: A phoneme with two allophones:

[β^w], a voiced velarized bilabial fricative, occurring immediately after a vowel:

[aβ^wara] 'dust'

[b^w], a voiced velarized bilabial stop occurring elsewhere.

It occurs in minimal pairs with the phoneme /b/:

[b^war:ək'ə] 'he became joyful'

[b ar:ək'ə] 'to go off accidentally
(of a gun)'

/P/: A phoneme with two allophones:

[p^h], a voiceless aspirated bilabial stop occurring word initially [polis] 'police'

[p], a voiceless, non-aspirated bilabial stop, occurring elsewhere:

[ɿsport] 'sport'

/p'/: A phoneme with the phonetic realization [p'], a voiceless tense, non-aspirated glottalized bilabial stop, occurring in loan words:

[p'ap':as] 'pope'

[lap':is] 'rubber'

/d/: The same as that of Gedeo:

[d̥em:əna]

'cloud'

[sɪnde]

'wheat'

/t/: The same as that of Gedeo:

[t^həw]

'leave it'

[baltet]

'old woman'

/t'/: The same as that of Gedeo:

[tʰɪr]

'January'

[atʰɪnt]

'bone'

/g/: A phoneme with the phonetic realization [g], a voiced velar stop:

[gəp̥s]

'barley'

[bəga]

'summer'

/k/: A phoneme with two allophones:

[k^h], a voiceless aspirated velar stop, occurring word initially

[k^hɪrəmt]

'rainy season'

[k], a voiceless non-aspirated velar stop, occurring elsewhere

[atɪkɪlt]

'vegetable'

/k'/: The same as that of Gedeo:

[kʰəcʰ:ɪn]

'thin'

[bəkʰ:a]

'enough'

/g^w/: A phoneme with the phonetic realization [g^w] a voiced labialized velar stop which contrasts in identical

environments with /g/:

[aŋg ^w al:əw]	'clear up'
[aŋgal:əw]	'you make some body to lay down on the back'

/k^w/: A phoneme with the phonetic realization [k^w], a voiceless labialized velar stop

[sɪk ^w :ar]	'sugar'
[ak ^w :ay:a]	'equivalent'

/k'^w/: A phoneme with the phonetic realization [k'^w], which contrasts in identical environments with /k'/:

[ak' ^w atə]	'increasing'
[ak'atə]	'it is becoming difficult'

1.1.2. FRICATIVES

/f/: The same as that of Gedeo:

[fiy:əl]	'goat'
[afəɾ]	'soil'

/f^w/: A phoneme with the phonetic realization [f^w], a voiceless velarised labio-dental fricative:

[f ^w af ^w ate]	'rain fall'
[af ^w ač':ə]	'he has whistled'

/s/: The same as that of Gedeo:

[sar]	'grass'
[masəro]	'pot'

/s'/: A phoneme with the phonetic realization [s'], a voiceless glottalized dental stop. It is treated here as a phoneme

which occurs in free variation with the phoneme /t'/:

[s'aʔot] or [t'aʔot] 'goddes'

[s'əgur] or [t'əgur] 'hair'

/z/: A phoneme with the phonetic realization [z], a voiced dental fricative:

[zər] 'seed'

[mərz] 'poison'

/z̥/: A phoneme with the phonetic realization [z̥], a voiced palatal fricative which alternates in certain environments with the phoneme /j/:

[z̥əmbər] or [jəmbər] 'sun'

lɪz̥ or [lɪj] 'son'

/s̥/: The same as that of Gedeo:

[ɪrs̥a] 'farm'

[s̥əmiz] 'shirt'

/h/: The same as that of Gedeo:

[haya] 'twenty'

[ahun] 'now'

/h^w/: A phoneme with the phonetic realization [h^w], a voiceless labialized glottal fricative:

[h^wala] 'back'

1.1.3. AFFRICATES

/tʃ/: The same as that of Gedeo:

[tʃərba] 'back'

[arəʃ:ə] 'he became old'

/č/: The same as that of Gedeo

[mə ʃ : ə]

¹ when

$$[\check{c} \ddot{t} g : a r]$$

'famine'

/c^v/: The same as that of Gedeo:

$$[\chi, \partial w]$$

' salt '

$$[ac^y : ir]$$

'short'

1.1.4. NASALS

/m/: The same as that of Gedeo:

[gambō]

'jar'

[gəmfə]

'porridge'

/m^w/: A phoneme with the phonetic realization [m^w], a voiced velarized labiodental nasal which occurs in minimal pair with the phoneme /m/:

W W : a

' dissolved '

[mam: a]

'a high tower for
keeping birds out of
someone's field'

/n/: Phoneme with two allophones:

[ŋ], a voiced velar nasal, occurring immediately before a velar consonant:

[alɒŋga]

' whip '

[manka]

' fork '

[n] a voiced dental, occurring elsewhere:

[nəb:ərə]

'there was'

/ñ/ A phoneme with the phonetic realization [ñ], a voiced palatal nasal:

[agəñ:ə]

'he found'

[səñ:ə]

'he accompanied'

1.1.5. LIQUIDS

/r/: A phoneme with the phonetic realization [r], a voiced trill dental liquid:

[bərə]

'ox'

[bɪr:]

'Ethiopian currency'

/l/: A phoneme with the phonetic realization [l], a voiced lateral dental liquid:

[lam]

'cow'

[bal]

'husband'

1.1.6. SEMI-VOWELS

/w/: A phoneme with the phonetic realization [w], a voiced labiovelar semivowel:

[wət':a]

'he went out'

/y/: A phoneme with the phonetic realization [y], a voiced palatal semivowel:

[ay:ə]

'he saw'

[yəne]

'mine'

1.2. VOWELS

1.2.1. FRONT VOWELS

/i/: A phoneme with the phonetic realization [i], a voiced

tense unrounded high front vowel:

[t ^h arik]	'history'
[mist]	'wife'

/e/: A phoneme with the phonetic realization [e], a voiced slightly lax mid-closed front vowel:

[bet]	'house'
[set]	'woman'

1.2.2. CENTRAL VOWELS

/ɪ/: A phoneme with the phonetic realization [ɪ], a voiced lax unrounded high central vowel:

[sɪm]	'name'
[tɪrs]	'tooth'

/ə/: A phoneme with the phonetic realization [ə], a voiced lax unrounded high mid central vowel:

[sət':ə]	'he gave'
[sə ^v l:əmə]	'he gave a reward'

/a/: A phoneme with the phonetic realization [a], a voiced lax unrounded low central vowel:

[sar]	'grass'
-------	---------

A phonetic chart of Amharic

Consonant-like segments

		bilabial	labio-dental	dental	palatal	velar	glottal
STOP	vd	b		d		g	
	vl	p		t		k	
	aspirated vl	p ^h		t ^h		k ^h	?
	glottalized vl	p'		t'		k'	
	labialized vd	b ^w				g ^w	
	vl					k ^w , k' ^w	
AFFRICATE	vd				ɟ		
	vl				ç		
	glottalized vl				ç'		
FRICATIVE	vd	β		z	ʃ		
	vl		f	s	ʃ		h
	glottalized vl			s'			
	labialized vd	β ^w					
	vl		f ^w				h ^w
liquid Trill	vd			r			
	lateral vd			l			
NASAL	vd	m	ɱ	n	ɲ		
	labialized vd	m ^w					
SEMI-VOWEL	vd	w			y		

Chart 5

34
7
41

Phonemic chart of Amharic Consonants

		bilabial	labio-dental	dental	palatal	velar	glottal
STOP	vd	b		d		g	
	vl	p		t		k	ʔ
	glottalized vl	p ^h		t ^h		k ^h	
	labialized vd	b ^w				g ^w	
	vl					k ^w , k ^{hw}	
AFFRICATE	vd				ɟ		
	vl				ɕ		
	glottalized vl				ɕ ^h		
FRICATIVE	vd			z	ɕ		
	vl		f	s	ɕ		h
	glottalized vl			s ^h			
	labialized vl		f ^w				h ^w
LIQUID trill	vd			r			
	lateral vd			l			
NASAL	vd	m		n	ɲ		
	labialized vd	m ^w					
SEMI-VOWEL	vd	w			y		

Chart 6

Phonetic Chart of Amharic vowel-like segments

	Front	Central	Back
high	i	ɨ	u ^u o u
mid	e	ə	o
low		a	

Chart 7

Phonemic Chart of Amharic vowels

	Front	Central	Back
high	i	ɨ	u
mid	e	ə	o
low		a	

Chart 8

1.2.3. BACK VOWELS

/u/: a phoneme with two allophones:

[u̥], a voiceless lax rounded high back vowel, occurring word finally, following after a first person singular subject marker:

[mɔt' : ah_{u̥}]

'I came'

[gəð:əlhɨ]

'I killed'

/u/, a voiced, tense rounded high back vowel, occurring elsewhere:

[sum]

'authority'

[hulət:]

'two'

/o/: A phoneme with the phonetic realization /o/, a voiced slightly lax rounded, high mid closed back vowel:

[mora]

'fat'

[k^həβəro]

'drum'

2. SUPRASEGMENTALS

Gemination of consonants is the main suprasegmental in Amharic. It differentiates lexical and grammatical meanings. Other features, like vowel length and stress, do not contrast either lexical or grammatical meaning.

2.1. GEMINATION OF CONSONANTS

All consonants except /h/ can be geminated in all positions except word initially.

