# Grammatical and Sociolinguistic Aspects of Ethiopian Languages

Edited by Derib Ado,
Almaz Wasse Gelagay and
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This book is dedicated to the Late Prof. Janne Bondi Johannessen of the Text Laboratory at University of Oslo. She was the fulcrum of the project *Linguistic Capacity Building: tools for the inclusive development of Ethiopia (LCB)* from initiation up to completion. She did much of the editorial work of this book before her untimely death. All the LCB project participants miss Janne very much.

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# The languages of Ethiopia

## Aspects of the sociolinguistic profile

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This book is part of the research work supported by the project Linguistic Capacity Building, tools for the inclusive development of Ethiopia (LCB),[1] which has been working on the development of resources and training of human power involved in linguistic work. The works in this volume are papers presented at different international conferences including the 46th North Atlantic Conference on Afroasiatic Linguistics, Long Beach, California from 1–3 June 2018 and the 20th International Conference of Ethiopian Studies, Mekele, Ethiopia from 1–5 October 2018 with support from the LCB project. The researches focus on different languages in all the three language families in the Afro-Asiatic phyla, namely Cushitic and Omotic and a Nilotic language from the Nilo-Saharan phyla. This volume also included two papers on Ethiopian sign language, for which there are no prior publications in any of the microlinguistic fields.

Ethiopia is home to more than 85 varieties of languages. There have been a lot of grammatical descriptions and other linguistic works produced as PhD dissertations and MA theses, mainly at Addis Ababa University. Nevertheless, most of the works by PhD students and staff remain unpublished. This volume is a contribution towards dissemination of linguistic research on Ethiopian languages conducted mostly by staff and PhD students in Ethiopian universities. We believe that such collective volumes give access to dissemination of research on Ethiopian languages while building the capacity of the linguists involved.

In this introductory section, we present the genetic classification, geographical distribution, population and functions of the major Ethiopian languages. We also provide a brief overview on language and identity in contemporary Ethiopia. Then we give a short overview of this book: the individual chapters and the reviewers.

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1. <https://www.hf.uio.no/iln/english/about/organization/text-laboratory/projects/Ethiopia/>, <http://www.aau.edu.et/chls/norad-lcb/>

## 1.    Aspects of the sociolinguistics profile of the languages

### 1.1    Genetic classification of Ethiopian languages

The East African country Ethiopia with a population of more than 110 million is home to more than 85 languages (The number varies depending on who counts and what is counted. For instance, Lewis (2009) listed 86 languages.). The languages of Ethiopia belong to the two language families: Afro-Asiatic and Nilo-Saharan. The Afro-Asiatic languages spoken in Ethiopia belong to the Cushitic, Omotic and Semitic families. Of the Cushitic languages Oromo has the largest number of speakers, followed by Somali and Afar. Other major languages in the Cushitic family are Sidama, Kambata and Hadiyya. Gordon (2005) presents 47 languages belonging to the Cushitic family, but the number is far from perfect. An example is the case of Oromo, which is presented as three separate languages i.e., Oromo West, Oromo East and Oromo Central, though they are usually considered to be one language with several regional dialects. The Cushitic languages are spoken mainly in the eastern and central parts.

The Omotic family is spoken in Ethiopia only, mainly in the Omo valley in the South Nations Nationalities and Peoples regional state (SNNPRS). This language family was first classified as Western Cushitic but later renamed as Omotic. Theil (2006) claims that this language family is not Afro-Asiatic but instead an independent language family. Wolaita, Gamo, Gofa and Dawro are major Omotic languages with a substantial number of speakers.

The Semitic languages consist of the following major languages: Amharic, Tigrinya, Geʿez and the Gurage cluster, which consists of several languages with dialect clusters. Amharic has the largest number of speakers from the Semitic languages followed by Tigrinya and the Gurage languages. Geʿez does not have native speakers but is widely used as a classical religious language in the Ethiopian Orthodox Tewahido Church throughout the country. The Semitic languages of Ethiopia are commonly referred to as Ethio-Semitic and are spoken in northern and central Ethiopia.

The Ethiopian Nilo-Saharan languages are spoken in the western part of Ethiopia bordering the Sudan and South Sudan. The total population of the Ethiopian Nilo-Saharan languages was less than 500,000 in the 1994 census (OPHCC 1998).

Finally, there is Ethiopian Sign Language, spoken by a substantial part of the deaf and hard of hearing, estimated more than a million people (Simons & Fennig 2018).

## 1.2     Geographical distribution

The language map of Ethiopia coincides with the administrative regional boundaries for the five major languages: Afar, Amharic, Oromo, Somali and Tigrinya (see Figures 1 & 2). Amharic, apart from in the Amhara Regional State, is spoken in all towns throughout the country and serves as a lingua-franca (Meyer 2006; Meyer & Richter 2003). Tigrinya is spoken in the North in the Tigray regional state. Afar is spoken in the Afar regional state. Somali is spoken in the Somali regional state. Oromo is spoken mainly in the Oromia regional state, which covers the largest area in central, western and southern Ethiopia. The SNNPRS[2] is the most diverse region consisting of 56 ethnic groups. The major languages in this state include the Gurage Cluster, Silti, Sidama, Wolaita, Hadiyya, Kambata, Gedeo, Gamo and Dawro.



**Figure 1.** Map of administrative regions of Ethiopia (December 2019)

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**2.**   The Sidama Zone, which has been part of the SNNPRS, was established as Sidama National Regional State on July 4, 2020.
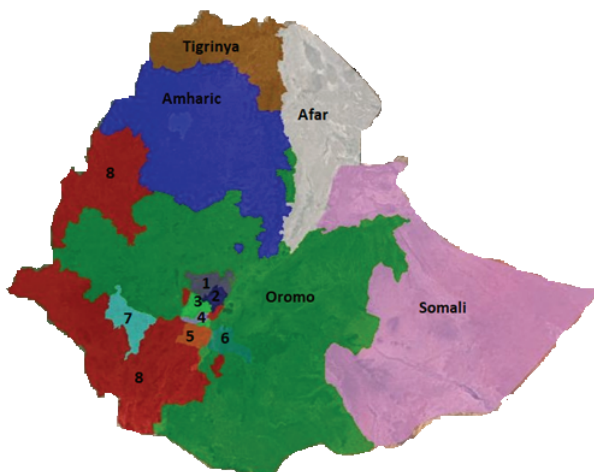
**Figure 2.** Map with the major Ethiopian languages: Afar, Amharic, Oromo, Somali, Tigrinya, Gurage (1), Silte (2), Hadiyya (3), Kambata (4), Wolaita (5), Sidama (6), Kafa (7) and others (8)

## 1.3    Speaker population

There is no reliable source of speaker population for Ethiopian languages to date. The 2007 census, which is the officially available data to date on speaker population presents the following number of mother tongue speakers from a total population of 73,918,505 as presented in Table 1.

**Table 1.** Ethiopian languages with more than 500,000 speakers by 2007 (CSA 2018)

| Language | No. of MT speakers | Language | No. of MT speakers |
|---|---|---|---|
| 1. Oromo | 24,930,424 | 9. Hadiyya | 1,253,894 |
| 2. Amharic | 21,634,396 | 10. Gamo | 1,070,626 |
| 3. Somali | 4,609,274 | 11. Gedeo | 974,609 |
| 4. Tigrinya | 4,324,933 | 12. Silti | 880,818 |
| 5. Sidama | 2,981,471 | 13. Kaffa | 834,918 |
| 6. Wolaita | 1,627,955 | 14. Kambata | 614,807 |
| 7. Gurage | 1,481,836 G | 15. Dawuro | 513,341 |
| 8. Afar | 1,281,284 | | |

It has been more than 12 years since the last census and the population of Ethiopia has exceeded 110,000,000 (UN 2019) and thus the number of speakers of the languages has also increased. There is no census data for the Ethiopian Sign language, but Simons and Fennig (2018) reported more than a million signers for it.

## 1.4     Status and functional distribution of Ethiopian languages

All languages have equal recognition in Ethiopia. Amharic is the working language of the federal government.[3] In addition, it is the working language of the Addis Ababa city government, the Dire Dawa city government, the South Nations, Nationalities and Peoples regional state, the Gambela regional state, and the Benishangul Gumuz regional state since it serves as a lingua franca among different ethnic groups that make up these regional states. Afar, Oromo, Somali and Tigrinya are languages that serve as regional working languages in the regional states where they are dominantly spoken.

About fifty languages have now official orthographies and primary education is given in about 33 of the Ethiopian languages (Ministry of Culture and Tourism 2015) including the 15 languages win Table 1. The Ethiopic script and the Latin script are the most widely used scripts in writing Ethiopian languages. Among Ethiopian languages, Amharic is widely used for publication of newspapers, infotainment magazines, fiction and non-fiction materials.

## 1.5     Language and ethnic identity in Ethiopia

Identity is a very wide-ranging concept that relates to the association of oneself to a number of qualifications. It applies to individual personalities or groups who consider themselves as having something in common. As Edwards (2009: 19) states it, "the essence of identity is similarity." When the concept is taken in terms of group or social identity, it clearly indicates sharing of one or more social qualifications. In relation to individual identity, the concept of "similarity" may look vague since individuality bases itself in what makes one unique from other similar groups. However, Edwards (2009: 19) says: "Individuality does not arise through the possession of psychological components not to be found in anyone else." Those traits one claims to uniquely own can also be found in the other individual member of the same group.

A number of factors interplay in the construction of identity, and some include gender, age, social group, ethnicity, language, culture, etc. Research provides substantial evidence that language identifies speakers in many ways. It provides clues as to who the speakers are and where they are from including their ethnic background. Ethnic identity or ethnicity is a complex social topic to define. It is commonly perceived to be a social construct which is associated with "national

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**3.**   The Council of Ministers of FDRE added 4 languages-Afar, Oromo, Somali and Tigrinya- as working languages of the Federal government in early March 2020.

origin, language, food and culture" (Reyes 2010: 339). Language is a strong tool to bring people together as a group and to have sense of sameness. It plays a central role in the construction of collective or national identity. A shared language was taken to be a major criterion than were other common values to form nation states in different parts of the world. For instance, in France and Germany, "a shared language was understood to be the identifying mark of a nation, which could then claim a state (Heller 2005: 1582)."

Society's orientation towards language and ethnicity is high in Africa, specifically in Sub-Saharan Africa "there is strong emotional attachment to language and ethnicity (Obeng & Adegbija 1999: 353)." Each ethnic group identifies itself and is identifiable with a shared language and culture. Solidarity among speakers of the same language is also strong in many contexts than it is among different ethno-linguistic groups.

Currently, Ethiopia follows ethno-linguistic identity as a principle to organize itself into federal states (Abbink 2011: 596; Zahorik & Wondwosen 2009: 80). Regional and small provincial administration areas are discerned mostly based on the languages residents speak, and people who speak the same or mutually intelligible languages are assumed to be members of one ethnic identity. Recognition of all ethnic groups and provision of the right to develop one's language and culture in the country's constitution has given rise to ethno-linguistic identities. Ethnic and linguistic consciousness boosted and many individual and political institutes have become advocates of particular ethnic and linguistic group rights. Ethno-linguistic practices spiked after the declaration of the freedom of use as confirmed by much research and summarized by Abbink (2011: 603) as:

> The innovative and encouraging aspect of Ethiopia's ethno-linguistic based federalism in the 1990s was that it initiated a liberating phase of ethnic and linguistic self-expression. People used their freedom for ethnic, linguistic and cultural expression. For instance, a whole series of new ethno-historical, language and folkloric publications written by members of the groups themselves was published, and still is.

The ethno-linguistic based administration, however, has not guaranteed peace in the country up until this time since its implementation in 1995. The country faced a number of hurdles in almost every province in spite of the legislative recognition to ethnic and linguistic diversity. Conflicts were mainly ethnic or linguistic based which some included: the famous WoGaGoDa conflict in South West Ethiopia, the Anywa-Nuer Relation problem which killed dozens of people in Gambela town, Benishangul-Gumuz regional state where a number of inter-ethnic clashes erupted among "the various population groups, indigenous Berta, Gumuz and descendants of later immigrant groups like the Oromo, the Amhara and other "highlanders",

about political representation, ethnic districts, and the regional presidency", and the Somali-Oromo relations in South East Ethiopia in Moyale town (Abbink 2011: 906–907), and the recent disputes in different places of the country can be cited as examples.

Abbink (2011: 604) explains the reasons as to why such regional disputes recurrently occur in the country. Some of the causes to the ethno-linguistic conflicts are: Attempts to "resurgence of sub-national and ethnic identities" which stimulated the WoGaGoDa related conflict in Wolaita and Gamo areas. Empowered by the constitution, "A fair number of newly emphasized ethnic groups pleaded for their own separate administrative division." Regionally developed constitutions made "Territories…mono-ethnic, even if they were not so historically; they cannot be shared by two or more groups."

One of the social developments of a shared ethno-linguistic environment is what is called "exclusionism." It is illustrated by Obeng & Adegbija (1999: 355) as "the togetherness of the in-groups who had identical linguistic habits and ethnicity led to the exclusion of people who were linguistically and ethnically different." This is what is happening in almost all African countries, particularly in Ethiopia. A number of social hostilities, as indicated in the preceding paragraphs, shock each part of the country and the root of most of the unrests were ethnic based fueled by political orientations.

The correlation between language and ethnicity does not, however, entail that languages are not used beyond the ethnic group they index. Languages of wider communication in Africa (Obeng & Adegbija 1999: 355) and in Ethiopia are used by various ethnic groups and serve as vehicles of interethnic communication.

## 2.   This book: The chapters

The book is organized in sixteen chapters in five major sections: lexicon, sociolinguistics and culture, grammar(morphology and syntax), phonetics and sign language.

### 2.1   Lexicon

The introduction of the Omotic language Gamo spoken in South-Western Ethiopia as a medium of instruction in primary education and as a language subject for all grade levels requires the creation of new terms for concepts that do not already exist in the language. **Almaz Wasse Gelagay** in her chapter *Term-formation methods in the Gamo language* describes the techniques used to form terms in the Gamo language, by studying recent text books for language and mathematics.

The ensete (false banana) plant is the topic of **Fekede Menuta** in his chapter *The ensete in Gurage: Nomenclature, use and meaning extension*. He shows how important this plant and its products are for the Gurage people, and shows that there are about 71 ensete varieties in Gurage. The people classify ensete varieties according to color, size, value, propensity, source of the plant and height, reflected in the terminology.

## 2.2    Sociolinguistics and culture

**Awlachew Shumneka Nurga** in his chapter *Language contact and its effects on language use of the Gurage varieties of Muher* investigates the language use of speakers of the Muher language. The speakers are all multilingual with knowledge of the official Amharic language and the neighbouring Ezha language, and the language is losing speakers as young people in the urban areas no longer has it as their first language.

