

LONG VOWELS IN OROMO: A GENERATIVE APPROACH.

A Thesis

Presented to

School of Graduate Studies

of ADDIS ABABA UNIVERSITY

In Partial Fulfillment  
of the Requirement for  
the Degree of Masters of  
Arts in Linguistics

by Abera Nefa

June 10, 1988.

ADDIS ABABA UNIVERSITY  
SCHOOL OF GRADUATE STUDIES

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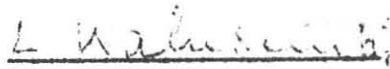
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I also convey my thanks to the Oromo lexicography section who assisted me in supplying valuable materials that has contributed much to the thesis.

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## ABSTRACT

This paper presents the generative analysis of long vowels in Oromo. The paper has four parts.

The first part presents a brief account of related literature. All the reviewed literature has presented the long vowels in Oromo but they do not account for them by providing enough linguistic data. In addition, all the reviewed literature does not identify the surface long vowels from the base long vowels.

The second part has treated the long vowels in Oromo. The long vowels are found to be both distinctive and non-distinctive. The distinctive long vowels occur followed by single consonants. They are also identical in quality to that of their short counter parts. The non-distinctive long vowels again do not have an identical short counter parts as the distinctive long vowels. At the root level they occur in the  $(c_1) \_ c_2$  environment. The predictability of these long vowels (i.e. non-distinctive long vowels that can appear in the  $(c_1) \_ c_2$  environment) is proved with five evidence. The evidence which has proved the occurrence of the non-distinctive long vowels in the  $(c_1) \_ c_2$  environment is (1) loans from Amharic, (2) the Bird Talk in Oromo, (3) the written source, (4) the verb inflection especially the glide ending roots and (5) the metrical analysis of poetic stress and compensatory lengthening.

The third section deals with suffix vowels. The suffix vowels are also found to be both distinctive and non-distinctive. The distinctive long suffix vowels are found to be short in the base. The base opposition is between the presence and absence of a glide where as the surface opposition is between long and short vowels. The non-distinctive long vowels are again short in the base form. Their surface long forms are obtained in compensation to the lost glide sounds.

The fourth part sum up what has been discussed in the preceding chapters.

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## CHAPTER I

### INTRODUCTION

1.1 STATEMENT OF THE PROBLEM: Oromo sound systems contain both long and short vowels. The long vowels are not studied in some detail. This paper, therefore, examines long vowels in Oromo to identify the distinctive from the non-distinctive. In addition, the underlying representation for the distinctive and non-distinctive long vowels, and the phonological rules that can map the base form onto the surface form will also be analysed.

1.2 SCOPE OF THE STUDY: This study deals with Oromo regardless of the dialects, because Oromo dialects have similar structure except some differences in lexical items and grammatical features. Therefore, the findings can be applied to all Oromo speaking regions of Ethiopia. This point is clarified by M.L. Bender and Mulugeta Eteffa as presented below.

on the grounds of mutual intelligibility and basic vocabulary, it seems fair to maintain that Ethiopian Galla is one language. If we adapt a cut-off point for separate languages as being less than 70 percent basic vocabulary is common, all Ethiopian varieties can easily be included under one heading. Bender (ed) (1976:131).

1.3 RESEARCH METHODOLOGY: Observation and interview methods are used- in eliciting the first hand data ( i.e . text, poems, songs, and folktales) from native speaker/informants (including the researcher). Second hand materials are collected from grammar books, theses and other related literature, Then all the collected data are analysed accordingly.

1.4 THE LANGUAGE: Oromo is one of the branches of the Lowland East Cushitic. It is the most widely spoken language in Ethiopia

except in gondar and Eriteria regions. The number of speakers is estimated to be more than ten million as of 1976 Bender(1976:166). The major dialects spoken in Ethiopia are Mac'ca , Tulama, and Arsi. Wallo, Harar and Rayya Oromo are included under Arsi. Some other dialects such as Waata are spoken in the neighbouring Kenya. The writer of this paper is from Mac'ca, the dialect spoken in the Western parts of Ethiopia.

1.5 SIGNIFICANCE OF THE PROBLEM: Oromo long vowels have not been studied from the generative phonology point of view. And the problem of distinctive and non-distinctive long vowels have not been resolved.. But, this paper has identified the distinctive from the non-distinctive long vowels. The non-distinctive long vowels are only long in the surface form. This finding is much of help to the written Oromo for it can abandon the non-distinctive long vowels from the orthography. According to the finding the ee in beek 'know' could be written short as in bek for the presence and the absence of length does not affect meaning. The finding can also be used as a base for further study on the same problem long vowels in Oromo. It may also serve as an evidence and material for a researcher interested in related languages.

#### 1.6 REVIEW OF RELATED LITERATURE

This section deals with book and other publications that consider Oromo vowels. The books and publications are treated according to their chronological order and their relation to the present study.

1.6.1 Dictionary of the Galla Language (1844) by Charles Tutschek is one of the oldest works on Oromo. Tutschek recognizes length

that comes from contraction. Tutschek traces length from contraction to awa or aya . For example 'baa' is the contracted form of bawa 'go out', whereas 'taa' is that of taya 'sit' . According to Tutschek the sequence vowel in bai- is not diphthong, but contraction from either w or y. The actual forms are bawi 'go out'!! or bayi 'go out!' The final -i is not an element of diphthong but a character of certain mood, (i.e. imperative) Tutschek did not identify the distinctive vowels from the non-distinctive ones.

#### 1.6.2 The Folk Literature of the Galla of Southern Abyssinia (1917)

by Cerulli is one of the dissertations on Oromo. In his work Cerulli mentions about nineteen phonetic vowels. He groups the phonetic vowels into five different classes. Each class contains

the following members;

a:	a,	$\bar{a}$ ,	$\acute{a}$ ,	$\overset{\circ}{a}$
ae:	e,	$\bar{e}$ ,	ie,	e, $\bar{e}$
i:	$\bar{i}$ ,	i,	$\bar{i}$	
o:	o,	$\bar{o}$ ,	$\overset{\circ}{o}$ ,	o
u:	u,	$\bar{u}$ ,	$\bar{u}$	

Cerulli did not say much about these phonetic vowels. He related e and o to closed Italian e and o. The remaining vowels are given a similar value to that of Semitic language. In the literature where Cerulli used ie (i.e. in biek-know) Hodson (1922) used ei whereas Gragg (1901) used ee.

All in all, the work is rich enough in text and lexical data, such as 'ie' which is very helpful as a source to determine the base form of ee.

#### 1.6.3 The book An Elementary and Practical Grammar of the Galla or Oromo Language (1922) by Arnold Hodson and Craven Walker is another old book worth commending. This book, although prepared for traders provides phonological information that can contribute

much to the present study. Hodson's diphthongs are important to indicate the development of some long vowels (pp 11-14).

For example, the present ee in beek- 'know' is a development from 'ey' and 'ei'. Hodson's work also did not discuss the problem of vowel in detail.

1.6.4 Grammatica della Lingua Galla (1939) by M. Moreno presents a brief survey of Oromo sound units. In the book long vowels are marked with a broken line (-). Vowels such as ie, uo are also given. The footnote on page (29) presents information regarding vowel glide sequences. Moréno did not give enough information how long vowels are obtained from vowel glide plus a consonant. For example ay+t → eet, ay+n → enn or aw+t → oot, and aw+n → oon. In general, the work is very helpful for the one interested in deciding on some long vowels like the ones presented above.

1.6.5 A Galla Grammar (1947) written by M. Wordfeldt recognizes length distinction in Oromo. In a table given in the introduction Wordfeldt presents short vowels and long vowels. He also showed how Oromo vowels can be written in Ethiopic script.

But as the purpose of the author is on grammatical sketch, vowels are not analysed in some detail. In short the book can serve as a data source for any one interested in Oromo.

1.6.6 የአማርኛና የጋላ ግጥም ጥናት /፲፱፻፶፫ ዓ/ም/

by Eshetu Kebede is a fourth year paper which treats Oromo vowels. Eshetu also indicated length distinction. But the purpose of the study was a comparison between Oromo and Amharic vowels. He disregards the origin of long Oromo vowels. According to Eshetu long and short vowels are identical in quality except in quantity. He also noticed the

near voiceless condition of morpheme final vowels (i.e. single vowels).

1.6.7 Another dictionary on Oromo is a Dizionario Borana-Italiano (1973) by Bartolomeo Venturio. The author has used short vowels for transcription. In some environments, however, a vowel is underlined to indicate length. In some other environments, vowels are written double to show length. This work of Venturio too, doesn't give enough comment why and how the vowels are long or short.

1.6.8 Lowland East Cushitic Subgrouping and Reconstruction (1974) by Paul Black is a dissertation on Cushitic languages of Ethiopia. In the phonology section, on page (64) the five Oromo Segmental vowels are given. Conditions in which 'a' alternates with 'o' and ee alternates with 'a' are presented on the bottom of page (66). The author also located the origin for the development of ee and aa to be ay and aw respectively. This work is used as source material for the present study, because it contains valuable information that can be employed in the solution for non alternating length (or long vowels) in Oromo.

1.6.9 'Oromo of Wollega' by Gene Gragg in the Non-Semitic languages of Ethiopia (1976) is one of the works on Oromo. The phonology section deals with vowels as well as consonant sound units. There, the author mentions five long vowels in addition to short vowels. Besides, Gragg presents /i, e/ as the counter parts of /ii, ee/, which tend to be laxer and somewhat lower. /a/ is also presented as a more centralized vowel than /aa/. The phonetic difference between short and long

back rounded vowels are of quantity or duration. The remarks given regarding back rounded long and short vowels are essential in deciding on the nature of some long vowels in Oromo.