Gemination differentiates lexical meanings occurring in minimal pairs:

[gəna]

'yet'

[gən:a]

'Christmass'

[wana]

'swimming'

[wan:a]

'main'

Gemination also differentiates grammatical meanings occurring in minimal pairs:

[mɔsam]	'to kiss'
[mɔs:am]	'to be kissed'

gemination frequently occurs on the penultimate radical of three or more syllabic verbs and on the final radical of two syllabic verbs in Amharic. The forms differ, depending on the extent to which a particular verb geminates the radical.¹⁶

Some class of verbs geminate the penultimate radical consonant only in the past tense:

[sɔb:ɔrɔ]	'he broke'
[yɛsɔβral]	'he breakes'

Some other class of verbs geminate the penultimate radical consonant throughout the conjugation:

[fɔl:ɔgɔ]	'he wants'
[mɔfɔl:ɔg]	'to want'

Others geminate the penultimate radical consonant in the infinitive and imperative:

[mɔrɔm:ɔrɔ]	'he examined'
[yɛmɔrɔm:ɪral]	'he examines'
[mɔmɔrmɔr]	'to examine'

2.2. STRESS

Cowley and others said the following about the stress of Amharic, "stress in Amharic runs with an almost even distribution on each syllable. It is often difficult to decide where the stress

actually falls in an Amharic word...sometimes there seems to be stress the vowel just before or just after a geminated consonant".¹⁷

The writer of this paper has also faced a difficulty to decide where the stress actually falls in an Amharic word. However, there seems to be one main stress phonetically within an Amharic word

səb:ə̀rə	'he break'
sət':ə	'he gave'
kəβə̀rə	'drum'
mələ̀	'he swore'
t'ərep':ez:a	'table'
k'ork'or:ə	'thin'
kuta	'national dress'
grān:a	'left handed'
səb:ə̀rat	'he broke it'
gira	'left'
birtukan	'orange'
atənt	'bone'

The above paradigm indicates that stress in Amharic occurs penultimately if the word ends in a vowel. But it occurs on the final syllable of a word if the word ends in a consonant.

2.3. VOWEL LENGTH

Amharic does not have the feature of vowel length for expressing lexical or grammatical meanings. Neither does vowel length occur phonetically in the language. However, a vowel can

be lengthened in normal speech for expressing emotional feelings. But; this is insignificant since it cannot be compared with the phonemic feature of vowel length in Gedeo.

3. PHONEME DISTRIBUTION

All phonemes occur in all positions with the exception of /n̄/, which does not occur in word initial position.¹⁸

3.1. CONSONANT CLUSTERS

The maximum number of consonants in a cluster is always two.¹⁹ Amharic consonant clusters occur in medial and final positions of a word. But, some clusters occur word initially too, those that do occur initially being of the type stop plus liquid.²⁰ However, an optional helping vowel can be inserted between the liquids and the preceding consonants:

[grān:]	'left handed'
or [gīrān:]	'left handed'

Although it is possible for clusters to occur in both medial and final positions, the final clusters are rather limited. In final clusters, usually, /n, r, s, m, l, / and rarely, /b, d, f, g, k, t, t', s, k', p', s', / occur as first element.²¹

Every consonant can combine with every other consonant in medial position of a word or pause group, except /h/. /h/, as a first member of a cluster, does not combine with any other phoneme. But, it occurs as a second member of a cluster in some

dialects of Amharic when the pronominal suffix /-h/ follows a consonant.

3.2.1. ASSIMILATION OF CONSONANTS

Consonant assimilation takes place when consonants which are produced at similar points of articulation follow each other immediately within one word or one pause group.²² The Type of assimilation is regressive:

t+	$\begin{bmatrix} t' \\ d' \\ s \\ s' \\ z \end{bmatrix}$	/t't'/	/yəbet-t'əlla/	[yebet':ə1:a]	'home made bear
		/dd/	/at-dəllɪl/	[ad:ə1:ɪl]	'do not deceive'
		/ss/	/bet-sərr'a/	[bes:ər:a]	'he build a house
		/s's'/	/at-s'af/	[as':af]	'do not write'
		/zz/	/at-zərga/	[az:ərga]	'do not make it stretch'
t'+	$\begin{bmatrix} t \\ d \\ z \end{bmatrix}$	/tt/	/mɪt'-təyazəčč/	[mɪt:əyazəč:]	'she is in labour'
		/dd/	/lɪt'-dərrək'ə/	[lɪd:ər:ək'ə]	The bark is dried'
		/zz/	/lɪt'-zərəgga/	[lɪz:ərəg:a]	'he stretched the bark'
k+	$\begin{bmatrix} g \\ k' \end{bmatrix}$	/gg/	/luk-gɪzza/	[lug:ɪz:a]	'you buy a paper'
		/k'k'/	/luk-k'əmma/	[luk'əm:a]	'he snatched a paper'
k'+	$\begin{bmatrix} k \\ g \end{bmatrix}$	/kk/	/yəsuk'-kɪsə1/	[yəsuk:ɪsə1]	'the charcoal is for a shop'
		/gg/	/mak'-gəz:a/	[mag:əz:a]	'he bought a hand woven wool'

g+	$\begin{bmatrix} k \\ k' \end{bmatrix}$	/kk/	/nug-kəmmər/	[nuk:əm:ər]	'he piled nug'
		/k'k'/	/yənug-k'it'əl/	[yənuk':it'əl]	'the leaf of a nug'
b+	f	/ff/	/lab-fəssəsə/	[laf:əs:əsə]	'sweat is flowing'

In addition to similar points of articulation, dental sibilants become assimilated to the following palatal sibilants:

z +	$\begin{bmatrix} s \\ z \end{bmatrix}$	/ss/	/muz-sit'an/	[mus:it'an]	'give me a banana'
		/z̥z̥/	/yəmuz-z̥ərba/	[yəmuž:ərba]	'the back of a banana'
s+	$\begin{bmatrix} s \\ z \\ z̥ \\ s' \end{bmatrix}$	/s̥s̥/	/as-s̥əbbər/	[as̥:əb:ər]	'he horrified some one'
		/zz/	/as-zərɾa/	[az:ər:a]	'he caused to be sowed'
		/z̥z̥/	/as-z̥əmmər/	[az̥:əm:ər]	'he caused to begin'
		/s's'/	/as-s'afə/	[as':afə]	'he caused to be written'

When /n/ precedes the labials /b, p, f/, it changes to a labial without affecting the second members:

n+	$\begin{bmatrix} b \\ p \\ f \end{bmatrix}$	= m + $\begin{bmatrix} b \\ p \\ f \end{bmatrix}$	/gɪnb/	[gɪmb]	'building'
			/yəman-polis/	[yəman ^ɪ polis]	'whose police'
			/gənfo/	[gəɱfo]	'porridge'

/w/ labializes a preceding velar after which it becomes elided:

/yəbəg-wət'/	[yəbəg ^w ət']	'dish'
/yəbəl ^g ə-wər/	[yəbəl ^g wər]	'a month of spring'

/i/ and the semivowel /y/. This happens whenever /y/ is a first member of a cluster:

/ay-bəlam/ [aybəlam] or [aibəlam] 'he won't eat'
 /ay-t'ət':am/ [ayt'ət':am] or [ait'ət':am] 'he won't drink'

When /y/ occurs following a consonant, it palatalizes the preceding consonant after which it becomes elided:

/bet-ye/ [bet^ye] 'my house'
 /lɪbb-yadrɪg/ [lɪb^y:adrɪg] 'be careful'

/y/ may be inserted between the vowels /i/ and /a/ when they occur in succession:

/nɪgəri-at/ [nɪgəriyat] 'tell her'
 /mari-at/ [mariyat] 'excuse her'

3.2. VOWEL SEQUENCES

When the following vowels occur in succession, certain changes take place:

ə+a /a/ /lə-antə/ [lantə] 'for you'
 u+a /ua/or/wa/ /nɪgəru-at/ [nɪgəruat] or [nɪgərwat] 'tell her'
 o+a /oa/or/wa/ /bəlto-al/ [bəltoal] or [bəltwal] or [bəl^wal] 'he has eaten'
 e+a /ya/or/ea/ /bərə-accɪn/ [bəryač:ɪn] or [bər^yač:ɪn] or [bərəac:ɪn] 'our ox'
 a+i /a/ /amsa-ɪgɪr/ [amsagɪr]
 ə+i /ə/ /lə-ɪne/ [ləne] 'for me'

/e/ changes to /ə/ after a palatal consonant:

/sət'ɨč:e/ [sət'ɨč:ə] 'I have given'

/i/ changes to, /ɨ/ after a palatal consonant:

/hiʃi-bbət/ [hiʃɨb:ət] 'go' comand

/sičiw/ [sič'ɨw] 'give him'

/e/ and /ə/ are used interchangeably due to dialeatal variation.

In the dialect of Menz, /o/ is realized as a central mid rounded vowel but this is not the case in the dialect of Addis Ababa.

Diphthongization is phonetic rather than phonemic in Amharic:

/bərəçacč'in/ [bəreač'ɨn/ 'our ox'

/mazya/ [mazia] 'april'

/sət't'uat/ [sət':uat] 'they gave her'

3.3. THE SYLLABIC STRUCTURE OF AMHARIC

Open and closed syllabic patterns are possible in Amharic. From the point of view of syllabic pattern, some students of linguistics may treat gemination of Amharic as a cluster of consonants. The supporting evidences for this are, firstly, a geminated consonant does not occur immediately before or after another consonant, CCC (three consonantal clusters) is not possible in the language. Secondly, a geminated consonant does not occur preceding another consonant, which is identical to it, in a pause group. There will be an insertion of /ɨ/ whenever such environments occur:

/lɪbb-bəl/	[lɪbːɪbəl]	'be careful'
/tɪgg-gɪba/	[tɪgːɪba]	'get in'

Due to these facts, the syllabic pattern CCV is assigned to both a geminated consonant followed by a vowel and to a cluster of two different consonants followed by a vowel. Therefore, from the syllabic structure point of view, gemination is a case of consonant clusters.

In this paper however, gemination and cluster of consonants are treated separately in such a way that gemination, which is an elongation of a consonant, is classified as part of the suprasegmentals, whereas clusters as an aspect of phonemic distribution. Because some clusters occur word initially while a geminated consonant does not. This shows that gemination does not occur in all positions where clusters occur. Therefore, the syllabic pattern can be assigned by CC for gemination and CC for consonantal clusters to indicate gemination is a separate case.