In her chapter *Ethnolinguistic perception and identity in Gurage* **Emebet Bekele Birkie** explores the perceptions and attitudes of speakers towards language use and ethnolinguistic identity within the complex sociopolitical and linguistic milieu of the Gurage people. An empirical investigation based on mixed methods reveals that speakers of different Gurage varieties perceive language as strongly connected to their ethnolinguistic identity.

**Etaferahu Hailu Tessema** describes a secret language spoken by females of a traditional religion in her paper *Sociolinguistic functions of the secret language of Gurage females*. Through interviews she found that the sociolinguistic functions of this Fedwet include the establishment of a secret communication among young girls to form a specific identity, and for various religious purposes.

**Fekede Menuta and Yigeremu Kifle** in their chapter *Gender and women representation in Gurage culture* aim to describe the social, cultural and political representation of women in the Gumer district of the Gurage Zone. They have conducted semi-structured interviews and focus group discussions as well observations of events and consultation of documents. They find noticeable differences between men and women at all levels, including discourse.

## 2.3    Grammar (syntax and morphology)

**Baye Yimam** discusses how manner of movement such as spontaneity, intensity, iterativity, durativity and directionality, which are often expressed in manner adverbs in languages which have this productive category, must be expressed differently in Amharic, which lacks this category. His chapter *Manner of movement in Amharic*

shows that subordinate clauses and preposition phrases are used as manner expressions for actions.

Serial verbs in the Omotic language Sezo are investigated by **Girma Mengistu Desta** in his chapter *Serial verb constructions in Sezo*. They are explored with respect to the one major verb and the one or more minor verbs. These two classes of verbs occur under very different conditions in the serial verb construction.

Nuer, a Nilo-Saharan language spoken both in South Sudan and Ethiopia, is a language with a complex morphology. **John Koang Nyang** in his paper *Number marking in Nuer nouns* finds that though suffixation is a common way to form plurals, there are many other ways, including suppletion, vowel quantity, change in vowel quality and internal vowel modification and null formation. Many occur in combinations, too.

*Case-marking in Semitic in the light of the evidence in the Ethiopian language area: linguistic convergence and divergence* is the title of **Lutz Edzard's** chapter. He is interested in the fact that languages in the Ethiopian language area, independently of language family, typically exhibit a two-case system from a morphological point of view, while Semitic in general is usually reconstructed is has a three-case system is.

**Shimelis Mazengia** investigates reduplication, the copying of a root or a stem, entirely or partially, in his chapter *Reduplication in Oromo*. The word classes amenable to reduplication are nouns, determiners, numerals, adverbs and adpositions, adjectives and verbs. Functionally, reduplicated nouns assume a predicative role and adpositions an adverbial role, while the reduplicative forms of the other word classes essentially have the sense of augmentation in terms of quantity, frequency or intensity.

*Verbal Derivations in Inor* is the title of **Tsehay Abza**'s chapter. Inor is a Gurage language, and she investigates derivation that applies to the verb stem and has the function of increasing or decreasing arguments, as well as conveying intensity, reciprocity or reflexivity. It may do so by affixation or by altering the stem's morpho-phonological properties.

## 2.4    Phonetics

The phonetics of Amharic fricatives have been studied by **Derib Ado** in his chapter *An acoustic analysis of Amharic fricatives*. The study aimed to identify acoustic correlates for place of articulation and airstream mechanisms. Frequency of peak intensity, maximum intensity, mean intensity, normalised intensity and spectral centre of gravity were found to be robust acoustic correlates of place of articulation.

**Feda Negesse and Tujube Amansa** explore vowel quantity in their chapter *Durational variations in Oromo vowels* using a high number of speakers. The

duration of the vowels was found to vary significantly across dialects in this Cushitic language, with the longest duration in the Eastern dialect and the shortest duration in the Western dialect. The voice and length of the following consonants were found to be significant factors for the duration of the vowels.

## 2.5    Sign language

**Pawlos Kassu Abebe** presents one of two chapters on sign linguistics. In his chapter *The linguistic nature of expression of aspect in Ethiopian Sign Language* he looks at the aspect system and discusses whether it should be regarded as inflectional, derivational or even gestural. His empirical investigation shows that the gestural nature must be refuted, and that aspect belongs to the area of inflectional morphology.

**Woinshet Girma** in her chapter *Polysemy of Ethiopian Sign Language* has used direct elicitation, video recording and analysis of EthSL dictionaries in order to find examples of polysemy and their etymology. She finds semantic extension processes, such as action vs. result of activity, systematic meaning relations and borrowings from oral languages and other sign languages.

## 2.6    The reviewers

This book has benefitted greatly from the advice of our reviewers. They have been exceptionally thorough and constructive, and some wrote long reviews of more than ten pages and even offered to read the revised papers. We are very grateful for their work, and honour them by mentioning their names here.

The reviewers are experts from universities and academic institutions across the world: Australia, the Czech Republic, Ethiopia, France, Germany, Great Britain, Italy, Netherlands, Norway, Sweden, South Africa, Spain, Turkey, the USA, and Zimbabwe. Their names are given in alphabetical order (Ethiopians by their first name):

Gisle Andersen (Norwegian School of Economics), Giorgio Banti (University of Naples), Baye Yimam (Addis Ababa University), Rosey Billington (University of Melbourne), Joshua Bousquette (University of Georgia-Athens), Katrin Bromber (The Leibniz-Zentrum Moderner Orient), Herbert Chimhundu (Chinhoyi University of Technology), Jordi Cicres (University of Girona), Lutz Edzard (Friedrich-Alexander-Universität), Kristin Melum Eide (Norwegian University of Science and Technology), Kadir Gökgöz (Boğaziçi University), Qandeel Hussain (North Carolina State University), Paul Kerswill (University of York), Elizabeth Lanza (University of Oslo), Johanna Mesch (Stockholm University), Ronny Meyer (Inalco University), Moges Yigezu (Addis Ababa University), Tore Nesset (Arctic University of Norway), Deborah Chen Pichler (Gallaudet University), Marijn van Putten (University of Leiden), Maria Rosa Lloret

Romañach (University of Barcelona), Sharon Rose (UC San Diego), Unn Røyneland (University of Oslo), Joe Salmons (University of Wisconsin-Madison), Guri Bordal Steien (Inland Norway University of Applied Sciences), Mauro Tosco (University of Turin), Yvonne Treis (Inalco University), Jan Záhořík (University of West Bohemia), Zelealem Leyew (Addis Ababa University), Rainer Voigt (Freie Universität Berlin), Arnfinn Muruvik Vonen (Oslo Metropolitan University), Quentin Williams (University of Western Cape).

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# Lexicon

# Term-formation methods
# in the Gamo language

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This research describes the techniques used to form terms in the Gamo language, an Omotic language of Afro-asiatic family spoken in South-Western Ethiopia. The introduction of Gamo as a medium of instruction in primary education and as a language subject for all grade levels requires the creation of new terms for concepts that do not already exist in the language. A number of new terms were formed to facilitate the teaching and learning of language, science and mathematics education. This research followed linguistic and communicative approaches, as illustrated in Antia (2000: 39, 44), to describe techniques of term-formation and to analyse features of the terms in line with the linguistic properties of Gamo. To this end, lexical data were collected from language and mathematics textbooks prepared in the Gamo language. Data were also gathered from native speakers who participated in textbook preparation and terminology works. According to the data, borrowing, compounding, blending, initialism, paraphrasing and semantic extension were applied to form terms pertinent to education in the Gamo language. The most frequent mechanisms were borrowing, followed by compounding, but few terms were formed by blending and paraphrasing.

**Keywords**: Gamo, education, terminology, term-formation methods

## 1. Introduction

Ethiopia is a multiethnic and a multilingual country where more than 85 languages are spoken (Lewis 2009). The languages have different levels of written development and social function. For a long time, Amharic has been used in domains like in education, media and literacy in all regions, and as a result has become the default lingua franca of the country (Cooper 1989: 21–28). Around 15 languages, including Oromo, Tigrinya, Somali and Wolaitta, were also used during the 1979–1991 literacy campaign (Vaughan 2003: 257). Most of the other languages were not used in public settings, but served mainly at home and in intimate conversations.

To improve this situation, the country adopted a multilingual approach in its constitution of 1994 by granting speakers the right to use, promote and develop native languages in different domains. Another policy, the Education and Training Policy (1994) was also framed to enhance the constitutional provision in education and training areas. The policy declares the use of mother tongue as a medium of instruction for every child in primary education and beyond. Inclusion of as many languages as possible in the education system is believed to be a way to engage diverse linguistic and cultural groups in the development system and to address education for all. Gamo is one of the languages whose function is promoted in education as a result of these policy initiatives.

Gamo is spoken natively by more than a million people (Central Statistical Authority 2008: 91) who live mainly in South- Western Ethiopia. The language comes under the Afro-Asiatic, Omotic Central Ometo language category (Bender 1975: 127). Its dialects amount to 42, with varied degrees of intelligibility (Hirut 2005, 2013 and Wondimu 2010: 33). The percentage of shared cognate words among the dialects ranges from 65% to 98%. There is high intelligibility among dialects sharing a high percentage of cognate words, and mutual intelligibility is low among dialects with a lower percentage of shared lexical items. There is an assumption that extensive dialectal variation is caused partly because the language has not been written until recently. Other reasons that account for the large number of dialectal variations in Gamo include 'political, settlement history and topography of the area (Wondimu 2010: 117)'.

Gamo has been introduced as a medium of instruction (MOI) for primary education since 1995. To this end, textbooks are published in a Latin based orthography for primary and secondary grade levels. The introduction of Gamo as MOI in primary education requires formation of relevant terms to be used in science and language education textbooks. The major purpose of this research is to describe the methods used to form terms, and to analyse features of the terms according to the linguistic properties of Gamo. The paper includes an introduction section, a conceptual framework (Section 2), the methodology used to collect data (Section 3), term-formation methods in the Gamo language (Section 4) and concluding remarks (Section 5).

## 2.    Conceptual framework

Terminology focuses on '… the relationship between objects in the real world and the concepts that represent them (Cabre 1999: 9)'. It mainly concerns creating understanding about the way concepts in a special field are represented by terms. Terminology involves three basic areas that put terms at the centre, referring to the

study of terms, the methods used to form terms and a group of terms in a special field (Cabre 1999: 32). On the one hand, it presents theories and approaches that could be used in studies of terms and, on the other hand, studies determined to analyse the methods by which terms are formed in different fields also fall under the category of terminology.

Formation of terms is motivated by a concept that enters in to an area of knowledge. Unlike lexicography, which begins work by collecting terms and then moves on to define and explain their meanings, terminology work considers concepts to be central, preceding terms (Antia 2000: 81).

Terms are defined as, '…the specialized words occurring in natural language which belong to specific domains of usage (Cabre 1999: 32)'. It is possible to note from the definition that terms play a special purpose or are applied to domain-specific communication. People from the same profession or area of experience share terms unique to the knowledge they have and that are relevant to the exchange of information with each other. To update communication in terms of knowledge innovation in different fields, terms are formed by the people concerned.

In order to use a language in education, science and technology, efforts have to be made towards the development of relevant terminology. This kind of work has not been extensive enough to advance education in African languages context, and the resulting shortage of terms has been referred to several times as a major impediment in the use of languages in science and technology (Probyn 2006: 394). Due to the lack of appropriate terms, the progress of mother-tongue education in the continent has been stagnant. For example, Kingei (1999: 146) takes the lack of scientific terms to be a barrier in implementing Swahili in higher education in Kenya. Terminology work is also uncommon in Gamo, except in the education sector, where teachers created a few terms while textbooks were being translated. Some publications that relate to agriculture and engineering are also available. They explore the indigenous living system and experiences of the Gamo people and contain lists of terms in their specialised fields. Blench (2006) compiles livestock terms in different Omotic languages, including Gamo, and explains how the words are introduced in to the languages. Habte (2013) describes 'vernacular houses' built in Gamo, and provides terms that refer to the local houses and the raw materials with which they are built.

Two other lexicography works in Gamo include Gebreyohannes (2000), a bilingual dictionary that compiles words from Gamo and Gofa languages and provides their meanings in Amharic. Another publication is Hayward and Eshetu (2014), a large volume that includes grammatical analysis of the Gamo language followed by selected words and their English meanings. However, research on methods of developing Gamo terms for scientific concepts are not available so far.

Different techniques are used to form terms for a given purpose and for a special subject. The techniques can help to create new terms or to adapt an existing

word to suit a new concept. These methods include:creating new terms through compounding, coining, paraphrasing and blending; using existing forms or modifying them; and borrowing (ISO704 2009: 51; Kloss & McConnell 1978: 63, quoted in Deumert &Vandenbussche 2003: 7). A number of these techniques are applied to form terms in different languages.

## 3.   Methodology

Researchers use different approaches to study terms, their formation and their communicative purpose. These include the linguistic, terminological system, sociological and communicative approaches (Antia 2000: 39–46). In the linguistic approach, term-formation methods used in a special domain are described.The terminological system approach is concerned with consistency in forming terms with different mechanisms. According to Antia (2000: 41), the sociological approach of terminology study focuses on finding out the social understanding of newly formed terms in a given language. Finally, the communicative approach refers to'… the extent to which proposed terms cover the pertinent field'.The present study used a combination of linguistic and communicative approaches to study terms formed to facilitate communication in education in the Gamo language. The linguistic aspect – the analysis of term formation methods – informs readers about textbook writers' efforts to form terms to fill in the observed terminology gaps to apply Gamo in education. In addition to describing term-formation methods, the research takes a communicative approach in evaluating the role the new terms play in facilitating students' learning in the language, and their adequacy in covering the intended ideas or concepts.

Data were collected from textbooks and from native speakers of the Gamo language. Sixty three terms were gathered from textbooks written in Gamo, and the methods used to form them were described. However, more new terms than the number indicated here are expected to be available in Gamo, particularly in religion, music, law, and other sciences that are not covered in this study.Terms were selected for inclusion in the study based on whether they were new formations or newly used in a given context, according to consultants' knowledge.The textbooks from which terms were taken include *The Gamo Language Students' Textbook Grade One* (2012), *The Gamo Language Students' Textbook for Grade Two* (2003), *The Gamo Language Students' Textbook for Grade Three* (2012), *Mathematics Students' Textbook in Gamo for Grade Three* (2003), *The Gamo Language Students' Textbook for Grade Nine* (2003), and *The Gamo Language Students' Textbook for Grade Ten* (2010), i.e., five textbooks for language and one for mathematics.These textbooks were selected because the researcher accessed copies from individuals and book shops.

