ADDIS ABABA UNIVERSITY
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ASPECTS OF DAURO PHONOLOGY

BY

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ASPECTS OF DAURO PHONOLOGY

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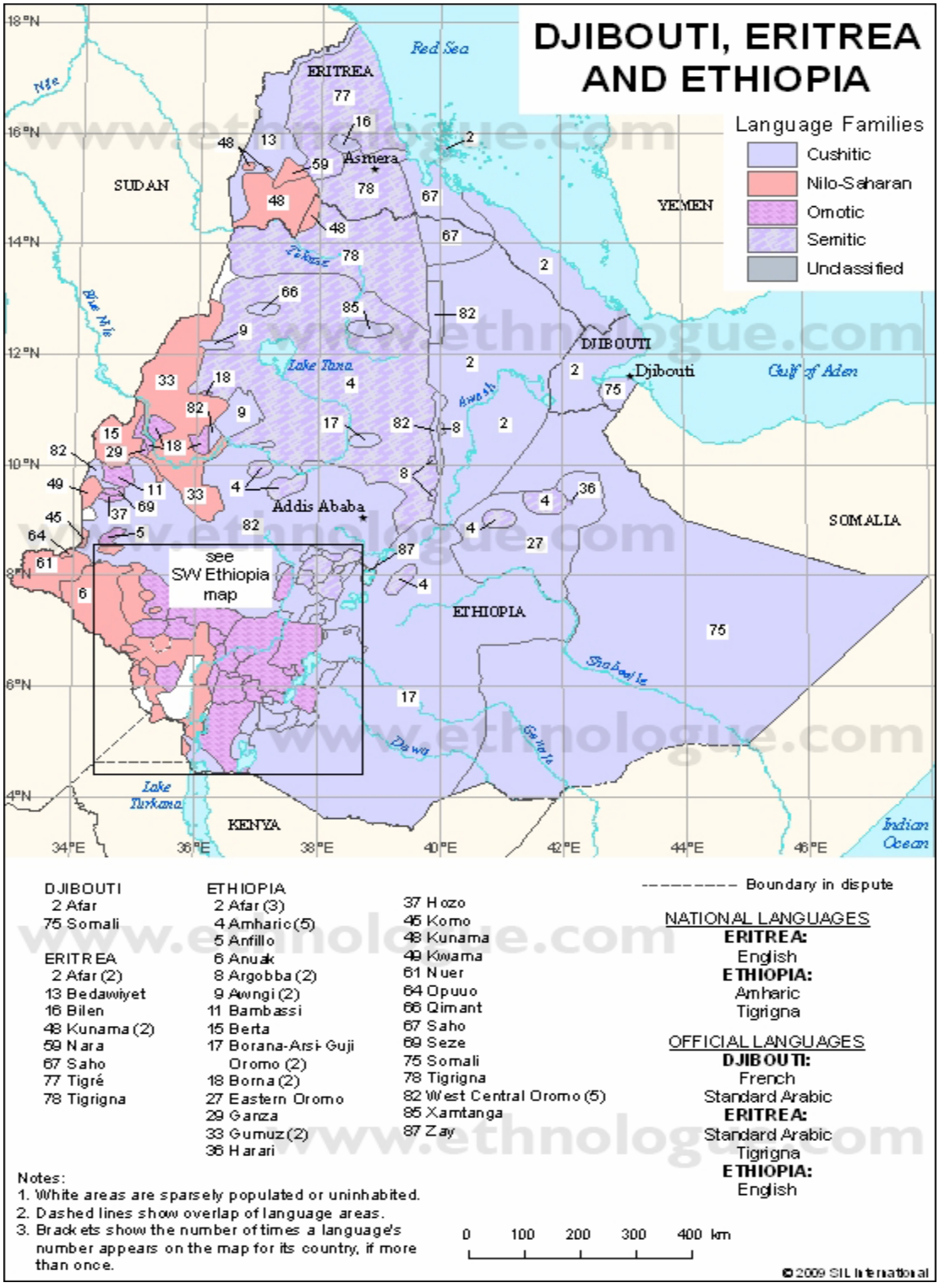
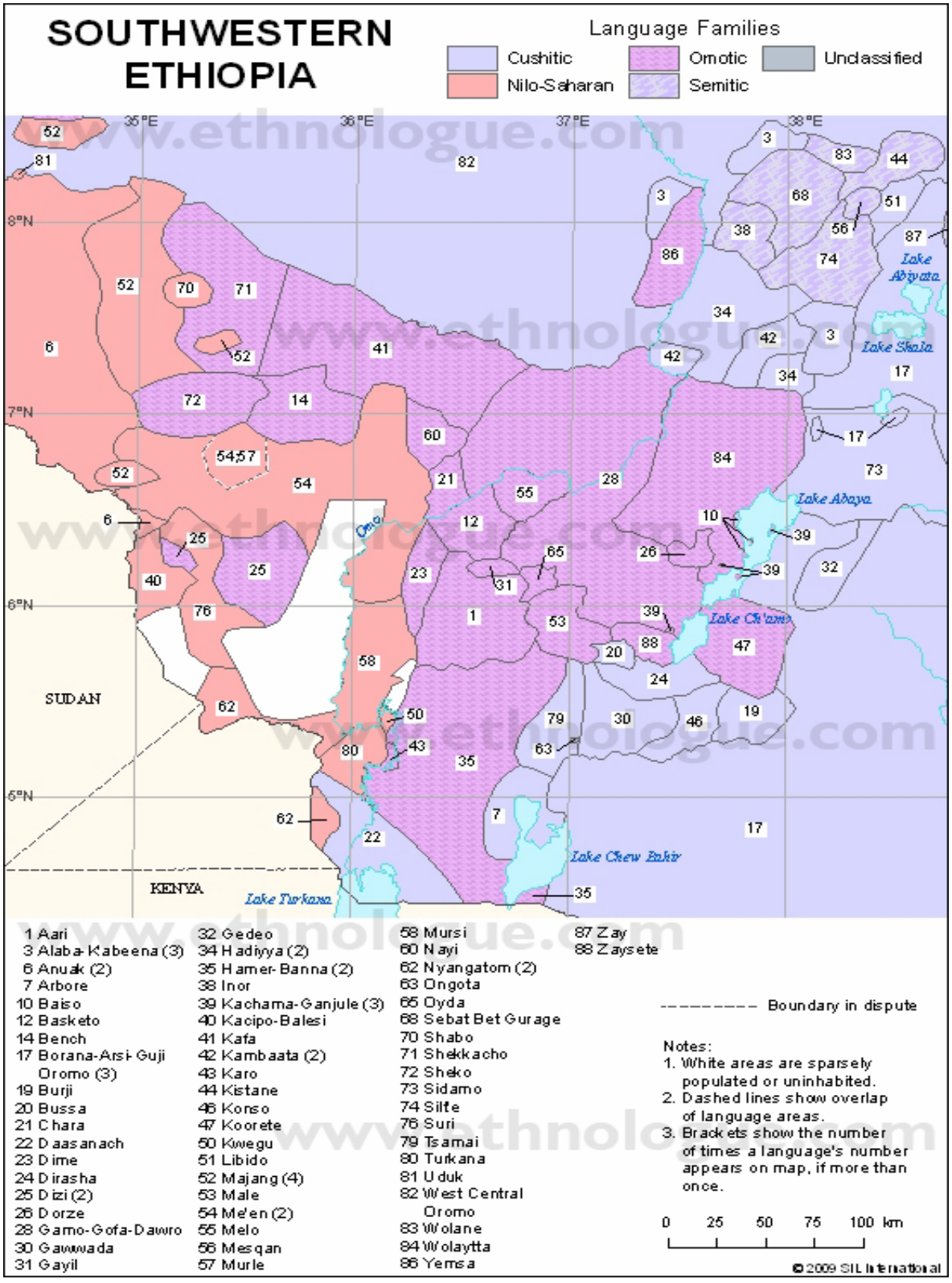


MAP 1
Source: SIL, Ethiopia



Map 2
Source: SIL, Ethiopia

Abbreviations and conventions

Acc.	Accusative
Nom.	Nominative
Sg.	Singular
Pl.	Plural
Ø	an empty position in a syllable structure
HON.	Honorific
. (dot)	a syllable boundary
~	contrasts with
→	changes to, pronounced as
[ ]	phonetic transcription
/ /	phonological transcription
/	In the environment

Acknowledgement

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Abstract

This research provides some aspects of a description of Dauro phonology; a language with half a million speakers in Ethiopia. However, even though no exclusive phonological works are available on the language some authors tried to give an overview of the sound system as an introduction to their works. Consequently, in several publications I found inconsistent segmental inventories of the language. On top of this, supra-segmental features are less emphasized.

In view of that, this study intends to deal with the language's sound system with no particular emphasis on any phonological theory, but provides a general description of the language's phonological aspect for linguists from diverse backgrounds. Thus, classifying the major analysis into two, (chapters two and three) this thesis makes some brief description about aspect of the segments in chapter two and the supra-segmental features in chapter three. Finally, the theme of the thesis is summarized in chapter four.

Hence, this work presents the vowel and consonant phonemes employed in the language. Additionally, features of each segment of the language are pointed out. An attempt is also made to identify the syllable structure and the way the language syllabifies its words. In addition, phonotactic restrictions on segments as well as possible clusters of consonants in the language are also provided. Furthermore, the tone system and its functions are highlighted.

CHAPTER ONE

1. Introduction

It is stated in many works that the number of languages in Ethiopia is estimated to exceed 80 with above 200 dialects. The language considered for this paper belongs to Dauro people. Dauros are an indigenous people living in Southern part of Ethiopia. As any other people of the world, they have their own language, culture, and social practices. Nonetheless, the language which is spoken by nearly half a million people has received less than its fair share of consideration from linguists. The intention of this study is thus to give aspects of a general description of the phonology of the language.

In the present chapter, I will give a general information regarding Dauro people and their language. This consists of the historic, geographic and socio-linguistic background, previous researches on the language, and methods of data collection on which the present study is based. In addition, the main objectives, and scope of the research are provided in this chapter.

1.1 Dauro people and their language

According to the present federal administrative structure of Ethiopia, the Dauro Zone is one of the zones in Southern Nations, Nationalities, and Peoples Regional State where people named Dauro are populated. The zone is found in the Southwestern part of the country, some 512km from the Ethiopian Capital, Addis Ababa, to the West of the Omo river valley. The area is geographically located between latitude 6^0 52' N to 7^0 13'N and longitude 37^0 7' E to 37^0 26' E which covers about 417,197 hectares of land comprising mainly mountain ranges (Data 1997). Dauros are bordered by Konta to the northwest, Kambaataa to the northeast, Wolaitta to the East (across the Omo river), Oromo to the North (across the Gojeb river), and Malo to the South. Currently, they live in five woredas (district); namely, Mareka, Tocha, Loma, Genabosa, and Esara where Tarcha is a town serving as their administrative center. Regarding Dauros population number, different sources give variant figures. However, the latest population census available in the country, the National Population and Housing Census of Ethiopia which was undertaken in May 2007, suggests their population number to be 492, 742. The largest population of the people is found in the first three Woredas; namely Mareka,

Tocha, and Loma. Almost all the population of Dauro speaks Dauro as their mother tongue, and very few (probably urban people) speak it as their second language.

In earlier times, their language was used to be referred notoriously as "Kuliɲa" in Amharic or "Kullo" k'ala in Dauro (most likely to say "Kullo" language according to Allan). With this context the people, regrettably, were considered by non-Dauros to have a name "Kullo" even though they hardly prefer it. In crude terms, it is assumed to be a name used by the former leaders as an indication of their domination as well as suppression to make the people feel inferior. Therefore, it is considered awfully hateful although its meaning is inexplicable in either their language or Amharic. Nevertheless, there were speculations concerning the evolution of the term. Curiously enough; as Data (1997) says that it is often argued by most Dauro natives that the term was an Amhara imposition after the area was incorporated to the Ethiopian state by Menelik towards the end of the 19th century. Data (1997: 12) further noted that there is a historical justification among the Dauros concerning the name. He thus wrote the following story he was told by many Dauro informants. Providentially, a Dauro native told me the same story.