The other difficulty in describing the syllabic patterns of Amharic lies determining the CVC vs the CCV syllable pattern in word medial or final position. The CVC pattern of Amharic, like /bet/, 'house'; but when it occurs in medial position, like /manta/ 'twin', there is a possibility of dividing it into either:

/mən-ta/	(CVC-CV)
or /mɔ-nta/	(CV-CCV)

In such cases the alternatives will be either to take the CCV pattern ignoring the CVC and VC, or vice versa.

The major syllabic patterns, occurring in a monosyllabic word of Amharic, are listed below for the sake of a convenient comparison of Gedeo and Amharic:

V	/a-sa-ma/*	'pig'
VC	/af/	'mouth'
VCC 12	/alk/	'you said'
VCC 11	/at't'/	'lack'
CV	/na/	'come'
CVC-	/lab/	'sweat'
CVCC- 12	/sərg/	'widing'
CVCC 11	/sidd/	'vulgar'
CCVC 12	/grar/	'acacia'
CCVCC 12 12	/tlant/	'yester day'
CCVCC 12 11	/graññ/	'left handed'

* The writer could not find a mono-syllabic word for the syllabic pattern of V

CHAPTER IV

ERROR PREDICTIONS

In this chapter, the phonologies of Amharic and Gedeo will be compared and contrasted. Certain types of problems expected to arise for Gedeo speakers learning Amharic are predicted by means of Contrastive Analysis /hereafter CA/. The difficulties predicted here will later on be checked against empirical data.

1. COMPARISON OF THE CORRESPONDING PHONEMES

Gedeo does not have the phonemes /p, s', z, ʒ, t, ɒ/ and the labialization of velars as well as the velarization of labials which do however exist in the phonemic inventory of Amharic. These phonemes are listed in charts 9-12, showing their corresponding patterns in the two languages.

As these charts show, the phonemes /p, s', z, ʒ, t, ɒ/ constitute a zero category in Gedeo both phonemically and phonetically. The nearest similar phonemes of Gedeo are /p'/ or /b/ for /p/, /s/ for /s'/ and /z/, and /ʒ/ for /ʒ/.

The phonemes /p', p, b/ share similar features except that they differ in voicing and glottalization. Therefore /p/ of Amharic may be wrongly pronounced as /p'/ or /b/ by Gedeo speakers who would add the features of glottalization or voicing respectively.

/s, s', z/ share similar features except that the phonemes /s', z/ of Amharic have the additional features of glottalization and voicing respectively. Therefore the Gedeo speakers are

expected to substitute the phonemes /s', z/ of Amharic by the phoneme /s/ of Gedeo.

The nearest phoneme for /ȶ/ of Amharic is the Gedeo /š/. Both are similar in all features except that Amharic /ȶ/ has the additional voicing feature. Therefore, the Gedeo native speakers are expected to substitute /ȶ/ by /š/. However, the features of voicing and glottalization are not a new phenomenon for Gedeo native speakers, since both are manifested in some other phonemes of Gedeo, such as in stops and affricates. The absence of voicing and glottalization in fricatives is nothing but an accidental gap. Therefore it is expected that the Amharic phonemes /p, s', ȶ/ may constitute the least difficulty for Gedeo native speakers in learning Amharic.

The Amharic phonemes /ɨ, ɓ/ are expected to create the greatest difficulties, because these vowels which are produced at the central high and mid areas of articulation are non-existent in Gedeo speech.

The nearest similar phoneme in Gedeo for the phoneme /ɨ/ is /i/. These two sounds are similar in all features except that /i/ of Gedeo is front while /ɨ/ is central. Therefore, the Gedeos are expected to substitute the /ɨ/ phoneme by /i/ when they learn Amharic.

The phoneme /a/ of Gedeo is the nearest similar to /ɓ/ of Amharic. Therefore, the probable error for Gedeos in learning Amharic is that they may substitute /ɓ/ by /a/ of Gedeo in all positions.

The labialization of the velars /g^w, k^w, kⁱw/ and of the glottal /h^w/, as well as velarization of the labials /b^w, f^w, m^w/, are phonemic in Amharic, but both of these features do not exist in Gedeo segments. All other consonants of Amharic except those which are borrowed and those which are of minimal importance, like /s', p',/ can also be marked phonetically for the feature of labialization.

Since this feature is foreign to Gedeo, the Gedeo native speakers may have a significant difficulty in producing sounds like /k^w, g^w, b^w/ . Therefore, in such cases, Amharic learners of Gedeo may drop the feature of labialization. For instance the word /m^wamm^wa/ 'dissolved' of Amharic may be read as /mamma/ 'watch tower for keeping birds from one's field'.

2. COMPARISON OF PARTIALLY SIMILAR AND PARTIALLY DIFFERENT PHONEMES

In this section, differences and similarities in the phonetic realizations of the allophones of the corresponding phonemes between Amharic and Gedeo will be compared and contrasted. A number of difficulties are predicted on the basis of CA, based on the assumption that when the phonetic and phonological differences between first and target languages are greater, the learning problem is also greater, and vice-versa. To this idea, 'Mach' said, "Differences in the phonetic realization of the allophones of the corresponding phonemes and differences in the positional variants... may result in wrong

perception of same phonemes through confusion with others, as well as wrong pronunciation.²³

2.1. DIFFERENT PHONEMIC ABSTRACTIONS
WITH THE SAME PHONETIC REALISATIONS IN
AT LEAST ONE OCCURRENCE

The phonemes /e, o, ñ/ do not exist in Gedeo, but they occur phonetically as allophones of the phonemes /ɛ, ɔ, n/ respectively. This indicates that the phonemes /ɛ, ɔ, n/ of Gedeo intersect with the phonemes /e, o, ñ/ of Amharic when these occur after /y, w/ and before palatal consonants respectively.

The Amharic phonemes /e, o, ñ/ are partially similar and partially different to those of the corresponding phonemes /ɛ, ɔ, n/ of Gedeo.

/ñ, e, o/ are the phonetic realizations of the phonemes /ñ/ or /n/, /e/ and /o/ of Amharic, respectively. These are also allophones of the phonemes /n, ɛ, ɔ/ of Gedeo respectively.

The sound /ñ/ which is an allophone of /n/ in Gedeo, occurs only before a palatal consonant while it also occurs in intervocalic medial and final positions in Amharic. Consequently it is predicted that considerable difficulties will be faced by native Gedeo speakers when it occurs intervocalically, while its pronunciation will be easy when it occurs before palatal consonants in Amharic.

The sounds /ɛ, ɔ/ of Gedeo are relatively more open and lax

than those of Amharic /e, o/. The sounds /e/ and /o/ which are allophones of the phonemes /ɛ/ and /ɔ/ in Gedeo occur only after /y/ and /w/ respectively in the native language, while in the target language /Amharic/, they occur in all other positions; consequently, the pronunciation of these sounds is expected to be easy for native Gedeo speakers when these occur in Amharic after the phonemes /y, w/, but they may result in a foreign accent pronunciation when they occur in any of the other positions.

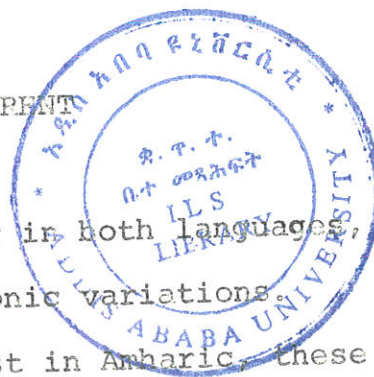
2.2. FAMILIAR PHONEMES WITH DIFFERENT

ALLOPHONIC VARIATION

The phonemes /k, g, l, i, a, u,/ occur in both languages but the two languages have different allophonic variations. Some phonetic varieties of Gedeo do not exist in Amharic, these are the /x/ of /k/, /ɣ/ of /g/, /l̥/ of /l/, /i̥/ of /i/, and /ḁ/ of /a/.

Since these phonetic varieties do not exist in Gedeo, the Gedeo native speakers may have problem of transferring into Amharic the Gedeo feature of voicelessness of liquid in final position and of vowels in unstressed final position of words. This may result in wrong perception of the corresponding Amharic phonemes as well as in wrong pronunciation of their phonetic realizations.

As far as /u/ is concerned, there are two allophonic variations in Amharic, whereas there is only one phonetic realization in Gedeo. Although the voiceless variant of /u/ that exists in Amharic does not exist in the phonology of Gedeo,



A phonetic chart of Gedeo-Amharic consonant - like segments

		bila- bial	labio- dental	dental	pala- tals	retro- flex	velars	glot- tals
STOP	vl	P (LA)		t			k	ʔ (LA) (G)
	vd	b		d			g	
Aspirated	vl	p ^h		t ^h			k ^h	
Glottalized	vl	P' (LA) (G)		t'			k'	
Labialized	vl						k ^w , k' ^w (A)	
	vd	b ^w (A)					g ^w (A)	
Explosive	vd					d' (G)		
FRICATIVE	vl		f	s	ʃ		x (G)	h
	vd	β (A)		z (A)	ʒ (A)		ɬ (G)	
Glottalized	vl			s' (A)				
Labialized	vl		f ^w (A)					h ^w (A)
	vd	β ^w (A)						
AFFRICATE	vl				ʧ			
	vd				ʤ			
glottalized	vl				ʧ'			
LIQUID Trill	vd			̠, ̡				
Lateral	vl			l̥ (G)				
	vd			l				
NASAL	vd	m		n	ɲ (A)			
Labialized	vd	m ^w (A)						
SEMI-VAWEL	vd	w			y			

Chart 9

A phonemic chart of Gedeo-Amharic consonants

		bila- bial	labio- dental	dental	pala- tal	retro- flex- ive	velar	glot- tal
STOP	vl	p(L)		t			k	ʔ(G), (LA)
	vd	b		d			g	
Glottalized	vl	pʰ(LA) pʰ(G)		tʰ			kʰ	
Labialized	vl						kʷ, kʷʰ(A)	
	vd	bʷ(A)					gʷ(A)	
Implosive	vd					dʰ(G)		
FRICATIVE	vl		f	s	ʃ			h
	vd			z(A)	ʒ(A)			
Glottalized	vl			sʰ(A)				
Labialized	vl		fʷ(A)					hʷ(A)
AFFRICATE	vl				ʧ			
	vd				ʤ			
Glottalized	vl				ʧʰ			
LIQUID Trill	vd			r				
	vd			l				
NASAL	vd	m		n	ṇ(A)			
Labialized	vd	mʷ(A)						
SEMI-VOWEL		w			y			

Chart 10

A phonetic chart of Gedeo-Amharic vowel-like segments

	Front			Central			Back		
	vl	short	long	vl	short	long	vl	short	long
high	i _o (G)	i	i:(G)		ɨ(A)		u _o (A)	u	u:(G)
Low-high		e	e:(G)		ə(A)			o	o:(G)
Low-mid	ɛ(G)	ɛ(G)	ɛ:(G)				ɔ(G)	ɔ(G)	ɔ:(G)
Low				ɑ(G)	a	a:(G)			

Chart 11

A phonemic chart of Gedeo-Amharic vowel

	front	central	back
high	i	ɨ(A)	u
mid-high	e(A)	ə(A)	o(A)
mid-low	ɛ(G)		(G)
low		a	

Chart 12

Key

In charts 9 -12

(A) = The segment is found in Amharic only.