Two Gamo native speakers were also used as resources. Both were linguists by profession, and had written and edited Gamo textbooks for different grade levels. Since dictionaries for specialised terms were not available in Gamo, identifying new terms from the textbooks was very challenging to the researcher.[1] This problem was overcome by asking one of the consultants to identify new terms from the Gamo textbooks. The other consultant, who participated in terminology work during textbook preparation, provided information with regard to the procedures followed in forming terms when textbooks were prepared for mother-tongue education in Gamo.

A Gamo-Amharic bilingual dictionary (Gebreyohannes 2000) was also used to cross-refer meanings of some existing Gamo words that were included in Gamo terminology for language and science education.

## 4.    Term-formation methods used in Gamo

In person-to-person communication, speakers depend mostly on their knowledge of words in communicating needs that arise in the moment. On the other hand, the use of words for a planned purpose, such as education, require the strategic development of terminology. Accordingly, new terms have been formed in Gamo largely due to its use in education, though the role of electronic and paper media, and the speakers themselves, is also profound. Terms must be formed to cover concepts that are introduced into the language in science, mathematics and language education. According to one of the consultants, new terms were first formally created in 1995, when common mother tongue textbooks were prepared in DaGaGo, a written language coined from three North Ometo languages that included Dawuro, Gamo and Gofa. As indicated in Almaz (2016: 277), the decision to amalgamate the three languages was an attempt to have a standard language that could serve as MOI for mother-tongue education for speakers of those languages.

Textbooks were prepared by subject teachers selected from the three linguistic groups of Gamo, Gofa and Dawuro. Parallel to the textbook writers, another group consisting of language teachers from the three linguistic groups was established. The group was in charge of forming terms for concepts given to them by the textbook writers. According to one consultant (who was the head of the terminology group and a textbook writer), most of the members of the terminology team were Amharic and English language teachers who were well-known as culture and language experts in their own linguistic groups. This group was given concepts in Amharic or English by the textbook writers, and then searched for terms that

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1.    As a second language speaker of Gamo, I had very little knowledge of the new terms before this research.

could represent the concepts well. When a concept had a term in one of the three languages – namely Gamo, Gofa or Dawuro – they chose that term rather than form a new one. On the other hand, if a word was available in three of the languages, the one which the group agreed up on, based on its linguistic and pedagogical advantages, was chosen. When these approaches did not work for a given concept, the last option was forming a new term using different methods for concepts that were not represented in the target languages.

The three languages (Gamo, Gofa and Dawuro) are now considered to be autonomous languages after speakers opposed the idea and the practice of merging the languages into one. Some individual and coordinated efforts have been put in place to develop the lexis of Gamo. There is an online web-based Amharic-Gamo dictionary called 'Glosbe' that aims to provide Gamo translations to Amharic words based on users' request. The system contains important features, such as an Amharic keyboard, that makes it possible for readers to enter a word online. The site asks speakers to provide Gamo words when they can, and this encourages term-formation practices in speakers. However, the dictionary does not yet provide Gamo equivalents, even to common Amharic words. This may show that speakers are not participating at the level required, and that the development of an online Amharic-Gamo dictionary is not taken seriously.

The methods used to form terms to facilitate teaching and learning in Gamo include borrowing, compounding, semantic extension, blending, initialism and paraphrasing. The following section deals with these term-formation methods.

## a.   Borrowing

Borrowing refers to 'incorporation of foreign elements into the speakers' native language (Haspelmath, 2009: 36)'. A number of synonymous words are available, parallel to the term borrowing. According to Haspelmath (2009: 37), terms like adaptation, copying or transfer of terms or concepts from one language into the other can be used to mean borrowing, based on researchers' focus of study.

Languages may borrow terms or concepts for various reasons, which are complicated to explain (Haspelmath 2009: 35). Two general issues that motivate lexical borrowing are 'social and attitudinal factors and grammatical factors'. Social factors relate to the social status of the resource language and the recipient language. On the other hand, verbs are believed to be borrowed less often from other languages than nouns, because they require more grammatical modification, meaning that speakers prefer other techniques to form verbs than borrowing from other languages.

One obvious reason for lexical borrowing is the absence of a term referring to a concept or an object in a given language. Changes in a society's communication

needs, due to changes in life experience or technological and scientific develop-
ments, paves the way for the transfer of certain concepts and the terms used to
illustrate them from one language to the other. Through borrowing, a concept and
a word that designates it are transferred to a language, which involves social change.
In most cases, borrowed words take on the linguistic features of the recipient lan-
guage and adapt to its system.

Haspelmath (2009: 38) identifies two kinds of borrowing: material borrowing
and structural borrowing. Material borrowing refers to borrowing lexical items or
affixes, while structural borrowing concerns 'the copying of syntactic, morpho-
logical or semantic patterns (e.g., word order patterns, case-marking patterns, se-
mantic patterns such as kinship term systems)'. Loanwords, which are defined by
Haspelmath (2009: 36) as, 'that at some point in the history of a language entered
its lexicon as a result of borrowing (or *transfer*, or *copying*)', are believed to be the
best examples of material borrowing.

Gamo has borrowed several words from the Amharic and English languages.
Amharic is in a contact situation with Gamo in many social settings, and is widely
used as a second language by most Gamo native speakers. Most of the written ma-
terials, like textbooks and the Bible, are translated from the Amharic versions. For
that reason, many words were borrowed from Amharic to Gamo. Some examples
are presented here in groups, according to the linguistic features analysed.

| Amharic | Gamo | English |
|---------|------|---------|
| *fidäl* | *pidale* | letter |
| *fird* | *pirde* | verdict |
| *sikʷar* | *ʃukkaare* | sugar |
| *muuz* | *muuze* | banana |
| *kiffil* | *kiffile* | grade |
| *loomi* | *loome* | lemon |
| *timhirt* | *timirtte* | education |
| *k'al* | *k'ala* | word |
| *märfe* | *marppe‿narppe* | needle |
| *dʒäbäna* | *dʒabana* | coffee pot |
| *mäs'ihaf* | *mat'aafa* | book |
| *masimäria* | *maasimaaria* | ruler |
| *tämari* | *tamaare* | student |
| *märräja* | *marraja* | information |
| *et'a* | *et'a* | fate |
| *kihilot* | *kilote* | skill |
| *mäkina* | *makina* | car |
| *lämaʃäg* | *aʃaganau* | to pack |
| *bʷambʷa* | *bomba* | water pipe |

Gamo borrowed many words from Amharic, including those shown in the above data. As can be noted from the examples, the borrowed words have been adapted in to Gamo through phonological and morphological processes. In the borrowed word *fidäl* 'letter', the labio-dental fricative /f/ is changed into the bilabial stop /p/, resulting in the Gamo word *pidale*. The borrowed word is adapted into Gamo, which lacks the phoneme /f/ in its phonetic inventory (Azeb 2012: 434). The phoneme /f/ is believed to be equivalent to /ɸ/, which is an allophonic variant of the phoneme /p/ in Gamo (Wondimu 2010: 47).

The word *ʃukkaare* 'sugar' has undergone sound change in that the initial fricative /s/ in the Amharic word *sikʷar* is changed into the affricate /ʃ/. This change seems sporadic, since it is not regularly applied to other words with initial /s/ sound, as in the word *silke* 'phone', borrowed from the Amharic *silk* 'phone'. According to Campbell (1998: 17), 'Sporadic changes affect only one or a few words, and do not apply generally throughout the language'. Though the real motivation for this adaptation may not be clear, it seems that the textbook writers were not in favor of copying the Amharic word without slight adaptation to it.

Another adaptation made to borrowed words is the addition of terminal vowels. Most of the Gamo words, with some exceptions, take terminal vowels. Azeb (2017: 818) states that most of the Omotic languages, including Gamo, comprise five vowels and their long forms. From the prevailing five vowels, Wondimu (2010: 69) confirms the presence of four, /e/ /o/ /a/ and /u/, in the terminal position in five dialects of the Gamo language. Accordingly, all of the words borrowed from Amharic were given terminal vowels. For instance, m*uuze* 'banana', *loome* 'lemon', *timɨrtte* 'education', *kiffile* 'grade', *mat'aafa* 'book' received /e/ and /a/ terminal vowels that did not exist in the source words.

The meanings of some borrowed words have also been extended to refer to a concept that is designated by a different word in the target language. For example, in Amharic *k'al* means 'word', but in Gamo extends to mean *k'aala* 'language', in addition to its original meaning. So, *gamoʦʦo k'aala* means 'the Gamo language'. In fact, 'language' is also metaphorically expressed by the Gamo word *dona*, which literally means 'mouth', and *gamoʦʦo dona* is again 'the Gamo language'.

Other words taken from the Amharic language include n*arppe* 'needle', *ʤabana* 'coffee pot', *mat'aafa* 'book', *maasimaaria* 'ruler'. These are common materials in everyday use, and it could be assumed that the words were borrowed when materials for sewing, preparing coffee or publishing were transferred. This is not to say, however, that activities like coffee preparation or sewing were introduced through the words *ʤabana* 'coffee pot' or *narppe* 'needle'. A different material or item might have been used for the purpose, and the presence of the core word *siko*, 'to sew' in Gamo, confirms that the activity had been practiced before the word *narppe*

'needle' was borrowed. It can also be said that the borrowed word *mat'aafa* 'book' looks similar to the Gamo word *mat'afa* with short vowel, which is translated as 'rude' (Gebreyohannes 2000: 149). This similarity may easily confuse speakers in general, and students in particular.

The last five words in the data were borrowed from Amharic, but the Gamo words that could convey the intended meanings were given in brackets in the text-books.The words *k'ada* 'fate', *hila* 'skill', *kame* 'car', *litʃ'anaw* 'to pack', *gelisyo* 'water pipe' were offered in brackets next to the Amharic borrowed words *ex'a, kilote, makina, aʃaganau* and *bomba*, respectively. The attempt to create clarity of meaning by providing alternative forms from Gamo, Amharic and English and its effect on standardisation of Gamo words is discussed in detail in Almaz (2016: 283). This kind of writing practice is obviously the result of language contact or speaker bilingualism.The writers might have considered the Amharic words to be more commonly used by speakers than the counter words. In situations in which one word is more widely known and practiced by speakers than another, Haspelmath (2009: 47) suggests, 'it becomes more efficient to use the better-known word'.

From the borrowed words, the word *aʃaganau* 'to pack' can be taken as a loan-blend: 'hybrid borrowings which consist of partly borrowed material and partly native material (Haspelmath 2009: 39)'. In the example, *aʃag* 'pack' is taken from Amharic, but the suffix -(na)u, which Hayward and Eshetu (2014: 155) identify to be one of the postpositions in Gamo, is added.

Another word supplier for Gamo is English. As a vehicle of science and technology concepts, the English language plays a great role in the education system in Ethiopia in general, and in Gamo in particular, with relevant terms in science, mathematics and language education borrowed from it. Some of them are presented here, based on the semantic fields they cover:

| Gamo | English |
|------|---------|
| *dijite* | digit |
| *pirobileeme* | problem |
| *rediyeese* | radius |
| *diyametre* | diameter |
| *santtimetre* | centimetre |
| *paraleelo* | parallel |
| *iskkuweere* | square |
| *anggile* | angle |
| *bawele* | vowel |

These borrowed English terms were also adapted to fit the linguistic system of Gamo. One obvious adaptation is addition of terminal vowels. The data show that all of the words received terminal vowels, such as /e/ and /o/.

As can be seen from the examples, the loanwords were contextualised according to the orthography rules of the recipient language, and were adapted into its sound system. For instance, Gamo does not take labiodental fricative /v/ at word initial position. Initial /v/ words are not attested to in both Hayward and Eshetu (2014: 810) and Gebreyohannes (2000). So, the borrowed words replaced /v/ with /b/, as in the word *bawele* 'vowel'.

The word *iskkuweere* 'square' is adapted by adding an initial vowel since Gamo phonotactics does not allow for word initial consonant clusters. With regard to this, Hayward and Eshetu (2014: 35) report that Gamo 'onsets consist of only a single consonant'. Word initial consonant clusters, according to Hayward and Eshetu's (2014: 36) findings, are attested to in four loanwords, *skripto* sometimes adapted to *iskiripto* 'pen', *kwaase* 'ball', *brille* 'flask-shaped drinking vessel' all borrowed from Amharic and a Gamo word *bro* 'yet'. Apart from these, initial consonant clusters are not attested to in Gamo. Hayward and Eshetu (2014: 38) emphasise that, 'Sequences of two consonants and geminate clusters occur only word-internally-never initially or finally'.

### b.   Compounding

As a term-formation method, compounding is defined as, '…the unifying of two or more autonomous words to form a third (Bauer 1983: 11 cited in Brinton & Traugott 2005: 34)'. The meaning of a compound word can mostly be related to the meanings of its components, but it is not always possible to predict meanings from parts. Fabb (1998: 66) attributes such unpredictability of meaning to two characteristics of compounds that relate to their tendency to change meaning, and the presence of different semantic relations between component morphemes.

Compounding is one of the word formation techniques in Gamo. It is mainly used to mention kinship terms, such as the repetitive compounds *awa-awa* literally 'father's father' or 'grandfather', *ayia-ayia* 'mother's mother' or 'grandmother' from a mother's side. All other terms used to describe kinship relationships, such as '*awa/ayia-mitʃtʃe* 'father's/mother's sister' or 'aunt', *awa/ayia -iʃa* 'father's/mother's brother' or 'uncle', *iʃa/mitʃtʃe-naʔa* 'brother's/sister's son/daughter' or 'nephew/niece' are compounds in Gamo (Gebreyohannes 2000). Compounding is also used as a means to form terms for language and science education in Gamo. Some compound terms formed for this purpose are directly copied from textbooks:

| Gamo | English |
|------|---------|
| *k'ofa k'afo* | concluding paragraph |
| *oyfa k'ofa* | interrogatives |
| *meegeta k'ofa* | statement |
| *k'aala ʃik'o* | dictionary |
| *saloo saʔa* | universe/world |
| *sinta guye* | sequence |
| *bila t'aɸo* | literature |
| *sitta ada* | direct speech |
| *zari beyo* | revision |
| *guta hasaaya* | colloquial speech/dialect |
| *medɗeti t'aafide* | fiction |
| *mat't'aafe keetʦa* | library |

The first three words, *k'ofa k'afo* 'concluding paragraph', *oyfa k'ofa* 'interrogative', *meegeta k'ofa* 'statement' are formed from the main or head word *k'ofa* 'idea' plus *k'afo* 'tie', *oyfa* 'question' and *meegeta* 'supporting wood'. Some of these components like *k'afo* 'tie', *oyfa* 'question' provide clues for students to easily identify the type of a given sentence or paragraph. In a similar system, *k'aala* 'word' is combined with *ʃik'o* 'collection' to form *k'aala ʃik'o* 'dictionary'. In *saloo saʔa* 'universe/ world', the words *saloo* 'sky/heaven'and *saʔa* 'earth' are combined.The resulting compound word *saloo saʔa* refers to every creation on the earth and under the sky. However, the new term *saloo saʔa* may not exactly coincide with 'universe' to include concepts like planets other than the earth. Similarly, the words *sinta* 'front' and *guye* 'back' come together as *sinta guye* to mean 'sequence/order'.