1.6.10 'Galla' in Languages of Ethiopia (1976), by M.L. Bender, and others is also an important work on Oromo. Under the phonology section five short vowels are presented. According to the authors the short vowels occur long as well (p.131) The non-occurrence of long vowels preceding geminate or sequences of consonants is also mentioned. The authors are aware of the role of contraction or absence of a sound unit giving long vowels. For example nagai is a contraction from nagaa 'be in health'. The long ii in itiima 'he will tell him' is caused by the loss of h from ithima. They also mentioned other views in the bottom of page (131). According to the views sequences of non-identical vowels (ia, eu) were originally eya or eyu which latter on lost the glide giving the diphthongs (ia, eu). The loss of a glottal stop in a given environment is mentioned as causing vowel length. Eg. ?aruu— aaruu, du?uu— duuna. The vowels are not discussed in detail for it is a survey work.

1.6.11 The Waata dialect of Oromo (1981) by Bernd Heine gives five short, five long and five devoiced vowels in the phonology section. Heine did not show whether the devoiced vowels are distinctive or non-distinctive. Even for the distinctive long vowels a very few data, such as jala 'under' jaala friend are presented. The present work provides enough linguistic data compared to that of Heine. It also makes difference between the distinctive and the non-distinctive long vowels. In addition it formulates rules that can account for

the development of non-distinctive surface long vowels.

1.6.12 The phonology of Macha Oromo (1981) by Wago Tola is an important paper (M.A). Wago indicates the distinctiveness of length in Oromo. He ascribes length in word final position to the loss of glottal stop. That is if a glottal stop preceded by a vowel is lost the vowel becomes long, otherwise it remains short. eg. sare? → saree whereas muka → muka. The section which deals with conditions under which a vowel becomes long is very helpful to work on long vowels in Oromo..

1.6.13 Gene Gragg in his Oromo Dicitinary (1982) gives five short and five long vowels. According to Gragg long and short vowels contrast in all positions and all syllable types except that with in a stem (i.e. exclusive of non-derivational affixes and stem final vowels) two long vowels do not occur in successive syllables. He did not show whether short or long vowels are the underlying representation.

1.6.14 A Grammar of Harar Oromo (1985) by Jonathan Owens considers the segmental phonology of Oromo. This book deals mainly with Harar Oromo. In his work Owens has indicated environments in which glides change into long vowels. For example du?e — duute when followed by consonant initial suffixes. The condition of glide deletion (i.e. bah — baa), vowel harmonization (i.e. tahe — tehe) are also mentioned. The material used in explaining the nature of Oromo vowel under which glides are reduced, and other phonological process are invaluable to the present work.

1.6.15 An interesting article on Oromo is 'Bird Talk in Oromo' in Quaderni di studi Ethiopici (1985/86) by Kebede Hordofa and Peter Unseth. In this article the section which deals with syllable fronting reflects an important fact regarding  $c_1 - c_2$ , a motivating environment for vowel length in addition to the non-occurrence of length preceding geminate (or cluster) consonants. In this respect the article is a useful evidence for the nature of non-contrasting vowel length in Oromo.

1.7 GENERATIVE PHONOLOGY: Phonology is concerned with the sound structure while generative phonology is a theory of

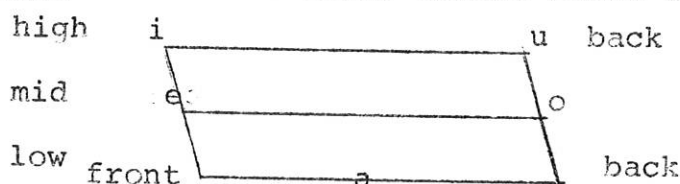
sound structure. It is generative because it maps the base form onto the surface representation by the application of phonological rules. It allows a greater degree of abstraction in the base form.

The theoretical framework work of generative phonology is started with the work of Morris Halle (1959). It was firmly established when Noam Chomsky and Morris Halle produced the book, the sound patterns of English (SPE) (1968). The writer of this paper has benefited from the works of Hyman (1975), Kenstowicz and Kisberth (1974).

The metrical phonology distinguishes two levels of representation. They are the segmental and the metrical. The metrical level stands for the supra-segmentals (i.e length and poetic stress in this study). Length and poetic stress are represented in the tree notation by using S and H as terminal nodes. The metrical phonology satisfies the explanatory adequacy for it makes a clear cut distinction between the segmental and non-segmental levels of analysis. The evidence from the metrical analysis of length and poetic stress for the long vowels in the (c<sub>1</sub>)—c<sub>2</sub> environment has benefited from the works of Ingria (LI 1980) Kiparsky (LI 1977) and Leben (LI 1980)

1.8 SYMBOLS USED IN THIS STUDY: These symbols include vowel and consonant charts, abbreviations, and signs used for this study.

1.8.1 Vowel Chart: All five Oromo vowels occur long and short



1.32 Consonant Chart

		Bi-labial	alveolar	palatal	velar	glottal
Stops	vl	(p)	t		k	ʔ
	vd	b	d		g	
	ejec	p̣	ṭ	c̣	q	
Implosive			ɗ			
Frica	vl	f	s	ʃ		h
	vd	(v)	(z)			
Affri	yl			tʃ		
	vd			dʒ		
nasals		m	n	ɲ		
liquids			l r			
Semi-vowels		w		y		

1.33 Key to Abbreviations

vs= versus

G = glide

vv = long vowels (or sequences of identical vowel)

v = vowel

vl = voiceless

vd = voiced

sg = singular

pl = plural

-c<sub>1</sub>c<sub>2</sub> non-identical sequences of consonants

-c<sub>1</sub>c<sub>1</sub> identical sequences of consonants

c<sub>1</sub> - c<sub>2</sub> = environment for non-contrasting long vowels

in root morphemes.

c<sub>1</sub> - G c<sub>2</sub> = environment for short vowel in base forms

Acc=Accusative case

Nom = Nominative case

Gen = Genitive case

Abl = Ablative (or instrumental) case

1.84 Key to signs

- [+] = shows presence of a feature  
[-] = indicates absence of a feature  
// = encloses the underlying forms  
[ I # shows surface representation  
- = line that separates roots from suffixes  
s = 1. stands for the more sonorous of the two sister nodes in the metrical analysis of length.  
2. represents the stressed syllable (or vowel) in the metrical analysis of poetic stress  
w = 1. stands for consonant when it branches from non-s node in the metrical analysis of length  
2. stands for the sister node of s when it branches from s  
3. represents non-stressed vowel (or syllable) in poetic stress.  
\$ = represents the higher node from which s and w branch  
( ) = encloses loan sound units  
" " = encloses quotations or an item to which attention is drawn.  
' ' = encloses glosses.  
→ = rewritten as  
/ = in the environment of eg t → n/n-  
/ = alternate i.e a/b → a or b  
∅ = zero morpheme  
# = word boundary  
+ = morpheme boundary  
' = stands for stress  
. = marks implosive or ejective sound units  
∂ = alpha, represents presence of a feature  
-∂ = alpha, represent absence of afeature

### 1.9 DEFINITION OF TERMS

Contrastive; The term contrastive is not used in generative phonology. The equivalent term is distinctive..

Metrics: linguistic term that refers to poetic rhythm. In metrics poetic stresses are analysed at non-segmental level.

Compensatory lengthening: A lengthening of an identical root vowel which fills the missing gap.

Underlying form: The abstract or non-concrete level of sound representation. The equivalent term is base form.

Surface form: The level between the abstract and actual representation. For example the sound unit /a/ is written 'a' at the surface but, at the phonetic level it is realized as [a, ʌ or ɑ̃]. Therefore surface representation avoids all phonetic details.

CHAPTER - 2

2.0. THE VOWEL DISTRIBUTION

The following analysis shows the occurrence of Oromo vowels in non-derived morphemes.

2.10 CONTRASTING LONG VOWELS

In many root forms, long vowels contrast with short vowels. This means, length is distinctive. Keeping this in mind, this section of the analysis examines, (1) the distribution of long vowels against short vowels, (2) the absence of contrast Vs the presence of contrast in all environments. Illustrations with respect to each contrasting vowels are presented below.

2.11 Short /a/ Vs Long /a/

Long /a/ contrasts with short /a/ in the environments given below:

<u>Contrasting short /a/</u>		<u>Contrasting long /a/</u>	
<u>Morpheme</u>	<u>gloss</u>	<u>Morpheme</u>	<u>gloss</u>
bud <u>u</u>	'to escape'	baaduu	'whey'
(1) Sam-uu	to be dirt	saam-uu	td oot
dab-uu	'to be in need'	daab-uu	'to plant'
ka?-uu	'to get up'	kaa?-uu	'to put'
ham-aa	'wicked'	haam-aa	harvest

2.12 Short /u/ Vs long /u/

The following data indicate the contrasting environment for long /u/ and short /u/

Contrasting Short /u/

<u>Morpheme</u>	<u>gloss</u>	<u>morpheme</u>
mud-aa	'short coming'	mud-a
(2) but-fii	'kidnap'	buut-ii
hub-a	'harm'	huub-a
gum-aa	'blood price'	guum-aa
sut-a	'patch'	suut-a

Contrasting long/u/

<u>morpheme</u>	<u>gloss</u>
mud-a	'anointing'
buut-ii	'viper'
huub-a	'raft'
guum-aa	'cane'
suut-a	'slowly'

2.13 Short /i/ Vs long /i/

Short /i/ contrasts with long /i/ in a few environments, especially in non-derived roots.