(G) = The segment is found in Gedeo only.

(LA) = The segment is found in Amharic Loan words from Geez or European languages

(G), (LA) = The segment is found in Gedeo as well as in Amharic loan words

the Gedeo native speakers may only face a relatively small problem in perceiving this sound while learning Amharic, because the absence of /y/ in Gedeo is only an accidental gap, as all the other vowels of Gedeo have the voiceless varieties.

2.3. SIMILAR PHONEMES WITH SIMILAR ALLOPHONIC VARIATIONS IN THE TWO LANGUAGES

The phonemes /d, ʃ, č, č', f, s, š/ and /h/ have one phonetic realization each. These occur in similar environments in both languages except that /č/ and /h/ have a limited distribution in Gedeo. The others, /b, t, m/ have two, and /n/ has three allophonic varieties in the two languages. Every allophone occurs in the same environment in the two languages.

In applied linguistics, the hypothesis has been put forward that learning a foreign language can be facilitated wherever there are similarities between the structures of the native and the target languages. Carroll²³ has this to say regarding this point:

"The hypothesis of applied contrastive linguistics is that wherever there are similarities, learning can be facilitated, and wherever there are contrasts, learning may be retarded or interfered with. In the psychology of learning, facilitation and interference phenomena are considered under the genetic concept of transfer... transfer of learning or transfer of training. Facilitation and interference are spoken of as representing positive or negative transfer."²⁴

On the basis of this hypothesis, the Gedeo speakers are expected to have the least difficulty in producing the above phonetic realization of Amharic.

3. COMPARISON OF THE SUPRASEGMENTALS

The hypothesis has been put forward that a foreign language learner may face a serious difficulty of interference as a result of a difference in rhythmic patterns found in the two languages. On the basis of this hypothesis, it is to be expected that suprasegmental differences between the two languages will induce Gedeo speakers to speak Amharic with a foreign accent.

3.1. VOWEL LENGTH

Phonemically, all vowels of Gedeo can be long and short. Long and short vowels contrast in identical environments, but the long vowels of Gedeo do not appear in the final positions except in loan words. In contrast to this, phonemic vowel length does not appear in Amharic words. Therefore, the Gedeo native speakers may have no problem in learning Amharic as far as vowel length is concerned, since they are able to produce and perceive an utterance with or without the feature of vowel length in all positions.

3.2. CONSONANT GEMINATION

As far as gemination of consonants is concerned, the two languages are structurally similar in that all phonemes except /h/ can be geminated in both languages. Gemination is also lexically significant in both Amharic and Gedeo. But the difference is that while Amharic permits gemination of consonants word finally, the Gedeo language does not. Therefore Amharic consonants which are geminated word finally are expected to constitute a problem

for Gedeo native speakers in learning Amharic. However the problem is expected to be distributional rather than suprasegmental.

3.3. DIFFERENCES OF STRESS

Phonetically, there is stress in both Amharic and Gedeo. But the occurrence of stress is structurally different in the corresponding languages.

Stress in Amharic words occurs penultimately if the word ends in a vowel, and word finally if the word ends in a consonant. Unlike Amharic, stress in Gedeo words falls on the final syllable of a word, if the word ends in a voiced vowel and on the penultimate syllable if the word ends in a devoiced vowel.

In addition to this, according to Wedekind, stress in Gedeo is a prominent feature, but in Amharic stress has a low prominence even on the phonetic level.²⁵

Therefore, it is predicted that the Gedeo speakers may have difficulties in transferring the prominent stress of Gedeo on the final syllable of Amharic words when an Amharic word ends in a vowel; for instance [bəl:a] 'he ate' of Amharic may be wrongly pronounced as [b ə l:ä] by Gedeo native speakers.

4. PROBLEMS CREATED BY DISTRIBUTIONAL PATTERNS IN THE TWO LANGUAGES

In this part, a number of problems are predicted on the basis of differences between the combination patterns of

corresponding phonemes of Gedeo and Amharic. The comparison is based on the positions of phonemes in a word or pause group, and on the sequences of phonemes in a cluster.

4.1. COMPARISON OF THE POSITIONS OF PHONEMES

Under this sub-category, phonemes or classes of phonemes are classified on the basis of their occurrences in initial, medial, or final positions.

Chart 13 shows that the phonological pattern of Gedeo does not permit vowels to occur in initial position whereas that of Amharic does. Also, it is not possible for consonants to occur in word final position in Gedeo whereas in Amharic, this is possible. /h/ takes only the initial position in a word in Gedeo whereas it takes all positions in a word or pause group in Amharic. /č/ occurs only word medially in Gedeo, whereas in Amharic, it occurs in all positions of a word.

Based on the assumption that there is interference due to positional differences in the native language and the target language, the Gedeo native speakers have an expected difficulties in pronouncing the sounds /h/ in medial position and /č/ in initial position. It is also expected to be difficult for them to produce Amharic consonants in a word final position and vowels in an initial position.

In such cases, Gedeo native speakers may tend to attach [-i] to Amharic word final consonants just as they are likely to prefix a glottal stop to word-initial vowels. Also, Amharic /h/

in word medial and final position, and Amharic /č/ in word initial and final positions are expected to be deleted by Gedeo native speakers.

A chart comparing the distribution of phonemes in both languages.

Type of phonemes	Gedeo			Amharic		
	initial	medial	final	initial	medial	final
o	-	+	+	-	+	+
Other vowels	-	+	+	+	+	+
h	+	-	-	+	+	+
č	-	+	-	+	+	+
p'	+	+	-	+	+	+
ñ	-	-	-	-	+	+
other consonants	+	+	-	+	+	+

Chart 13

4.2. COMPARISON OF THE SEQUENCES OF CONSONANT CLUSTERS

Gedeo and Amharic consonant clusters in word medial position can be compared as to their manners of articulation.

It can be seen from chart 14 that there are no cluster types in Gedeo which cannot occur in Amharic, but the reverse is not the case. The types of clusters occurring in both Gedeo and Amharic are:

Nasal plus stop

Nasal plus voiceless fricative

Liquid plus stop

Liquid plus voiceless fricative

Since these sets of clusters exist in both languages, they are expected not to posit a problem for Gedeo native speakers or vice versa. All other classes of clusters occurring in Amharic as shown in chart 14 do not occur in Gedeo. The types of clusters not found in Gedeo are listed below on the basis of their manner of articulation.

4.2.1. CLUSTERS WHICH REPRESENT PRIMARILY A PHONEMIC RATHER THAN A DISTRIBUTIONAL PROBLEM

The following types of clusters are possible in Amharic.

Nasal plus voiced fricative

Liquid plus voiced fricative

The second member of these clusters does not occur in Gedeo, since the phonemes /z ʒ/ do not exist in the language. These may be substituted by /s, z/. But the problem may be phonemic rather than distributional.

On the other hand, the following sets of clusters are

A chart showing the structures of consonant clusters in the corresponding languages based on manner of articulation.

1st member	2nd member	Gedee				Amharic			
		vl+vl	vl+vd	vd+vl	vd+vd	vl+vl	vl+vd	vd+vl	vd+vd
Stop	stop	-	-	-	-	+	+	+	+
	fricative	-	-	-	-	+	+	+	+
	liquid	-	-	-	-	+	+	+	+
	nasal	-	-	-	-	-	+	-	+
Fricative	stop	-	-	-	-	+	+	+	+
	fricative	-	-	-	-	+	+	+	+
	liquid		-		-		+		+
	nasal					-	+		+
Nasal	stop			+	+			+	+
	fricative			+				+	+
	liquid								+
	nasal				-				+
Liquid	stop			+	+			+	+
	fricative			+				+	+
	liquid				-				+
	nasal		+						
?	glide		+						
	nasal		+						

Chart 14

Key VL.=voiceless

Vd.=voiced

- = structurally not possible

+ = structurally possible

permissible in the structure of Gedeo.

Glottal stop plus glide

Glottal stop plus nasal

Glottal stop plus liquid

These combinations are not possible in Amharic because the first member /ʔ/ does not appear phonemically in Amharic except in some loan words of Geez origin, or in some dialects of Amharic such as that of menz.

4.2.2. CLUSTERS WHICH REPRESENT PRIMARILY A DISTRIBUTIONAL RATHER THAN A PHONEMIC PROBLEM

The following sets of clusters occur in Amharic but not in Gedeo.