Other terms formed by compounding are *bila t'aɸo* 'literature', *sitta ada* 'direct speech' and *zari beyo* 'revision'. The first term *bila t'aɸo* 'literature' is formed from *bila* 'wisdom' and the Amharic word *s'ɨhuf*, which is adapted into Gamo phonology as t'aɸo 'writing', generally meaning wisdom or knowledge of writing literary materials.The word *sitta ada* 'direct speech'is taken from *sitta* 'direct' and *ada*, a word which is usually used to affirm or to mean 'true'. It can therefore be assumed that *sitta ada* is linked to speaking something directly. Finally, *zari beyo* 'revision' is created from *zari* 'returning' and from *beyo* 'look'. This compound term takes its meaning directly from the component words. To revise means to look back at something.

The term *guta haasaya* 'colloquial speech/dialect' was also formed by joining two Gamo words. The first part *guta* literally means 'small', and the other one *haasaya* is 'speech'. The compound word *guta haasaya* 'colloquial speech/dialect' is meant to indicate all the Gamo dialects that are spoken in districts of Gamo other than the standard dialect. By taking the word *guta* 'small', the compound word compares the diverse linguistic forms of Gamo with the standard one, and assigned them a lower social status.

The last two terms in the data demonstrate a further technique of compounding called loanblends. One of the two components of the compounds is an Amharic word. In *meddeti t'aafide* 'fiction', the first component *meddeti* 'create' is a Gamo word, while the second, *t'aafide* 'written', is taken from the Amharic word *s'ihuf* 'written material'. One of the components, *mat't'aafe* 'book' of the last word *mat't'aafe keetstsa* 'library' is taken from the Amharic word *mäs's'ihaf* 'book'. The compound word seems to have been directly taken from the Amharic word *betä mäs's'ihaf* 'library'. The word *betä*, which is taken from *bet* 'house' is *keetstsa* in Gamo, therefore *betä mäs's'ihaf is* translated as *mat't'aafe keetstsa* 'library'.

Since most Gamo language speakers are bilingual in their own language and in Amharic or another language, there is a high probability for these kinds of blends to occur. In fact, multilingual speakers are found in most areas of Ethiopia and, as a result, compounding words from two languages might be common in other languages, as well. For instance, Kozicki (2017: 56) identifies the use of Geʿez system in Amharic terminology compounding as '…there are two forms of compounds in Amharic reflecting the Amharic and Geʿez models, though the Geʿez model is becoming more and more popular in the process of coining terminology for Amharic'. One example is the use of the Geʿez gentive marker *ä*, as in the above example *bet-ä mäs's'ihaf* 'library', instead of saying *yämäs's'ihaft bet* 'library' again with the Amharic genitive form *yä*.

The compound words mentioned above fill in the lexical gap in language and science education in Gamo. Based on Fabb's (1998: 66) classification of compounds, the new compound terms of Gamo can be categorised as endocentric, exocentric and coordinate compounds in terms of their structure. Endocentric compounds are those that have one of their components as a head. *k'ofa k'aʃo* 'concluding paragraph', *oyʃa k'ofa* 'interrogative', *meegeta k'ofa* 'statement' have the word *k'ofa* 'idea' as their head. *bila t'aɸo* 'literature', *guta hasaaya* 'colloquial speech/dialect', *meddeti t'aafide* 'fiction', *mat't'aafe keetstsa* 'library' have the components on the right side as their head, and are also endocentric compounds.

On the other hand, in the compound terms *zari beyo* 'revision' and *sitta ada* 'direct speech' the compound terms and their components are from different parts of speech and are, hence, exocentric compounds. *k'aala ʃikʾo* 'dictionary', *saloo saʔa* 'universe' and *sinta guye* 'sequence/order' can be taken as coordinate compounds in which both of the components have equal status in the compound nouns.

**c.   Blending**

Blending is 'the fusing of words into a single lexeme by a process of compounding or clipping (Brinton & Traugott 2005: 41)'. It involves different mechanisms of fusing elements of words into one form. In some instances, blending can involve a whole part of one word and a shortened form of another. In other cases, a blend can be formed by fusing parts of the source words (Hosseinzadeh 2014: 18).

Gamo blends formed by fusing elements of different semantically related words include the following:

| Gamo | English |
|------|---------|
| *medosa* | animal |
| *donza* | plant |
| *sunkʼo* | adjective |
| *soadde* | subject |
| *matuma* | gender |

These new blends were formed by different mechanisms of blending. The term *medosa* 'animal' was formed by clipping *me*-from *mehe* 'domestic animal', *do*- of *doza* 'wild animal', and the last syllable-*sa* of the word *hesa* 'such'. The blend is meant to represent all domestic animals, wild animals and related creatures, such as marine animals.

Another scientific term that was blended from parts of other words is *donza* 'plant'. Just like the above word, *donza* was formed by clipping *do*- from *dolizayta* 'that grow upwards', *-n* from *nne* 'and' and by clipping *-za-* from the middle position of *lagizayta* 'that grow horizontally'. The term *donza* was, hence, formed to designate plants of different size and nature. The two terms, *medosa* 'animal' and *donza* 'plant' play significant roles in facilitating natural and environmental science education in the Gamo language.

The term *sunkʼo* 'adjective' was also fabricated to facilitate language learning with the same technique of blending parts of two words. It came from *sun*-, taken from *suntsa* 'name', and *kʼo*-, which is taken from *kʼončʼčʼiso* 'describe'. The term *sunkʼo* literally means to name, to describe, or describing a name, which is the communicative function of adjectives.

The term *soadde* 'subject' was created from *so*- of the word *soho* 'house' and the whole syllable of the word *adde* 'man'. The point in the word is that a man is an owner or head of a house, and this position of a man in a household is related to the function of a noun in a sentence, which serves as a subject heading the sentence. It seems that the terminologists translated this term directly from the Amharic word *baläbet*, which is used to refer to 'subject' of a sentence. Initially, *baläbet* can be used in wider contexts. In a very formal conversation, it may be used to mean one's

husband or wife. In other contexts it may mean 'owner of something' or 'owner of a house'. So, it seems that *baläbet* is translated into the Gamo term *soadde* 'owner of a house' or 'subject' of a sentence. Haspelmath (2009: 39) describes this kind of term formation to be 'loan meaning extension whereby a polysemy pattern of a donor language word is copied into the recipient language'.

The term *matuma* 'gender' is another type of blending called phonemic overlap, where 'a syllable or part of a syllable is shared between two words (Hosseinzadeh 2014: 19)'. *matuma* 'gender' is taken from two words, *mačč'a* 'female' and *atuma* 'male'. From the first word *mačča* 'female', the first syllable *ma-* was taken, the phoneme *-a-*, which overlaps in the middle of the two morphemes, is shared, and *atuma* 'male' was included to make the term meaningful, easy and acceptable. The blend term *matuma* 'gender' refers only to female-and male-gendered creatures, but not to gender-neuter things.

### d.    Semantic extension

Semantic extension is a type of semantic change that refers to 'a widening of meaning in a lexical item (Crystal 2008: 181)'. The mechanisms used to understand new concepts through existing elements include metaphor and metonymy, which, according to Sakita (2001: 248), are 'cognitive processes of understanding abstract concepts in terms of concrete ones'. Metaphorical extension involves perceived similarity between a new concept and an existing object, while metonymy is based on physical or ideal relationship between objects and concepts (Lujan 2010: 291). Semantic extension can also occur through broadening or narrowing concepts a word can refer to. Broadening the meaning of a word is termed as generalisation, while narrowing is 'semantic restriction, specialisation or reduction (Lujan 2010: 294)'.

The meanings of some Gamo words have been extended to cover new concepts that the words did not represent before. The original and the extended meanings of some of the words are given below:

| Gamo | original meaning | extended meaning |
|------|------------------|------------------|
| *laamme* | change | variable |
| *ʃemppo* | rest | chapter/unit |
| *č'atʃtʃa* | a stopping mark | punctuation mark |
| *dentstso* | pick up | subtraction |
| *dabbo-dabboya* | relative | match |
| *kaara* | roof | topic/title |
| *giddo* | inside | centre |
| *herega* | determine | mirror |
| *hup'e* | head | key |
| *ayipe* | eye | main |

The above words were extended to designate new concepts in science and language education when Gamo is introduced as MOI. The data demonstrate that the major semantic extension mechanisms used in Gamo are metaphor and semantic broadening.

The words *lamme* 'change', *ʃemppo* 'rest', *čʼatʃtʃa* 'a stopping mark' and *dentsʦo* 'pick up' in their original meaning have become extended to refer to 'variable', 'chapter', 'punctuation mark' and 'subtraction', respectively. However, the existing words are not arbitrarily extended to include new concepts. There is a perceived conceptual relationship that can be taken as a slight or loose metaphorical connection between the old and the new concepts. For instance, *čʼatʃtʃa* originally refers to a mark that shows where something stops. It is applied to refer to punctuation marks that primarily indicate where a sentence or an idea pauses or ends up.

The original meanings of some of the words like, *kaara* 'roof', *herega* 'determine', *hupʼe* 'head' and *ayipe* 'eye' have clear metaphorical relationships to the new concepts they represent. The word *kaara* 'roof' refers to the upper part of a house or other structure. Similarly, a 'topic/title' is placed on top of a text. The two concepts 'roof' and 'topic' have spatial relationship that makes it easy to understand the meaning of the new term.

Previously, the word *herega* meant 'determine' a price for something. According to the consultants, the same word *herega* was given to mirror based on the functional relationship between the object and the word. The purpose of a mirror is to look at one's image and evaluate or give value for oneself. The word *herega* 'determine' the value or price of something was taken to identify the object 'mirror'. Here, the idea of determining the value of an object is transferred to mean 'mirror'. Metaphor is, in fact, used inversely here from the abstract concept 'determine' to the concrete object 'mirror'. Since the two terms 'determine' and 'mirror' come from different domains, based on Lujan's (2010: 289) criteria of metaphor, the meaning extension can be taken to be a metaphor.

The other word *hupʼe* 'head' was extended to mean 'key' or 'major' points. The head comes on top of a person's body, and this meaning is transferred to key concepts that come on top or ahead of other related ones in their importance. Similarly, the word *ayipe* 'eye' was used to designate the concept 'key' or 'main', as in *ayipe kʼaalata* 'key words'. It can be seen from these examples that metaphor was applied as a means to use concrete objects to understand abstract concepts.

On the other hand, allocation of the word *ayipe* to mean 'key' or 'main' is controversial because, as mentioned in Gebreyohannes (2000: 13), the word *ayife* with the plural morpheme *-ta, ayifeta*, metaphorically means 'dangerous people', 'leaders of a bad action'. With these metaphorical impressions, using the word *ayipe* in a language classroom to mean 'major words' or ideas distracts from communication. One can also observe the orthographic inconsistency between the

textbooks and the dictionary (Gebreyohannes 2000: 13). This mismatch between the spelling *ayipe* in the textbooks and *ayife* in the dictionary is another cause of confusion to learners.

### e.   Initialism

Initialism is a word formation process in which 'the initial letters of words in a phrase are pronounced as letters (Brinton, 2000: 99)'. When writing, initialisms are often written with 'periods between the letters'. In Gamo, initialism is used as one of term formation mechanisms as shown in the following three examples:

| Gamo | English |
|------|---------|
| h.h.m | etc. (etcetera) |
| M.L | E.C (Ethiopian Calendar) |
| E.P.M | According to European Calendar |

In the first initialism, *h.h.m* 'etc.', the first two letters *h. h.* are clipped from the reduplicated words *hessa* 'such' *hessa* 'such' and the third letter *m.* is taken from the first letter of the word *mala* 'kind'. The three clipped forms *h.h.m* 'etc.' all together represent the long speech *hessa hessa mala* 'such such kind'.

The term *M.L* is formed from the first letters of *marotetstsa* 'mercy' and *laytstsa* 'year'. It seems that the Amharic term *amätä* 'of a year' and *mihirät* 'mercy', which is used to refer to the Ethiopian Calendar, is translated to *laytstsa* 'year' and *marotetstsa* 'mercy', respectively, and gives *marotetstsa laytstsa* 'E.C'.

The other initialism *E.P.M.* 'according to European calendar' is formed by clipping E. from *Eropa* 'Europe', P from *paydo* 'number' and M from *mala* 'kind'. Hence, E.P.M. stands for *Eropa Paydo Mala*, which can be translated in to English as 'according to European calendar'.

### f.   Paraphrasing

Paraphrase in linguistics refers to 'an expression of the meaning of a word or phrase using other words or phrases, often in an attempt to make meaning easier to understand (Richards & Schmidt 2002: 384)'. Gamo represents few concepts by paraphrasing or illustrating an object or idea, and two concepts formed with this method are:

| Gamo | English |
|------|---------|
| *mole oyk'etsan ak'iza asa* | fisher |
| *bila doona awa* | philosopher |

We can note from the examples that the word 'fisher' is paraphrased as *mole oyk'etsan ak'iza asa.* This explanation contains four words *mole* 'fish', o*yk'etsan* 'by catching*', ak'iza* 'live' and *asa* 'person'. More literally, *mole oyk'etsan ak'iza asa* means 'a person who lives by fishing'. One can consider here that a new word that exactly states 'fishing' as a profession was not created by either of the other methods. Rather, it seems that a description of the activity a fisher does to make a living was given.

The second paraphrase is *bila doona awa* 'philosopher'. As we can see, three independent words are used to explain the concept in Gamo. The first part, *bila* means 'wisdom', the second *doona* is literally 'mouth', but which in this context means 'language', and the last component *awa* is 'father', which also seems to denote a well-known person. The rationale appears to be that a philosopher is one whose speech is filled with wisdom or one who philosophises or speaks in a very attractive or persuasive language. Therefore, the terminologists paraphrased the concept by considering how a philosopher can be perceived in society.

## 5.   Conclusion

This paper tried to describe term-formation methods in Gamo by collecting data from six textbooks and from interviews. The data show that a variety of techniques were used to form terms that could facilitate the teaching and learning process in the Gamo language. Among the methods, borrowing was widely used, followed by compounding as the second most-used term-formation method. Terms that cover concepts in different areas were also formed by semantic extension and blending, but a very few examples were found to show initialism and paraphrasing techniques.