Contrasting short /i/

<u>Morpheme</u>	<u>gloss</u>
ḍib-uu	'to cause trouble to'
ḍis-uu	'to stretch'
(3) fit-a	'finishing'

Contrasting Long /i/

<u>Morpheme</u>	<u>gloss</u>
ḍiib-uu	'to push'
ḍiis-uu	'to abandon'
fiit <sup>ə</sup>	'top'

2.14 Short /o/ Vs Long /o/

These root vowels (i.e. o and oo) contrast only in a few environment.

Contrasting Short /o/

<u>Morpheme</u>	<u>gloss</u>	<u>Morpheme</u>
sor-uu	'to sift'	soor-uu
mor-uu	'spell up on'	moor-uu
bor-u	'tomorrow'	boor-uu
(4) bon-a	'dry season'	boon-a
qor-uu	'to clip'	qoor-uu

Contrasting Long /o/

<u>gloss</u>
'to fatten'
'to be fat'
'unclean'
'pride'
'get dry'

2.15 Short /e/ Vs Long /e/

/e/ and /ee/ occur in contrast only in very few environments, especially as root vowels.

Contrasting Short /e/

<u>Morpheme</u>	<u>gloss</u>
(5) e <sub>l</sub> <sup>o</sup> m-uu	to milk

Contrasting Long /e/

<u>Morpheme</u>	<u>gloss</u>
eel-uu	'to be dark'

As can be observed from the above examples, long contrasting vowels (i.e. root vowels) may be constrained based on their environment of occurrence. Because contrasting long vowels are always followed by single consonant sound units. They also reflect a quality which is quite identical to that of their short conter parts.

Contrasting long vowels occur in the constrained environment being preceded or followed by sonorant sound units (i.e liquids, nasals and laterals). Moreover, length in oromo seems to be a surface phenomenon which is the result of absence of a glide from an environment. The next examples show the validity of this claim in some contrasting morphemes.

Contrasting short /o/

<u>Morpheme</u>
(6) /do-tuu/
[d <sup>h</sup> tuu]
/eat greedily/

Contrasting Long /o/

<u>Morpheme</u>
/dow-tuu/ base form
G-reduction and
doo-tuu V-lengthening
[dootuu] surface form
'burstied'

Besides, in a random sample of seventy two contrasting non-derived morphemes /a/ occurs in contrast in forty six cases, /u/ and /o/ appear in contrast in eleven cases, /i/ occurs in contrast in three cases but /e/ occurs in contrast in one case only.

Even if the above stated points and environments for long contrasting vowels may invite different interpretations, this paper adher to the existing convention because, morphemes of contrasting vowel may not be rule governed and their environment of contrast may not be predicted.

## 2.2. NONCONTRASTING LONG VOWELS

This section of the analysis deals with morphemes of noncontrasting long vowels. Noncontrasting long vowels are followed by single sound units. They may not occur either before geminate or sequences of consonants. All five Oromo simple vowels maintain this feature [t+long] in the noncontrasting surface environment. All of them occur in a similar rate of distribution in the  $C_1-C_2$  environment. In most cases the specified environment for non contrasting long vowels are dictated by sonorant sound units. In general, non contrasting long vowels show the following environment of occurrence.

### 2.21 Non-contrasting Long /e/

Long /e/ appears root vowel in a lot of morphemes. It has no alternate at all in the following morphemes

Non contrasting Long/e/

<u>Morpheme</u>	<u>gloss</u>
seen-aa	'recollection'
beek-aa	'wise'
(7) deem-uu	'to go'
reeb-uu	'to beat'
lee1-uu	'to become dirt'

2.22 Noncontrasting Long /a/

Long /a/ occurs noncontrasting in the environments to follow:

Noncontrasting Long /a/

<u>Morpheme</u>	<u>gloss</u>
waad-uu	'to roadst'
(8) laa1-uu	'to see'
raag-oo	'fortell'
saar-uu	'to become bushy'
naar-a	'eye lash'

2.23 Non-contrasting Long/u/

Long /u/ mainly appears in the following morpheme.

Noncontrasting Long /u/

	<u>Morpheme</u>	<u>gloss</u>
	guut-uu	'tafill'
	duub-a	'behind /back'
(9)	fuul-a	'face'
	luut-uu	'to stoop'
	suuf-uu	'to smell'

2.24 Noncontrasting Long /i/

As the following examples show /i/ also occur noncontrasting in morphemes given below.

Non-contrasting Long/i/

	<u>Morpheme</u>	<u>gloss</u>
	diig-uu	'to bleed'
	fiig-uu	'to run'
(10)	diig-uu	'to demolish'
	ciis-uu	'to lie down'

2.25 Non-contrasting Long /o/

The long vowel /o/ just as the other non alternating long vowels appear in the environment given below.

Noncontrasting Long /o/

	<u>Morpheme</u>	<u>gloss</u>
	hooq-uu	'to scratch'
	moof-aa	'rag'
	bood-a	'afterwards'
(11)	qooq-uu	'to feel hungry'
	hool-aa	'sheep'
	loon	'herd'

As can be observed from data (7-11) non contrasting long root vowels occur in a C<sub>1</sub>-C<sub>2</sub> environment. They may not appear preceding -C<sub>1</sub>C<sub>2</sub> or C<sub>1</sub>C<sub>1</sub> (the -C<sub>1</sub>C<sub>1</sub> may be a phonetic -C<sub>1</sub>C<sub>1</sub> the base of which could be -C<sub>1</sub>C<sub>2</sub> eg /bar-ne/ → [barre] 'we knew')

2.26 The  $-C_1C_1$  Environment

Long vowels do not occur followed by  $-C_1C_1$  consonants. Examples are as follows:

	<u>Morpheme</u>	<u>gloss</u>
	bokk-aa	'rain'
	lapp-ee	'heart'
(12)	cubb-uu	sin
	bill-aa	knife
	gemm-oo	hearth

2.27 The  $-C_1C_2$  Environment

Long vowels do not occur before  $-C_1C_2$  consonants. To illustrate examples are as follows:

	<u>Morpheme</u>	<u>gloss</u>
	arg-uu	to see
(13)	gors-uu	to give advice
	sirb-a	dance
	ging-ee	'stammerer'
	geng-oo	'circle'
	lenc'-a	'lion'

In most cases, a root vowel becomes long when it is not followed by geminated or sequences of consonants. The data (12,13) presented above are different from data (7-11), because the root vowels in data (12,13) are followed by either geminated or sequences of consonants which block vowel lengthening. From these point of view ~~non~~ contrasting length may be governed by a set of phonological rules that can map

The loans from Amharic show the internalized sound system (phonological rules that govern the phonotactic) especially the sound units (vowels) that Oromo has in addition to the rules that dictate the sound structure with respect to the sound units Oromo does not have sound units like the Amharic sixth order /t/ and first order /a/. In the process of borrowing, however, /a/ ad /t/ are/ replaced by /a/ and /i/. In most cases, if the loan contains /a/ and /i/ they are changed into /aa/ and /i/ respectively, always only when they occur between single consonants (or  $C^1 - C^2$ ) and in morpheme final position. The examples presented below indicate the vowel system in Oromo and the phonological rules regarding noncontrasting long vowels

### 2.31 LOANS FROM AMHARIC

- (1) Loans from Amharic
- (2) Bird Talk in Oromo
- (3) written source
- (4) Verb Inflection
- (5) Metrical Analysis of Length

Noncontrasting long vowels occur followed by single consonants (i.e.  $(C^1) - (C^2)$ ). The evidence shows the intuition for the  $C^1 - C^2$  environment, the origin of some surface long vowels and the underlying form for the  $C^1 - C^2$ . The evidence is drawn from:

### 2.30 EVIDENCE FOR NONCONTRASTING LONG VOWELS

the base form onto the surface form. But before treating the problem of noncontrasting length, evidence that reflect the systematic phonological rules is presented below.



2.315 Loan with Root Vowel /o/

	Amharic	Oromo	
	Morpheme	Morpheme	
	qob	qobii	'cap'
(17)	qoi	qoi ii	'bed'
	kok	kookii	'edible fruit'
	foq	foo ii	'story'

2.316 Loan with Root Vowel /u/

	Amharic	Oromo	
	Morpheme	Morpheme	
	gus	gusii	unripe bear
(18)	fur	fuurii	'sin'
	suf	suffii	'woolen'
	muz	musii	'banana'

As can be seen from the data (14-18) above the oromo speakers adjust the morphemes according to their own sound system. As mentioned earlier, noncontrasting long vowels do not appear preceding sequence of sound units (i.e. cluster or geminate). The loan from Amharic too, shows the non occurrence of long vowels before double (i.e. -C<sup>1</sup>C<sup>1</sup> or C<sup>1</sup>C<sup>2</sup>) consonants. The data below indicate the environments.

2.41 Evidence for  $-C_1C_2$  Consonants

Amharic	Oromo
Morpheme	Morpheme
qurs	qursi
qulf	qufii
marfe	marfee
masqal	masqalii
	'cross'
	'middle'
	'key'
	'breakfast'
	<u>gloss</u>

The data (19) above show the non occurrence of length preceding  $-C_1C_2$ . It also indicate the systematized sound rules. For example, the vowel sound in masqal is changed into 'masqalii', 'cross' which reflects the absence of /a/ in Oromo. If the vowels of the loan are like to that of Oromo as in qurs and qulf, they remain the same except in environments that motivate length.