1. Stop plus stop
Stop plus fricative
Stop plus liquid
Stop plus nasal
2. Fricative plus stop
Fricative plus fricative
Fricative plus liquid
Fricative plus nasal
3. Nasal plus liquid
Nasal plus nasal
4. Liquid plus nasal

All sets of clusters which differ by the sign + or - in chart 14 are expected to pose difficulties for native Gedeo

speakers. on this point Lado says "when the native language does not have a sequence or when a sequence does not occur in a position in which it does occur in the foreign language, we will have located a problem."²⁶

The type of problem for Gedeo speakers in learning Amharic, in this case, can be predicted to consist the following:

First, Gedeo native speakers may insert a vowel, most likely /i/, between the cluster consonants when the first member is a sound other than a liquid or a nasal.

Second, Gedeo native speakers may commit an error or metathesis whenever the clusters of Amharic contain nasals or liquids as a second member in the sequence. For instance the Amharic word /ak'na/ 'go up' may be wrongly be pronounced as /ank'a/ 'make someone conscious'.

Third, one of the members of the clusters may be deleted and then the remaining consonant may be geminated whenever the clusters are of the following types:

1
Nasal plus nasal²

Liquid plus nasal

Hence the word /amna/ 'last year' of amharic may be wrongly pronounced as /amma/ 'gossip',

4.3. COMPARISON OF THE POSITIONS OF CONSONANT CLUSTERS

Lado says "experience shows ... that difficulty does not depend exclusively on the sequence itself but also on the position in which the sequence occurs."²⁷ Gedeo consonant

clusters occur only in medial positions whereas in Amharic they occur in medial and final positions. There are also rare clusters word initially in Amharic. Amharic does permit clusters of the stop-plus liquid type in initial position, although the sixth order helping vowel may be inserted in the cluster consonants. Therefore, Gedeo native speakers are not expected to have difficulties in this regard.

Final consonant clusters do not exist in Gedeo. Therefore the Gedeo speakers may face a difficulty in pronouncing Amharic word final clusters. The probable type of error may be the insertion of a vowel between the cluster consonants.

4.4. COMPARISON BASED ON VOWEL SEQUENCES

Predicted types of difficulties for Gedeo speakers in pronouncing Amharic words with more than one vowel in succession are the following: As is shown in chart 15, only identical vowels are elided in Gedeo when these occur in succession as a result of phonetical elision of /ʔ, h, w, y/ in fast speech. But in Amharic, some non-identical vowels are elided as follows, when they occur in succession:

a + i → a

ə + a → a

ə + i → ə

In this case, native Gedeo speakers are expected to have two types of problems. The first problem is phonemic rather than distributional, since the vowels /i/ and /ə/ are absent in

A chart of vowel sequences in both languages

vowel sequences	elision of identical vowels	diphthongs across /w, y, ɥ, h/	after the elision of vowels	Types of diphthongs	labialization	palatalization
a + i	-	ai	-	ai	cray	
a + ɪ	-		a			
a + u	-	au	-	au		
a + o	-	aʊ	-	-		
a + a	a	-	a	-		
o + i	-	ɔi	-	-		
o + e	-		-	oe		
o + a	-	ɔa	-	oa	C ^w a	
o + u	-	ɔu	-			
i + o	-	-	-	io		C ^y a
i + a	-	ia	-	ia		
e + o	-	ɛʊ	-	-		C ^y a
e + a	-	ɛa	-	ea		
ə + a	-		a			
ə + ɪ	-		ə			
u + a	-	-	-	ua	C ^w a	

Chart 15

Key

C^y = The consonant is palatalized.
C^w = The consonant is labialized.

Gedeo. Here, the Amharic vowels will probably be replaced by similar vowels of Gedeo (i and a). The second problem is that a Gedeo speaker may also tend to insert a glottal stop /ʔ/ or a semi-vowel (/w/ or /y/) between vowels occurring in succession in Amharic words or pause groups.

The other predicted type of error under this category is due to the monophthongs of Gedeo contrasting with the phonetical diphthongs of Amharic. Gedeo has fewer, and phonemically less complex, vowel phonemes than Amharic. The Gedeo vowel patterns are less complex in that they do not allow diphthongs.*

The short vowels are more lax than those of Amharic. When these Gedeo vowels are lengthened, they become tense monophthongs. In contrast, Amharic has short and tense monophthong nuclei. Hence Gedeo speakers may tend to substitute their long and tense monophthongs. For instance, the Amharic word /miazia/ 'april' may be wrongly pronounced as /ma:za:/

* Diphthongs do not occur in Gedeo phonemically except that the Gedeo vowels come in contact when semi-vowels or glottal consonants are deleted in fast speech.

CHAPTER V

ERROR ANALYSIS

As the writer of this paper is interested particularly in the application of this study for pedagogical purpose, and as other writers claimed that there is a discrepancy between error productions and actual student problems, an empirical study is carried out to verify or falsify the hypothetical difficulties for native Gedeo speakers in learning Amharic.

The empirical data are collected from four native Gedeo speakers at Miccile Holana, about 20 kms south of Dilla. The people were chosen from those who had not or very little been exposed to Amharic. They were asked to sit in a row. The writer of this paper, who is an Amharic speaker read an Amharic word from the lists and asked the first Gedeo speaker to repeat the same word; then the second person in the row repeated after the first, etc. thus reducing direct imitation of the first Amharic speaker. Their speech was recorded on a tape and later was transcribed each word on a separate card, in order to facilitate the sorting out and the analysis of all errors committed.

1. NEW PHONEMES

/ə, ɪ, s', z, ʒ, b^w, f^w, k^w, k'^w, g^w, h^w/ are the new phonemes for native Gedeo speakers in learning Amharic, /ə/ occurred 238 times in the data of 350 words. 86.55% of the occurrences was substituted by /a/, verifying the prediction of

difficulties by means of CA. But unlike the hypothetical prediction, mistakes have also been made by substituting /ə/ by /i, ε, a: / or /o/. The linguistic cause for the substitution seems to be vowel harmony. As chart 16 shows, /ə/ is substituted by /i/:

[ikək]

[ikəkⁱ]

[mafsəsa]

[mafisisa]

/ə/ is substituted by /ə/:

[bək':ol:ə]

[bək':əⁱ]

[s'əlot]

[s'əⁱlot]

/ə/ is substituted by /o/ when it occurs after /w/:

[wəⁱləl]

[wolali]

[wənd]

[wondⁱ]

/ə/ is substituted by /ε/:

[məⁱləm:əⁱlə]

[məⁱləm:εlε]

[təⁱmɪr]

[təⁱmiri]

As the data indicate, even though the Amharic vowel /ə/ is substituted by /a/ vowel in most cases, the Gedeo speakers also use /aa/ and /ε/ alternatively as a substitute for /ə/.

Also, the Gedeo native speakers were unable to produce the /ə/ vowel of Amharic in all positions and contexts.

Another most difficult phoneme for native Gedeo speakers is the Amharic vowel /ɪ/. This /ɪ/ occurred 99 times in the data of which 91.21% of all the occurrences are substituted by the vowel /i/ as was predicted by means of CA. Unlike the prediction, however, /ɪ/ is also changed to /a/ in a few words.

This is caused by vowel harmony:

[k'əbɪr] [k'abar]
[adkɪmɔw] [ʔadakam]

/ɪ/ is also wrongly pronounced in all contexts except that /ɪ/ and /u/ are alternatively used when it is preceded by /w/:

wɪrɪr:ɪd wɪ(u)rɪrɪdɪ

A chart showing actual problems of the new phonemes for Gedeo

New phonemes	Substitu- ents	Number of occurrences in the text	% out of the whole occurrences	% of corect- ness	% of errors
ə	a	206	86.55	0	100
	ε	16	6.72		
	a:	6	2.52		
	ɔ	5	2.10		
	i	4	1.68		
	o	1	0.32		
ɪ	i	83	91.21	0	100
	i:	5	5.49		
	a	3	3.30		
s'	s'	8	61.54	61.54	38.46
	s	3	23.08		
	t'	2	15.38		
z	v z	9	60	60	40
	.y j	6	40		
z	z	31	100	100	0

Chart 16

Although /s'/ and /z'/ are new phonemes for Gedeo native speakers, these create only little problem. For instance, /s'/ occurred 13 times in the data, of which 61.54% of the occurrences were pronounced correctly. The other 38.46% were errors, 40% of the errors were made by the substitution of /t'/ which had not been predicted by means of CA. The other 60% were made by the substitution of /s/, which conforms to the prediction of errors by means of CA.

As far as /z'/ of Amharic is concerned, the chart shows that 40% of the occurrences of /z'/ in the data are substituted by /j'/. The other 60% were pronounced correctly. It was expected that the phoneme /z'/ of Amharic would be substituted by /s'/ which in some regard is closer than /j'/. However, this did not happen in all cases. /z/, on the other hand, does not constitute any problem for native Gedeo speakers, though it is a new phoneme, the phoneme was pronounced correctly in all cases.

2. PARTIALLY SIMILAR PHONEMES

The sounds /e, o, n̄/ of Amharic and /e, o, n/ of Gedeo are partially similar phonemes. The empirical studies on chart 17 show that the Gedeo native speakers do not have any problem in producing the sounds /e, o, n̄/ when these occur following /y, w,/ and preceding a palatal consonant respectively. This confirms the prediction based on CA. But the result of the empirical data also indicates that /e/ is substituted by /i/ in a few words, which was not expected in our hypothetical error

predictions. The linguistic cause for the change is vowel harmony.

As the chart indicates, 76.47% of all occurrence of /n/ in the text is pronounced correctly. The following are some

examples: /agān:ə/ / agān:q/ 'he got'
/yātīn:aw/ /yatanə/ 'which'

Although 23.53% of the data are substituted by /n/, this shows that the number is statistically insignificant. This falsifies the prediction that the phoneme /n/ constitutes a problem when it occurs in all environments except in the position preceding a palatal consonant.