> *Fitawurari Weldegiorgis, Menelik's general who led the army to the South, wrote a letter to Menelik saying that he subjugated the area as far as Kullis, a village in a Dawro land [the present day Madaa Kuilli in the vicinity where Dauro royal families used to live and are yet living]. Then Menelik replied to the letter wrongly taking the village name of Kullis as the name of the people and corrupted the term as Kullo.*

Therefore, Dauro (which can also be spelt as Dawro, or uncommonly as Dawuro) is the most preferable name for the people as it was assumed to manifest the people's actual identity[1]. Dauro people also refer to their language (locally) as Daurotsua or Dauro K'ala. Outsiders,

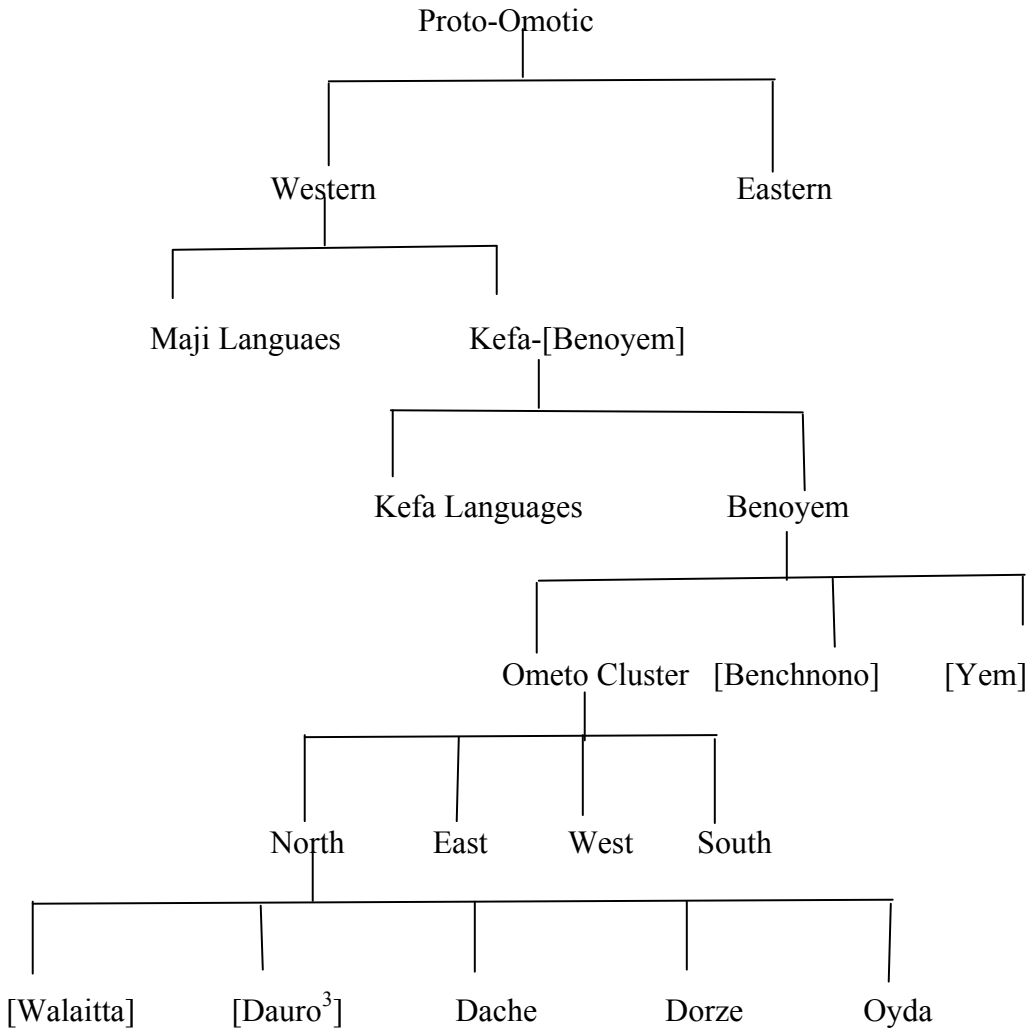
[1] Cerulli (1956: 97) suggests ostensibly that it is the name locally known as their territory when refugees from the Muslim state known as Dawaro colonized the area in their territory. But according to Terefe et al (1995) cited in Data (1997: 12) and Data (1997) Dauro is not a derived name from what is suggested, since there is no solid evidence to justify; but is a word with a meaning 'an impregnable, powerful, heroic people' in the language. Thus, it is considered as an apt name, for the reason that it indicates their bravery. Hence they are highly proud of it.

however, mainly call both the people and the language as Dauro. In fact, officially both the people and the language are referred to as Dauro. Thus, Dauro in most cases represents both the people and their language. Therefore, in this work I preferred to use the official name of the language despite the fact that both names acceptably refer to the language. For the majority of the people subsistence is based on agricultural products, mainly 'Ensete' for the highlanders and maize for the others (i.e. the lowlanders).

1.2 The genetic affiliation of Dauro

To genetically classify Dauro, two contentious hypotheses should be considered regarding the subdivision of the Afroasiatic language phylum. Firstly, in line with Joseph Greenberg's (1963) classification, Dauro was apparently classified as Cushitic (particularly as West Cushitic), one of the branches of Afroasiatic. Later, the language family is reclassified by Harold Fleming (1969 and 1974) as the sixth affiliate of Afroasiatic denying its being a branch of Cushitic which slightly settled the controversy for a certain decades. Rolf Theil also claims that Omotic should be an independent language family as there is no convincing arguments have been presented for the counter hypothesis. All the scholars have their own justifications that I cannot consider here for each hypothesis. Hence, in accordance with the latter hypothesis, in the interior classification of the language family Fleming (1976) in Bender (1976: 47) classified Dauro as a branch of Kefa Benoyem[2] group under western Omotic language families. Under Kefa Benoyem, there are two subfamilies: Kafa Languages and Benoyem which stands for Benchnono, Yem, and the Ometo cluster under which Dauro is categorized. That means Dauro is part of the northern Ometo subgroup of the Benoyem subfamily. The following family tree of the Omotic shows the place of Dauro in the language family.

[2] Fleming used a term Kefa Gimojan for the name of the group, but I observed that most people consider it offensive and thus I prefer to use Kefa Benoyem as most present linguists do.



Adapted from Bender (1976: 47)

The language is reduced to writing as a result of the political reformation in the country when the current government came to power after the downfall of the Derg in 1991. The language

[3]In the classification according to the grapevine Dauro is in the position along with an independent language Konta.

uses a Latin based orthography and has become a medium of instruction in the first cycle of the primary schools approximately since then. It has also been taught as a subject.

1.3 The scope of the research

According to Allan (1976) Dauro has three dialects: Gene, Waka, and Jimma. The people from these three dialects can easily understand each other probably regardless of some phonological differences. As stated by Allan there is perceptible phonological difference among these dialects. On the other hand, Hirut (2007: 72) said that the language has only two regional dialects which she named Mes'a and Gok'a the former being supposed to be spoken by majority of the people. She also noted that the dialects exhibit lexical differences[4] where her work particularly focuses on the Mas'a dialect. Identifying the number of dialects in the language is possibly laborious due to financial and time constraints (although I made a few attempts which are somewhat straight-thinking). Therefore, I simply classified Dauro into two major dialects. These are the variety spoken by the highlanders and that spoken by the lowlands[5]. In fact, as has been noted in the previous section these varieties belong to different groups with different subsistence and exhibit lexical differences. Thus, almost all the data contained in this work were collected and elicited from the highland Dauro speakers[6], which conceivably belongs to the Gok'a dialect in accordance with Hirut's classification. That means the way I classified the dialects of the language is quite different from the prior works on the language.

1.4 Statement of the problem

According to some scholars (For instance see Fleming 1976; Allan 1976, Hayward 1990, Hirut 2005) all languages under Ometo cluster are mutually intelligible. For Fleming (1976:51) all languages in the western except Chara should be considered as dialects of Welaitta. Besides

[4]In her work the following data were used to attest the idea.

Gok'a	**Mes'a**	
miis	meedda	'He ate'
uiis	ušeedda	'He drunk'
biis	beedda	'He came'

[5]Within these varieties there could also be subtle variation which may further increase the number of its dialects.

[6] Due to much contact with Wolaitta the lowlanders mainly use Wolaitta forms.

Allan (1976:324) says "[Dauro] is mutually intelligible with both Konta and [Welaitta]." Data and Behailu (2003: 108) also stated that Dauro is a language with close affinity to Wolaitta, Gamo, and Gofa languages. On top of these, Hirut (2005: 187) said "The four speech varieties, [Welaitta, Gamo, Gofa, and Dauro], are sufficiently close to each other to be considered as mutually intelligible dialect variants rather than separate languages." On the other hand, the people have an aversion to the idea of considering their language as part of the other and claim the self-sufficiency of their language regardless of the similarities manifested lexically and/or grammatically[7]. Thus, to check out whether the claim is political or linguistic, further comparative works should be looked-for on the speech varieties. Consequently, to test out the speech varieties in terms of their sound system this study may provide essential concepts about the speech variety under consideration.

Secondly, within Dauro there is a dialect cleavage where one could easily find apparent variations especially in terms of their consonantal phonemes. Concerning this, Allan (1976: 326) said that "phonologically, it seems to be the correspondences among consonants that differentiate one [Dauro] dialect from another." Hence, there are two views; the one that considers Dauro as a dialect and the other that considers it as an independent language with internal dialect differentiations. Thus, this study may assist comparative linguists to settle the problem and helps in documenting the speech variety by providing phonological evidences. In addition, as claimed by Hirut (2005) the orthography of the language has various "weaknesses" that I assume to arise from inadequacy of phonological works on the language. Thus this study may provide solutions to the problems of the orthography too. Above all, it is intended to provide a phonological description owing to unavailability of exclusive phonological work on the language.

[7] An attempt was made (in 1999?) to make a new language encompassing all variety named as WOGAGODA (an acronym from the names of the four varieties); but it was an abortive endeavor as it instigated political unrest.

1.5 Significance of the research

As has been mentioned in § 1.2, the language is serving as a medium of instruction in Dauro zone notwithstanding some problems stated in the earlier section. In view of the problems stated, it is hoped that this study might make the following practical contributions.

- ❖ It will settle the problem regarding its phonemic inventories and hence may provide solutions to some problems related to its orthography.
- ❖ It will serve as a springboard for further researchers on the language.
- ❖ It will contribute to the documentation of the language in particular and the Omotic language family in general by providing phonological evidences.
- ❖ Its detailed description will show the roles of the main supra-segmental features especially tone.

1.6 Objectives of the research

The main objective of the study is to give a general linguistic description to the sound system of Dauro .The specific objectives are the following.

The study:

- ❖ shows the phonemic inventories of the language.
- ❖ shows the languages syllable type, structure and its syllabification procedures.
- ❖ gives an overview of the languages tone and its functions.
- ❖ shows some of the phonological processes undertaken in the language.

1.7 Methodology

In this work an attempt is made to give a general description of the language's phonology. For this intention, the methodology employed includes informant method. Thus, native speakers of Dauro from the highlanders were interviewed as a major source of data. Prior to the collection of data, selected word paradigms from Swedish and SIL word lists and other common words were prepared in a language which is common for me and the informant, i.e., Amharic and English. After the transcription of the collected data, description was made based on previously made linguistic works as a reference.

1.8 Review of related literature

So far, many linguistic works were published on Omotic languages. Some of these works focus on the language family in general while some of them are descriptive for certain Omotic languages such as Dauro. As a result, there are a few descriptive works done on Dauro compared to other Omotic languages. Thus, in this section I provide some of the previous descriptive works on the language and their findings.

The earliest work on Dauro that can be cited is the study by Fleming and Bender (1976) which made a comparative study of Cushitic and Omotic languages. In this work an attempt is made to give a genetic classification of the language family. Thus, they classified the internal language family into different groups and thus Dauro was classified as an Omotic language under western Omotic subfamily.

The other earliest work is the article by Allan (1976), entitled **"***Kullo***"** which, to the best of my knowledge, is the first descriptive work on the language. In this article Allan tried to show a brief thumbnail description of the language where his phonological description is based on Jimma dialect. Accordingly, he identified 26 consonantal and 5 vowel phonemes of which /B/ and /G/ were supposed to be not phonemes at all, but rather allophones of /b/ and /g/ respectively; for (he said) there are no satisfactory minimal pairs available. He also indicated three diphthongs he recognized in the dialect. Besides he has tried to show supra-segmental features like vowel length, gemination, and pitch accent and some syntactic categories of the language.

Hiwot did her senior essay on the language's verb morphology in 1988. By way of introduction; she has given some aspects of its phonology based on Allan and made a broad analysis of the verb morphology by collecting data from the Gene dialect. Therefore, the phonological aspect of her work is entirely similar to that of Allan regardless of the data she collected and analyzed from Gene dialect (she possibly has observed the dialects to have similar sound systems although Allan argues the existence of phonological discrepancy).

A year later, Siseraw also did his senior essay on the language's noun morphology. Thus, he made analysis of its noun's inflection indicating how the language marks its nouns. As an introduction, Siseraw (1989) has given some basic concepts about the sound systems of the language based on Allan's work even if he also added phonemes by rejecting some phonemes of the language from the inventories of Allan (1976). In other words, he added two consonant phonemes disregarding two consonants of Allan (1976) and also added one-vowel phoneme to Allan's phonemic inventory. Those new sounds added to the inventory were the alveolar affricate ejective and the alveolar fricative ejective consonants he transcribed in his work as /c'/ and /s'/ respectively. However, he ignored the bilabial implosive /B/ and the palatal affricate /j/.

From the vowel phonemes, he added the central mid vowel to the five consonants Allan identified. He tried to verify the vowel by providing words like /paraa/ (horse) and /gatsaa/ (field) claiming that the first vowels of these words have the central mid vowel /ä/. However, in my attempt to ascertain this condition, I proved that he must have considered the short central low vowel /a/ as central mid vowel /ä/.

The other descriptive work on the language is the article with a title *"Ometo verb Derivations: The case of Basketo, Male, Ko:rete and Kullo"* by Azeb in 1994. In this article she has tried to give an idea about verb derivations of the four representative languages belonging to the four affiliates of the Ometo cluster according to Fleming. Her intention was to see the internal relationship of these varieties to point out their genetic correlation by means of their bound morphemes. Hence she said "the verb derivation of these languages has many shared features" although she claimed that in terms of verb derivational groups Dauro has little similarity with the other languages where the other three languages are more closely related to each other.

In addition, Hirut (2005) tried to discover practical problems associated with the orthography of the four varieties we mentioned earlier (the so called WOGAGODA), which includes Dauro, and recommended on how to solve the problems. In course of her work, she has tried to show the consonant and vowel phonemes of the varieties. Accordingly, she noted that Dauro makes use of 26 consonant and 5 vowel phonemes. These vowels are short with their phonemic

long counterpart. Although the number of the consonantal phonemes that Hirut (2005) and Allan (1976) have given seems to be similar, there is variety between the two inventories. For instance, consonantal phonemes such as /p, p', č, & č'/ and /B, f, t', & G/ are respectively exclusive to Hirut (2005) and Allan (1976). Therefore, those four consonants included in Allan (1976) are not in the sets of Hirut's (2005) work.

Another published descriptive work on the language is an article entitled "*Some Aspects of the Phonology and Morphology of Dawuro*" again in 2007 by Hirut[8]. In this work the phonology and morphology of the language is treated. The part dealing with its phonology, accordingly, tries to give an overview of the consonant and vowel phonemes. In the inventory, 25 contrastive consonants and five monophthongs with their long counterpart and five diphthong vowel phonemes were identified. But from the three diphthongs identified by Allan one of the diphthongs, /oi/, is not part of the inventory. From the supra-segmental features gemination, vowel length and syllable structure are briefly described. Thus, she noted that gemination is phonemic in the language. Moreover, she identified nine syllable structures with either long or short obligatory nuclei. Phonotactically, she noted that all words in Dauro can begin with all phonemes except /r/, the alveolar trill. Three morphophonemic processes, palatalization, vowel harmony and glide insertion; were also treated in this section of her work.