2.42. Evidence for  $-C_1C_1$  Consonants

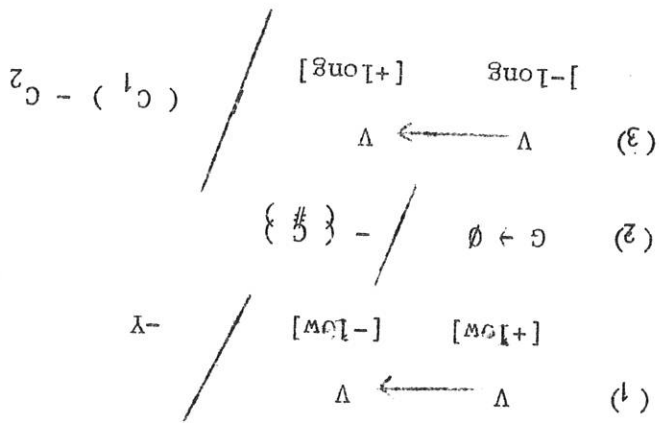
Amharic	Oromo
Morpheme	Morpheme
ganna	gannii
daggaane	daggaane
gamma	gamma
basso	bassoo
	'eatable flour'
	'shoe'
	'aimed at'
	'christmas'
	<u>gloss</u>

Data (20) show the non occurrence of length before double consonants (i.e.  $-C_1C_1$ ). These data 20 also justify the intuition of the native speaker for  $-C_1$  environment. According to data (16) the root vowel /a/ in Amharic becomes /aa/ in Oromo only in  $C_1-C_2$



Some of the present noncontrasting long vowels in Oromo have originated from the earlier vowel glide underlying form. For example the  $\bar{e}e$  in  $\bar{e}esa$  has been originated from the earlier  $\bar{a}y$  as in  $\bar{a}ysa$ . Moreno (1939: 23-30). The  $\bar{e}e$  in  $\bar{a}ldee-sa$  also originated from the earlier  $\bar{a}y$  as in  $\bar{a}lday-sa$  Black (1974: 102). The following examples indicate the derivation for some non-contrasting long surface vowels based on the rules (1-3) above.

2.61a Written Source



The written source is drawn from cerulli (1917), Hodson (1922), Moreno (1939) and Black (1974). According to these sources, some of the noncontrasting long vowels are developed from vowel glide sequences in the base. Some other surface noncontrasting long vowels are obtained in the process of metathesis. The phonological processes include vowel raising (or lowering) glide deletion and vowel lengthening based on the following rules.

2.6 WRITTEN SOURCE

Like wise vowel that come between single consonants (i.e. C<sub>1</sub> - C<sub>2</sub>) are long as in  $\bar{b}aadur$ , the disguised form above (21).

The derivation for easa, yeeyii, dageese, eeñu, beek-uu and jaldeesa.

/ayn-u/ /ays-a/ /ḍagay-sa/ /beyk-uu/ /jalday-sa/ base form  
eyñ-u eys-a ḍagey-sa → jaldey-sa V. raising

(22) G. deletion and

eeñ-u ees-a ḍagee-sa beek-uu jaldee-sa V.lengthening

[eeñ-u] [eesa] [ḍagee-sa] [beekuu] jaldeesa] surface form

'who' 'where' 'you will hear' 'to know' 'baboon'

2/61 b Written source

Non-contrasting long surface vowels are also originated from a vowel glide underlying forms that contain the glide /ʔ/. For example the eo in foon 'meat' is originated from the earlier underlying form oʔ as in foʔ-n.

The derivation for loon and foon are as follows:

/loʔ-n/ /foʔ-n/ base form  
(23) loo-n foo-n G-deletion and v-lengthening  
[loon̄] [foon] surface form  
'cattle' 'meat'

2.62 Written Source - Metathesis

As the , written material in data(2.61a,b) shows, surface (or non-contrasting) long vowels are obtained in compensation to the lost glide sound units. In the case of metathesis, metathesising the glide should precede glide deletion. Eorexample darh - a becomes daar-a after /h/ and /r/ exchange their position. After the application of metathesis and glide deletion rules surface long vowels are obtained as follow:

4. Methathesis rule

V	[+sonorant -syllabic]	C	V (c)
1	2	3	4 (5)
1	3	2	4 (5)

Morphemes

	/damh-oḍ/	/garh-a/	/darh-a /	base
	dahm-oḍ	gahr-a	dahr-a	metathesis (4)
				G-deletion (2)
				and
(24)	ḍaam-oḍ	gaar-a	daar-a	V.lengthening (3)
	[ḍaamoḍuu]	[gaara ]	[ daara ]	surface form
	'feel cold'	'mountain'	'cloth'	

2.70 VERB INFLECTION

In verb inflection short vowels become long in compensation to the short sound units. This case refers to

root final glides (i.e d, w, y, ʔ, h). /d/ is included in the glide class for one of its features is glottal. When these sound units (or root final glides) are followed by any consonant initial suffixes, they themselves disappear, and the root vowels become long. The perfect and imperfect inflections of glide final root verbs are as given below.

2.71 Root Verb duʔ - 'die'

Perfect Inflection

Imperfect Inflection

<u>Person</u>	<u>gloss</u>	<u>person</u>	<u>gloss</u>
sg 1 duʔe	'I have died'	nan duʔa	'I will die'
z duute	'you have died'	hin duuta	'you will die'
3F duute	'she has died'	hinduuti	'she will die'
(25) m duʔe	'he has died'	hin duʔa	'he will die'
pl 1 duune	'We have died'	hin duuna	'we will die'
2 duutan	'you have died'	hin duutu	'you will die'
3 duʔan	'they have died'	hin duʔu	'they will die'

2.72 Root verb bah 0 'get out'

Perfect Inflection

Imperfect Inflection

<u>Person</u>	<u>gloss</u>	<u>person</u>	<u>gloss</u>
1. bahe	'I got out'	non baha	'I will get out'
2. baate	'you got out'	hin baata	'you will get out'
3F baate	'she got out'	hin baati	'she will get out'
(26) m bahe	'he got out'	hin baha	'he will get out'

p1	baane	'we got out'	hin baana	'we will get out'
2	boatan	'you got out'	hin baatu	'you will get out'
3	ba <sub>h</sub> an	'they got out'	hin bah u	'they will get out'

2.73a Root verb foy - 'spin'

Perfect inflection

Imperfect Inflection

<u>Person</u>	<u>gloss</u>	<u>person</u>	<u>gloss</u>
sg1 foye	'I spun'	nan foya	'I will spin'
2 foote	'you span'	hin foota	'you will spin'
(27) 3f foote	'she spun'	nin footi	'she will spin'
m foye	'he span'	hin foya	'he will spin'
pl 4 foone	'we span'	hin foona	'we will spin'
2 footan	'you span'	hin footu	'you will spin'
3 foyan	'they spun'	hin foya	'they will spin'

2.73 b Root Verb day- 'give birth'

Perfect Inflection

Imperfect Inflection

<u>Person</u>	<u>gloss</u>	<u>person</u>	<u>gloss</u>
sg 1 daye	'I gave birth'	nan daya	'I will give birth'
2 deese	'you gave birth'	hin deesa	'you will give birth'
3f deese	'she gave birth'	hin deesi	'she will give birth'
(28) m daye	'he gave birth'	hin daya	'he will give birth'
pl 1 deene	'we gave birth'	hin deena	'we will give birth'
2 deesan	'you gave birth'	hin deesu	'you will give birth'
3 dayan	'They gave birth'	hin dayu	'they will give birth'

2.74 Root Verb dow - 'burst'

Perfect Inflection

Imperfect Inflection

<u>Person</u>	<u>gloss</u>	<u>Person</u>	<u>gloss</u>
sg1 dowe	'I burst'	nan dowe	I will burst
2 doote	you burst	hin doota	you will burst
(29) 3F doote	she burst	hin dooti	she will burst
m dowe	he burst	hin dowe	he will burst
pl 1 doone	we burst	hin doona	we will burst
2 dootan	you burst	hindootu	you will burst
3 down	they burst	hin down	they will burst

s.75 Root Verb fed 'wish'

Perfect Inflection

Imperfect Inflection

<u>Person</u>	<u>gloss</u>	<u>person</u>	<u>gloss</u>
SG1 feđe	'I wished'	nan feđa	'I will wish'
2 feete	'you wished'	hin feeta	'you will wish'
3F feets	'she wished'	hin feeti	'she will wish'
(30) m feđe	'he wished'	hin feda	'he will wish'
pl 1 feene	'we wished'	hin feena	'we will wish'
2 feetan	'you wished'	hin feetu	'you will wish'
3 feđan	'they wished'	hin feđu	'they will wish'

Data (25-30) show environments in which short underlying vowels become long. According to the data, length is a surface form which can be handled by the following:

$$5 \quad C_1VG \rightarrow C_1VG- / \_\_ + V$$

$$6 \quad C_1VG- \rightarrow C_1VV- / \_\_ + C(V)$$

The next examples are presented to show the application of the rules (5,6) given above based on data (25, 28)

<u>Base form</u>	<u>Surface form</u>
<u>Person</u>	<u>Person</u>
sg 1 /bahe/	[bahe] (5)
2 /bahte/	[baate] (6)
3F /bah-te/	[baate] (6)
M /bah-e/	[bahe] (7)
Pl 1 /bah-ne/	[baane] (6)
(31) 2 /bah-tan/	[baatan] (6)
3 /bah-an/	[bahan] (5)

<u>Base form</u>	<u>Surface form</u>
<u>Person</u>	
sg 1 /daye/	[daye] (5)
2/day-te/	[deese] (6)
3F /day-te/	[deese] (6)
(32) M /day-e/	[daye] (5)
pl 1 /day-ne/	[deene] (6)
2 /day-tan	[deesan] (6)
-3 /day-an/	[day an] (5)

2.80 Metrical Analysis of Length

This section of the analysis presents evidence for the (C<sub>1</sub>) - C<sub>2</sub> environment of length/

2.81 Poetic Stress as metrical Phenomenon

This section examines the role of stress with respect to long vowels. For this purpose the poetic data below are taken from Cerulli (1917: 146). The transcription here follows Cerulli in every detail.