A chart showing the substitutions of the partially similar phonemes of Amharic as spoken by native Gedec speakers in learning Amharic

Partially similar	Substitu- ents	Number of occurrences	% of occur- rences in the text	(overlapping phonemes in the corre- sponding languages	% of over- lapping phoneme in the text	% of errors in the text
e	ɛ	23	22.00	e	4	96
	i	1	4.00			
	e	1	4.00			
o	ɔ	4	83.01	o	5.67	94.33
	ɔ:	6	11.32			
	o	3	5.56			
n̄	n̄	13	76.47	n̄	76.77	23.54
	n	4	23.53			

Chart 17

The native Gedeo speakers have omitted the feature of labialization in all of its occurrences. As a result the whole syllable is modified. This confirms the hypothetical prediction of errors based on CA. The forms of modification of the syllable is shown in chart 18.

In most cases, /^wa/ is changed into /ə/ when the syllable occurs in word initial position. Vowel length is added and is used alternatively, This being the case, especially, with /a/.

k^w aŋk^wa [k'əŋk'a]
f^waf^wate [fə: fa:te]

A chart showing the actual errors with regard to the Amharic feature of labialization

Amharic Syllable	As spoken by Gedeo	No. of occurrences	Percentage of modifications
C ^w a	C	4	22.22
C ^w a	C	2	11.11
C ^w a	Ca	2	11.11
C ^w a	Ca	10	55.56

Chart 18

Key C^w = labialized consonant

According to the empirical data, as shown in chart 18, the feature of labialization is found to be the most difficult feature for a Gedeo learning Amharic.

3. SUPERASEGMENTALS

3.1. STRESS

The final syllables of all the words in the data are stressed. In this item, the hypothetical error prediction is confirmed by the empirical data. This indicates that the Gedeco speakers have great difficulty in producing a word without a final stress.

3.2. VOWEL LENGTH

As the empirical data indicates, of all the vowels that occurred in the data, only the following are alternatively lengthened when spoken by Gedeco speakers. These are:

/a/ is lengthened 15 times in its total occurrence

/ɔ/ is lengthened 3 times

/u/ is lengthened 3 times

/i/ is lengthened 1 time

This figure is insignificant when compared with the total number of occurrences of vowels in the data. This shows that vowel length is not a problem for Gedeco native speakers in learning Amharic. The error predictions by means of CA is confirmed.

4. ACTUAL DIFFICULTIES WITH REGARD TO

DISTRIBUTIONAL PATTERNS OF AMHARIC PHONEMES

What are the types of errors made by Gedeco native speakers with regard to the patterns of Amharic Phonemic distribution? And what are the types of interferences coming from the Gedeco

language? The answers to these questions are treated in the following empirical analysis. The errors made by the testees due to distributional differences between the corresponding languages are classified into three parts for convinience. The first is: errors due to differences in the position of phonemes in a word or pause group, the second is: errors due to differences in the sequence of consonants in clusters, and the third is: errors due to the sequence of vowels or dispthonges in the respective language.

A chart showing the number of errors made by adding a vowel in word final position

Phonemic constructions of a vowel	No. of occurrences in the data	Percentage of occurrences	Phonetic realizations of the vowels	No. of occurrences	Percentage of occurrences
ɪ	28	80	ɪ	17	48.57
			ɪ̯	11	31.43
ε	5	14.28	ε	3	8.57
			ε̯	2	5.71
others	2	5.72	a	1	2.86
			ɔ̯	1	2.86

Chart 19

4.1. POSITIONAL PROBLEMS

The types of errors in this part are also classified into three sub-parts. These are:

4.1.1. ACTUAL DIFFICULTIES WITH REGARD TO AMHARIC WORD FINAL CONSONANTS

In the data, 90 words end with consonants, of which, 78 (86.67%) are pronounced erroneously. The errors can be classified as deletion of the final consonant, and insertion of a vowel in the final position of a word or pause group.

Chart 20 shows that 55.12% of the errors were made by elision of consonants in word final position, as it was predicted by means of CA. The rest are made by vowel insertion of which 80% of the errors is made by an insertion of the helping vowel /i/, the voiceless one occurring predominantly. This also confirms the predication of errors.

A few words are also erroneously formed with an insertion of /ε/, /a/ and /ɔ/ instead of the helping vowel /i/. The /ε/ is determined by grammatical conditions rather than phonological conditions: It can be regarded as a feminine marker, attached at the end of a Gedeo word. This is especially true in loan words of Gedeo from Amharic:

Amharic word	Gedeo loan word
/k'al/	/k'aale/(feminine) 'word'
/suf /	/suufe/(") 'oilseed'

The above forms indicate that a vowel /ε/ is added in the final position of Amharic words, which vowel is a feminine marker

A chart showing errors due to Amharic word Final consonants

-C	Ø	i		ε		a	ɔ	Correct- ness	Total %
		i	ɪ	ε	ε̇				
t	14	4	1	1	1	-	-	3	24
t'	2	1	1	-	-	-	-	-	4
k	1	1	-	-	-	-	-	1	3
k'	-	1	1	-	-	-	-	-	2
b	2	2	3	-	-	-	-	1	8
d	1	-	-	-	-	-	-	1	2
g	-	1	-	-	-	-	-	-	1
ɣ	-	1	-	-	-	-	1	-	2
f	3	1	-	-	-	-	-	-	4
s	1	1	-	-	-	-	-	-	2
h	3	-	-	-	-	-	-	-	3
z	-	1	1	-	-	-	-	-	2
ʒ	-	1	-	-	-	-	-	-	1
l	2	2	1	1	1	-	-	1	8
r	1	-	-	-	-	1	-	2	4
m	8	-	1	1	-	-	-	1	11
n	4	-	1	-	-	-	-	2	7
ñ	1	-	1	-	-	-	-	-	2
Total	43	17	11	3	2	1	1	12	90
%	47.79	18.89	12.22	3.33	2.22	1.11	1.11	13.33	100

Chart 20

suffix in Gedeo. This had not been predicted by means of CA.

/a/ and /ɔ/ are inserted due to vowel harmony:

/t'ət'ər/ ----> /t'at'ar'a/ 'sand'

4.1.2. ACTUAL DIFFICULTIES FOR NATIVE GEDEO SPEAKERS WITH REGARD TO AMHARIC WORD INITIAL VOWELS

In the data, 100 words begin with a vowel, of which /a/ occurs in 91 words, the rest begins with the vowel /i/. The actual error made by native Gedeo speakers is that there is an insertion of a glottal stop /ʔ/ in the initial position of each word:

/alga/	---->	/ʔalga/	'bed'
/ansa/	---->	/ʔansa/	'lift up'

4.1.3. ACTUAL DIFFICULTIES FOR NATIVE GEDEO SPEAKERS BASED ON THE POSITION OF PHONEMES IN A WORD.

The empirical data show that /h/ occurred in 9 Amharic words in medial positions and in 2 words in final positions. The /h/ was deleted in those positions of the words when spoken by the testees. The empirical data indicates that the speakers were unable to produce the sound /h/ in medial and final position of a word. This verifies the prediction of errors based on CA.

4.2. ACTUAL DIFFICULTIES WITH REGARD TO CONSONANT CLUSTERS OF AMHARIC

In the data, 237 cases of consonant clusters are collected.

These clusters are classified on the basis of their manner of articulation. The number of errors made by the testees in pronouncing these clusters is listed below in different charts.

In the charts, vl stands for voiceless, vd stands for voiced and uc means unchanged which stands for clusters which were pronounced correctly by the testees. The column under /i/ indicates the error due to an insertion of the vowel /i/ between the clusters. If the vowel inserted is not an /i/, it is indicated in the chart with the number against it.

4.2.1. WHERE EACH MEMBER OF THE CLUSTER BELONGS TO
A CLASS OF STOP PLUS AFFRICATE OR FRICATIVE

This can be also classified into different sets of clusters. The first set is the cluster whose first member is a stop and the second is either a stop an affricate or a fricative. Chart 21 shows that there is an insertion of the vowel /i/ between the members of the clusters in all of their occurrences, whenever there is a cluster of stop plus fricative. The explanation would be that Gedeo speakers have difficulty to learn such clusters of Amharic as had been hypothesized by means of CA.

Besides, the data indicate that the testees produce the clusters correctly when both members of the clusters are voiced stops. In such cases, 4 of the 7 clusters in the data are pronounced correctly without vowel insertion. The other 3 are mispronounced by inserting a vowel between the members of the clusters. This shows that there is an alternation of vowel

insertion when both members of the cluster are voiced stops. This falsifies the prediction of errors based on CA. But the testees mispronounced the clusters only when at least one member of the cluster was a voiceless stop:

When both members are voiced stops:

abgɪn ---- abigini_o or ?abgini_o

when at least one member is a voiceless stop

adkɪmɔw ---- ?adakam

As the chart shows, it is /i/ to be inserted between the consonants splitting the cluster as has been predicted by means of CA. But the vowel /a/ is also inserted as shown in the chart, due to vowel harmony. This was not revealed by means of CA.

The second set is that of clusters whose first members are a fricative, while the second is either a stop, a fricative, or an affricate. Of all clusters this category is 42, of which 29 (69.05%) are pronounced correctly. The other 13 words (31%) are pronounced incorrectly by inserting /i/ for splitting the phonemes from occurring in succession. The figures indicate that the Gedeos have a lesser degree of difficulty in learning the clusters of Amharic phonemes when the first member in the sequence is a fricative.

The third set is the clusters whose first member is an affricate, while the second is either a stop, an affricate, or a fricative. The total number of clusters listed in the data under this category is 4 of which 3 (75%) are pronounced correctly.