As noted so far, the previous phonological works were full of debates and did not thoroughly discuss and describe the language's phonological aspects. The supra-segmental features are also given less emphasis. Therefore, in this study the segmental as well as the supra-segmental features will be described comprehensively.

[8] She noted that her data is inconsistent with Allan in several ways (cf. Hirut 2007: 73).

Chapter two

2. Dauro segmental phonology

In this chapter an attempt is made to provide a brief descriptive outline of the sounds and major phonological alternations in Dauro. Thus, this chapter provides the inventories of the consonant and vowel phonemes, and the processes that apply to them in different environments. Consequently, charts showing all of the phonemes and listings of the minimal and near minimal pairs used to attest the phonemes will be presented in conjunction with the phonological processes that are undertaken in the language involving both consonant and vowel phonemes. As a result, the chapter is organized for the ease of the analysis into three major parts. The first part deals with consonants while the second and the third correspondingly deals with vowels and phonological processes. I thus begin by considering 'phonemes' in an attempt to give brief descriptions of the consonantal and the vowel phoneme inventories of the language.

"Phoneme" is a technical term in linguistics which can be defined differently in different phonological literatures in an assortment of views (cf. Robins 1964: 137). Durand (1990: 3), for instance, defined a phoneme from a classical or structuralism's view as a small set of sound that distinguishes words from one another. Similarly, Carr (1993 and 2008) described a phoneme as a kind of sound which has a contrastive function in a specific language. Therefore, as phonemes are contrastive; each phoneme is then distinct from every other phoneme in a language.

In some works, nonetheless, phoneme can also simply be distinguished in a non technical way as a sound unit that native speakers of a language are acquainted with as belonging to their language (see McMahon 2002: 14-17). These sounds a native speaker recognizes (both consonants and vowels) are used to structure words used in the language. In most languages, vowels have a syllabic quality whereas consonants form syllables[9] only in combination with vowels.

[9] The notion of syllable jointly with Dauro syllable will be treated in the next chapter.

Phonemes can be viewed in two directions; from the point of view of the significance of the sound in the language and from the point of view of their actual pronunciation (Clark et al 2007: 92-93). What matters in the first case is the contrastiveness of the sound while the latter sees phonemes from the actual way they are pronounced as a set of related sounds or phones. Hence both views respectively deal with minimal pairs and allophones as Dauro phonemes will accordingly be described in this chapter.

2.1 Consonant phonemes and their description

It is noted in chapter one that there is a divergence of research outcomes on the numbers of Dauro consonantal phonemes. In this work, it's attested for the language to have 26 consonant phonemes of which the inventory includes seven plain stops: three affricates, five fricatives, two nasals, one trill, one lateral, one implosive, two approximants and four ejectives.

Most of the consonant phonemes are uttered with pulmonic air stream mechanism; with the exception of the alveolar voiced implosive /ɗ/ and the ejectives such as /p', s', č' and k'/. These consonants are formed correspondingly by ingressive and egressive glottalic air stream mechanism. In terms of their place of articulation notably the bilabial, labiodental, alveolar, palatal, velar, and glottal places of articulations are recorded. Furthermore, for the language seven manners of articulations are examined regardless of the air stream mechanism. These are stops, affricates, fricatives, nasals, trill, lateral, and approximant. For the plain stops there is a voiced-voiceless opposition except for the glottal stop. Thus in the following section, a short description for each of these consonant sounds with their allophonic alternation and evidence for their phonemic status will be provided which will finally be summarized at the end by presenting all the inventories of the language's consonant phonemes in a tabular form.

2.1.1 Description and distribution of consonantal phonemes

In this subsection, my attempt is to provide a concise description of each consonantal phoneme and its distribution. It is worth mentioning at first that in Dauro the simplest verbal form is imperative. Hence, verbs are given in their imperative form when they are part of the attestations. The description is organized based on the manner of articulation.

2.1.1.1 Stops

Stops are sounds that involve formation of a complete closure and a sudden release of the outgoing air from the lung (see Catford 1988). The release is due to air pressure build up behind the closure, so that when the closure is removed the air rushes out with a popping sound. There are two types of stops; namely the oral stops and the nasals stops (cf. Carr 1993: 7). Seven plain oral stops exist with varied features at four points of articulation: bilabial, alveolar, velar, and glottal. In addition, one implosive and two ejective sounds make part of the oral stops that increases the number of the stops to ten. On the other hand, only two nasal sounds that are articulated at two points of articulation exist in the language. However, for the description's smoothness I classified them according to their place of articulation. So the bilabial oral stops will be described at the outset and the nasals afterwards.

2.1.1.1.1 Oral bilabial stops

Oral bilabial stops are consonants formed by a complete closure and sudden release of egressive lung air by the two lips. There are two oral consonantal phonemes namely /b/ and /p/ which are regarded as bilabial stops. Furthermore, Dauro has a bilabial ejective stop; in this work transcribed as /p'/. Thus, some brief descriptions of the language's bilabial stops will be given below. All the oral bilabial stops may occur in either word initial or medial position.[10]

1. **p** is a voiceless bilabial stop.

púnná	'blow'
parsoaa	'local beer'
hóspúná	'eight'
láappúná	'seven'

[10] In the language, no consonant sound is attested occurring in a word final position.

2. **b** is a voiced bilabial stop.

boozaa	‘fool’
tabaa	‘mine’
dábbóo	‘relative’
gúlbátáa	‘knee’

3. **p’** is a bilabial stop formed by the egressive glottalic air stream mechanism. Thus it is an ejective sound attested in both permissible positions in Dauro.

p’iriaa	‘fishhook’
p’eɗaa	‘a type of grass’
húup’íaa	‘head’
harap’iaa	‘dove’

2.1.1.1.2 Oral alveolar stops

There are two plain alveolar stops in Dauro that are transcribed as /t/ and /d/. In addition, the language has an implosive alveolar sound /ɗ/.

4. **d** is a voiced alveolar oral stop. This sound is unique in that it is articulated by a complete closure and sudden release of air using the blade of the tongue[11] raised against the alveolar ridge. For that reason, this sound can significantly be considered as laminal sound. During the closure of the air with the blade; the tip of the tongue approaches the teeth. Accordingly, its place of articulation seems to be dental and some people may thus regard the sound as dental. However, it is an alveolar sound uttered after the releases of a closure by the blade of the tongue and not by its apex. Therefore, the name Catford (1988) has given to such sounds as voiced alveolar sound of Dauro is lamino-dentalveolar stop while articulations made with the blade are termed as laminal. Hereunder I give an example of words with this alveolar stop in different positions of a word.

[11] The blade of the tongue according to Catford (1988: 88) is “part of the upper surface of the tongue laying immediately behind the tip, and extending back from the tip along the center-line about 1 to 1.5cm.”

déšáa ‘malice’

dábbóo ‘relative’

dorsa ‘sheep’

gediaa ‘leg’

ʔóiddá ‘four’

5. **t** is a voiceless alveolar stop

táná ‘I’ (accusative)

támmá ‘ten’

ʔita ‘bad’

ʔaatto ‘mother’

6. ɗ is a voiced alveolar implosive stop.

ɗametsa ‘suck’

ɗantsaa ‘breast’

k’ooɗia ‘neck’

siiɗiaa ‘nose’

biraɗɗiaa ‘finger’

2.1.1.1.3 The velar stops

Velar stops are /k/, /g/ and /k’/. Examples (7) to (9) give words of the language containing these velar stops.

7. **k** is a voiceless velar stop. The following attestation provides the sound in different environments of a word in Dauro.

kaisua ‘thief’

kárétsá ‘black’

keetsa ‘house’

koošaa ‘find’

kušiaa ‘hand’

bookussa ‘dig’

šánká ‘hunting’

zókkiaa ‘back’ (of body)

8. **g** is a voiced alveolar stop.

gediaa	‘leg’
gatsaa	‘field’
gaammuaa	‘lion’
ʔagenaa	‘moon’
gigga	‘ready’
dángársá	‘elephant’

9. **k’** is an ejective velar stop.

k’úuk’úllíaa	‘egg’
k’efiaa	‘wing’
mek’etsaa	‘bone’
haik’ua	‘die’

2.1.1.1.4 Glottal stop

10. **ʔ** is a glottal stop. This consonant sound occurs in either of the positions even if its occurrence is noticeably frequent word initially as it has crucial function in the language; i.e. it functions as an epenthetic consonant, since word roots never begin with a vowel in Dauro. Therefore, it is predictable under strictly phonemic analysis, as an onset to all syllable peaks which has no other onset (see the first two attestations below). Moreover, the glottal stop of Dauro does not geminate word medially[12].

ʔátúmá	‘male’
ʔaile	‘slave’
gúlʔá	‘navel’
maʔa	‘food for children’

[12] In Dauro orthography the glottal stop is seen as geminate at the word medial position. Nevertheless it seems to me that those words with a geminate glottal stop in their written form are due to an influence of a high tone accompanying vowels coming after the consonant.

2.1.1.1.5 Nasals

As noted earlier, Dauro has oral stops and nasals stops. So, in this section the nasal stops of Dauro are described. Nasals are sounds produced when the velum is lowered and majority of the blocked air is shunted through the nose (cf. Carr 1993: 7). That means there is a blockage and release of out flowing air. For this reason, these sounds are categorized as stops due to the blockage of air and as nasals for the obstructed air rushes out through the nose. Nasal point of articulation phonetically ranges from bilabial to velar in the language. Phonemically, Dauro has the following two most common nasal sounds amongst languages.

11. **m** is a voiced bilabial nasal.

máatáa	'grass'
matsa	'milk'
miičča	'sister'
mek'etsaa	'bone'
múussá	'eat'
támáa	'fire'
túmmúmá	'onion'

12. **n** is a voiced nasal stop.

núná	'we' (accusative)
naʔa	'child'
doonaa	'mouth'
ʔúddúppúná	'nine'
fólibéennáa	'unsuccessful'

2.1.1.2 Affricates

According to Carr (2008: 10) affricates are "a type of speech sound involving a stop closure followed by slow release of the closure, resulting in audible friction." In crude terms, it is a plosive sound followed by a homorganic fricative. As a result, an affricate can be regarded as a segment having sequences of diverse features. In Dauro there are four affricate sounds attested, namely /ts/, /č/, /č'/ and /ĵ/ that are described briefly as follows.

13. **ts** is a voiceless alveolar affricate. It tends to occur more often as compared to the other affricates of the language, but is never attested word initially or as geminate word medially. One perhaps interesting feature of this sound to be considered here could be its occurrence as a cluster only with the alveolar nasal preceding the sound as shown in the last example of the following attestation. So the following lexical items of Dauro possessing this affricate sound are provided for substantiation.

kóotsáa	'hive'
mitsa	'tree'
suutsaa	'blood'
bootsaa	'white'
ʔifitsaa	'gate'
ʔantsaa	'breast'

14. **č** is a voiceless palatal affricate. Unlike the alveolar affricate the occurrences of this sound can be word initial or medial position. Besides, it can also occur as geminate consonant. Furthermore, like the alveolar affricate, the only consonant that precedes this consonant sound is the alveolar nasal. The following attestation provides you with some of the language's words having the sound.

čúč'č'éddá	'he caught'
šuččaa	'stone'
ʔaačaa	'teeth'
ʔiččeeša	'five'
hetanča	'shepherd'

15. **ǰ** is a voiced palatal affricate. It is the least frequent phoneme so far used among the highlanders as very few words with the phoneme are recorded in my data. This sound occurs essentially as geminate or in a cluster word medially. In addition, there is no position where the voiced palatal affricate contrasts with any other sound. The following words contain the phoneme. Thus, I considered the consonant as belonging to the dialect's consonant inventory due to their usage with these words in either of the permissible positions for consonants in the language.

ĵabanaa	‘coffee pot’
ĵimaa	‘a plant whose leaves has narcotic effect’
ganĵa	‘belly’
p’ejjaa	‘a house made of bamboo’

16. **č’** is an palatal ejective affricate. It can geminate or be in both initial and medial positions of a word.

č’awwa	‘sweat’
č’iiššaa	‘flower’
šučaa	‘flexible’
č’úč’č’éddá	‘he caught’
kač’č’iaa	‘horn’
mač’č’atto	‘wife’
č’inč’a	‘intelligent’

2.1.1.3 Fricatives

Fricative sounds of a language are sounds formed where the articulators come very close to one another producing an audible friction while the escape of air (Carr, 1993: 1). In Dauro there are six fricatives articulated at four points of articulation. In the following section, I give a description of the language’s fricative sounds categorizing them into four in accordance with their place of articulation.

2.1.1.3.1 Labiodental fricative

17. **f** is a voiceless labiodental fricative. It is produced by bringing the lower lip against the upper teeth in order to force the air to escape through a narrow passage. Hence, the semi-blockage of the air causes an audible friction resulting with labiodental sound (see Carr 2008: 84). The sound can be in either word initial or medial position as shown in the following attestation.

fólibéennáa	‘unsuccessful’
fóʔéennóo	‘proper name’ (its meaning is inexplicable)
fólíbáannúu	‘she was unsuccessful’
šaafa	‘river’

2.1.1.3.2 Alveolar fricatives

There are three alveolar fricatives in Dauro that have various phonological features. We shall describe each alveolar fricative with exemplifications of their distribution in word initial and medial position as follows.