The initiative taken to form terms for education in Gamo must be commended in that it contributes a lot to modernize the lexis of the language. In addition, there was a great effort to adapt borrowed terms into the linguistic system of the language to make them easily acceptable by the learners. Further terminology research might help to find additional data on term-formation methods in Gamo, but the shortage of new science and technology terms in the language is obvious. A great deal of more work needs to be done to standardise the lexis of Gamo for science and technology education, as shortage of terms may deter students' and teachers' motivation to learn and teach in the language.

## Acknowledgements

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## Online resources

<https://glosbe.com/gmv/am> *Glosbe: Gamo Amharic Dictionary Online*.

# The ensete in Gurage

## Nomenclature, use and meaning extension

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The aim of this article is to investigate the way Gurage people name the diverse ensete (*Ensete ventricosum*) varieties and how that naming categorises varieties of the plant. It also attempts to describe lexical entities associated with ensete and its products, meaning extensions of ensete names and the associated vocabularies in everyday language use, such as in proverbs and insults. The study follows cross-sectional research design and qualitative methodology. Key consultant interviews and interview guides were used as a method and tool, respectively. Eight key consultants from Gumer, Chaha, Inor, Ezha, and Gyeta participated in the study. The findings show that there are about 71 ensete varieties in Gurage. The people classify ensete varieties according to color, size, value, propensity, source of the plant, height, and other variables. The lexical nets related to the plant, its products and byproducts are significantly large and qualify documenting them as part of lexicography. Some ensete variety names are metaphorically used to insult someone, as in $g^j inb^w ə$ 'obese' and in proverbs, as in $g^j inb^w ə$ *ihata birəzin t'onata jimʷəsin* [Gynbuwe its.water heavy.on.it its.power it. seems.to it] 'When the ensete variety Gynbuwe carries much water in its stem, it considers itself as an entity that has much power'. The study can help linguists, anthropologists, and ethno-botanists in studying the interaction between man, language and nature, in this case the ensete plant.

**Keywords**: culture, ensete, Gurage, nomenclature, semantics

## 1. Introduction

### 1.1 Background

Culture is man's intervention in nature. Language is both a part of culture, as the way people use it and interact with one another is culture specific, and is the means by which culture is encoded and transferred.

Gurage refers to south Ethiosemitic speakers living in the Gurage Zone of the Southern Nations and Nationalities Regional State (SNNPRS). It also refers to the place the people live in, and with the addition of the morpheme {-ina} to their language, assuming the form Guragina. The main diet of Gurage comes from the ensete, named in Gurage as *əsət*, plant ('*Ensete ventricosum*', also known in English as Ethiopian banana, Abyssinian banana, or false banana). They have in fact have been described as the people of ensete culture (Shack 1966). The plant is drought-resistant and, hence, contributes largely to food security in the often drought-stricken tropical country, Ethiopia. The plant is grown mostly in the south-west, where Cushitic, Omotic and Semitic speakers live (Blench 2007).

Ensete has been a topic of interest to anthropologists, botanists and anthropological linguists. A few studies have been done from perspective of economic values, including food security in densely populated areas, commercial values and tourism.

The diversity of the plant has been relatively better studied from an ethnobotanical perspective. It was discovered that there are cultivated and wild varieties of ensete (Blench 2007; Smeds 1955), although there is an argument that the wild varieties may not be the same species as the cultivated varieties. This needs more scientific explanation through comparative study of the two varieties. Within the cultivated varieties of the plant, farmers distinguish several types. For instance, a recent work by GCTC, 2004 [2012 E.C.] lists about 60 varieties of ensete varieties in Gurage.

Names are labels given to humans, plants, places and objects. Names are studied for various reasons. Human names have been studied from cultural, semantic and pragmatic perspectives, including metaphorical extensions (Fekede 2014). Plant names have been studied by botanists to classify plants and preserve them. Place names, or toponyms, have also been studied to uncover historical and anthropological facts, such as settlement patterns, mobility, contact situations, etc. Names of objects have been studied by lexicographers and anthropologists to document languages and cultures. The study of nomenclatures of the ensete plant and the objects associated with it will help as an input for lexicography on one hand, and to classify the plant's varieties based on the indigenous knowledge of the plant's users. The fact that ensete is part of Gurage culture has not only contributed to hundreds of lexicons of the language, but also it is the sources to several proverbs and metaphors. This language use, together with the nomenclature of the ensete plant and its culture deserves description and documentation.

## 1.2    Statement of the problem

There are a few descriptive studies on ensete (cf. Section 1.6); however, there are no in-depth studies on ensete plant in Gurage dealing with the nomenclatures, patterns of classification of the plant's varieties and uses of the product and byproduct of the ensete plant.

Only a few farmers, often elders, are able to distinguish the several varieties of the ensete plant. When it comes to knowledge of ensete varieties with medicinal value, very few people even among the elders could identify them. Documenting the nomenclature and the traditional classification of the plants with different associated meanings can help knowledge transfer among individual members of Gurage society. The different uses of the ensete plant have less scientifically been documented. In fact, it has been reported that every part of the plant is used as a product or byproduct. It is food for both people and animals, and the byproducts are used for making mats, bags, sacks and building houses with its rope (Shack 1966; Blench 2007; Hudson 2007).

From a linguistic perspective, despite lists of a few names of the plant, the language use associated with ensete plant – particularly the proverbs and semantic extensions – need attention. There are a number of attributes that show the value difference among the plant's varieties as in: *bək'ət'əra; badədetɨm wəra* (drought Badedet delicious *'during a drought, even the Badedet variety is delicious'*). Again, a variety of ensete, *gʲimbɨwə* which has the ability to contain more water than other varieties has been attributed metaphorically with human qualities, as in: *gʲimbɨwə ɨha-ta b-irəzi-n, t'ona-ta ji-mʷəsɨ-n* (Gimbuwe water-3SGM.POSS when-heavy-3SGMO, power-3SGM.POSS 3SGM-seem-3SGMO *'when the water it contained in its stem makes it heavier, Gimbuwe thinks that it has much power'*). The actual meaning is that someone who is physically huge thinks that he has the strength to defeat a person who is not physically big. The language used as attribute with the products of the plant as well needs attention: *buja*: 'byproduct of *wussa*' is metaphorically assigned to a 'foolish person'; *gagəra* 'white strip on cooked *wussa*' is metaphorically used to mean 'not courageous'; *at'ɨrk'ujə* 'dried and baked *buja*' is used as attribute for 'teeny weeny'. Thus, this study is an attempt to fill this knowledge gap.

## 1.3    Objective

The main objective of this study is to provide a descriptive account of əsət culture in Gurage with particular emphasis on nomenclature, which somehow presupposes a traditional classification of the plant's varieties, use and meaning extension.

Specifically, the study aims to:

– Uncover the existing 'traditional' classifications of the ensete plant, and thereby find out if the classification helps one to differentiate the ensete varieties.
– Find out the different uses of the plant's products and byproducts in the cultures, including: food, medicine and other uses of socio-cultural and economic importance.
– Document ensete-related vocabularies, and investigate semantic extensions and pragmatic uses of the ensete vocabulary in everyday communication.

## 1.4    Significance

The study will help to document the diversity of the plant, knowledge about it and the practice of use. It can aid lexicographers to include ensete vocabularies in dictionaries. The semantic extensions will aid language users in understanding the expressions and the culture, which can help educators in preparing teaching materials. As many parts of the Southern Nations, Nationalities and People's Regional State practice the ensete culture, the findings will help knowledge and skills transfer, as well as comparative study of the plant in the region.

## 1.5    Methodology

The research is cross-sectional description in design and qualitative in methodology. Regarding sampling, two types are used, namely, area and participant sampling. Different agro-ecological areas in Gurage – namely, Gumer, Chaha, Inor, Ezha and Gyeta – were included. Ensete may grow in Dega 'temperate' zones (2300–3200 MSL) only in small scale, Woinadega 'sub-tropical' zones (1500–2300 MSL), and Qolla 'tropical' zones (1100–1500 MSL). The districts selected include all the three ecological areas. The maturation time and the ensete varieties are expected to vary in these climatic zones. It is also good to check if a particular ensete variety has the same status, attribute and value in the different agro-climatic zones. Participants were selected purposefully based on age: elders (40–55), middle-aged (31–40) and youngsters (18–30); and by gender: male and female of the various age ranges. The age difference was included if there is intergenerational transfer of ensete variety names. Gender difference is required because there are clear-cut gender roles regarding labour. For example, men plant the plant and look after it, while women are responsible for providing manure for the plant, and for processing the plant in converting it into food and other byproducts, such as fibre. The main tool used is semi-structured interview guide, with which information on ensete varieties,

uses, and semantic extension was obtained. We also made elicitation of ensete nomenclatures from the key consultants. The data obtained were transcribed phonemically. We used the Chaha variety for transcription because it is understood by many Guragina speakers. We tried to indicate the source dialect when names of ensete varieties totally differed formally and/or semantically from the other dialects. The analysis method is categorisation, thematic description and interpretation of semantic extensions.

## 1.6    Literature review

Shack (1966) in his book *The Gurage: A People of the Ensete Culture* describe the importance of ensete in Gurage. He also provides the various cultures of the people from an anthropological perspective. Alemayehu (1992) discusses ensete culture and its importance in Gurage with much focus on the history of the people. Gebreyesus (1991) has a section on the description of ensete in his book *The Gurage and Their Culture*. GCTC (2004 [2012]) describes the ensete culture in Gurage and lists 60 ensete varieties. Blench (2007) offers a history of ensete in Highland Ethiopia and compares the name ensete in some Cushitic, Omotic, Semitic and Nilo-Saharan languages. Hudson (2007) provides a comparative distribution of 20 ensete vocabularies among five Highland East Cushitic Languages (Burji, Gedeo, Sidama, Kambata and Hadiyya) and three Gurage languages (Chaha, Silte and Soddo). Leslau (1969) offers a text describing the importance of ensete in Gurage. As most of the works had broader perspectives and described ensete only partially, a focus on the classification, the ensete vocabularies documentation and semantic extensions of the lexical items were not well studied. This study attempts to provide a descriptive account of ensete vocabularies and their semantic extensions from the Gurage cultural milieu to fill the existing gap.

## 1.7    Organisation of the chapter

This chapter has three sections consisting of introduction, presentation of the results and summary and discussion. Section 1, the introduction, provides the background to the research site and the people being studied, the problem statement, the objective of the study, significance of the study, the research methodology used and literature review on ensete. Section 2 presents the result of the study in two main parts: Section 2.1 provides the ensete nomenclature and its diversity, and Section 2.2 deals with the semantic extensions of ensete-related expressions. The third section summarises the study and discusses the results.

## 2.    Presentation of results

### 2.1    Nomenclature and diversity

Gurage people speak about 12 dialect clusters of a language called *Guragina*. A recent study (Fekede 2015) shows that some of these dialects are less intelligible to others, but most of them in Sebatbet Gurage are relatively well understood by most Gurage language speakers, mainly by the west Gurage people and Mesqan. The fact that Gurage languages exhibit variation is also seen in the very name of ensete, which is called *əsət* in Chaha, Inor, Endegegn, Geto; *əssət* in Ezha, Muhir, Mesqan, Gogot, and Kistane. Wolane, an east Gurage language variety has *wesse* for ensete, which is borrowed from the Highland East Cushitic languages such as Sidama, Kambata and Hadiyya. Another east Gurage language variety called Zay, which is found in Oromya in the Island of Zway Lake, has *wərqe* for the plant. It seems that Zay borrowed the name from Oromo.

### 2.1.1    *Nomenclature based on development stages*

Six stages of growth have been recorded across Sebatbet Gurage. Due to dialect variations, some stages have different names. For instance, the first seedling stage is named *fʷənfʷə* in Gumer and Geto, but *bʷəfa* in Chaha. The latter name applies only to the leaf of the eucalyptus tree in Gumer and not for the stage of the ensete plant. Similarly, the fourth stage is called *təkʲət* in Gumer and Chaha but *məsrə* in Ezha. This latter term has the meaning 'about to reach' implying that it is about to reach the stage at which it will be transplanted to *hiba* the 'fifth stage of ensete'. Some *məsrə* can directly be transplanted to the ensete stage escaping the fifth, *hiba*, level. The term *əsət* has both a specific meaning, the grown stage of four to five years, of the plant and a generic meaning all the varieties and stages of the plant. Figure 1 shows *fʷənfʷə* / *bʷəfa* 'the first seedling stage of ensete'.

To grow the seedling, farmers uproot ensete plant at its fourth stage, and then cut off the stem at about five centimetres above the corm. After that, they drill out its centre that basically grows tiller, then they fill the drilled part with stone and rids so that a single tiller may not grow. Next, the plant is placed in a hole prepared for it. Within a year, the plant grows a number of seedlings as shown in the Figure 1, and all the set are called *fʷənfʷə*. In some Gurage language varieties, *fʷənfʷə* is also called *bʷəfa*, which has the meaning 'leaf' in other varieties.

The second growth stage of the ensete plant is *sɨmʷa*. At this stage the sets in the *fʷənfʷə* are separated, and are planted in pairs in rows. Usually, they are planted closer to one another and often near the home of farmers so that they may get heat from the smoke that comes out of their huts. The *sɨmʷa* looks like the one shown in the Figure 2. The *sɨmʷa*, which were planted closer to one other and in pairs of rows, are transplanted after a year, after which they are planted far apart and in a

**Figure 1.** fʷənfʷə '*(bwäʃa)* 'seedlings'



**Figure 2.** simʷa

single row, rather than in pair of rows. This third growth stage of the plant is called *jə-mara sɨmʷa* (of-line *sɨmʷa*) 'lined *sɨmʷa*'.

The picture in Figure 3 shows this third stage. After a year, or when the *sɨmʷa* is two years old, it is transplanted into separate holes dug about 50 cm apart. The plants are still in rows like *sɨmʷa*, except for the distance between them. This fourth growth stage of the ensete is named *t'əkʲət* in Chaha and Gumer, but *məsrə* in Ezha; cf. Figure 4.

As shown in Figure 4, *t'əkʲət* is independently planted and the wider space between the plants allows for the plant to grow thicker and branch out several leaves. A year later, the *t'əkʲət* are transplanted into similar rows, but placed farther apart from one another so that they can grow bigger without much competition for nutrients. The plant at this fifth stage is called *hiba*. Some bigger *t'əkʲət* ensete plant may be transplanted to a permanent ensete plant hole, rather than to the *hiba* stage. *Hiba* is transplanted to a permanent ensete hole after a year, and it is now called *əsət* (ensete). Figure 5 shows ensete in its final planting location.