<u>Poetic Data</u>	<u>gloss</u>
ámma díegni homáda	For poverty is a misfortune.
namā díerā gababsá	tall man it shortens;
gababá baddú basá	short ones it destroys wholly,
ta?umsá dombí godá	of chairs it makes little stools;
(33) uffaná mófā godá	of clothes it makes rags.
wamiccá bode godá	It sends away invitation

Oromo has different kinds of poems. One of them is data (33) above. Each metric line in these data (33) contain seven syllables. Three syllables of each metric line are stressed. The stressed syllables contain long vowels, as in déerā or short vowels as in nama. The non-stressed syllables also contain long vowels as in wamiccā and short vowels as in baddú.

But, how can short vowels be stressed? why is it that not all long vowels stressed?

Before going into the issue, poetic stress will be compared with "normal" stress in lexical and inflected forms.

2.811	<u>Lexical stress</u>	<u>poetic stress(33)</u>	<u>Difference</u>	<u>gloss</u>
	ámma	ámma	-	'now'
	náma	náma	-	'man'
	dombí	dombí	-	'stool'
(34)	deera'	dié <sup>ˆ</sup> erá	/	'tall'
	gabaaba'	gababá <sup>ˆ</sup>	-	'short'
	moofa'	mófa <sup>ˆ</sup>	/	'rag'

	<u>Inflected forms</u>	<u>Poetic Stress</u>	<u>Difference</u>	<u>gloss</u>
	deegni	diegni	-	'poverty'
	hámaada	hamáda'	/	'is cruel'
	gabaabsa	gababsa'	/	'makes short'
	baddú	baddú	-	'worthless'
	baasa'	basa'	-	'makes'
(35)	taa'umsa	ta'umsa <sup>ˆ</sup>	/	'seating'
	goda'	goda	-	'makes'
	uffanna'	uffaná <sup>ˆ</sup>	-	'clothes'
	goda'	goda	-	'makes'
	waamicca	wámiccá <sup>ˆ</sup>	/	'invitation'
	bodde'	bode'	-	'later on'
	goda'	goda'	-	'makes'

The lexical (34) and the inflected form (35) above contain eighteen stressed syllables. The poetic data differ from those of lexical and inflected data only in six cases. In all of the other cases they correspond to each other. For example the ee in deegni is stressed in its "normal" and poetic stress.

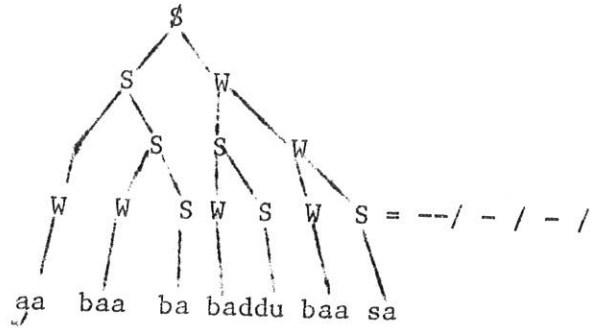
Since the transcription of Cerulli (1917) does not represent the actual pronunciation by Oromo speakers of today, the poetic data of Cerulli (33) above will now be revised in both transcription and stress as below

<u>Revised poetic Data</u>	<u>gloss</u>
'amma deegni hamaada'	In this days poverty is cruel.
'nama deeraa gabaabsa'	It makes tall man short;
gabaaba baddu' baasa'	it shortens the short one;
(36) taa?umsa dombi' goda'	makes his seat dombi (seat of the poor).
uffanna' moofa' goda'	It makes clothes rag
waamicca badde' goda'	lessen status in invitation

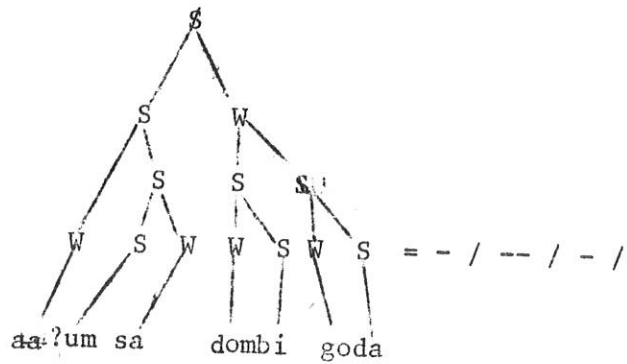
The link of (36) and (33) differ only in three cases. For example data (35) stress the second syllable of moofa' where as data (33) stress the first syllable. For this reason data (36) are presented as follows.



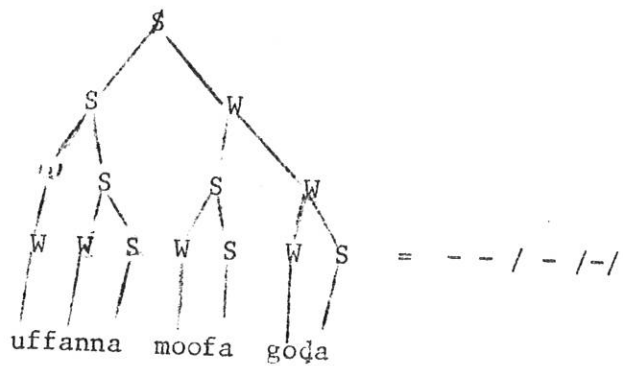
(37) c. gabaaba' baddu' baasa' 'it shortens the short one'



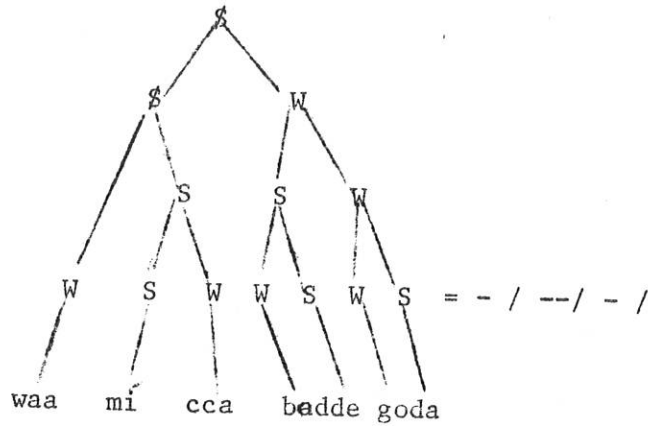
(37) d. aa?umsa' dombi' goda' 'makes his seat dombi, seat of the poor'



(37) e. uffanna' moofa' goda' 'makes clothes rag'



(37) f Waamicca bodde goda 'essen 'status in invitation',



As can be observed from data (37), the number of long non stressed vowels is greater than the number of long stressed vowels. The stressed and non stressed long vowels appear in the  $C_1 C_2$  environment as in moof-a'.

According to the metric analysis of length, stressed vowels are considered to be long in the base form. Therefore all the non stressed long vowels should be considered short in the base form. It follows that the poetic stress too confirms long  $\underline{V}$  in  $C_1 - C_2$  to be a surface phenomenon as in /bah+sa/ → [baasa]

However there are a few exceptions to this; some of the stressed long vowels also are found to be short in the underlying form. For example, the base forms of ee in deeraa and aa in baasa are ey and ah respectively. Their long surface forms, ee and aa are obtained after glide deletion (5,6) lengthens the remaining vowel. Therefore,

even what is stressed in the metrical line may not always belong in the underlying form.

## 2.82 Compensatory lengthening as Metrical Phenomenon

This section considers the role of compensatory lengthening in the  $C_1-C_2$  environment. Metrical analysis distinguishes metrical and segmental levels of analysis.

In the metrical analysis of compensatory lengthening, long vowels are represented as sequences of identical vowels. Long vowels occupy two separate positions in a metrical tree. These positions are represented by S and W. S stand for the more sonorous of the two sister nodes, W stands for consonants in the base form. But in the surface, W stands for the non-sonorous sister node of the sonorous S, especially when s and w branch from the s node and w is preceded by S itself.

The segmental level is a level at which long vowels are equated with short vowels.

In line with the above stated points the metrical analysis of compensatory lengthening in Oromo is presented below.

For the analysis of compensatory lengthening (1) inflected morphemes of data (25-30), and root morphemes of data (24) are used.

2.821 Inflected morphemes in Metrical Analysis

Roots ending in glides as shown under data (25-30) above usually delete the glide when followed by consonant initial suffixes, and then double the root vowel in compensation to the lost sounds. The loss of a glide from a root final position can be handled by rules (7, 8) below.

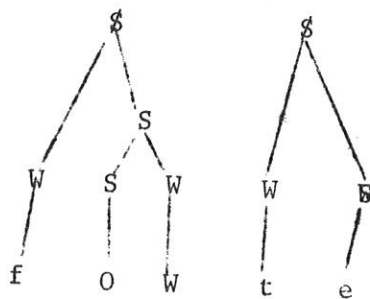
$$7. G \rightarrow \emptyset / - / \left( \begin{array}{c} + \\ \# \\ C \end{array} \right)$$

8, Empty Node Convention

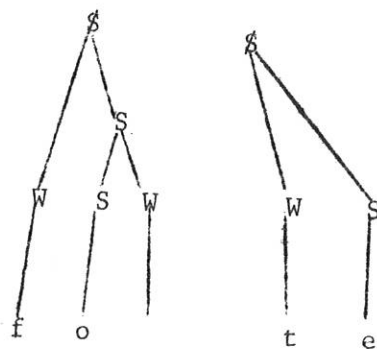
"Empty w nodes which are part of a syllabic coda are to be associated with the terminal element dominated by the immediately preceding syllabic nucleus" (LI 1980: 471)

Based on rules (7, 8) above the analysis of data (2.7) only in perfect sg 2 is as follows.