18. **s** is a voiceless alveolar fricative.

saluaa	'sky'
ʔásá	'person'
ʔáasá	'widen'
ʔadussa	'long'

19. **z** is a voiced alveolar fricative.

zokkiaa	'back' (of body)
zoʔo	'red'
wozanaa	'heart'
miizzaa[13]	'cow'
héezzáa	'three'

20. **s'** is an alveolar ejective fricative.

s'eessa	'waist'
s'aʔetsa	'bite'
ʔins'arsa	'tongue'

[13] A native Dauro word for this lexical item is probably /miaatto/, because although it refers to 'cattle' in Wolaitta some people claim that it is a Wolaitta form. But it is regularly used among most Dauro speakers with a meaning 'cow'. Regarding such interferences Allan (1976) says as Dauro speaking societies are mutually intelligible with Wolaitta speakers, one of the biggest problems from the viewpoint of analysis is "keeping the informant (and hence the data) from the interference from the [walaitta] forms."

2.1.1.3.3 Palatal fricative

21. **š** is a voiceless palatal fricative. It can be found in both word initial and medial positions.

šiik'a	'love somebody'
šaafa	'river'
šoora	'neighbor'
šučaa	'snake'
ʔíšaa	'brother'
šéešší	'race'

2.1.1.3.4. Glottal fricative

22. **h** is a voiceless glottal fricative. It is produced within the glottis by "bringing the vocal cords together to produce friction" Carr (2008: 65). This sound is found in either word initial or medial position, but it does not occur as geminate in word medial position where consonant cluster or gemination is permissible.

haatsaa	'water'
hamatta	'to walk'
héezzá	'three'
maaha	'side of a body'

2.1.1.4 Trill and lateral

Trill and lateral sounds are referred to as liquids in various literatures. In Dauro, there are verifications for the presence of the trill /r/ and the lateral /l/.

23**. r** is a voiced alveolar flap when not geminated word medially but as trill in a cluster. It has no attestations word initially[14].

dura	'rich'
maara	'calf'
k'ara	'sharp' or 'brave'
dorsa	'sheep'
harria	'donkey'

[14] Bender (1988) says that the sonorant /r/ is non-initial in most Omotic languages and this really holds for Dauro.

24. **l** is a voiced alveolar lateral sound that occurs in both permissible positions for consonants.

laatama	‘twenty’
laas’aa	‘lunch’
gúlbátaa	‘knee’
báallíaa	‘feather’
bóllá	‘body’
ʔolaa	‘war’
ʔola	‘lose’

2.1.1.5 Approximants

Approximants are sounds with a feature of both consonants and vowels. However, they do not occupy the nucleus position unlike vowels. When approximants occur in word medial position following vowel(s) they turn pure vowels into a diphthong. This is explained with an example in section 2.2.2. On the contrary, approximants could be used in the language as a consonant[15]. Attestations for both Dauro approximants serving as a consonant in a word initial and medial position[16] is given in (25) and (26).

25. **w** is a voiced bilabial glide.

woraa	‘forest’
cáwwá	‘sweat’
wombaa	‘lake’

26. **y** is a voiced palatal glide.

yošaa	‘scary’
yora	‘greedy’
miyyia	‘side of body’
hayyuaa	‘die’

[15] As said by Roach (2000: 21) a typical distribution for consonants is before vowels and thus we use approximants as consonants when they only occur before vowel phonemes.

[16] Unlike what is suggested by Bender (1988) these approximants can be word initial in Dauro.

2.1.2 Minimal or near minimal pairs of consonants

It is agreed among almost all linguists that minimal pairs are the best and the easiest tool to test out phonemes of a language (see Sommerstein, 1977). Hawkins (1984: 50) says that minimal pairs are "useful for establishing quickly and simply the phonemes of a language." Regarding the operation of minimal pairs, Mulugeta (2008: 15) states "if two sounds bring change of meaning in a pair of otherwise identical words, they are considered to be separate phonemes." Similarly, Durand (1990: 7) suggested the following, which complemented this idea, in distinguishing phoneme of a language. The idea additionally enlightens how minimal pairs work while identification of phonemes.

> *Given two phones, if replacing one by the other yields a different lexical item, they can tentatively be considered as different phonemes. To make this test operational one takes what are called minimal pairs: that is, two words which are identical except at one place in the sequence.*

Thus, lists of minimal pairs or near minimal pairs attesting to phoneme status of adjacent consonants are given in the following examples. From (27) to (29) the examples given are minimal pairs indicating the contrasts among stops in Dauro.

27. [b] ~ [p]

[buno]	'blow'
[púnó]	'let it excrete' (for animals)

28. [d] ~ [t]

[ʔutaa]	'stew '
[ʔúdáa]	'do'

29. [k] ~ [g]

[kotsaa]	'share'
[gótsá]	'needle'

The minimal pairs for Dauro fricatives are given in the following examples (30) to (33). In example (33), however, a fricative is contrasted with a stop for the contrasting sounds have the same place of articulation.

30. [f] ~ [s]

[k'áfúaa] 'bird'

[kásúaa] 'to cook'

31. [s] ~ [z]

[wósánãa] 'Let's pray'

[wózánãa] 'heart'

32. [s] ~ [š]

[saʔa] 'beat him'

[šaʔa] 'one thousand'

33. [h] ~ [ʔ]

[maʔa] 'food for children'

[maaha] 'side of a body'

In example (34) I give a minimal pair for the language's nasal consonants. Moreover, in examples (35) and (36) trill and lateral are contrasted with fricative sounds.

34. [m] ~ [n]

[maʔa] 'food for children'

[naʔa] 'child'

35. [z] ~ [r]

[booza] 'fool'

[boora] 'ox'

36. [š] ~ [l]

[šáafá] 'river'

[laafa] 'little'

The following examples illustrate the opposition among Dauro ejectives, affricates and the implosive. I substantiated some of these sounds using a couple of near minimal pairs where no minimal pairs are recorded.

37. [k] ~ [k’]

[kara]	‘to pick something’
[k’ara]	‘brave’ or ‘sharp’

38. [s’] ~ [s]

[s’eela]	‘seeing’
[seela]	‘burning’

39. [ts] ~ [š]

[košaa]	‘hunger’
[kotsaa]	‘share’

40. [č’] ~ [č]

[šočča]	‘hit’
[šúč’č’áa]	‘straight’
Or	
[miič’č’attòo]	‘sister’
[miičča]	‘laugh’

41. [ɗ] ~ [k]

[ɗámétsá]	‘suck’
[kárétsá]	‘black’

42. [ɗ] ~ [d]

[wo ɗuaa]	‘kill’
[wodoruaa]	‘rope’

Hitherto, an attempt is made to describe the consonant sounds with reference to three distinctive parameters. These are voicing state, place of articulation, and manner of articulation. Besides, their phonemic status is proved by using minimal or near minimal pairs. Considering these distinctive parameters, I present a summary of the language’s 26 consonant phoneme inventories in a tabular form as shown in table 1. However, as noted earlier, the sound with the least distribution in the language is in curly brackets to indicate that its status in

the phoneme inventory is not absolutely clear despite some attestations provided in example (15). In the language no syllabic consonant is attested.

		Bilabial	Labiodental	Alveolar	Palatal	Velar	Glottal
Stops	Voiceless	p		t		k	ʔ
	Voiced	b		d		g	
	Ejective	p’				k’	
	Implosive			ɗ			
Affricate	Voiceless			ts	č		
	Voiced				{ǰ}		
	Ejective				č’		
Fricative	Voiceless		f	s	š		h
	Voiced			z			
	Ejective			s’			
Nasal		m		n			
Trill				r			
Lateral				l			
Approximant		w			y		

Table 1: Charts of Dauro consonant phonemes

2.1.3 Allophones of consonant phonemes

Allophones are “the different variants of a phoneme brought about by the different environment in which it appears” (Wardhaugh 1977: 59). This section thus deals with allophones of Dauro consonants and their distribution based on their point of articulation and thus bilabials are described at the outset.

From the bilabial stops /p/ has its aspirated corresponding item when used word initially as shown in 42. Secondly, the bilabial stops, /b/ and /p/, are fricativized to [β] and [ɸ] intervocalically or preceding a vowel word medially as shown in the section dealing with spirantisation (see attestation 61). The following words show some of the incidences showing the phenomenon of aspiration.

43. /paraa/ → [p^{h}araa] ‘horse’
/parsoaa/ → [p^{h}arsoaa] ‘local beer’
/paač’ia/ → [p^{h}aač’ia] ‘exam’

Similarly, the voiceless alveolar stop, /t/, aspirates word initially but not word medially[17]. In addition, non-geminated /d/, /t/, and /r/ flap intervocalically as indicated in the following attestation.

44.	/táná/	→	[t^{h}áná]	'I'
	/táamáa/	→	[t^{h}áamáa]	'weak'
	/ʔutaa/	→	[ʔ^{w}uɬaa]	'stew'
	/tiraa/	→	[t^{h}iɬaa]	'chest'
	/ʔúdá/	→	[ʔ^{w}úɬá]	'do'

In addition, the alveolar nasal /n/ exhibits a velar allophone [ŋ] and a palatal allophone /ɲ/ when it precedes velar and palatal sounds respectively. Furthermore, it has a labial nasal allophone [m] preceding a labial stop /b/. Examples attesting these phenomena are given below.

45.	/wánbáráa/	→	[wámbáráa]	'judge'
	/č'inč'a/	→	[č'iɲč'a]	'intelligent'
	/dangarsa/	→	[daŋgarsa]	'elephant'

Moreover, the voiceless velar, /k/, may exhibit various allophones depending on the adjacent vocalic segment and its environment of distribution. For instance, it undergoes labialization and palatalization when respectively followed by rounded back vowels and front vowels. On the other hand, it is also aspirated word initially. Hence depending on the vocal segment following the velar sound the following examples show the possible allophones of the voiceless velar phoneme.

46.	/bookusa/	→	[b^{w}ook^{w}usa]	'dig'
	/kessa/	→	[k^{h}essa]	'let it out'
	/bukkeedda/	→	[b^{w}ukk^{y}eedda]	'thresh'
	/káatsáa/	→	[k^{h}áatsáa]	'grain'
	/šanka/	→	[šaŋka]	'hunting'

[17]Word medial aspiration is not common in Dauro.

As can be examined from the example, the phoneme has four manifestations in different environments depending on the adjacent vocalic segment. That is /k/ has four possible allophones where [k] occurs elsewhere. The aspirated one is only be found word initially whereas it turn out to be [k^{w}] and [k^{y}] correspondingly before back vowels and front vowels in word medial position.

The other velar sound of Dauro, /g/, has one noticeable allophone inter-vocalically where it gets a feature of fricatives in an attempt to undergo spirantisation (see § 2.3.2 or attestation 61).

2.2 Vowels phonemes and their descriptions

Dauro vowel phonemes are articulated with a stricture of open approximation and can be divided into monophthongs and diphthongs. I will describe each point in the following section.

2.2.1 Monophthongs

Monophthongs are vowels whose quality remains constant (see Wardaugh 1972; Gussenhoven 1998). This means that monophthongs are 'basically produced with a single unvarying quality throughout the duration of the vowel' (Hammond 1999: 3). The vowel inventory contains five contrastive monophthong vowels. All the vowels occur definitely in pairs with a quantity distinction; but no central mid vowel is proved. Table 2 shows non-diphthongal Dauro vowel phonemes and their long counterparts.

	FRONT		**CENTRAL**		**BACK**	
	Short	*Long*	*Short*	*Long*	*Short*	*Long*
High	i	ii	---	---	u	uu
Mid	e	ee	---	---	o	oo
Low			a	aa		

Table 2. Charts of Dauro Non-diphthongal Vowel phonemes

The above listed non-diphthongal vowels of the language are generally distinguished from each other in terms of tongue position and length. In line with the parameter of lip rounding, the two back vowels are produced with lip rounding and the tongue lifts up to a mid and a high

air position. On the other hand, all the language's non-diphthongal vowel phonemes with the exception of the low central vowel are tense. This and rounding, however, does not yield a phonological contrast in addition to the quantity contrast. In the following section, I provide a concise description of each Dauro monophthong vowel phonemes.

2.2.1.1. Vowel phonemes

In this section, I present a description and revealing examples of the language's short monophthongal vowel phonemes in accordance with the parameter of lip rounding as well as the vertical and horizontal positions of a tongue. Note that the long vowels will be dealt in chapter three (§ 3.1.1).

47**. i** is a high front unrounded vowel.

ʔita	'bad'
miičča	'lough'
miširatto	'woman'

48. **e** is a mid front unrounded vowel.

s'eessa	'waist'
šéešša	'seed'

49. **a** is a low central unrounded vowel. Most words use this vowel phoneme especially in word final position.

šámmádá	'he brought'
laatama	'twenty'

50. **o** is a mid back rounded vowel.

wodoruaatto	'lass'
zoʔo	'red'

51. **u** is a high back rounded vowel.

ʔúsúppútámmá 'sixty'

ʔúdúppútámmá 'ninety'

For a clear-cut contrast of monophthong vowels in terms of quality, I give minimal pairs in the following section.

2.2.1.2 Minimal pairs

The following attestation provides an opposition of words in terms of the language's vowel quality. I write singling and doubling the symbols of vowels perceived respectively as short and long in the representation.

52.			
	[o] ~ [a]	[kótsá]	'apportionment'
		[kátsáa]	'grain'
	[u] ~ [e]	[núná]	'we' (acc.)
		[néná]	'you' (sg.) (acc.)
	[a] ~ [e]	[šaate]	'abhorrence'
		[šaata]	'Traditional dish made of clay'
	[i] ~ [u]	[ʔišaa]	'brother'
		[ʔušaa]	'alcohol'

2.2.2 Diphthongs

A diphthong is a **VV** phoneme with contradictory features (Catford 1988; Gussenhoven 1998; Sommerstein 1977). Phonetically a diphthong can be represented in two equivalent ways where [y] and [w] can uncompromisingly represent [i] and [o] or [u] respectively. Allan (1976: 326) states that there are three vocalic diphthongs that occur from the "juxtaposition of vowels belonging to separate morphemes." Additionally, we may also have a transition from one vowel quality to another within a single syllable nucleus. Therefore, it is attested that the language possesses vocalic diphthongs. Diphthongs of the language can either be short or long. Allan (1976) and Hirut (2007) listed some of the language's short diphthongs where Hirut listed five diphthongs disregarding /oi/, one of the three diphthongs Allan identified. The diphthongs end in four vowels of the language except the mid front unrounded vowel. These diphthongs are of three kind; raising, falling, and front back. Hence from the attestations given on (53), diphthongs tagged a, d, and f are falling diphthongs. The other diphthongs other than /ui/, which is front back, are raising diphthongs. Certain diphthongs are more frequent than others: /au/ and /ui/ occur in only a few words. In this work the following short diphthongs are attested.