Since each stage of development between transplantation requires a year, ensete becomes a foodstuff only after six years. A six-year-old ensete can be uprooted mainly for its corm. The stem part reaches for the stage of scraping often at seven years. Though the ensete is uprooted at the age six, it may be scraped together with those ensete plants aged seven and above to make *Wussa* 'the main product of ensete', out which varieties of bread types are prepared.



**Figure 3.** jəmara sɨmʷa

**Figure 4.**  t'əkʲət



**Figure 5.**  əsət

### 2.1.2    *Parts of ensete and its products*

Ensete has several parts, including the leaf, branches carrying the leaves, stem, root and corm. There are also other names that are not shown in Figure 6 below, because a few of such parts are invisible at the surface and the others are the results of physical changes, such as some parts of the plant becoming dry. The names of invisible parts and those that are results of change are verbally described.
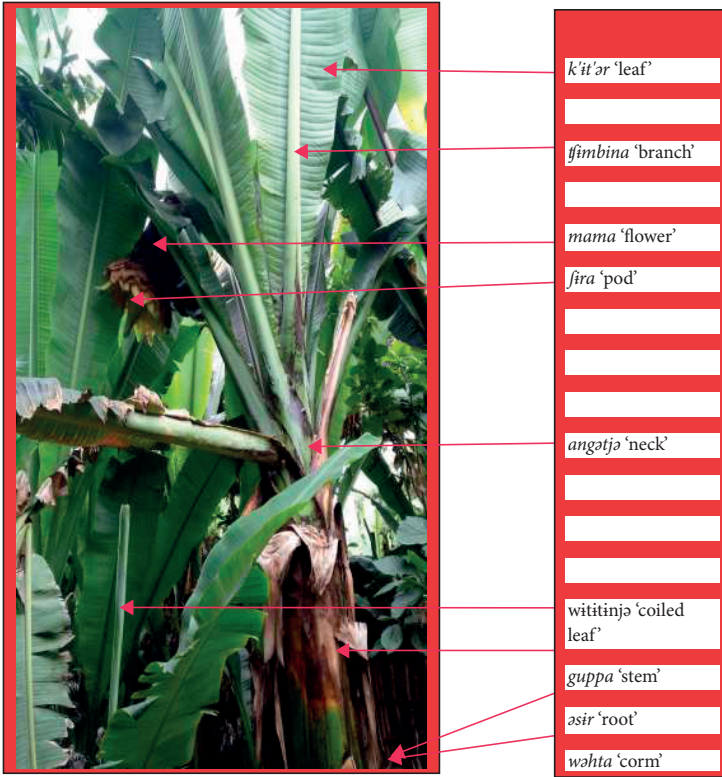


**Figure 6.**  Parts of ensete

Note that *wititinjə* 'coiled leaf' becomes a flower when the ensete becomes mature enough. The flower bears pods that look like bananas. After flowering, the ensete plant becomes dry if it is not uprooted and scraped.

When the ensete plant is uprooted, the *guppa*, which has several layers, is detached layer by layer. Three names of *guppa* are identified, based on the layer levels. The outer-most layers are called *nitʃijə* 'detached stem', the second layer is *nətʃʷə* 'whitish' and the inner layer is *inkʲinkʲina*, which is used as food for animals, since it is not scraped and fermented for human consumption. It is not known why this

part is avoided in making '*wussa*'. It could be chopped, since it is very soft, and fermented together with the other parts of the scraped stems.

When *nɨtʃɨjə* becomes dry, it is called *enwa*; when *tʃɨmbina* gets dry, it is called *wədərə* 'rope'; if the *wədərə* is not cut off and collected for use, it becomes extremely dry and cannot be used for tying or other useful purposes. Extremely dry *wədərə* is called *kʷəkʷəsa*, and can only be burnt and used for cooking food.

Inside the *guppa* and *tʃɨmbina*, there is a soft substance with netlike holes, called *ʒanʒa*. This is often chopped into pieces and added as a component in making *wussa*. In fact, *wussa* is a mixture of scraped *guppa*, chopped *ʒanʒa* and tiny ground *wəhta* 'corm'. Figure 7 shows a corm made ready for grinding (a) and after grinding (b):

**a.**  Wəhta 'corm'



**b.**  Burəma 'ground/chopped corm'



**Figure 7.**  Corm before and after grinding

*Burəma*, chopped *ʒanʒa* and scraped *guppa* are mixed and stored for fermentation. The output of these three is called *t'ikʷət*. When *t'ikʷət* becomes well-fermented after a couple of weeks, it is called *wussa*, which also represents the name for bread made out of the same. A jelly-like liquid that is obtained from *burəma* and scraped *guppa* is called *at'met*, which is used to make porridge. The raw *wussa* is often squeezed with *kəbsasa* 'less finely scraped fibre', then placed on a wooden tool called *zəmbʷərə*, chopped with a big knife called *sənda* and finger-protecting wooden tool called *jɨtʃotʃpʷətʃʼə* 'wood for doing'. The liquid that comes out when the *wussa* is squeezed is called *bʷɨja*, which may be boiled and eaten during the rainy season, or can be dried and baked as a type of bread called *at'ɨrkʷɨjə*.

*Wussa* in its 'bread' form has three names often based on its thickness. The extreme thin type is called *albabʷətʃʼat*; the mid-level is called *aʃaʃat* and the thick variety is *dapʷa*. Raw *wussa* that is squeezed and finely cut may be roasted rather than baked. This roasted *wussa* is called *braprat*.

### 2.1.3    Ensete variety names

In this subsection, we discuss the naming of the diverse ensete varieties in Gurage culture. Most ensete names are based on shape, color, value, size, origin, originator, character and other semantic fields. We attempt to present them with these semantic fields. In cases of overlap in the semantic fields, we provide explanation. The ensete varieties whose semantic category refers only to label the plant are presented in a separate category.

**a.**    *Ensete variety names based on shape or size*

About eleven ensete varieties seem to have been named, based on their shape or size. Table 1 provides such ensete varieties:

**Table 1.**  Ensete names associated with shape & size

| SN | Name | M-by-M gloss | Transliteration |
|----|------|--------------|-----------------|
| 1 | *antʃʼir-o* | short-VOC | 'the short' |
| 2 | *ankʼəfʷ-jə* | spoon-INS | 'spoon like' |
| 3 | *aba-kʼitʼe* | father-leaf | 'leafy' |
| 4 | *tʃʼəhʷ-jət* | spear-like | 'the sharp (slim)' |
| 5 | *fʷir-inzir* | rat-ear | 'small leafy' |
| 6 | *gufən-wə* | grow.fast-of | 'growing fast/become big' |
| 7 | *kʲəkʲərə-t* | stretch-ADV | 'stretchy (spreading leaves)' |
| 8 | *atʃakʼitʼ* | Crack | 'cracking' |
| 9 | *imir-jə* | stone-ADJ | 'tight' |
| 10 | *zəgʷirə-t* | wood.store.on ceiling-ADV | 'growing very high' |
| 11 | *dər-jə/ dəre* | tight-ADJ | 'having tight layers of stem' |

It is worth explaining the morphology and meaning of the words representing ensete varieties in Table 1. The name *antʃʼiro* comes from *antʃʼir* 'short' in Siltʼe language, but *atʃʼir-* with deletion of /n/ in central Gurage languages. The morpheme {-o} – vocative marker- gives it the gloss, 'you short' or characterizing the plant as 'the shot'. In *ankʼəfʷjə*; *ankʼəfʷə* refers to 'spoon'; and the morpheme {-jə} is used as instrument marker, and to derive attributive adjectives. Thus, *ankʼəfʷjə* is an ensete variety having 'spoon shape' stem layers called 'kʼəsra' when the plant is uprooted and the stem layers are detached from one another. The name *abakʼitʼe* is a compound of *aba* 'father' and *kʼitʼe*, which in isolation is spelt *kʼitʼər* 'leaf'; so,

*abak'it'ər* refers to 'ensete variety having wide leaves'. The name *tʃʼəhʷjət* is from *tʃʼəhʷə* 'spear' and morphemes {*-jə-*} and the {*-t*} feminine and focus marker, so *tʃʼəhwjət* characterises the ensete variety as 'slim' and growing vertically, but not becoming much broader. The variety *fʷir-inzir* is named by combining an animal name *fʷir* 'rat' and *inzir* 'ear'; implying a 'rat's ear'. For the Gurage community, a rat's ear is considered the smallest ear animals have. Thus, this attribute is given to the variety of ensete that has small leaves.

The name *gufən-wə* comes from *gufən-* 'big and growing fast', and {*-wə*} is attributive or agentive morpheme with masculine gender as in *ʃəgʷərwə* [wizard-AGE.M 'the he wizard'] as opposed to *ʃəgʷərwət* 'the she wizard'. Therefore, *gufənwə* characterises the ensete variety as the one growing wider (bigger) and fast. The variety *kʲəkʲərət* is derived from the verb *kʲəkʲərə* 'stretch' with an adverbial affix {*-t*}. The name characterises the plant by its shape of leaves, which are stretched sideways rather than vertically. The variety *atʃak'it'* 'crack' is a verb used as a noun. The label shows that the stem of the plant often cracks as it grows higher. The name *imirjə* is from *imir* 'stone' and the morpheme {*-jə*} 'adjectiviser'. The name characterises the corm of the plant as the variety that does not get cooked easily and fast. Note that corm is not only ground to make *wussa* 'bread', but it is also cooked and eaten without being ground. The name *zəgʷirət* is from a noun *zəgʷirə* 'fire wood store near the ceiling at the house' and {*-t*} is adverb morpheme. The name characterises the plant as the one growing very high. The name *dərjə* is from *dərə* 'tightly woven' and the morpheme {*-jə*} is 'adjectiviser'. It is reported by consultants that the stems of the variety are tightly layered, unlike some other varieties.

Of the lists in Table 1, *ank'əfʷjə* is preferred to produce best *wussa* 'bread made of ensete', and *dəre* is well known as a medicine, its corm being cooked and eaten to heal broken bones.

**b.**  *Ensete variety names based on colour*

Some ensete names are based on the colour with which the plant is associated. Table 2 below shows such names:

**Table 2.**  Ensete name based on color

| SN | Name | M-by-M gloss | Transliteration |
|---|---|---|---|
| 12 | *ajwə-ɲə* | Animal salt -like | 'grey' (Inor, Geto dialects) |
| 13 | *bərəs-jə* | mixed colour-ADJ | 'White with red strips' |
| 14 | *biʃa-amərat* | red-amerat | 'red of *amerat*' |
| 15 | *nətʃʼ-wə* | white-ADJ | 'whitish' |
| 16 | *sin-wət* | tooth-ADJ | 'white like a tooth' |
| 17 | *jə-get'-jə* | GEN-decorate-ADJ | 'the decorated' |
| 18 | *b-en-əʒ-ə* | with-eye-see-JUS | 'let it be seen with eyes' |

The name *ajwəɲə* is from *ajwə* in Geto and Inor varieties (in Gumer and Chaha *ewə*) 'animal salt' and {-ɲə}, of course {-nə} in Chaha, an 'adverb marker'. Semantically, it can mean 'salty' or 'looking like the salt's colour. With regard to the label of ensete here, it assumes the second meaning 'looking-like a salt', which actually has a grey ash colour. The name *bərəsjə* is from bərəs 'a mix of red with white' and {-jə} 'adjectiviser'. The stem of the plant is brown, not actually red, with white strips. The variety *biʃaamərat* is combination of *biʃa* 'red' and *amərat* 'a variety of ensete' discussed below under classification with propensity. Thus, *biʃaamərat* is the sub-variety of *amərat* distinguished by its red, actually brown color. The names *nətʃʼwə* (from *nətʃʼə* 'white' and {-wə} adjectiviser), and *sinwət* (from *sin* 'teeth' {-wət} adjectiviser and {-t} feminine marker) characterise 'white colour', yet *sinwət* is whiter than *nətʃʼwə*. The name *jəget'jə* is a combination of {- jə} 'genitive marker' *get'* 'decoration' and {-jə} 'adjectiviser' characterising the plant as a decorated by nature. It is less specific to identify it compared to the other varieties, since decoration has many forms and types. Similarly, *benəʒə* (from {bə-} 'with (INS)', *en* 'eye', *əʒ* 'see' and {-ə} 'jussive affix' all together giving the literal meaning 'let it be seen with eyes' or metaphorically implying 'attractive'.

**c.**   *Ensete names based on significance*

**Table 3.**  Variety name based on significance

| SN | Name | M-by-M gloss | Transliteration |
|----|------|--------------|-----------------|
| 19 | *agade >an-gad-e* | not-hungry-1sGO | 'I am not hungry' |
| 20 | *a-j-tʃor-e* | not-3SG-sick-1sGO | 'I will not get sick' |
| 21 | *dəm-ərtʼ* | blood-clot | 'that clots blood' |
| 22 | *dən-kʷi-nət* | stomach-roast-NOM | 'stomach roast' |
| 23 | *mar-jə* | heal-GEN | 'healer' |

The name *agade*, which is reduced form of *angade*, constitutes the negative morpheme {an-} 'not', *gadə* 'be hungry'[1] giving the meaning 'I am not hungry'. Though all ensete varieties in Gurage are edible, this variety is more significant in that it can reach a stage where its corm can be used faster than other varieties. The people can consume it in short period of time after it was transplanted from *hiba* to the *ensete* stage. The variety *ajtʃore* (from a- 'negative' {-j-} '1SG' tʃor 'sick' {-e} '1sGO')

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1.    The word *gadə* (V) 'one gets hungry' becomes *gadʒə* 'hunger' (n) by palatalizing /d/ to /dʒ/; the same word by changing the last vowel /ə/ to an /a/; hence, *gada* gives it the opposite meaning 'having plenty'.

mean 'I will not be sick', implying that 'as far as I am eating this plant, I will not get sick'. It is unclear why it was named this way, since this variety is not categorized with 'medicinal varieties. The variety named *dənkʷinət* from (*dən* 'stomach', *-kʷi-* 'roast' and {*-nət*}'nominaliser' is metaphorically used to mean 'satisfy the stomach'. The variety *marjə* is from (mar 'heal' and {*-jə*} 'agent marker'), hence, having the meaning 'that heals'.