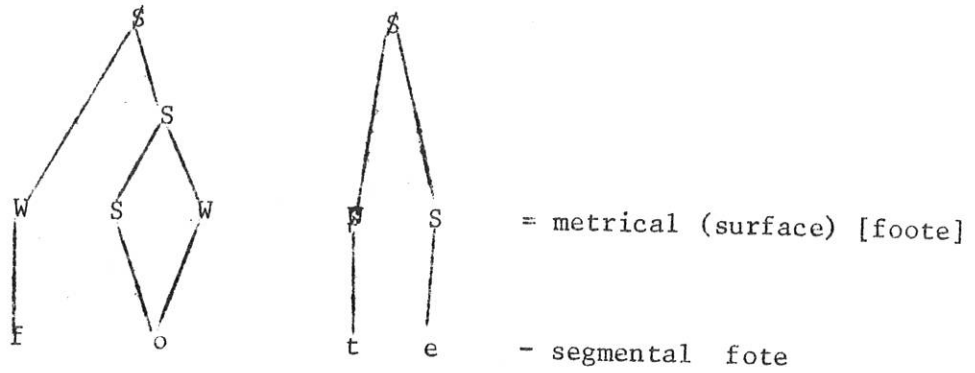
(38) a- base form = / fow-te /



(38) b G- deletion (9)



(38) c. Empty Node Convention

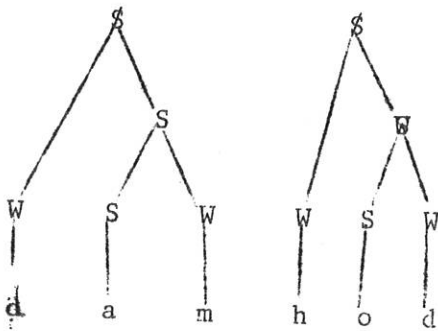


2. 822 Root Morphemes in Metrical Analysis

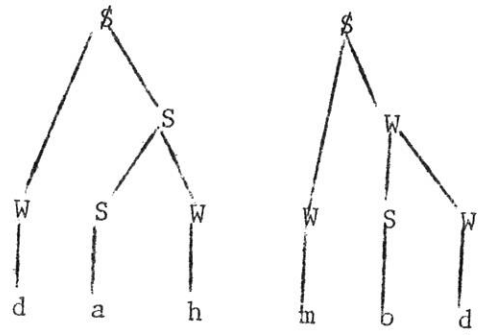
Data (24.) above require an extra rule (i.e rule 4) in addition to rules (7, 8), because glide deletion and vowel lengthening do not solve problems such as in data (25-30). To obtain a correct result, glide and sonorant /m/r/ metathesis should precede the application of deletion rule (7). If glide deletion occurs after metathesis, it results in compensatory lengthening in the same environment as given below.

Metric representation of data (24)

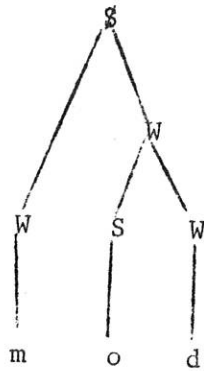
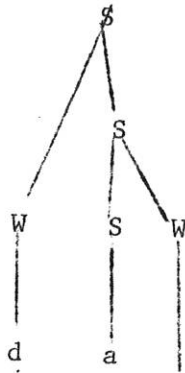
(39) a /damhod/ base form



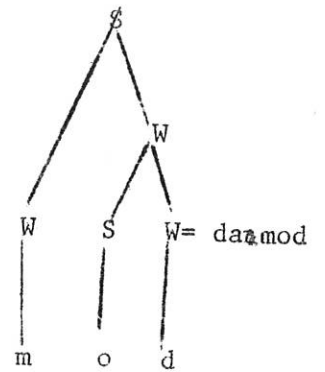
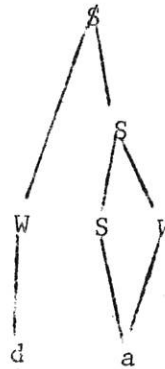
(39) b Metathesis (6)



(39) c. G - deletion (a)



(39) d. Empty Node Convention



The evidence from the metrical analysis of compensatory lengthening also reconfirms the length in  $(C_1) - C_2$  environment to be a surface phenomenon especially for the non-contrasting length. The base form for surface long V in the  $C_1 - C_2$  environment is short V in  $(C_1) - GC_2$

The segmental level only stands for segments excluding length. So on this level VV sequences are not found. Length is, however, non-segmental, and is represented on a higher level, as indicated in the metrical tree (39) d.

CHAPTER 3

3.0 SUFFIX VOWELS

In Oromo, suffix vowels are divided into contrasting and non-contrasting vowels. These suffixes require detailed examination. For this purpose, this section of the analysis presents suffix vowels whether long or short, and contrasting or noncontrasting, to identify the base.

3.1 Contrast in Suffix Vowels

The contrasting suffix vowels include nominalizers and verb formatives as well. The following examples indicate the representation for each.

3.11 Short /-e/ VS Long /-ee/

In Oromo, the morpheme e functions as perfect formative (or perfect marker). But, ee on the other hand acts as a nominalizer. This means -e is an inflectional suffix whereas -ee is a derivational suffix.

<u>Short /-e/</u>		<u>Long /-ee/</u>	
<u>Morpheme</u>	<u>gloss</u>	<u>Morpheme</u>	<u>gloss</u>
eele	'I/he was annoyed'	eel-ee	'clay bar'
leele	'It looked like soot'	leelee	'bee soot'
(40) gale	'I/he killed'	kal-ee	'kidney'
fit-e	'I/he finished'	fiiṭee	'tie'
tikse	'I/he shepherd'	tiksee	'shepherd'
lole	'I/he quarreled'	lolee	servant

3.12 Short /-a/ Vs Long /-a/

The suffix -a verbaliz or nominalizes a root where as -aa changes the root into a different form of noun Consider the following illustrations.

Short /-a/		Long /-a/	
<u>Morpheme</u>	<u>gloss</u>	<u>Morpheme</u>	<u>gloss</u>
kor-a	'climbing'	kor-aa	'climber'
du?-a	'death'	du?-aa	'dead'
sor-a	'sifting'	sor-aa	'sift'
mor-a	'spell'	mor-aa	'speller'
lol-a	'quarrel'	lol-aa	'flood'
(41) hor-a	'salty water'	hor-aa	'wealthy'
gub-a	'burning'	gub-aa	'burner'
gor-a	'turning'	gor-aa	'strawberry'
utaal-a	'jump'	utaal-aa	'jumper'
bær-a	'year'	bar-aa	'learner'

3.13 Short /-i/ VS Long /-i/

The imperative morpheme - i and the noun formative -ii appear in opposition in root final position. Some root morphemes taking the imperative marker -i also take the noun formative -ii, Examples are as follows.

<u>Short /-i/</u>		<u>Long /-i/</u>	
<u>Morpheme</u>	<u>gloss</u>	<u>Morpheme</u>	<u>gloss</u>
Kut-i	'cut!'	Kut-ii	'rumour'
but-i	'take away'	but-ii	'kidnap'
koob-i	'treat with kooba'	koob-ii	'small hill'
qor-i	'clip!'	qor-ii	'feod type'
bar-i	'learn'	bar-ii	'dawn'
(42) saam-i	'toot/'	saam-ii	'loot'/ing
guur-i	'collect'	guur-ii	'ear wax'

3.14a Short /-u/ Vs Long /-uu/

The imperfect negative suffix /-u/ occurs in contrast with the infinitivizer /-uu/, which convert the root into infinitive.

<u>Short /-u/</u>		<u>Long /-uu/</u>	
<u>Morpheme (inflected)</u>	<u>gloss</u>	<u>Morpheme</u>	<u>gloss</u>
hin bit-u	I will not buy	bit-uu	'to buy'
(43) hin qal-u	I do not kill	qal-uu	'to kill(animal)'
hin deem-u	I will not go	deem-uu	'to go'
hin baru	I will not learn	bar-uu	'to learn'

1. In imperfect negative the root vowel is stressed. The stress distinguishes the positive p1 2,3 from negative sg1.

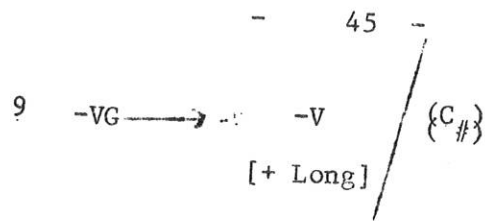
3.14 b Short /-u/ Vs Long /-u/

The infinitive formative /-uu/ appears in contrast with the imperfect positive marker /-u/ in pl 2, 3 as given below.

<u>Short /-u/</u>			<u>Long /-u/</u>	
<u>Morpheme (inflected)</u>	<u>gloss</u>		<u>Morpheme</u>	<u>gloss</u>
pl 2	hin <sup>1</sup> gal <sup>2</sup> -u	'you will go home'	gal-uu	'to go home'
2	hin <sup>1</sup> martu	'you will coil'	mar-uu	'to coil'
3	hin <sup>1</sup> har-u	'they will sweep'	har-uu	'to sweep'
(44)	hin <sup>1</sup> sirbu	'they will dance'	sirb-uu	'to dance'

In data (40-44) above some suffix vowels do not occur in contrast. These vowels include /-oo/ and /o/ which do not occur in any form of contrast, where as, /-uu/ and /-u/ appear but in a few positions. The base forms of these double vowels, mainly the noun formatives, are quite different from the surface forms because the base forms are structured on a single vowel plus a glottal stop. When the glottal stop is followed by a boundary (i.e morpheme-+, or word =#) or a consonant initial suffix (i.e. morpheme or o wrd) the glottal stop disappears, and in compensation the remaining vowel becomes long. The surface contrast, that is, contrast between a single and double vowel of the same quality (or colour) is quite different from the base contrast. This is the difference between the presence and absence of the glottal stop. The surface forms are generated from the base by the following rule.