53. a. /oa/

[ʔut**oa]** ‘chair’

[kott**oa]** ‘hen’

b. /au/

[d**au**rotsua] ‘an indigenous name for the Dauro language’

[káuʔáa] ‘king’

c. /oi/

[**ʔoi**tama] ‘forty’

[**ʔoi**dda] ‘four’

d. /ia/

[k’ood**ia]** ‘neck’

[harr**ia**] ‘donkey’

e. /ai/

[h**ai**tsa] ‘ear’

[k**ai**sua] ‘thief’

f. /ua/

[ʔaš**ua]** ‘meat’

[kanat**ua**] ‘dogs’

g. /ui/

[k**ui**lli] ‘name of a place’

h. /ao/

[k**ao**] ‘dinner’

In addition to the above listed short diphthongs; the language also has five long diphthongs namely [aai], [uaa], [oaa], [iaa], and [aau]. I give attestations for these long diphthongs in example (54). In terms of duration, actually the first part of the diphthongs in (a) and (e) is obviously much longer whereas the second part is longer for the others. Interestingly, one member of the diphthong is the low central vowel. When the first part is the low central vowel the second part will essentially be a front vowel or a high back vowel.

54. a. /**aai/**

[mus**aai**]	‘to eat’
[kan**aai**]	‘the dog’
[boor**aai**]	‘the ox’

b. /**uaa/**

[sal**uaa]**	‘sky’
[wod**uaa]**	‘kill’
[kaf**uaa**]	‘bird’
[wodor**uaa**tto]	‘lass’

c. /**oaa/**

[wodor**oaa**]	‘rope’
[ʔut**oaa]**	‘chair’
[soll**oaa**]	‘Injera’ (staple food in Ethiopia)

d. /**iaa**/

[baall**iaa**]	‘feather’
[kač’č’**iaa**]	‘horn’
[k’ef**iaa**]	‘wing’
[sol**iaa**]	‘a song sung during funeral rites’
[m**iaa**tto]	‘cow’

e. /**aau/**[18]

[kaauʔ**aa]**	‘to play’

As can be seen from the attestation, long diphthongs in the language are mainly restricted to a word final position. Nevertheless, at irregular intervals these diphthongs can be in a word medial position as in the case of [m**iaa**tto].

[18] Note that short and long diphthongs may contrast in the language as can be observed between this diphthong and its short counterpart in example 53b.

2.3 Phonological processes

I have so far described consonantal and vowel sounds that are labeled phonemes. I also analyzed and classified consonants along with their potential allophones in the language. In addition, I have given a concise description of Dauro monophthongal and diphthongal vowel phonemes. Nevertheless, the description is only in relation to the individual sounds though this is not the way words are pronounced. Different phonemes come together to form a syllable. In this structure various phonological changes maybe undertaken to phonemes. Thus, I discuss in this part some of the common phonological processes that are employed in Dauro below.

2.3.1 Assimilation

Assimilation is the most common phonological process in every language "which involves a sound changing in order to become more like a neighboring sound" (Hawkins, 1984: 162). Thus assimilation occurs whereby two neighboring sounds become more similar to one another. The resemblance could be through their place and/or manner of articulation. The following assimilation types are some of the phonological processes attested in the language.

2.3.1.1 Labialization

Labialization is a form of assimilation in which a non-labial consonant gains the features of labials from an adjacent labial segment. In Dauro labialization can be complete or partial. Complete labialization happens when the alveolar nasal /n/ changes to bilabial nasal /m/ in the environment preceding voiced bilabial stop /b/. Likewise, the process occurs partially due to a consonant variation whilst a consonant anticipates [+ round] and [+ back] features of the following back vowel; which superimposes its rounding feature to consonants preceding it. The following attestation provides some of the language's words undergone this phonological process. Except in the first case where /n/ is changed completely to [m] by gaining the adjacent sound's place of articulation, superscripted [w] is used to indicate labialization.

55.	/sánbátáa/	→	[sámbátáa]	'Sunday'
	/wánbáráa/	→	[wámbáráa]	'judge'
	/booraa/	→	[b^{w}ooraa]	'ox'
	/doonaa/	→	[d^{w}oonãa]	'mouth'
	/k'oodɨaa/	→	[k'^{w}oodɨaa]	'neck'

/bootsa/	→	[b^{w}ootsa]	‘white’
/múussá/	→	[m^{w}úussá]	‘eat’
/č’uaa/	→	[č’^{w}uaa]	‘smoke’
/bunaa/	→	[b^{w}unãa]	‘coffee’

This phonological process can be symbolized as follows.

a. /n/ ⟶ [m] / _____ [b]

b. $\begin{bmatrix} C \end{bmatrix} \longrightarrow \begin{bmatrix} C^{w} \end{bmatrix} / \_\_\_\_ \begin{bmatrix} u \\ o \end{bmatrix}$

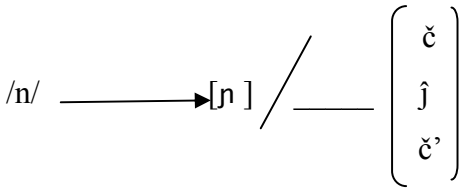
The first representation (a) shows the complete labialization that can be interpreted as: a non-labial (alveolar) nasal sound /n/ will be changed to a labial nasal sound [m] in the environment preceding voiced labial stop /b/. Similarly the second representation (b) shows Dauro consonant gain rounding feature in the environment preceding rounded vowels, i.e., the two back vowels /o/ and /u/ for the language.

2.3.1.2 Palatalization

Even if palatalization can be described in diverse sense, for instance according to Lass (1984: 169) statically as a secondary articulation, it is nonetheless dynamically referred in this work as a process whereby the place of articulation of a certain sound is shifted virtually or totally to have a palatal place of articulation. In Dauro there are two types of palatalization: complete and partial. Complete palatalization is a type of palatalization whereby a non-palatal sound completely gains a palatal place of articulation. In the following attestation a regressive complete palatal assimilation is undertaken.

56.	/ganĵia/	→	[gaɲĵia]	‘belly’
	/č’inč’a/	→	[č’iɲč’a]	‘intelligent’
	/hetanča/	→	[hetaɲča]	‘shepherd’

In these examples, a lexical item which originally has an alveolar nasal sound acquires a palatal place of articulation regressively and gets changed to a palatal nasal consonant and thus can be represented as follows.

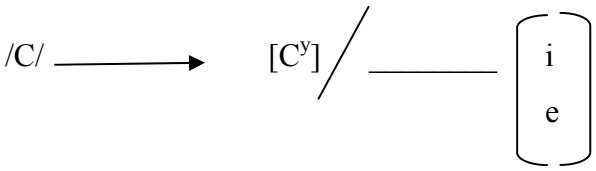


The formalism can be interpreted as; when the phoneme /n/ occurs before consonant sounds /č/, /ĵ/, and /č'/ its place of articulation is changed to palatal.

Normally, palatalization undergoes partially just as bilabials except /w/; alveolar and velar consonants are followed by front vowels. I have indicated the process by superscripting [y] over the phoneme.

57. /s'eeta/ → [s'^{y}eeta] 'one hundred'
/deešša/ → [d^{y}eešša] 'goat'
/siiɗiaa/ → [s^{y}iiɗiaa] 'nose'
/miizaa/ → [m^{y}iizaa] 'cow'
/gediaa/ → [g^{y}ediaa] 'leg'

This partial palatalization in Dauro can be summarized by the following representation.



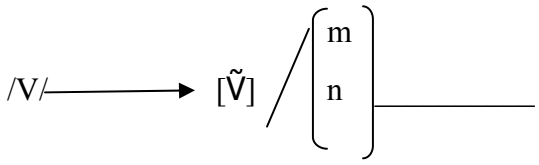
The representation signifies that a non-palatal consonant sound gain a palatal feature in the language if the front vowel follows.

2.3.1.3 Vowel nasalization

Vowel nasalization is a fairly frequent phonological process in languages which is perceived when a sound is articulated with a lowered velum, in order that the air rushes out through the two openings; the mouth and the nose (see also Abdurahim: 1992). In Dauro vowels are nasalized when preceded by a nasal consonant as illustrated below.

58.	/búnáa/	→	[b^{w}únãa]	'coffee'
	/doonaa/	→	[d^{w}oonãa]	'mouth'
	/híntánáa/	→	[híntánãa]	'he/she' (HON.)
	/kánáa/	→	[kánãa]	'dog'
	/múussá/	→	[m^{w}ũussa]	'eat'
	/fóʔéennóo/	→	[foʔéennõo]	'name of a person' (it has inexplicable meaning)

Vowel nasalization in Dauro can simply be depicted as follows.



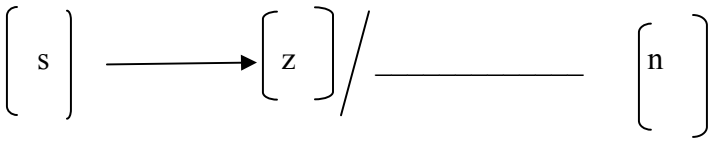
This representation has an interpretation that a non nasalized vowel can be nasalized when preceded by a nasal consonant, either /m/ or /n/.

2.3.1.4 Voicing

Assimilation does not always affect the locus or place of articulation, but the features of voicing can also be affected (cf. Hawkins: 1984). Voicing is a process whereby a voiceless sound turns to be a voiced sound due to an adjacent voiced sound**.** For example, in the language the alveolar fricative voiceless sound /s/ could become changed to its voiced counterparts due to the influence of voiced alveolar nasal sound afterward.

59. /ʔasnaa/ → [ʔaznaa] 'husband'

This word is consequently pronounced with the voiced fricative alveolar sound /z/. Thus, the general representation can be indicated as follows.



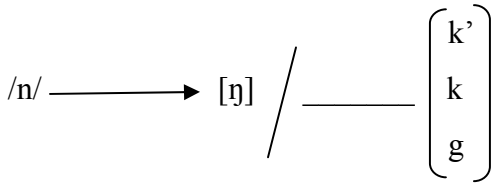
The representation can be interpreted as, a voiceless alveolar sound can be voiced in the environment preceding voiced nasal consonant.

2.3.1.5 Velarization

Velarization occurs in Dauro when non-velar sound changes its place of articulation to velar. This phonological process mostly occurs in the language when alveolar nasal sound /n/ comes immediately before the velar sounds. In this case it acquires the velar place of articulation from the adjacent velar sound. For example, in the following words a nasal sound /n/ before the language's velar consonants, /g/ and /k/, changes its place of articulation to velar and as a result turn out to be a velar sound /ŋ/.

60. /dangarsa/ → [daŋgarsa] 'elephant'
    /mank'oo/ → [maŋk'oo] 'poor'
    /šanka/ → /šaŋka/ 'hunting'

This phonological process can be represented as follows.



The representation indicates that an alveolar nasal could become a velar nasal if followed by the specified velar sounds. As stated by Bender (1988) the velar nasal /ŋ/ in most Omotic languages occurs only before velars.

2.3.2 Spirantisation

Carr (2008: 163) defined spirantisation as one form of lenition (the process where consonants became weaker) in which stops turn out to be fricatives. This phonological process happens to labial stop consonants positioned intervocalically. In some (if not all) Dauro speech spirantisation undergoes when voiced bilabial stop /b/ and its voiceless counterpart /p/ are fricativized to /β/ and /ɸ/ respectively, while they occur between vowels or when followed by

vowels word medially. In addition the voiced velar stop also changes to [γ] intervocalically as illustrated in the following example.

61.	/tabaa/	→	[taβaa]	'mine'
	/gabariya/	→	[gaβaria]	'farmer'
	/gooba/	→	[gooβa]	'clever'
	/gúlbátáa/	→	[gúlβátáa]	'knee'
	/hóspúná/	→	[hósɸúnã]	'eight'
	/ʔagenaa/	→	[ʔaγenãa]	'moon'

However, spirantisation is blocked in the environment when the sounds occur as geminate. See the following illustration.

62.	/táabbáa/	→	[táabbáa]	'my father'
	/dábbóo/	→	[dább^{w}óo]	'relative'
	/ʔúsúppúná/	→	[ʔús^{w}úpp^{w}únã]	'six'
	/láappúná/	→	[laapp^{w}únã]	'seven'

In general, one can represent this phonological process as:

$$\begin{pmatrix} b \\ p \\ g \end{pmatrix} \longrightarrow \begin{pmatrix} \beta \\ \phi \\ \gamma \end{pmatrix} \; / \; V(C) \_\_\_\_\_ V$$

2.3.3 Truncation of the glottal stop

This is a process where a segment in the original lexical item is lost from a structure. In Dauro a segment can be deleted at word boundary when the first word ends with a vowel and the next begins with a glottal stop as shown in the following example.

63. tá-ʔabbaa/ → [táabbáa] ‘my father’
my-father
tá-ʔašuwaa → [táašúaa] ‘my relative’
my-meat
tá-ʔišaa → [táišáa][19] ‘my brother’
my-brother

Hence, when we use this pronoun in connected speech with a noun beginning with a glottal stop, the glottal stop could be deleted.

2.3.4 Epenthesis

Epenthesis is presumably the opposite of deletion as it adds a foreign segment to the existing sequence. Hence, it is a phonological process wherein a segment is inserted into a sequence of a structure. In Dauro, I couldn’t find an epenthetic segment that blocks impermissible sequences of sounds other than the palatal glide /y/ for the process of diphthongization (see § 2.3.7), but I observed that a glottal stop to be inserted at the beginning of words seemingly beginning with vowels as there is no word in the language that begins with a vowel (see the following illustration).