**d.**    *Ensete names based on source*

**Table 4.**  Variety based on source

| SN | Name | M-by-M gloss | Transliteration |
|----|------|--------------|-----------------|
| 24 | *bazər-jə* | guest-ADJ | 'the guest' |
| 25 | *bʷatʃʼə< bə-awətʃʼə* | after-out | 'after having been lost' |
| 26 | *dəre-wət'-jə* | tight.strips-out-of | 'when *dere*[2] has been lost' |
| 27 | *jədərma-kʲinkʲjə* | stallion-pod | 'pod of stallion' |
| 28 | *jəʃira- kʲinkʲjə* | ensete.flower-pod | 'pod of ensete flower' |
| 29 | *jawi-arə* | wild.animal-shit | 'shit of wild animals' |

The ensete varieties here get their names from where they originated. For instance, *bazərjə* (from *bazəra* 'guest' and {*-jə*} 'adjectiviser') shows that the plant is not 'indigenous' to the area, and it came from somewhere else as a guest. The variety *bəawətʃʼə* (from {*bə-*}'after' *awətʃʼə* 'get lost'), implies that the variety had been lost, and was re-gained, or this variety has replaced the lost variety. Similarly, *dərewət'jə* (from *dəre* 'one variety of ensete' *wət'a* 'out' and {*-jə*} 'after' represents a variety name that has been found after the variety named *dəre* had been lost. The other three *jədərmakʲinkʲjə* (from {*jə-*} 'of', dərma 'stallion' and *kʲinkʲjə* 'pod'), *jəʃira- kʲinkʲjə* (from {*jə-*} 'of' *ʃira* 'flower of ensete', *kʲinkʲjə* 'pod') and *jawiarə* (from {*jə-* 'of', *awi* 'wild animal' and *arə* 'faeces') show the way the plant varieties reproduced or came into being. Unlike the accustomed ways farmers grow shoots of the ensete plant, these ensete varieties grew naturally from the faeces of stallions (domestic animal), from the faeces of an unidentified wild animals and from the pods of ensete flowers.

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2.    Dəre is a medicinal variety of ensete (see Example 4).

**e.    *Ensete names based on Propensity***

**Table 5.**  Varieties based on propensity

| SN | Name | M-by-M gloss | Transliteration |
|----|------|--------------|-----------------|
| 30 | *agʷe-warə* | thrifty- gone | 'no more a stingy/offers much' product' |
| 31 | *agʷərgʷir< agʷəkʷir* | growl | 'grow aggressively' |
| 32 | *amər-at* | conduct-one | 'good/suitable' |
| 33 | *bʷəsər-ə< bʷisir* | ripe-of | 'of ripen' |
| 34 | *e-hir-e* | NEG-forbid-1SGO | 'let it not forbid me' |
| 35 | *gʷar-jə* | competition-of | 'of competitive' |
| 36 | *k'antʃ'-wə* | fibre-ADJ | 'having fibre' |
| 37 | *e-tkʷakʷəf* | not-offer | 'mean to supply/give' |
| 38 | *ʃərt'-jə* | conspire-of | 'conspiring' |
| 39 | *t'ər-jə* | hunger- of | 'for extreme hunger' |
| 40 | *jə-gətir* | 3SGM-mercy | 'let it not harm' |
| 41 | *ji-rəg-jə* | 3SGM-coagulate-of | 'of coagulating' |
| 42 | *kʷaʃkʷaʃ-jə* | kuash (idiophone)-of | 'getting dry' |

The varieties, *agʷewarə* 'no more a thrifty', *ehire* 'let it not forbid me'; *etkʷakʷəf* 'mean' and, *ʃərt'jə* 'conspiring' got their names based on the product the plants offer. The *agʷewarə* variety offers much product, thus, people are no longer thrifty since they have much to offer. Similarly, *ehire* is a variety that is positively valued with regard to the product it provides, 'one it does not forbid'. The other two *etkʷakʷəf* and *ʃərt'jə* are considered 'less productive', hence, considered 'mean' and 'conspiring', respectively.

The variety *agʷərgʷir < agʷəkʷir* 'growl' has the property of growing aggressively. Similarly, *gʷarjə* 'competitive' grows faster. The variety *kʷaʃkʷaʃ-jə* 'shouting' characterises the variety as having leaves that often get dry. The varieties *amərat* 'good'/'suitable', *bʷəsərə* 'ripping', *jəgətir* 'let it not harm', *t'ərjə* 'for an extreme hunger, *jirəgjə* 'that coagulates', and *k'antʃ'wə* 'having fibre' are named after the quality of the food, *wussa*, obtained out of them.

**f.    *Ensete names based on dedication to or use for***

**Table 6.**  Variety based on use for

| SN | Name | M-by-M gloss | Transliteration |
|----|------|--------------|-----------------|
| 43 | *fərəz-jə* | horse-of | 'of the horse' |
| 44 | *wənad-jə* | mare-of | 'of the mare' |
| 45 | *mujət-jə* | muyet-of | 'of Muyet' |
| 46 | *kʲəs-wə* | priest-of | 'of the priest' |
| 47 | *miʃra-t* | bride-F | 'of the bride' |

Many key consultants could not figure out why *fərəzjə* 'of the horse' and *wənadjə* 'of the mare' were labelled to the varieties. Though ensete serves as food for animals, only cows – not horses or mares – are fed with it. The other three *mujətjə, kʲəswə, miʃrat* have cultural meanings. Mujət refers to 'spirit' often possessed by women, and a few men. It has a power and can cause ailment if angered. Those people who have possessed this spirit receive annual gifts including ensete, thus, *mujətjə* is an ensete variety whose purpose is identified as gift. Similarly, *kʲəswə* is a variety meant for *kʲəs* 'priest'. Priests in the culture used to receive such gifts. In Gurage culture, a newly married bride is promised a gift of cows, ensete and other property, the promise ceremony being called *misagʲə*. Thus, *miʃrat* is the ensete variety meant for *miʃra* 'bride' though it is not common to use the name of this specific variety during *misagʲə* ceremony.

A few ensete varieties given below are named after human and material names.

| | | |
|---|---|---|
| 48 | *ismajl* | 'Ousmail' |
| 49 | *marde* | 'youngsters' |
| 50 | *zəmbile* | from Amharic *zəmbil* 'bag' |

The ensete variety *ismajl* is named after a person's name, *Ousmail* who is reported to have brought the ensete variety to the area. Another ensete variety name *marde* comes from a collective noun 'youngster'. The reason behind naming it after the 'youngsters' is not clear. The ensete name *zəmbil* comes from a 'type of bag made of the fibre of ensete'. Probably, this ensete variety is good for 'fibre' production.

The names of quite a large number of ensete varieties could not be glossed by certain attributes, and are just labels for each ensete variety. The names below are examples:

**Table 7.** Variety without attributive meanings

| SN | Name | Remark |
|---|---|---|
| 1 | *anzana* | |
| 2 | *Astara* | Medicinal plant |
| 3 | *badədet* | Its corm is poor in quality |
| 4 | *egəndijə* | |
| 5 | *gəzod* | |
| 6 | *gʲinbiwə* | It stores comparatively much water in its stem |
| 7 | *gindʒiwə* | |
| 8 | *gumbura* | |
| 9 | *helod* | |
| 10 | *hone* | |
| 11 | *iniba* | |

**Table 7.** (*continued*)

| SN | Name | Remark |
|----|------|--------|
| 12 | *kəmbat* | |
| 13 | *k'ibnar* | Good for its good quality '*wussa*' |
| 14 | *lemat* | |
| 15 | *ore(jət)* | |
| 16 | *Sapara* | |
| 17 | *təgadəd* | Its corm is preferred, good for porridge |
| 18 | *wek'a* | |
| 19 | *wəʃmədʒja* | |
| 20 | *zɨgezwə* | |
| 21 | *zober* | Is medicinal ensete variety |

The variety *k'ibnar* seems a combination of *k'ib* 'butter' and *nar* the 'copula is' in Silte language. So, *k'ibnar* may be attributive, 'it is butter' implying having a good quality.

### 2.1.4    *Names related to ensete processing tools*
There are several tools directly associated with the ensete plant. They are used to cut its leaves and stem, to uproot the corm, to split the layers of stem, scrape the stem, chop down the corm, cut the *wussa* into fine flour, which is the main product of ensete, etc. Some of these tools are provided as follows:

| | |
|---|---|
| *təbətʃə* | 'a big knife for uprooting ensete' |
| *murəja* | (probably from mur- 'cut' in Cushitic and -ja 'instrument marker') 'a knife to cut off leaves of ensete' |
| *jəzəmbʷərə sənda* | (from jə-*zəmbʷərə* 'wooden tool on which *wussa* is placed for cutting', and *sənda* 'knife') 'a big knife to chop *wussa* with' |
| *wək'ara* | 'a small knife to split *kəsra/guppa* stem with' |
| *zəmbʷərə* | 'a circular wooden tool on which '*wussa*' is placed and chopped' |
| *jɨtʃotʃpʷə ətʃə* | (from jɨ- 3sɢ, tʃot- 'do', *pʷə* 'instrument marker', and *ətʃə* 'wood') 'wooden tool used to protect fingers from being cut when chopping *wussa*' |
| *sɨbisa* | 'bamboo made tool used for ensete stem scraping' |
| *ʒɨbangʲɨba* | 'wooden made tool with gears used to chop corm into small pieces' |
| *watar* | 'lumber like wood on which stem of ensete is placed and scraped' |
| *wərəra* | 'hole used for *wussa* storage' |
| *gərə* | 'clay pot used for storing *buja*' |

The first four, *təbətʃ, murəja, jəzəmbʷərə sənda*, and *wək'ara* are types of knifes. They differ in size, thickness, and shape. The *təbətʃ* is tall and thick knife with wooden handle which is used to uproot ensete by cutting the plants roots. The *murəja*, and *jəzəmbʷərə sənda* are both double bladed tall knives with wooden handle. The former is relatively shorter and thinner than the latter. The *wək'araI* is small sized

with one edge blade used for splitting the stem of ensete layers to make ready for scraping. The other four tools; namely, *jit͡ʃot͡ʃpʷə ət͡ʃʼə, sɨbisa, ʒibangʲiba*, and *water* are wooden made. The first is small a half-moon shaped wooden finger protecting tool while cutting the raw wussa into pieces. The second tool, *sɨbisa* is a half splinted one node bamboo used for scraping layers of ensete stem. The *ʒibangʲiba* shown in Figure 8 below is made of wood with three different shapes; it is flat with two blades like edges at the top, round in the middle and with gears at the bottom. The top knife looking part helps to hit and mix a scraped stem and ground corm; the middle part is used to handle the tool and the gear is used to grind the corm into smaller pieces. *Watar* is wooden made tool on which layers of ensete stems are placed and against which the stem is scraped with *sɨbisa*.
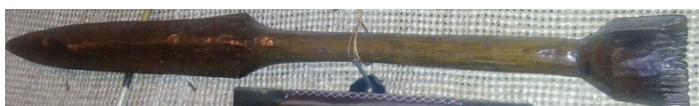


**Figure 8.** Zhibangjba

*Wərəra* is a hole of different width and height dug often inside the ensete yard to store a processed raw *wussa*. It is a place of fermentation as well as a store house. The hole is carefully bedded with ensete dry stems called *enwa*, and then with untorn fresh ensete leaves called *bəra-k'itər*.

### 2.1.5    Action verbs related to ensete processing

There are several action verbs that are used mainly in relation to ensete plant processing, some of which can, in fact, be used in other contexts. The verbs listed below are the most common action verbs associated with ensete processing.

| | | |
|---|---|---|
| *t'ənfot* | (from *t'ənf* 'cut off at distance' and -ot 'GER') | 'cutting off the leaves of ensete' |
| *nikrot* | (from *nikr-* 'uproot' and -ot 'GER') | 'uprooting' |
| *k'əsra nifk'ot* | (from *k'əsra* 'ensete stem' *nifk* ' 'detach', and -ot 'GER') | 'detaching the layers of *k'əsra* 'ensete stem' |
| *mədər t'ət'ot* | (from *mədər* 'place', *t͡ʃət͡ʃ* 'lay' and -ot 'GER') | 'bedding a place with ensete leaves to store *burəma* 'scraped ensete' |
| *fak'ot* | (from *fak'* 'scrape' and -ot 'GER') | 'scraping ensete stem' |
| *dəbsot* | (from *dəbʃ* 'chop' and -ot 'GER') | 'chopping a corm into pieces' |
| *k'irak'irot* | (from *k'irak'ir* 'mix' and -ot 'GER') | 'mixing *burəma* ' |
| *səfrot* | (from *səfr* 'cover' and -ot 'GER' | 'covering *burəma*' |
| *əsəsot* | (from *əʃəʃ* 'mash' and -ot 'GER') | 'mashing the *burəma*' |
| *t'ik'rot* | (*t'ik'r* 'hide' and -ot 'GER') | 'putting *t'ik'ʷət* 'fresh *wussa* in a hole' |

The action verbs *nɨkrot* 'uprooting', *k'ɨrak'ɨrot* 'mixing' *səfrot* 'covering' and *əsəsot* 'mashing' can be used in other general contexts in addition to their use with ensete. The other action verbs provided here above are *t'ənfot, k'əsra-nɨfk'ot, mədər t'ət'ot, fak'ot, dəbsot* and *t'ɨk'rot* are only used in the context of ensete plant processing. The verb *mədər t'ət'ot* seems an extension of making a bed, since it can also be used to make bed ready. The action verb in non-specialised and literal use can refer to 'hide' rather than store in the ensete product context.

The following nouns are worth noting as they only occur in context with ensete:

*wussatʃa*      'turn taking for scraping of ensete'
*fakʲət*      'woman whose job is ensete scraping'
*wajwəto*      'women song sung during *wussatʃa* 'ensete scraping'

The first word *wussatʃa* is derived from *wussa* 'bread' and {-atʃa}. This bound morpheme is not common and productive to derive other nouns in the language. The noun *fakʲət* is derived from the verb fak'- 'scrape', an agent nominal marker: {-i} which is changed into glide and nested palatalising k to kʲ and feminine marker {-ət}. The derivation of *wajwəto* is not clear: *waj-* can be used as onomatopoeia in shouting, and {-wət} is nominaliser with feminine gender marker as in *ʃəgʷər-wə-t* [wizard-NOM-F 'she-wizard']. The vowel {-o} is a vocative marker as in *miʃt-o* [woman-VOC 'you! woman'].

### 2.1.6    *Products of ensete*

There are several products and byproducts of the ensete plant. The main direct products are *at'met'* 'porridge making powder of ensete product' *wussa* 'bread making part of ensete product' and *wehta* 'corm of ensete'. Many of the others are products of these main products or just byproducts of the plant. Some of such products and byproducts are presented below:

*at'met'*      'liquid of scraped ensete which is stored and when cools down becomes solid.
              It is used for porridge making'
*t'ɨkʷət*      'stored *wussa* which is not yet fully fermented'
*wussa*      'fermented product of the scraped ensete' and 'the bread of it'
*t'ɨkurəja*      (from *təkərə* 'keep'/'hide') '*wussa* stored for several years in a hole'

*Wussa* is divided into two groups based on quality: *mətʃʲi* 'best quality' and *tɨkʷɨrjə* (from *tɨkʷɨr* 'black' and {-jə} 'adjectiviser', hence, 'blackish'), which is poor quality.