- 
2. Stress in imperfect positive is placed on the prefix hin. It is obligatory.



The derivation for the contrasting leel-e and leel-ee

	/leyl-e/	/leyl-e?/	base form
(45)	leel-e	ʔeel-ee	G- deletion and V-lengthening(11)
	[pe <sub>1</sub> e]	[ <sub>1</sub> ee <sub>1</sub> ee]	
	'became soot'	'soot'	

### 3.20 Noncontrasting Suffix Vowels

In most cases, long suffix vowels appear as non-contrasting Long/-a/ however, occurs contrasting in a few cases.

### 3.21 Long suffix /-e/

The data below show the distribution for the noun formative /-ee/

<u>Morpheme</u>	<u>gloss</u>
dam-ee	'branch'
halb-ee	'knif'
(46) sar-ee	'dog'
hat-ee	'bush'
sagal-ee	'sound/voice'

3.22 Long suffix /-u/

In a few cases /uu/ contrasts with /-u/ which is both the imperfect negative suffix and the imperfect positive suffix in pl 2,3 (44) Most of the time /-uu/ is used as infinitive formative. Some times it also occurs with root nouns. It also appears with feminine adjective. In general, the non contrasting /-uu/ shows the following distribution.

3.22 A Noun formative Long /-u/

	<u>Morpheme</u>	<u>gloss</u>
	bulg-uu	'giant'
	tir-uu	'liver'
	bidr-uu	'trough'
(47)	barr-uu	'spot'
	boor-uu	'dirt'
	hark-uu	'calf less cow'
	dirmam-uu	'bruise'

3.22 b Long /-u/ as feminine Adjective Suffix.

	<u>Morpheme</u>	<u>Gloss</u>
	diimt-uu	'red (F)'
	baredd-uu	'beautiful (F)'
(48)	hamt-uu	'wicked'
	subduu	'liar'

3.23 Long Suffix /-i/

The non contrasting /-i/ occurs with root nouns that cannot be converted into infinitive, adjective or verb. It only occurs in contrast along root verbs.

	<u>Morpheme</u>	<u>gloss</u>
	mit-ii	'red ant'
	salg-ii	'nape'
	tafk-ii	'flee'
	qalb-ii	'caution'
(49)	garb-ii	'kind of tree'
	girb-ii	'cotton'
	warq-ii	'gold'
	kom-ii	'disagreement'
	amart-ii	'ring'

3.24 Long Suffix /-o/

Long suffix /-o/ never occurs in contrast. It rather appears as noun formative as follows.

	<u>Morpheme</u>	<u>gloss</u>
	janj-oo	'retarded'
	molg-oo	'food type'
	eeb-oo	'spear'
(50)	fant-oo	'syphilis'
	fand-oo	'dung'

mud-oo	'short coming'
diy-oo	'near'

2.25 Long suffix /-a/

The distribution of /-aa/ as a non contrasting noun formative suffix is quite few. In most cases /aa/ contrast with /-a/, the verbal noun formative. Examples for the noncontrasting /-aa/ are shown below. \*

	<u>Morpheme</u>	<u>gloss</u>
	mat-aa	'head'
	sarb-aa	'calf'
(54)	mad-aa	'wound'
	sang-aa	'bull'
	dag-aa	'stone'
	sod-aa	'fear'

On the other hand the non-contrasting suffix vowels require a similar solution to the contrasting suffix vowels, because, length in suffix vowels are caused by the loss of glides (i.e. ? or y) in suffix final positions. This condition has been noticed by Black (1974) and Waqo (1980). According to them, long suffix vowels are obtained when a glide disappears from a position, especially from suffix final positions. The next examples show conditions in which long suffix vowels are obtained by the rule (9) above.

The derivation for lafee, galtuu, and sangaa.

/laf-e?/ /gal-t-u?/ /sang-a?/ base form

(52)	laf-ee	gal-t-uu	sang-aa	G-deletion and v-lengthening
	[lafæe]	[galtuu]	[sangaa]	surface form.
	'bone'	'servant'	'bull'	

### 3.30 Length in Case Relations

Case suffixes in morphemes of long penultimate vowels are preceded by short vowels. But every instance of a case vowel is identical in quality to a suffix vowel. In other environments (i.e, in short or long vowel suffixes or morphemes of short penultimate vowel) case suffixes are preceded by long vowels. Stress is also placed on the initial component of the long suffix vowel as presented below.

### 3.31 Long Penultimate Vowel Morphemes

<u>Case</u>	<u>Morpheme</u>	<u>Morpheme</u>
Acc	nadde <sub>ə</sub> en(i)	farde <sub>ə</sub> en(ii)
(53) Nom	nadde <sub>ə</sub> en	farde <sub>ə</sub> en
Gen	nadde <sub>ə</sub> eni	farde <sub>ə</sub> eni
Dat	ndde <sub>ə</sub> enff	farde <sub>ə</sub> enif
Abl	nadde <sub>ə</sub> enin	farde <sub>ə</sub> enin
	'women'	'horses'

3.32 Short Final Vowel Morphemes

<u>Case</u>	<u>Morpheme</u>	<u>Morpheme</u>
Acc	nama	mana
Nom	nama	mana
Gen	namaa	manaa
(54) Dat	namaaf	manaaf
AbI	namaan	manaan
	'man'	'house'

3.33 Short penultimate vowel Morphemes

<u>Case</u>	<u>Morpheme</u>	<u>Morpheme</u>
	halkan	torban
Acc	halkan	torban
Nom	halkan	torban
(55) Gen	halkanii	torbanii
Dat	halkaniif	torbaniif
AbI	halkaniin	torbaniin
	'night'	week

3.34 Long Final Vowel Morphemes

<u>Case</u>	<u>Morpheme</u>	<u>Morpheme</u>
	lolaa	gabaa
Acc	lolaa	gobaaa
Nom	lolaan	gobaan

(55)	Gen	lolaá	gobaa
	Dat	lolaaf	gobaaf
	Abl	lolaan	gobaan
		'flood'	'stump'

As can be observed from data (53-56) above, case suffixes appear with long vowels where the morpheme final and the penultimate vowels are short, as in nama 'man' and torban 'week'. But, when the penultimate vowels are long the vowels that precede the case suffixes become short, as in naddeen 'woman'. On the other hand, if morpheme final vowels are long (surface) case length neutralizes and long final vowels remain long. This means, Oromo, does not allow two long vowel sequences. For this reason, the case morphemes occur regardless of length in the environment of long final vowels. Forexample, the dative form for lolaá 'flood' remains lolaaf 'for the flood' with a stress on the initial component of the suffix vowel. Based on the above stated arguments, the following rules are posited to show some phonological processes to obtain the surface form.

(10)  $-V(C) \xrightarrow{[\rightarrow \text{long}]} -V(c) / VC \xrightarrow{[\rightarrow \text{long}]} \#$   
 $[\rightarrow \text{long}] \quad [-\rightarrow \text{long}]$

(11)  $V(C) \xrightarrow{[\rightarrow \text{long}]} -V(c) / \left[ \begin{array}{c} V \\ [\rightarrow \text{long}] \\ V \\ [-\rightarrow \text{long}] \\ VC \\ [-\rightarrow \text{long}] \end{array} \right] \#$

Derivation:

Long Penultimate vowel Morphemes

<u>Gen</u>	<u>Dat</u>	<u>Abl</u>	
/fardey + ii /	/fardey + iif/	/fardey + iin/	base form
fardeen +ii.	fardeen + iif	fardeen + iin	G-deletion and V lengthening
(57) fardeén+ ii	Fardeén + iif	fardeén +iin	stress
fardeén + i	fardeén + if	fardeén + in	V-shortening
[fardeéni]	[fardéénif]	[fardéénin]	surface form
'of horses'	'for horses'	'by horses'	

Short Final Vowel Morphemes

<u>Gen</u>	<u>Dat</u>	<u>Abl</u>	
/nama + aa/	/nama + aaf/	/nama+ aan/	base form
nam + aa	nam + aaf	nam + aan	V. deletion
(58) namaá	namaáf	namaán	stress
[nan a.ɪ]	[namaáf]	[namaán]	surface form
'of man'	'for man'	'by man'	

Short Penultimate Vowel Morphemes

<u>Gen</u>	<u>Dat</u>	<u>Abl</u>	
/halkan + ii/	/halkan + iif/	/halkan + iin/	base form
halkan + íi	halkan + íif	halkan + íin	stress
(59) [halkaníi]	[halkaníif]	[halkaníin]	Surface form
'of night'	'for night'	'by night'	

Long Final Vowel Morphemes

	<u>Gen</u>	<u>Dat</u>	<u>Abl</u>	
	/lola? +aa/	/lol-a? +aaf/	/lal-a? +aan/	
				G.deletion and
(60)	lol-aa+-aa	lol-aa+-aaf	lol-aa+-aan	V-lengthening
	lol-aa	lol-aaf	lol-aan	V.neutralzation
	lol-aa	lol-aaf	lol-aan	stress
	[lolaa]	[lolaaf]	[lolaan]	surface form
	'of food'	'for flood'	with/by flood	

CHAPTER 4

4.05 SUMMARY AND CONCLUSION

This paper contains three major parts. They are as follows:

4.1 The first part deals with review of related literature. And it highlights important points relevant to the present study. Because, they<sup>are</sup> cues to the development of long surface vowels. Weak points in each reviewed literature are also mentioned. These weak points have moved the researcher to undertake the present study.