64. /ʔizo/ ‘she’
/ʔiraa/ ‘rain’
/ʔoošaa/ ‘question’

2.3.5 Flapping

As noted earlier the trill /r/ and the alveolar stops /t/ and /d/ in Dauro flap in an intervocalic position. In addition to the attestations given in 44 the following provides some of the illustrations of the process.

[19] Due to deletion of the consonant, two vowels with varied quality are combined in a sequence and thus a diphthong is formed. In this regard, it could also be considered as diphthong formation or diphthongization.

65. /mara/ → [maɬa] ‘calf’
/baadalaa/ → [baaɬalaa] ‘maize’
/máatá/ → [máaɬá] ‘right’

2.3.6 Free variants

Two independent phonemes of a language may alternate in definite contexts without any misrepresentation of the lexical item’s meaning as in the case of Dauro initial glottal sounds. Regarding this Durand (1990: 8) says “If two phones can be substituted for each other in the same environment without destroying the identity of the lexical item under consideration, they can be said to be free variants of the same phoneme.” In reality phonemes may not freely interchange without any possible reason. Therefore, this notion is arguable mainly by the socio-linguists as they claim this phenomenon to be controlled by socio-linguistic variables.

Nevertheless, occasionally in Dauro the glottal stop varies freely with the glottal fricative /h/ notably in a word initial position as shown in the following attestation.

66. /hintattaa/ → /ʔintattaa/ ‘you’ pl. Nom.
/hinteentu/ → /ʔinteentu/ ‘you’ pl. Acc.
/hóspúná/ → /ʔóspúná/ ‘eight’
/hins’arsa/ → /ʔins’arsa/ ‘tongue’
/haaratsaa/ → /ʔaaratsaa/ ‘new’

Consequently in Dauro, it can be said that in some circumstances the contrast between the glottal sounds /ʔ/ and /h/ will be suspended in word initial position.

2.3.7. Diphthongization

In Dauro there is a process of diphthongization in which a monophthong becomes a diphthong. In the following attestation, aforementioned, I observed /y/ serving as an epenthetic segment between the accusative marker /-a/ (probably for masculine nouns) and nouns ending with a front mid vowel. Hirut (2007) described this process as glide insertion. In this case the front mid vowel of the noun plus the accusative marker is an impermissible diphthong formation as there is no diphthong /ea/ in the language and thus the ending /e/, that will make the first part

of the diphthong, should be raised further gaining the feature of the inserted palatal glide and become the front high vowel, /i/, to produce the available diphthong /ia/ (this process could be termed as raising). Hence this is a process of diphthong formation in the language after the insertion of the palatal glide and raising of the mid-front vowel. In addition, the combination of different morphemes (like a plural morpheme and the accusative marker) may result in diphthongization (see example 67). The following attestation shows some of the former happenings.

67.	golle + -a	→	golle-y-a	→	[gollia]	'home'
	harre + -a	→	harre-y-a	→	[harria]	'donkey'
	baalle + -a	→	baalle-y-a	→	[baallia]	'feather'
	paač'e+ -a	→	paač'e-y-a	→	[paa č'ía]	'exam'

Furthermore, an addition of this accusative marker on nouns ending with high back vowel also results a diphthong [ua]. For example, an accusatively marked noun /maayyu/ (cloth) will become [maayyua] as a consequence of the combination of the morphemes' vowels.

2.3.8. Monophthongization

On the contrary, even if this process is quite rare in the language combining various morphemes could turn a diphthong into a monophthong during the process. In the following attestations when a plural marker [-tu] and the accusative marker [-a] is attached to nouns ending with a diphthong, the diphthongs are reduced to a monophthong (particularly to a low central vowel).

68.	kaisua –tu-a	→	[kaisatua]	'thieves'
	thief- Pl.-Acc			
	mač'č'ia –tu-a	→	[mač'č'atua]	'wives'
	wife-Pl.-Acc			
	ʔadania-tu-a	→	[ʔadanãtua]	'cats'
	cat-Pl-Acc			

2.3.9 Vowel deletion

This phonological process is induced in the language by suffixation mainly during inflection. In other words, a short mid front vowel in word final position is subject to deletion in Dauro when followed by another morpheme beginning with a high front vowel. For instance, when a nominative marker /-í/ is attached to nouns ending in a short mid front vowel /e/, the nominative marker crosses out the final ending of the noun. Thus, the following example provides attestations showing the removal of the front mid vowel in the language at morpheme boundary due to the adjoined high front vowel.

69.	harre	+	-í	→	harre-í	→	[hárrí]	‘donkey’
	baalle	+	-í	→	baalle-í	→	[báallí]	‘feather’
	ʔaile	+	-í	→	ʔaile-í	→	[ʔáilí]	‘slave’
	paač’e	+	-í	→	paace-í	→	[páací]	‘exam’
	laage	+	-í	→	laage-í	→	[láagí]	‘friend’
	golle	+	-í	→	golle-í	→	[góllí]	‘home’

Chapter three

3. Supra-segmental features

Under this chapter I shall discuss some aspects of the language's phonological systems beyond segments; specifically segment length, syllable structure, phonotactics and consonant clusters, and tone. Therefore, this chapter is organized into four parts as follows. The first and the second part deal with segment length involving both vowel and consonant in section (3.1) and the syllable structure in section (3.2), while the third section (3.3) deals with phonotactics and consonant cluster. Finally, the fourth section (3.4) deals with tone.

3.1 Segment length

Length is a phonological quality which is not physically measured. The concept of length thus usually considers duration segmentally attributing the locus of the property "long" or "short" to either the vowel or consonant. In this work, even if no attempt is made to measure the amount of time taken to articulate a given segment in Dauro, admittedly a greater duration while articulating both consonant and vowel phonemes results in contrastive geminates and vowel length respectively. Vowel length and gemination that result from varied duration are treated in this subsection as it is contrastive in the language.

3.1.1 Vowel length

All previous works (and this work too) suggest that Dauro has five short vowels. Nevertheless, it was disputed whether or not these short vowels have opposing long counterparts. Allan (1976) claims that vowels are generally short and the difference between short and long vowels is not distinctive despite a few pairs of opposing morphemes with a few vowels. Siseraw (1989), however, argues that vowels are lengthened and may display contrast in non-final position. As indicated by him only /a/, /o/, and /i/ have shown short and long distinctions.

On the contrary, it is attested in this work that all vowels display short and long contrasts. In other words, all the five phonemes are recorded occurring in pairs with a quantity opposition as shown in the following words. The language makes majority of the long and short distinction using the low central vowel.

70

i. a ~ aa

támá	‘fire’
táamáa	‘weak’
ʔásá	‘his’
ʔáasá	‘widen’
ʔásáa	‘person’
súntsáa	‘crowned head’
súntsá	‘name’

ii. o ~ oo

čórá	‘many’
čóorá	‘shore’
ʔočaa	‘a type of tree’
ʔoočaa	‘ask’

i ~ ii

šik’a	‘to love somebody’
šiik’a	‘to cover carefully’

iii. e ~ ee

k’esaa	‘curse’
k’éesáa	‘milk obtained from cow right after delivery for the first week’
yedda	‘let go of something’
yeedda	‘he came’
ʔessa	‘stop’
ʔeessa	‘honey’

iv. u ~ uu

ʔutaa	‘stew’
ʔuutaa	‘person’s name (its meaning is inexplicable)’
dufiaa	‘tail
duufiaa	‘grave’

3.1.2 Consonant gemination

Consonant gemination happens while a consonant is pronounced for a noticeably longer period of time. So, it is a process whereby a single consonant is lengthened. Similar to the vowel length, consonant gemination is also phonemic in intervocalic position. In addition, it is a regular phenomenon in the language. Normally a pilot assessment of the world’s languages illustrates that there is a great diversity in the composition of geminate inventories. In some languages, all singletons contrast with their geminates as in the case of Dauro (excepting the glottal sounds and the alveolar voiceless affricate) while in others only a small amount of consonants show a length contrast (Blevins 2004, 2005). The following example consequently illustrates some of the

language's contrastive geminate consonants even if no word in the language have a geminate consonant either word initially or finally; succinctly consonants may geminate only in a word medial position. In the following example, words tagged (ii) have geminate consonants while those tagged (i) have singleton consonants.

71. **/t/ ~ /tt/**

i.	mata	'near'
ii.	matta	'bribe'
i.	ʔítá	'one'
ii.	ʔíttá	'bad'

/č/ ~ /čč/

i.	šučaa	'flexible'
ii.	šuččaa	'reserved 'k'oč'č'oo''

/m/ ~ /mm/

i.	támáa	'fire'
ii.	támmá	'ten'

/š/ ~ /šš/

i.	ʔuša	'drink'
ii.	ʔušša	'to drink'
i.	šeešaa	'kin'
ii.	šéeššáa	'urine'

/l/ ~ /ll/

i.	sóolóaa	'injera' (a staple food in Ethiopia)
ii.	sóollóaa	'a type of tree'
i.	ʔolaa	'war'
ii.	ʔolla	'trench'

3.2 Syllable structure

For the ease description of the language's syllable structure, I should first make clear the notion of syllable.

3.2.1 The notion of syllable

Syllable is a vital larger phonological unit which can be formed by the combination of sound segments in a logical order (Langacker, 1973: 251-252, Durand, 1990: 199). Similarly, Ladefoged (1993: 248) considered this unit i.e. a syllable as the smallest possible unit of speech. According to his idea every utterance of a speech has at least a syllable. One may ask the question "should a syllable be considered as a unit?" Although denied by Chomsky and Hale, Durand (1990) and many other linguists regard a syllable as a unit because of its enormous roles. Hall, (2006), for example, considers a syllable as an indispensable unit in phonology for many phonological generalizations can only be made insightfully by referring to it. On the word of the author, most phonological rules, for instance, refer to syllable boundaries. Additionally, to describe the arrangement of sounds in a language, knowledge of the language's syllable structure is indispensably required. Moreover, phonological properties like stress and tone take syllable as their domain.

Bearing this notion in mind, I would like to turn to the techniques that should be considered in phonology to treat syllables. Most of the contemporary phonological theories treat syllable in varied ways. However, almost all the phonological theories agree on the hierarchical arrangement of a syllable except for the early generative phonology that claims the phonological representation to have no hierarchy but rather a sequence of segments. Thus, syllables of any language are organized phonological units which can traditionally be seen as a structure "containing an obligatory nucleus preceded by an optional consonantal onset and followed by an optional coda" (Kenstowicz 1995: 250). Accordingly, a syllable has different constituents but exhibits similar hierarchical arrangements of the constituents notwithstanding the language being considered.

There are two immediate sub-elements when syllables of any language first branches. These are the onset; i.e., the immediate branch holding any optional consonant; and the rhyme which further branches into the syllable nucleus and the coda. As Goldsmith (1990: 108) suggests the coda of a syllable, which is one of the sub-elements of a rhyme, dominates any marginal consonantal elements following the nucleus or peak while the nucleus dominates any vowel segment.

As said by Durand (1990: 209) one of the common ways of specifying the possible syllables of a language is by means of a template-schema. Thus, a structural arrangement of constituents of a syllable can be depicted as follows. Note that syllables are conventionally marked as σ (the small Greek letter sigma).

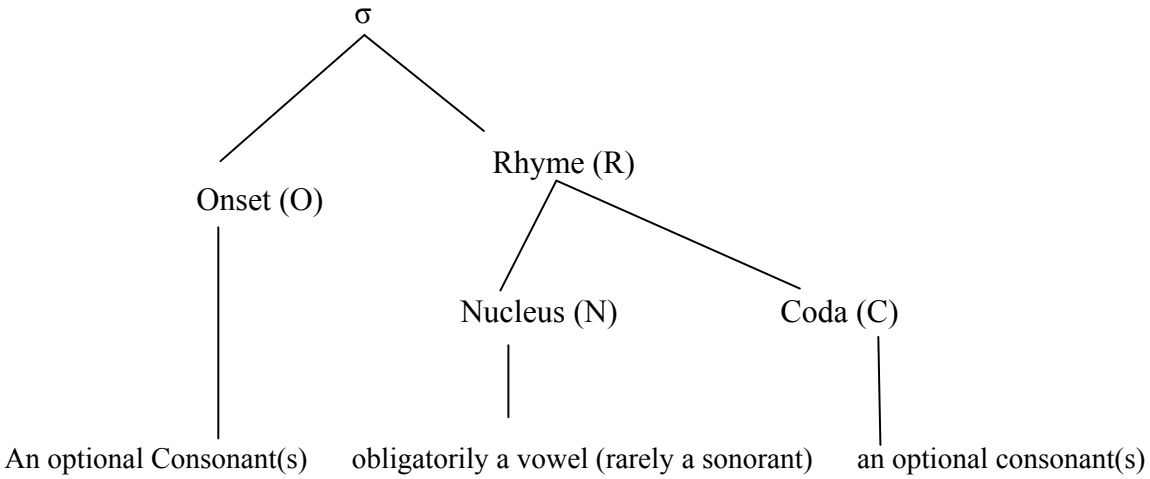


Figure 2 hierarchical structure of a syllable

Therefore, a syllable can be represented hierarchically on the basis of this diagram depiction where consonants on the either side of the nucleus are optional. For instance, a monosyllabic Dauro word with a short vowel peak /ʔá/[20] (‘he’) can be represented as shown in fig (3). This monosyllabic word of the language has a consonant on its onset but lacks a consonant in its coda. Since the language has no word that ends with a consonant, every final syllable lacks the coda.

[20] In Dauro non-clitic monosyllabic words are very sporadic; the only monosyllabic word I found is this accusatively marked pronoun and its nominative counterpart /ʔi/.