A chart showing the errors when both members
are either a stop, Affricate or Fricative

		Stop plus			Affricate plus			Fricative plus		
		stop	Affricate	Fricative	stop	Affricate	Fricative	stop	Affricate	Fricative
vl + vl	i	2	-	5	-	-	-	2	-	3
	uc	-	-	-	1	-	-	9	3	-
vl + vd	i	6	-	-	1	-	-	1	2	1
	uc	-	-	-	-	1	-	9	-	-
vd + vl	i	2a	-	-	-	-	-	2	-	2
	uc	-	-	-	-	-	-	-	-	2
vi + vd	i	3	-	2	-	-	-	-	-	-
	uc	4	-	-	-	-	1	6	-	-
Total occurrence		17	0	7	2	1	1	29	5	8
Total occurrence in the category		24			4			42		

Chart 21

The other is mispronounced due to an insertion of the vowel /i/ in the clusters. The error is indicated in the chart when the cluster is a voiceless affricate plus a voiced stop. Generally it is possible to conclude that the native Gedeo speakers do not have difficulty in producing an Amharic word which has a cluster of:

1. Fricatives plus stops, Affricates, or Fricatives

2. Affricates plus stops, Affricates, or Fricatives

The above error analysis shows that not all of the sets of Amharic clusters which do not exist in the phonemic combination patterns of Gedeo are equally difficult for native Gedeo speakers learning Amharic. This shows a limitation of CA in the prediction of difficulties based on the assumption that wherever there is a difference in the structure between the corresponding languages there is also a difficulty in learning the target language.

4.2.2. WHERE THE FIRST MEMBER OF THE CLUSTERS BELONGS TO A CLASS OF STOPS, AFFRICATES, OR FRICATIVES, AND THE SECOND MEMBERS BELONG TO A CLASS OF NASALS OR LIQUID

This can also be classified into three sets of clusters. The first set is a stop plus a nasal or a liquid. 33 clusters of this type are listed in the data, of which 29 (87.88%) clusters are mispronounced due to vowel insertion between the clusters. 10 clusters are formed by the combination of stop plus nasal, none of which was pronounced correctly. This shows that the Amharic consonant clusters whose first member is a stop in general, and a stop plus a nasal in particular, constitute great difficulties for native Gedeo speakers learning Amharic.

The second set of clusters is: affricate plus nasal or liquid. 12 clusters of this type are listed in the chart, 9 (75%) of which are mispronounced due to vowel insertion. The vowels inserted are /i/ and /a/. /a/ occurred in one cluster

due to vowel harmony:

[ak'rari] -----> [ak'arari] 'the one who sings a song'

6 of the 12 clusters are formed with a combination of voiced affricates plus nasals or liquids, of which none is pronounced correctly. This shows that the Gedeo speakers have a relatively greater difficulty in learning a cluster of voiced affricates plus nasals or liquids, than in learning those clusters consisting of voiceless affricates followed by nasals or liquids.

The third set of clusters includes the types of clusters combining fricatives with nasals or liquids. 24 clusters of this type are listed in the data as shown in chart 22, of which 21 (87.50%) were pronounced correctly. 3 (12.5%) were mispronounced due to an insertion of the helping vowel /i/ between the clusters, but this is statistically insignificant. (According to a principle of statistics, figures are classified here into "significant" and "non significant".) In the set, the clusters formed by the combination of fricatives followed by trills were pronounced correctly. This indicates that the speakers did not have a problem in learning Amharic when the clusters begin with fricatives and followed by trills. Generally, it is possible to conclude that Amharic word clusters, whose first members are fricatives, do not constitute problems for Gedeo speakers learning Amharic. This falsifies the respective prediction of errors on the basis of CA.

The empirical study shows also that all the errors sorted out from the clusters of fricatives plus nasals or liquids, are

A chart showing the difficulties for Gedeo Native speakers in pronouncing the clusters whose first members are stops, affricates or fricatives, and the second members are trills, or lateral

		Stops plus			Affricates plus			Fricatives plus		
		Nasal	Trill	Lateral	Nasal	Trill	Lateral	Nasal	Trill	Lateral
vl + vd	i	7	5 la	4	1	2	-	1	-	1
	uc	-	1	1	1	-	2	8	2	7
vd + vd	i	3	4	5	2	1	3	-	-	1
	uc	-	1	1	-	-	-	-	2	2
Total		10	12	11	4	3	5	9	4	11
		33			12			24		

Chart 22

made by an insertion of a vowel between the clusters. This also falsifies the prediction which hypothesises that a form of matathesis takes place wherever there is such a cluster, since the Gedeo structures permit a cluster of nasal or liquid plus fricative but not vice versa.

4.2.3. WHERE EACH MEMBER OF THE CLUSTER BELONGS

TO A CLASS OF NASAL OR LIQUID

Clusters of this type are sorted out from the empirical data, (see chart 23), 4 of which are formed by the combination of nasals plus a liquid, and nasals plus nasals. All of them were mispronounced. The other 7 are formed by the combination of a liquid plus nasal, of which 4 clusters are pronounced wrongly.

The total number of errors made by Gedeos in this regard sums up to 8 clusters, of which 6 are due to consonant assimilations. The other 2 are mispronounced by vowel insertion between the members of the clusters. The following are some examples of these errors.

[amna]	[ʔamina] or [ʔam:a]	'last year'
[alma]	[ʔam:a]	'make it develop'
[k ^h ərma]	[k ^h am:a]	'she stayed'

As the examples show, there is an alternation of consonant assimilation or vowel insertion whenever the cluster is formed by the combination of nasal plus nasal or liquid plus nasal.

But, when a liquid is combined with a nasal, it is the liquid that assimilates with the nasal. Such specific points of errors are unpredictable although the hypothetical error prediction by means of CA is verified on the grounds that one member of the cluster is assimilated with another when the cluster is formed by the combination of liquid plus nasal or vice versa. For instance, it was predicted that the Amharic word [k^hərma] 'after

A chart showing the difficulties for Gedeo native speakers with regard to the Amharic consonant clusters whose first and second members are either a nasal, a trill, or lateral

		Nasals plus		Trill plus	Lateral plus		
		nasal	trill	nasal	nasal	Total	
errors	Vowel /i/ insertion	1	1	-	-	2	-
	assimilation	2	-	2	2	6	
Correctness		-	-	2	1		3
		3	1				
Total		4		4	3	11	

Chart 23

having stayed' would be pronounced as $\text{[k}^{\text{h}}\text{am:a]}$ by Gedeos. The empirical data prove that the word is pronounced as $\text{k}^{\text{h}}\text{am:a}$ as it was predicted.

4.2.4. WHERE THE FIRST MEMBER BELONGS TO THE CLASS OF NASAL OR LIQUID AND THE SECOND TO STOP AFFRICATE OR FRICATIVES

Empirical studies are carried out on these types of clusters to verify or falsify the hypothesis that similar

structures in the corresponding languages facilitate the learning process (in this case the Gedeos learning Amharic). Since the structures of the Gedeo language permits the clusters of this type.

70 clusters were sorted out from the empirical data of which 65 (92.86%) were pronounced correctly. This verifies the hypothesis. The rest were mispronounced by an insertion of a vowel between the clusters (due to vowel harmony), and the helping vowel /i/ in the other 3 clusters. However the error is considered to be insignificant when compared with the number of correct pronunciations in the data.

4.2.5. WHERE THE TYPE OF ERRORS ARE DUE TO FEATURES OTHER THAN THE INSERTION OF A VOWEL BETWEEN THE CLUSTERS

So far, we have seen that the actual errors with regard to the Amharic medial consonant clusters are caused by an insertion of a vowel between the members of the cluster. Chart 25 shows also the other type of errors due to an assimilation of consonants, a substitution of one consonant by another, and omission of one member of cluster.

A glance at chart 25 is sufficient to show that error predictions were way off except for /mn, rm, and rn/. The pattern of assimilation of Amharic consonant clusters as spoken by the Gedeos can be summarized from the chart as

A chart showing the difficulties for Gedeo native speakers with regard to the Amharic consonant clusters whose first members are either nasals, trills or laterals and the second members are either stops, affricates, or fricative

		Nasals plus			Trills plus			Laterals plus				
		Stops	Affricates	Fricatives	Stops	Affricates	Fricatives	Stops	Affricates	Fricatives	Total	
vd	vl	i	-	-	2(a)	1(a)	-	1	1	-	5	42
	uc	7	8	7	3	1	3	6	1	1	37	
vd	vd	i	-	-	-	-	-	-	1	-	1	28
	uc	13	-	3	5	-	1	5	-	-	27	
		20	8	10	10	2	4	12	3	1	70	
Total		38			16			16			70	

Chart 24

spoken by the Gedeos can be summarized from the chart as follows:

$$\begin{array}{l}
 \left\{ \begin{array}{l} lm \\ rm \\ mm \end{array} \right\} \rightarrow /mm/ \left\{ \begin{array}{l} f\check{c} \\ r\check{c} \\ s\check{c} \end{array} \right\} \rightarrow /cc/
 \end{array}
 \quad
 \begin{array}{l}
 \left\{ \begin{array}{l} sz \\ lz \end{array} \right\} \rightarrow /zz/ \\
 s\check{z} \rightarrow /z\check{z}/
 \end{array}$$

A chart showing errors due to assimilation, substitution and omission of consonants with regard to the Amharic consonant clusters.

Type of Clusters	Number of occurrences in a cluster	errors	actual errors		substitutions	omissions
			Assimilations			
			Progressive	Regressive		
fc [✓]	2	fič [✓]		cc ^{✓✓}	-	-
fd	1	fid	ff	-	-	-
gc [✓]	1	gič [✓]	-	-	g	-
lg	1	-	-	-	-	g
lm	2	-	-	mm	-	-
lz	2	-	-	zz	-	-
mn	1	mm	mm	-	-	-
ms [✓]	1	-	-	-	ns	-
rc [✓]	1	-	-	cc ^{✓✓}	-	-
rm	1	mm	-	mm	-	-
rn	1	rn	-	nn	-	-
sc [✓]	1	sič [✓]	-	cc ^{✓✓}	-	-
sj [✓]	2	sič [✓]	-	jj	sc [✓]	-
sn	1	ns		nn		
sz	2	siz		zz		
sž [✓]	1	siž [✓]		žž ^{✓✓}		
wl	1	wil				i
wn	1	win				n

Chart 25

According to the data, /m/ is read as /n̄/ when followed by /ṣ/. For instance /amṣ/ 'wait up to late evening' is read as /?ansị/ by Gedeos, which has a different meaning 'lift up'. The chart shows also that the voiceless affricate is changed to a voiced one when preceded by a voiced stop, the changes indicate that:

/gč/ → /g̣j/
 /ṣj/ → /ṣč/
 /mš/ → /n̄š/

The other point discovered in the data is that the testees were unable to pronounce the cluster of /w/ plus any other consonant. When such clusters occur, they omit the semivowel /w/; for instance:

/wn/ → /n/
 /wl/ → /l/

The problem is due to Amharic diphthongs rather than consonant clusters (see 4.3 for clarification).