4.2 The second chapter considers vowels which are long at root level. The analysis is divided into two classes; contrasting and non-contrasting long vowels.

4.21 The class of contrasting vowels deals with root level long vowels. The contrasting long vowels occur before single consonants. They also reflect a quality identical to their short counter-parts.

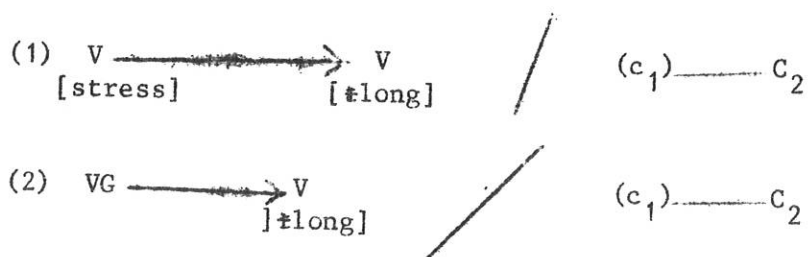
The contrasting long root vowels are distinctive also. Because, they distinguish meaning as in sor- 'sift' and soor- 'fatten'. But the environment in which contrasting long root vowels appear is limited and this require a serious research of its own.

4.22 The class of non-contrasting long root vowels also occur before single consonants. But they do not have a short counter-part. On the basis of the environment for non-contrasting root level long vowels are pædictable.

Oromo does not allow sequences of glide plus consonants as in beyk- 'know' or sequences of three consonants as in bittn 'you(pl)

'bought'. Here Oromo applies glide deletion rules as in beyk → beek, and the root vowel is lengthened or inserts an epenthesis vowel as in bittn → bittan.

Most of the time, glide deletion and lengthening of the root vowel works for Oromo especially in non-contrasting surface long vowels. Two possible solutions are given for the non contrasting long root vowels. They are (1) stressed context (for stress has a tendency to lengthen vowels. Hyman (1975: 207), and (2) vowel-glide-sequence in the base form. Both solutions are in the form of the following phonological rules:



Derivation for guut- 'fill'

'Stressed Context'

- |        |                           |
|--------|---------------------------|
| /gut-/ | base                      |
| gúu    | v- lengthening and stress |
| [gúut] | surface form              |

G- Deletion

/guwt-/	Base form
guut	G-deletion and V-lengthening
[guut-]	surface form
'fill'	

4.30 Evidence for the (C<sub>1</sub>)—C<sub>2</sub> environment

Both the loans from Amharic and the "Bird Talk" in Oromo have shown the internalized systematic phonological rules for long vowels in the (C<sub>1</sub>)—C<sub>2</sub> environment. According to the evidence, long vowel in the (C<sub>1</sub>)—C<sub>2</sub> environment is proved to be rule governed.

4.31 The written source also gives evidence for the development of some surface long vowels. For example the present day eeñu 'who' has developed from aynu after a phonological process. Long vowels such as the ee in eeñu, or the ee in beek, appear in the (C<sub>1</sub>)—C<sub>2</sub> environment. The written evidence too, confirms lengthening of vowel in the (C<sub>1</sub>)—C<sub>2</sub> to be a surface phenomenon the base of which is short vowel in the (C<sub>1</sub>) (C<sub>2</sub>).

Example are as follows:

Derivation for eesa and eenu

/aysa/	/ayn-u/	base form
eysa	eyn-u	V-raising
—	eyñ-u	palatalization

eesa	een-u	G- deletion and V-lengthening
[eesa]	[eenu]	surface form
'where'	'who'	

4.32 The Verb inflection again indicates how some long surface vowels have developed from vowel glide-sequence. Foreexample, the oo in mooti 'king' appears in the  $(C_1) \text{---} C_2$  environment, the base of which is short o in the  $(C_1) \text{---} GC_2$ .

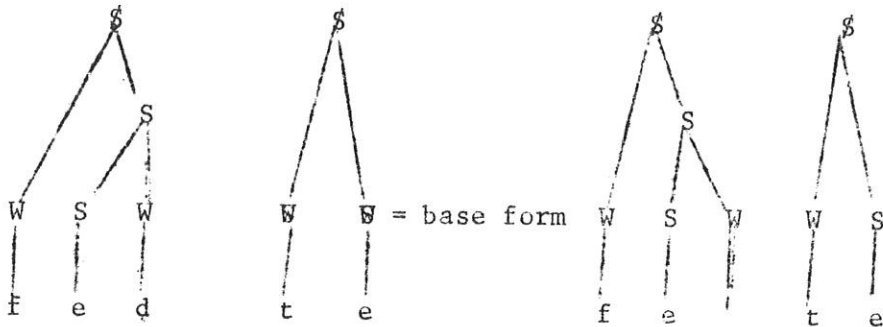
4.33 The evidence from the metrical analysis of poetic stress and compensatory lengthening also confirm long vowel in the  $(C_1) \text{---} C_2$  to be a surface phenomenon. The poetic stress has shown lengthening of vowel in the  $(C_1) \text{---} C_2$  to be a surface realization. Most of the time non-stressed long vowels are short in their base forms. For example, the aa in baasa is not stressed. Because the underlying form of aa is ah which is obtained after glide deletion.

The metrical analysis of compensatory lengthening has proved, lengthening of vowel in the  $(C_1) \text{---} C_2$  to be a surface phenomenon. Based on glide deletion, metathesis and Empty Node Convention rules, the surface  $(C_1) \text{---} C_2$  can be derived from  $(C_1) \text{---} GC_2$ , the base form.

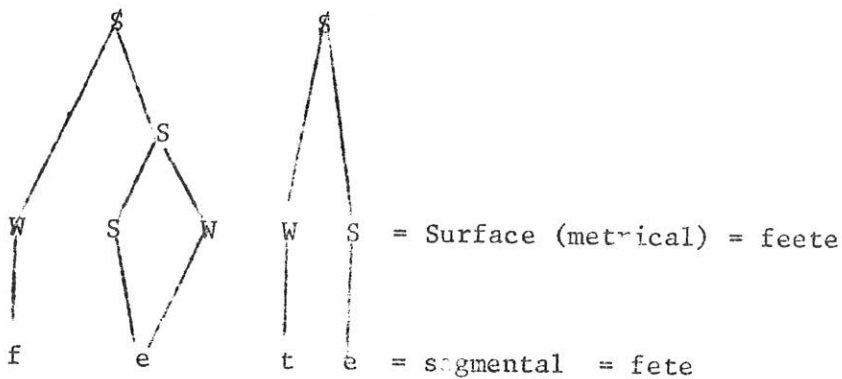
Derivation for feete 'she/you wished'

a. /fedte /- base form

b. G. deletion



c. Empty Node Convention



4.4. The base forms of long suffix vowels (i.e. contrasting and non contrasting) spelled out as vowel glide sequence. The loss of the glide leads to a surface long vowel. Due to this fact, base contrasts differ from surface contrasts. Both the contrasting and non contrasting long surface vowels (i.e. suffix vowels) are obtained as indicated below.

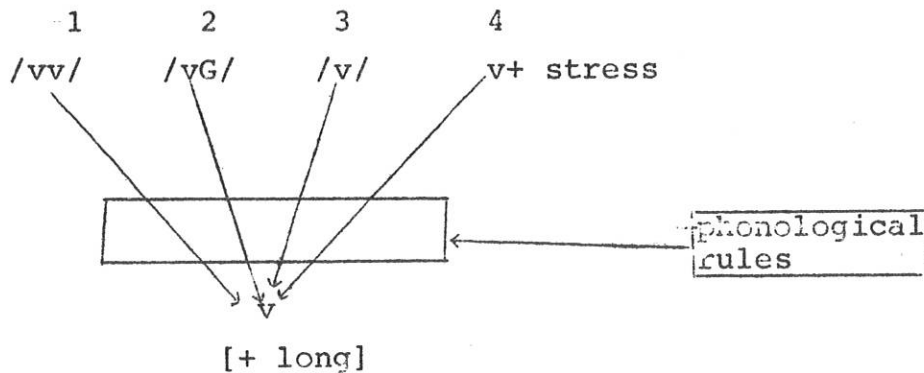
Derivation for leele and leelee.

/leyl-e/	/leyl-ə?/	base contrast
/leel-e	/leel-ee	G - deletion and v lenthening
[leele]	[leelee]	surface contrast
'became black'	'soot'	

Derivation for sangaa and mitii

/sang-a?/	/mit-i?/	Base form
sang-aa	mit-ii	G-deletion and v- lengthening-
[sangaa]	[mitii]	surface form
'bull'	'red anē'	

Oromo surface long vowels, therefore, come from long underlying, from short vowel plus glide, from stressed context and from short vowel in the process of metathesis.



Example 1 /soor-/ Long underlying form

[soor] surface form  
 'feed'

2 Short plus glide

/beyk-/ base form  
 beek G-deletion and v-lengthening  
 [beek-] surface form  
 'know'

3 Metathesis

/darh-a/ base form  
dahr-a G-metathesis  
daar-a G-deletion and v-lengthening  
[daara] surface form  
'cloth'

4 Stressed Context

/gut-/ base form  
guuḡ v-lengthening and stress.  
[guut-] surface form

4.5 This study (i.e the generative phonology of long Oromo

vowels, the metrical analysis of poetic stress and compensatory lengthening) is the first in kind in the phonology of written Oromo. The metrical analysis of poetic stress and compensatory lengthening presented as an evidence for the long vowels in the  $(c_1) — c_2$  environment is the first in kind in the phonology of Ethiopian languages. This study can be used as a source material for the study of supra-segmentals, a very common feature in most Ethiopian languages.

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DECLARATION

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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Place and Date of Submission AAU, June<sup>10</sup>, 1986.