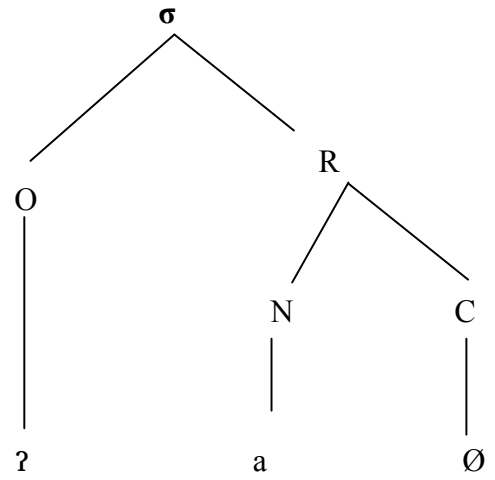


Figure 3: The syllable structure of a monosyllabic Dauro word

Similarly, a disyllabic word /ʔačča/ (‘teeth’) can be represented as follows. It is important to note that in the language disyllabic and tri-syllabic words are prevalently used.

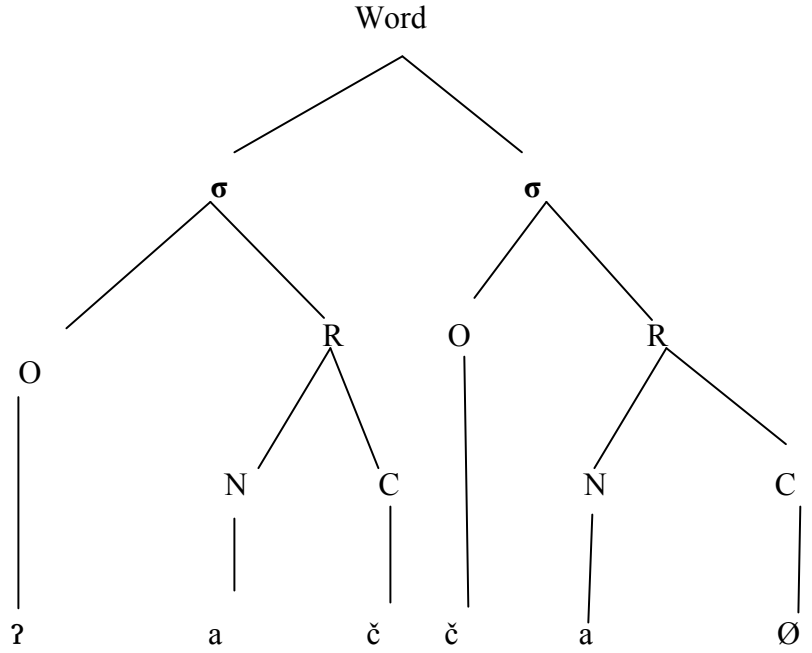


Figure 4: The syllable structure of a disyllabic Dauro word, /ʔačča/

3.2.2 Types of syllables

Syllables are of different kinds depending on their weight and their possession of the coda. Firstly, depending on their weight, we can divide syllables into light and heavy syllables. The weight of a syllable is determined according to the number and/or duration of segments on the rhyme. In other words, the combination of nucleus and coda determines the weight of a syllable. For this reason, light syllables have simple nuclei, and thus they possess only a short vowel peak with an optional onset. Consequently, a light syllable absolutely lacks long or diphthong vowel or a coda. On the other hand, the heavy syllables may either have a long vowel or a diphthong or a coda. That means a syllable with a branching rhyme (a syllable with a coda, simply represented as (C)VC) or a branching nucleus or rhyme (which means the nucleus has either a long vowel or a diphthong that can be symbolized as (C)VV(C)) is termed as heavy syllable. The branching could be to a nucleus and coda or to vowel segments dominated by a rhyme node.

Moreover, syllables can further be divided into open (coda-less) and closed syllables (with coda). An open syllable lacks a consonant occupying its coda. We can represent this simply as (C)V(V) where parenthesized symbols indicate optional segments for a syllable to be an open syllable. In contrast, a syllable that possesses a consonant in its coda position is known as closed syllable. A closed syllable may also possess an onset. The following schematic representations show the structure of open and closed syllables.

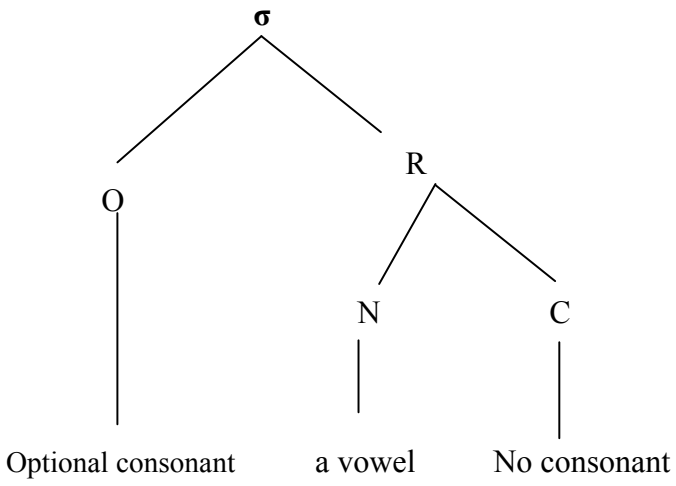


Fig 5: The structure of an open syllable

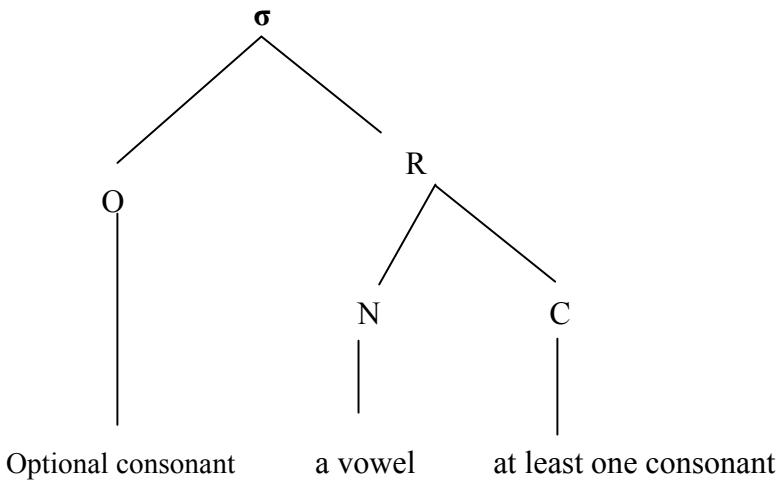


Fig 6: The structure of a closed syllable

In addition, Clements and Keyser (1983: 29) suggested one of the following syllable types to be canonical for every language of the world.

Type I: CV

Type II: CV, V

Type III: CV, CVC

Type IV: CV, V, CVC, VC

Cognizant of these notions, a Dauro syllable is described in the following section.

3.2.3 The syllable structure of Dauro

Syllables are the most obvious and salient prosodic unit in Dauro like in many other languages. At the outset based on the suggestion by Clements and Keyser (1983), Dauro syllable type may fit to either of the syllable types. In view of that, the possible syllable of Dauro from those canonical syllable types listed above is definitely the third type. Hence, the various configurations of syllables on onset, nucleus, and coda are discussed next.

3.2.3.1 Onset

Onsets syllable in Dauro contain necessarily a consonant and there is less (even no) restriction on consonants to occupy the onset position. That means every consonant of the language can go to an onset position[21]. Aforementioned, when a syllable seems to begin in a zero onset, the glottal stop occupies an onset position as an epenthetic consonant in the surface form to fill the gap. The following attestation illustrates some of the possible syllable onset consonants. In each case, the consonants occupy the onset of a syllable. For the first example, however, a glottal stop is an epenthetic consonant for the reason.

72. ʔizo 'she'
čórá 'many'
doonaa 'mouth'

3.2.3.2 Nucleus

The nucleus plays an important role in the syllable structure of the language as it is an obligatory subpart. In Dauro, there is no non-vocalic Nucleus. In view of the fact that the language has three types of vowels; short, long, and diphthong; any of these vowels can go into syllabic nucleus. However, these vowels cannot make a syllable per se as a syllable of the language requisitely needs a consonantal onset. The following attestation (73) provides you with some of the language's syllable nucleus.

73. k**á**r**é**ts**á** 'black'
ʔita 'one'
h**aa**ts**aa** **'**water'
ʔaile 'slave'

[21] Note that a restriction on some consonants for not occurring on a word initial position does not necessarily infer their non occurrence on an onset. As words are combinations of different syllables, the constraint could only apply to the first syllable of a word.

3.2.3.3 Coda

Infrequently, a syllable may possess a consonant on a coda position. If a syllable contains a coda, utmost one consonant is permitted for a syllable because coda cluster are not allowed. As a consequence, closed syllables may possess all consonants with the exception of the glottal consonants and the alveolar affricate. This is because, these consonants can never geminate or be the first consonant in a cluster. In the syllable structure the alveolar nasal, however, is the most frequently occurring consonant on the coda. See the following attestations.

74. Category 1

múussá	'eat'
miičča	'lough'
láappútámmá	'seventy'

Category 2

ʔíns'ársá	'tongue'
hintenaa	's/he' (HON.)
súntsáa	'crowned head'

In the above authentication, I sorted out those words having consonantal coda within their syllables into two categories. The categorization is made on the basis of the enabling conditions for a consonant to be in coda position such as gemination and cluster. In both categories the first consonants of the cluster goes to the coda position. Consequently, the first category contains words with geminate consonants while the second category contains words with clusters of consonants.

3.2.4 The syllable types of Dauro

There were disparate research outcomes from different researchers on the topic of syllable types of Dauro. Siseraw (1989) identified eight syllable types for Dauro while Allan (1976) recognized ten syllable types. Hirut (2007) also identified nine types of syllables that are employed in the language. In this work, nonetheless, Dauro is pointed out to have six syllable types.

Generally, in the following section the possible syllable types of Dauro are listed. In case words with more than one syllable are part of the attestation I used dot to divide the syllable (in accordance with the current recommendations of the IPA) where the bold print indicates the type of syllable under question.

75. **CV** this is a syllable that consists of a short vowel and an onset consonant. It is in fact the most common type of syllable in any language (Katamba 1989) as it is the fundamental syllabic structure that people first acquire in infancy. That is why it is often called the core syllable. It is, however, the only possible pattern only in a small number of languages such as Senufo and Hua (see Roca and Johnson 1999: 247).

ʔá	'he'
ʔí.tá	**'**bad'

76. **CVV** is a syllable with a long vowel or with a diphthong.

dáb.**bóo**	**'**relative'
c'oo.ra	'beach'
laa.taa	'to marry'
kai.sua	**'**thief'

77. **CVC** is a syllable with an onset, a short vowel, and a coda.

kés.sáa	'let it out'
hát.ta.ma	'thirty'
dor.sa	'mouth'

78. **CVVC** is a syllable type that has long vowel or a diphthong as its peak and also an onset and a coda.

héez.zá	'three
gaam.muaa	'lion'
šooš.šaa	'snake'
ʔoid.da	'four'

79. CVVV is a type of syllable in Dauro where a syllable possesses an onset consonant followed by long diphthongs.

ʔa.daa.**niaa** 'cat'

sii.**ɗiaa** 'nose'

ʔu.**toaa** 'chair'

80. **CVVVC** this syllable type contains a long diphthong which is preceded and followed by an onset and a coda. The occurrence of such syllables is only in the word medial position, but is very sporadic in the language.

miaat.to 'cow'

To summarize, the language's possible syllable structure can be formulated as **CV(V)(V)(C)** that applies to any positions of a word (note that a word final syllable lacks coda) where C stands for consonant and V for vowel segments and the alternating part of the syllable is indicated by parenthesizing.

Depending on the possession of coda Dauro syllables are of two kinds; open and closed. In terms of weight only the core syllable is light whereas CVV, CVC, and CVVC syllables of the language are heavy. However, those syllables with long diphthongs can conversely be regarded as super heavy syllables.

As a general rule, the template-schema for Dauro syllable structure can be depicted as shown in figure (7).

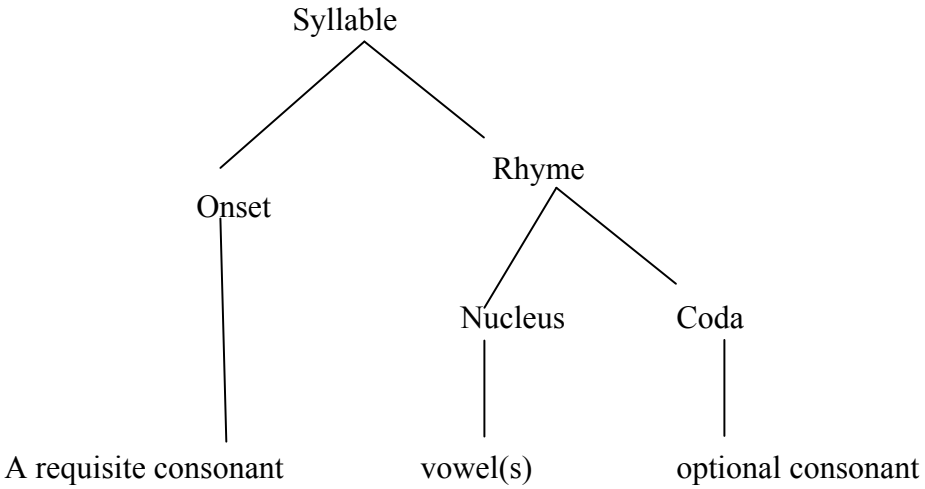


Fig 7: the template schema for Dauro syllable structure

As can be seen from the template-schema, the syllable of Dauro must have a consonant on the onset and a vowel as a nucleus, but an optional coda which dominates utmost a consonant.

3.2.5 Syllabification

To syllabify a word of a given language, certain universally attested template matching algorithms of formal step-by-step procedure must be followed (cf. Clements and Keyser 1983: 38). However, a very simple and intuitive three step algorithms is identified to show the correct syllabification of Dauro words that installs as follows:

- Identify the vowel(s) from the transcription of the word to be syllabified.
- Attach the vowel to a preceding onset consonant.
- Place the remaining consonant not followed by a vowel (if available) in a coda position.