4.3. ERRORS DUE TO SEQUENCES OF VOWEL- LIKE SEGMENTS (DIPHTHONGS)

Amharic is characterized by different diphthongs on the phonetic level due to the sequences of vowel like segments (see chart 26). But diphthongs do not exist in Gedeo except that they are possible across /h, w, y, ?/ phonetically. The empirical data show that such a structure in Amharic constitutes great difficulty for Gedeos learning Amharic, as was hypothesized by means of CA.

A chart showing the errors made by Gedeos due to the sequences of vowel-like segments in Amharic

Vowel Sequence	substituent	No. of occurrences	E X A M P L E S	
			Amharic	As spoken by Gedeos
ia or ya	[a]	9	[mariam] or [maryam]	/marami/ 'Mary'
oa or wa	[a]	22	[bəltoal] or [bəltwal]	/baltali/ 'he has eaten'
ua or wa	[a:]	7	[sət'əwat]	/sat':a:ti/
			or	or 'they
	[ɔ:]	5	[sət'wat]	/sat':ɔ:ti/ gave her
əu or əw	[ɔ]	6	[sət':əw]	/sət':ɔ/ 'he gave him'
əh	[ɔ]	3	[k'əm:ɨ̌:al:əhu]	[k'amiç:al:ɔ] 'I took from him'

Chart 26

CHAPTER VI

SUMMARY AND CONCLUSION

The summary of this study can be classified in (1) a hierarchy of difficulties for Gedeo native speakers learning Amharic, and (2) the possibilities and limitations of CA in the prediction of errors.

1. HIERARCHY OF DIFFICULTIES

The difficulties of pronunciation problems for Gedeo speakers learning Amharic may be summarized as follows.

1.1. PHONEMIC PROBLEMS

The consonants p , z , ʒ , s' , g^w , k^w , k'^w , h^w , b^w , f^w , and m^w as well as the vowels $/ɨ$, $ə$ of Amharic are new phonemes for Gedeo native speakers learning Amharic. The labialization of velars and glottal, the velarization of labials, and the non-low central vowels of Amharic were found to be the most difficult ones, and the others (p , s' , z , and ʒ) are somewhat difficult phonemes for Gedeo native speakers learning Amharic - while $/z/$ does not constitute a problem at all.

1.2. PHONETIC PROBLEMS

The diphthong-like segments such as:

$/əu/$	or	$/əw/$	as in	$/nəw/$	'is'
$/ia/$	or	$/iya/$	as in	$/mazia/$	'april'
$/əa/$	or	$/wa/$	as in	$/bəltoal/$	'he ate'
$/ua/$	or	$/wa/$	as in	$/sət':uat/$	'they gave her'

are the most difficult phonetic segments of Amharic for Gedeo native speakers. The phonetic feature of stress in Gedeo is structurally different from that of Amharic. These constituted a problem of interference for Gedeo native speakers in learning Amharic.

1.3. ALLOPHONIC PROBLEMS

Some phonemes such as /e o n̄/ of Amharic are partially different and partially similar to phonemes of Gedeo, such as /ɛ, ɔ, n/ of Gedeo. It is discovered in the empirical contrastive study that the Gedeos face difficulties of interference in the production of these sounds in Amharic.

1.4. DISTRIBUTIONAL PROBLEMS

The difficulties due to differences in distribution between the comparable phonemes can be summarized as follows:

1. The CVC, CVCC, and CCVCC pattern of Amharic distribution, which are not structurally permissible in Gedeo are difficult for Gedeo native speakers. The study reveals that there is either an insertion of a vowel word finally, or an elision of the final consonant. A glottal stop is also inserted word initially when the word begins with a vowel.
2. The Gedeo native speakers are unable to produce /h/ in word medial and final positions. The study revealed that /h/ is elided in word medial and final positions.
3. The type of errors discovered due to the differences

in the combination of phonemes in clusters between Amharic and Gedeo is (1) an insertion of vowels between the clusters (2) elision of one member of the cluster and (3) an assimilation of one member to the other in a cluster.

2. POSSIBILITIES AND LIMITATIONS OF ERROR PREDICTIONS

Although it is possible to predict errors on the basis of CA, the empirical contrastive study revealed that CA has its limitations in predicting such errors. The following summary of errors indicates that errors that are not predicted by means of CA probably can only be discovered by the empirical study of error analysis.

On new phonemes for Gedeo native speakers:

Errors predicted
by means of CA

/ə/ → /a/

$$/ \frac{1}{2} / \longrightarrow / i /$$
$$/s^{\circ}/ \rightarrow /s/$$
$$\check{z} \longrightarrow /s/$$
$$Z \longrightarrow /S/$$

$/\bar{n}/ \rightarrow /n/$

Errors discovered by
means of error analysis

$/\partial/ \rightarrow /a/$
 $\searrow$
 $/i, \epsilon, \partial/$

i → /i/

→ /ə/

/s^h/ → uncharged
 → /s/
 → /t^h/

$$\frac{1}{\sqrt{2}} \rightarrow \frac{1}{\sqrt{2}}$$

/z/ → unchanged

$/\bar{n}/ \rightarrow \begin{matrix} /r/ \\ /n/ \end{matrix}$



Not all types of Amharic clusters which are not structurally permissible in Gedeo are equally difficult for Gedeo native speakers. For example, the empirical contractive study of Gedeo and Amharic revealed that fricatives occurring as first members of clusters do not constitute serious difficulty of interference for Gedeo native speakers.

It had also been predicted by means of CA that the phonemic distributions of Amharic, which are not structurally permissible in Gedeo, would erroneously be pronounced with an insertion of the helping vowel /i/; but by means of error analysis, other vowels, that is /ɛ, a, ɔ, u/ were also found to be inserted in the place of the helping vowel /i/ due to vowel harmony /ɛ/ is also sometimes inserted word finally for indicating feminine markers.

The writer of this paper recommends error analysis because it is more dependable than prediction of errors based on CA. The comparative study between languages in error analysis is also necessary, since it is useful for revealing the sources of interference.

NOTES

¹M.L. Bender, The Nonsemitic Languages of Ethiopia (Michigan State University: Carbondale Illinois, 1976), p. 132.

²Central Statistical Office, Report on a Survey of Sidamo Province (Addis Ababa: May, 1976), p. 8.

³M.L. Bender and others, (ed.), "Ethiopia Distribution of Mother Tongue", in Bender (ed.), Languages in Ethiopia (London: Oxford University Press, 1976), map.

⁴W.R. Lee, "Thoughts on Contrastive Linguistics in the Context of Language Teaching," in James E. Alatis, (ed.), Report of the nine-teenth Annual Round Table Meeting on Linguistic and Language Studies (Washington: Georgetown University Press, 1968), p. 186.

⁵Vladmir Mach, "Comparative Analysis of English and Czech phonology and Production of Errors in Learning" in Gerhard Nickel (ed.), Papers in Contrastive Linguistics (Cambridge: The University Press, 1971), p. 104.

⁶Roger L. Snook, "A stratificational Approach to Contrastive Analysis", in Nickel (ed.), Ibid, p. 18.

⁷Klaus Wedeking, "Sidamo, Gedeo (Derasa) Burji: Phonological Differences and Likeness", Journal of Ethiopian Studies, vol XIV, 1976-79 (Addis Ababa: January, 1980) p. 134.

⁸Ibid. pp. 136-7.

⁹Ibid pp. 137-40.

¹⁰Ibid pp. 141-2.

¹¹Ibid p. 161.

¹²Loc. cit

¹³Davis Irvine, (ed.), Instructional Articulatory Phonetics (Norman: University of Oklahoma, 1971), pp. 106.

¹⁴Taddese Beyene, "Amharic and English Segmental Phonemes: A Contrastive Study," in Language Learning vol. 16, No. 1 and 2, p. 95-96.

¹⁵Haftemariam Markos, Regional Variations in Amharic, "Journal of Ethiopian Studies, vol. XI, No. 2, (Addis Ababa: June, 1973), p. 121.

¹⁶Roger Cowely and others, "The Amharic Language" in Bender, (ed.), Op.cit. p. 87.

¹⁷Ibid p. 77.

¹⁸Taddese Beyene Op. cit., p. 100.

¹⁹Ibid.

²⁰M.L. Bender, "Phoneme Frequencies in Amharic" Journal of Ethiopian Studies, vol. XII, No. 1, (Addis Ababa: January, 1974), p. 21.

See also Bender "Two problems in Amharic Phonetics:

the Sixth Vowel and the Verb Suffixes," in Journal of Ethiopian Studies Vol. III, No. 2 (Addis Ababa: July 1969), p. 34.

²²በአዲስ አበባ ዩኒቨርሲቲ የኢትዮጵያ ቋንቋዎችና ስነ ጽሑፍ ክፍል /አዘጋጅ/፣ 1964፣ /ያልታተመ/፣ ገጽ፣ 68-72::

²³Vladimir March, "A Comparative Analysis of English and Czech Phonology and Prediction of Errors in Learning," in Nickel (ed.), op.cit., p. 104.

²⁴John B. Carroll, "Contrastive Analysis and Interference Theory," in Alatis (ed.), op. cit., p. 114.

²⁵Klaus Wedekind, op. cit., pp. 137-8.

²⁶Robert Lado, Linguistics Across Cultures (Ann Arbor: The University of Michigan Press, 1957), p. 19.

²⁷Ibid.

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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.

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Signature  _____

Place and date of submission April 30, 1981 I.L.S.