These algorithms help us to determine the organization of consonants and vowels for syllabification by providing solution to problems of syllabifying. According to this algorithm, only one, but a requisite consonant can go into the onset position. Besides, the coda also occupies only one consonant as this algorithm works on the restriction that Dauro allows only one consonant in the onset and coda position.

Hence, the parameter disambiguates the position of each segment within the syllable structure. For example to syllabify the word /dorsa/ (sheep) the vowels of the word should be identified first. These vowels go to the nucleus, and thus we have two nuclei for this word. Therefore, this indicates us that the word is composed of two syllables. By the second algorithm, we should attach these vowels to consonants preceding them, which must go to an onset position. Thus, both consonants preceding the vowel peaks are consonants to be on the onset position. The remaining consonant /r/ will be placed on the coda of the first syllable, as it cannot be an onset of the second syllable by the constraint on the position. In contrast, the second syllable lacks consonantal coda.

We can indicate the procedure structurally as follows. In the representation of the language's syllables in the previous section, the same procedure applied to syllabify the word /ʔačča/ (teeth) and /ʔá/ (he) we have seen in figure (4) and (3).

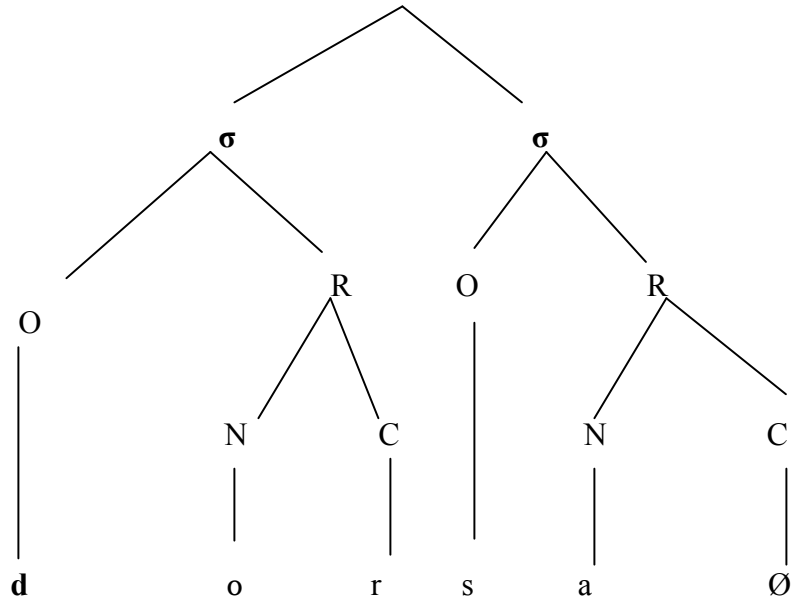


Fig. 8: syllabification of a disyllabic Dauro word, /dorsa /

3.3 Phonotactics and consonant clusters

Before describing the language's phonotactics, it is essential to make the concept of phonotactics comprehensible. Phonotactics is the study of the permissible strings of phonemes in a language (Roach 2000: 71). Similarly, Butskhrikidze (2002: 19) defined Phonotactics as "the study of the

set of permissible arrangements or sequences of sounds in a given language." It is worth noting that two or more languages with similar or even identical phoneme inventories (if available) may have very different rules governing the distribution of phonemes in morphemes, words, and syllables. Cognizant of this, an attempt is made in this section to provide the phonotactics of Dauro.

In Dauro, vowels occur only in a word medial and final position. In the latter the low central vowel outranks the other vowels in terms of occurrence. Nonetheless, as compared to vowels, there is more phonotactic restriction on consonants. In the language, there are no words that begin with the affricate /ts/, or the trill /r/. Similarly, some consonants have geminated counterparts where some are never attested as geminate (for instance /h/, /ʔ/, and /ts/).
Concerning sequences of consonants the following points can be suggested.

- A cluster of consonants is permissible merely in the middle of a word. Thus, a sequence of consonants is inadmissible either word initially or word finally.
- More than two consonants in word medial position is impermissible.
- At word initial position a single consonant is required.
- No consonant takes word final position. In other words, all Dauro words end with a vowel mainly with the low central vowel.
- Clusters block germination, i.e. neither the first nor the second consonant geminates in a cluster.
- During a syllabification of words with a cluster of consonants, the first consonant occupies the coda position of the first syllable while the second consonant takes an onset position of the subsequent syllable.

Qualitatively, the language has only a few types of consonants to occur in a sequence. (See table 3 below).

	b	č’	č	g	j	k	k’	n	s’	p	s	ts	t	ʔ
f								fn						
m	mb													mʔ
n	nb	n č’	nč	ng	nj	nk	nk’	nn	ns’			nts	nt	nʔ
l	lb													
r							rk’				rs			
s						sk				sp				

Table 3: Distribution of Dauro Consonant Cluster in word medial position

As can be seen from table 3 the majority of consonants have the alveolar nasal /n/ functioning as a first member of a consonant cluster. The following words are some of the words used while summarizing the table.

81. wómbá ‘lake’
gófná ‘tail’
gúlbátá ‘knee’
suntsa ‘name’
s’oolintia ‘star’
k’áns’ua ‘cut’
dángársá ‘elephant’
mank’oo ‘poor’
wonbara ‘judge’
ganjia ‘belly’
č’in č’a ‘intelligent’
babark’ia ‘hyena’
parsoaa ‘local beer’
hóspúná ‘eight’
ʔasna ‘wife’
ʔiskiaa ‘feather’
gúlʔá ‘navel’
gimʔišaa ‘sleep’

3.4 Tone

Tone is the use of specified pitch movement across a word in a language that distinguishes words from one another (Gussenhoven 1998). Analogous to consonant and vowels tones are also contrastive in a slight majority of languages of the world (about 60- 70% according to Yip (2006)). This pitch movement across the word is not a property associated to individual segments (or sounds), but is normally a property of syllables.

3.4.1 Is Dauro a tone language?

A use of pitch as intonation is common to convey prosody and pragmatics; but it does not necessarily make a language tonal (see also Gussenhoven 2004). According to Yip (2006) "A tone language is a language in which the pitch of the voice can change the meaning of the word." Similarly, Ladefoged (2001: 9) says "Differences in pitch that can change the meaning of a word are called differences in tone." On the other hand, some scholars argue that tone may function in a language with no contrasts of meaning. For instance, Kutsch Lojenga wrote the following regarding this idea claiming that tonal minimal pairs are not the only evidence to classify languages as tonal or non-tonal.

> *The presence or absence of tonal minimal pairs has often been taken as an indicator for calling a language tonal or non-tonal. However, even if the existence of lexical minimal pairs can be seen as a convenient and very concrete way to illustrate that a language is tonal, absence of tonal minimal pairs does not at all prove that a language is not tonal. Even if there are no minimal pairs in the lexicon, tone might function in the grammar*[22].

In light of this Dauro is tested out for a tone feature. Accordingly, although such features exist in the language, I found two views in previous works regarding this aspect. In the first place, it is claimed to be a tone language while in the other there seem much skepticism. Among scholars dealt with the pitch system of the language, Allan (1976: 332) says that "while there are two levels of systematic pitch in [Dauro], for the most part, pitch is predictable and non-contrastive." As far as I can make out from this idea, Allan denies the tonal feature of the language. On the contrary, Siseraw (1989) apparently refutes Allan by claiming that tone in Dauro is distinctive that has a lexical function. He thus identified two level tones; high and low. He further noted that most words end in a low tone (in case a word ends in a high tone, he claims, it lexically contrasts with similar word that ends in a low tone).

[22] I am deeply indebted to Kutsch Lojenga for her permission to quote this unpublished material.

Similarly, this work substantiates that tone is contrastive and is not perfectly predictable. Therefore, this work accordingly categorizes Dauro as a tone language particularly a register tone language which uses two level tones; high and low that are realized as raising and falling pitch across words. At surface level, tone in the language follows the same pattern as the first tone. To be exact, at surface level a high tone persists high while a low tone keeps itself low throughout the word. The following tonal minimal pairs attest the opposition of tone in the language. Therefore, these minimal pairs may ascertain that Dauro is a tone language. In each case I marked the high tone with an acute (´) accent on top of the first vowel letters of a word where low tones are left unmarked (similar procedure is followed within the entire thesis)

82. k'eesaa 'priest'
    k'éesáa 'milk obtained from cow right after delivery for the first week'
    mék'étsáa 'clan'
    mek'etsaa 'bone'

    kátsáa 'grain'
    katsaa 'seed'

3.4.2 Functions of tone

Tone has different functions depending on language specific properties. In some languages tone has a lexical and grammatical function while in others either of the functions is displayed. Tone in Dauro has lexical and (probably) grammatical function as discussed below.

3.4.2.1 Lexical function

A single lexical item with similar segmental arrangement may display a different meaning by lowering or raising pitch across a word. For example, replacing a high tone by a low tone may result another lexical item that has no any relation with the meaning of the former lexical item. Hence tone difference in the language may result in lexical distinction as shown in the following attestation.

83. háitsáa ‘leaf’
haitsaa ‘ear’

mátsáa ‘bee’
matsaa ‘milk’

déšáa ‘crooked’
dešaa ‘malice’

kásúaa ‘cooking’
kasuaa ‘a very strong metal stick used to roll heavy objects’

3.4.2.2 Grammatical function

Grammatical function of tone refers to modification of a word or a lexeme to reflect grammatical information such as gender, tense, number, person or other functions i.e., tone may indicate different grammatical intentions as affixes do in most languages. For example, tone may change the grammatical category of a word by changing a noun to a verb, a verb to an adjective, etc. or vice versa. In addition, it may make a number distinction; i.e., singular noun may sense plural or vice versa or tense of an action may alter by varied pitch. Furthermore, by using different tone patterns, the case or definiteness of a language can be indicated. Thus, Dauro tone seems to exhibit grammatical contrasts by alternating a raising or falling pitch across the word as shown below.

84. zoʔo ‘red’
zóʔó ‘red things’
ʔadussa ‘long’
ʔádússá ‘lengthened’
punna ‘something blown’
púnná ‘blow’

Chapter four

Summary and conclusion

To encapsulate briefly from the outset, this thesis tries to describe some phonological aspects of Dauro without emphasizing a specific theoretical approach. The entire thesis is organized into different chapters. In each chapter perceptive issues are discussed and hence I summarize some of the important notions of these chapters below.

In the first chapter, I provided preliminary information about the language and the people of Dauro. Additionally, my attempt was to give an overview of some relevant publications on the language and the methodology employed to carry out the research. Besides, fundamental concepts regarding the research were also specified.

The description of sound system is provided in chapters two and three. In chapter two an attempt is made to present an analysis of the language's segmental phonology. A description of consonant and vowel phonemes with substantiations using minimal or near minimal pairs were provided. The phonological processes that apply to the sounds of the language are also taken into consideration. Thus, 26 consonant phoneme and five short vowel phonemes were identified. Each sound phoneme was distinguished by definite parameters. For the distinction of consonants, for example, parameters such as voicing, place of articulation, and manner of articulation were employed where vowels were distinguished based on tongue position and tongue height.

From the language's consonant phoneme the status of one of the consonant phoneme (the palatal, affricate, voiceless) in the phonemic inventory was noticeably problematic. In terms of distribution, the consonants can be in either word initial or medial position excepting the alveolar trill and the alveolar affricate. For the most part, the glottal stop comparatively takes word initial position as it is an epenthetic consonant in the language.

As noted earlier, it is pointed out that qualitatively there are five distinctive vowels in Dauro. However, in addition to this quality distinction, length is also contrastive. The language also

has vowels that are termed as diphthongs which are either short or long. The diphthongs can be regarded as falling, rising, and front-back which are predominantly restricted to open syllables.

In the third chapter, other important aspects of the language's sound systems that are larger than a segment were taken into account. The chapter dealt with segment length, syllable structure and syllabification of the language. In addition, an overview of the phonotactic restrictions the language vest on the segments was provided in the chapter. Furthermore, the study categorized the language as register tone language by identifying two level tones; high and low. These tones seemingly have both lexical and grammatical function in the language with a realization of rising and falling pitch across a word.

The syllable structure has a requisite consonant onset and an optional coda. In other words, Dauro has instantly recognizable syllable pattern that show CV(V)(V)(C) syllable type which illustrates an onset of the syllable to be filled by a consonant, but where it is not filled, the glottal stop is realized. Most (if not all) Dauro words end in a vowel. Therefore, the last syllable of all words of the language is an open syllable. This implies the impracticality for consonants to occur in word final position. The syllable peak possesses either a short or a long vowel or a diphthong. The work thus investigated six syllable types in the language with both simple and complex nuclei. The most dominant syllable type in the language was observed to be the CV type whereas the least is CVVVC that is formed when a long diphthong is used word medially.

In syllabification, three algorithms were predictable to syllabify a Dauro word. In the first place, one should indispensably make out the vowel(s) from the transcription of the word to be syllabified. Subsequently, the vowel preceding consonant will go to the onset of the syllable. However, in case a consonant within the syllable identified is not automatically followed by a vowel it makes coda of the syllable. Therefore, during syllabification of words consisting of clusters of consonants (note that I considered geminate consonants as a cluster in this case), the first part of the cluster makes coda of the first syllable and the second consonant will become an onset of the subsequent syllable.

Phonotactically, Dauro does not allow cluster in a word initial or final position. It is only permissible to have a sequence of two consonants in the word medial position. In terms of syllable structure a Dauro syllable forbids a cluster of consonants in its onset and coda position. In most clusters the alveolar nasal makes the first part of the cluster. Even so infrequent in the language, it is worth noting that like vowel length consonant length in Dauro is phonemic intervocalically. However, it is unfeasible in the language for a segment to geminate being a member of a cluster.

In general, I think the study provides a skeleton for further researches to be conducted on the language in particular and on the Omotic languages in general by providing some necessary information about Dauro's sound system. However, further study is needed to support these findings and the analysis given.

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