A baked *wussa* is divided into three groups based on its thickness: *albʷabʷətʃʼat* 'too tiny' *aʃaʃat* 'tiny' and *dapʷa* 'thick'. Another name for the thick variety is *kɨmʷis* which, however, differs in its content because other ingredients, such as flour or barley are added to it.

Foods made of *wussa* other than the breads mentioned above include:

| | |
|---|---|
| *bɨrapɨrat* | 'dried and chopped *wussa* is finely ground with hand and roasted with oven' |
| *ozat* | 'porridge' |
| *buja* | 'squeezed out liquid of *wussa*' |
| *atɨrkʷɨjə (from a-'Causative' t'ərək' 'dry' and jə 'ADJ')* | 'squeezed out liquid of *wussa* is dried and then baked' |
| *sostaziz* | (from *sost* 'three' and *aziz* *'a bound morpheme probably referring to a mix')* 'mix of roasted *wussa* with cheese and butter' |
| *k'əmbʷənə* | 'mix of *wussa* and cabbage cooked in a pot', often food only for women. |

By products of ensete are *k'antʃ'a* 'fibre', *kəbsasa* 'fibre which is not well scraped', and *wədərə* 'rope'. *Wədərə* in its unwoven form is used to tie different things, including mowed grass, to make fences, to build houses with instead of nails, and so on. In woven form, it is used to tie animals, to tie loads on a horse's or mule's back, etc. The woven rope can be made directly from the unprocessed form of rope called *j-əsət wədərə* (of ensete rope/rope of ensete) or from fibre of ensete termed *jə-k'antʃ'a wədərə* (of fibre rope 'rope made of fibre')

There are several products made of *k'antʃ'a* 'fibre' and *wədərə* 'rope'. These include *ɨf ʷət* 'cover for kettle'; *tʃefat* 'round substance for putting a kettle on'; *ʤipə* 'mat' with several brands, and meant for different sections of a house, including *'jək'akət ʤipə* 'mat for sleeping area', *jofəntʃe ʤipə* 'mat of entrance', *jətʃbaj ʤipə* 'mat for an area near the middle pole of a house called *ətʃba*" There are also other products of rope used as mattress, such as *kapʷat* 'thick mattress' and *k'ətʃ'k'ətʃ'ə* 'thinner mattress which is laid over the *kapʷat'*. Wussa is made into flat and thin shape for baking with *jɨtəfʷəpʷə*, literally 'slapper' but actually 'flattening into thin and circular shape', which is made of fibre and rope. Another very important tool made of fibre and rope is *jɨwədərə*, which is a blend of *jɨwərəpʷə* 'eating for' and *wədərə* 'rope' by dropping *-rəpʷə from the former and wə- from the latter*, and used for dining from, like a plate.

## 2.2    Semantic extension

The ensete vocabularies discussed above can be used metaphorically to **insult** someone. We here distinguish insult from cursing contextually. Insult refers to assigning to someone a negative attribute, which could be behavioural or an act. On the other hand, cursing refers to a wish that something evil or bad may happen to somebody. For example, *en t'ərək'* (eye dry 'who never obeys anyone') is an insult, but *en-aha afər* (eye-2sɢᴍ soil 'literally let your eyes be soil' and metaphorically referring to

'die') is a curse. Thus, I consider that all the ensete-related vocabularies are used as insults and not as curses:

| Lexical item | Actual meaning | Its metaphorical use (insult) |
|---|---|---|
| *t'ikʷət* | 'fresh unbaked and unfermented *wussa*' | 'powerless' |
| *buja* | 'left over liquid of squeezed *wussa*' | 'lazy' |
| *gagəra* | 'White strip on improperly baked *wussa*' | 'fearful' |
| *jə-t'at'ər-jə* | '(of-left.over.of wussa-ADJ 'left over of *wussa* on a hand') | 'untidy'/'unclean' |
| *t'imʷjət* | 'a small roll of *wussa* to be squeezed' | 'weak'/'small' |
| *əgir-tʃeffat* | (leg-kettle 'seat of kettle made of rope') | 'amorphous leg' |
| *k'əsra* | 'layers of ensete stem' | 'unmotivated, idle' |
| *at'irkʷijə* | 'bread made of dried *buja*' (liquid of wussa) | 'teeny-weeny' |
| *gʲinbʷiwə* | 'ensete variety that carries much water' | 'obese' |
| *kəbsasa* | 'not finely scraped fibre' | 'one who is grudge'/'revengeful' |
| *ʒanʒa* | 'net like soft substance inside leaves of ensete' | 'forceless'/'powerless' |
| *k'əmbʷənə* | 'food made of *wussa* and cabbage' | 'useless' |
| *fakʲjət* | 'woman who scrapes ensete stem' | 'scraper'/'low status worker' |

Many of the ensete vocabularies are also used as ***a proverb*** in a several socio-cultural contexts. We have provided some examples elicited from key consultants:

(1)  *ema        wədərə  hərə-m*
     route/trio rope     happen-PST
     'The trip has become rope'

Actually, it means 'the distance to a destination is far, hence, the travelers could not reach on time'. The word *wədərə* 'rope' in this context implies 'length'. A similar expression with a slightly different meaning is given in (2):

(2)  *nɨbrət    **wədərə**  hərə-m*
     existence rope       happen-PST

'Existence or life has become rope' with the implied pragmatic meaning 'life has become bad or boring'. Thus, the meaning of *wədərə* here is 'boring'.
    Two proverbs given in (3) and (4) are based on the names of ensete varieties:

(3)  *bə-k'ət'ərə  **badədet**-im    wərə*
     In-drought  Badedet-even  good
     'During a drought, even the corm of the *Badedet* ensete variety is good'

Actually, *badedet* is not a variety preferred for its corm. It is only good for scraping to make *wussa* 'bread'. Thus, during periods of drought, people cook and eat the corm of this variety. The proverb is used when one is at a disadvantage and has to compromise.

(4)  *gʲimbʷiwə*  *iha-ta*       *b-irəzi-n*        *tʼona-ta*       *ji-mʷəsi-n*
     Gymbuwe   water-3sGM  When-heavy-3sGO  power-3sGM  3sG-seem-3sGO
     'When the water in the stem of Gymbuwe gets heavier to it, the plant thinks it
     has got much power'.

The proverb is used to downgrade someone who thinks he is superior or stronger
than others. The proverb is used to nullify one's boasting by showing him the fact
that what he claims is nothing more than the water in the stem of the ensete plant
that flows out or soon becomes dry.

   Different stages of growth of the ensete plant are also used to express success
through patience, as in (5):

(5)  *fənəhʷim bə-səb*   *ji*          *səre,* *fʷənfʷə antʃʼim*    *ʃira ji-wəre*
     be.patient on-person 3sG-reach, shoot cut     flower(pod) 3sG- eaten
     'By being patient one becomes rich like other rich ones; he reproduces ensete
     shoots and eats the products of ensete plant that reached the stage of flowering'.

The proverb is used to encourage one to endure problems and to win over poverty
through patience and hard work.

   The next three proverbs are related to tools for processing and storing *wussa*
from ensete. They have relatively similar meanings, that is, expressing laziness, as
shown:

(6)  *məhəna e-tʃən*      *barə-tʃi-m*      **watar-ehʲta** *səpərə-tʃi-m*
     Mehena NEG=come say-3sGF-CONV lumber-her break-3sGF-PST
     'Thinking that *Mehena* will not come again, she burnt her lumber of scraping'

As discussed above, *watar* is lumber used to put on *kʼəsra* 'stem of ensete' to scrape
it. A lazy or a careless woman burns her lumber in summer when ensete is not
scraped, and she looks for another (often borrowing for her neighbours) during
*məhəna*, period or season when ensete is scraped.

(7)  *ji-tʃən*       *e-məsin-a,*        **b-orərə-hʲta** *tara*
     3sG-come NEG-seem-3sGF In-hole-her  defecate
     'Not thinking that the time for scraping and storing ensete comes, she defecates
     in the hole meant for storing *wussa*'.

The proverbs, (6) and (7) are actually used to warn people not to be careless, and
not to be less helpful to others, as they may in turn need help.

(8)  *b-awʃa*         **wussatʃa** *kʼimar*      *ji-kʼəmʷir-pʷə*
     In-lazy.woman ensete. scraping. time  louse 3sG-kill-INS
     'During the lazy woman's ensete scraping days (time), the workers kill their lice'

The implication is that a lazy woman cannot manage time and the workers who are scraping ensete for her. Because of that, the workers just sit down and kill the lice found on their hair or clothes. Practically speaking, people clean their hair or rid themselves of lice only when they are idle or not at work. Thus, the proverb is used to express the fact that one should not be foolish, lest others take advantage of him.

In Gurage culture, when an important person dies, there is a song called *wərko* sung to the dead man or woman. The next two proverbs use ensete vocabulary as a simile to express the behaviour and colour of a deceased woman:

(9)  *ameraɦʲ **bəra**, jə-bʃa danəra*
conduct  soft.   leaf,   GEN-red skin(hid)
'your conduct is like a soft leaf of an ensete, and like a red hide of an animal'

*Bera* is thornless and soft ensete leaf. *Danera* is tanned soft hide used for sleeping with like a sheet of cloth. These two items are used as similes to express the good conduct of the deceased woman.

(10)  *dəmər-aɦʲ j-odʒi   jə-**k'antʃʼɨwə**   mətʃʼi*
color -3SG  3SG-tell  GEN-Kanchiwe good.wussa
'Let it be told about your color, it looks like the wussa made of the Kanchiwe ensete variety'

The *wussa* from *k'antʃʼɨwə* ensete variety is white in colour and the best quality. The people used it to magnify how beautiful the deceased woman was.

## 3.   Summary and discussion

Our aim in this article was to provide a descriptive account of *əsət* culture with due attention to the nomenclature of ensete varieties, the traditional classification of the plant and its uses in Gurage culture. We used cross-sectional design and qualitative methodology to obtain and analyse our data. Though we did not statistically quantify the degree of knowledge of ensete varieties among the people of the sampled areas based on age, gender and ecology, we found from the small samples of people we had interviewed that youngsters have relatively less knowledge of the ensete varieties than elders. Elder women had better knowledge of ensete varieties compared to young boys and girls, as well as some adult men. The ensete varieties we have provided were distributed across the sample areas without restriction to the ecological zones, however, some medicinal ensete varieties, such as *astara* were found in limited areas, as in Ezha. We have also seen that some farmers plant fewer ensete varieties than others. People from lowland areas, such as Chaha, Ezha and Inor plant much more diversified ensete varieties than the people in highland areas, such

as Gumer and some parts of Geto. This is because some highlanders, such as Gumer and Geto also produce cereal and potatoes to supplement their diet. Lowlanders, on the other hand, are highly dependent on ensete as a drought-resistant crop. This must have contributed to the extensive farming and diversity of ensete in lowland Gurage land as compared to the highland areas.

It is important to mention that ensete can be harvested at any time of the year. However, it is rarely uprooted and scraped during the summer, which is a rainy season. This is because the rain makes the scraping process difficult, as it is done in an open space in the ensete garden where there is no protection from the rain, and also because people believe that products such as *wusa* and *at'met'* lack quality when processed in rainy seasons.

It was learnt that ensete's medicinal values generally lie in the corm. Corms of *Astara* and *gʷarjə* are eaten to soften and mend broken bones, respectively. The former is eaten before mending a broken bone by traditional healers and the later after the bone has been fixed, to strengthen it. Other ensete varieties are also selected for the higher quality of their corm or *wusa*. The variety selection for different purposes requires more investigation and is not within the scope of this article.

Generally, ensete, which is highly diversified, is a huge part of the Gurage culture. About 60 varieties were identified by GCTC (2012: 75–76), of which two *nətfwə* and *wəʃmədʑa* are repeated twice. This makes the list 58. Haile (2009: 16), on the other hand, identified only 17 varieties for Chaha. In our finding, 71 varieties were listed, of which 24 varieties, namely, *antʃʼiro, abak'it'e, fʷirinzir, gufənwə, zəgʷirət, jəget'jə, ajtʃore, jədərmakʲinkʲjə, jawiarə, agʷe-warə, kʷaʃkʷaʃjə, marde, zəmbil*e, *anzana, gəzod, gindʑiwə, helod, hone, lemat, wek'a, zigezwə, wənadjə, mujətjə, miʃrat* and *zober*[3] were not found in GCTC (2012) and Haile (2009). To the contrary, four varieties identified by Haile (2009), namely, *girinde, charqemar, Yesohdemyet* and *yet'efye* were not found in our findings. Similarly, 10 varieties, namely, *tikureset, yekechirye, yefugagʷarye, bishwet, yedbirye, gembena-badedet, yezara-badedet, mintigir, sero* and *kabsaswe*, which were identified in GCTC 2012, were not found in our study.

The fact that there is a discrepancy in the number of ensete varieties identified by different studies implies that there is a need for more study in clearly soliciting the ensete varieties in Gurage. The studies should include whether there are different names for the same variety in different areas of Gurage. Naming according to dialect variations should also be negotiated. We found that *zobr* in Chaha is *zobero* in Gumer.

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**3.**  Zober seems to have been identified as sobil in GCTC (2004 [2012]: 76), and hence may not be considered different.

Ensete has different growth stages distinguished by various labels. The plant also has several uses in Gurage culture. It is used as a foodstuff for people and animals. Its byproducts, such as its rope and fibre, are used in building houses and fences, and to make different household furniture including mattresses, mats of different types, bags and many others things. The ensete vocabularies have enriched the Gurage language and are used, in addition to labelling the plant varieties, in insults and in proverbs expressing wisdom, laziness, goodness and beauty. These rich vocabularies will be lemmatised and included in the Gurage dictionary, which is in preparation by the author. The fact that ensete vocabularies are linked to all aspects of Gurage life: food, utensils and general language use confirms the characterisation of Gurage as 'a people of the ensete culture' by Shack (1966) and the attribution of ensete as 'the soul of the Gurage' by Leslau's (1969).

## Acknowledgments

## Abbreviations

Abbreviations used in this article are:

| | |
|---|---|
| ADJ | adjective |
| ADV | adverb |
| AGE | agent |
| CONV | con verb |
| F | feminine |
| GCTC | Gurage Culture Tourism and Communication |
| GEN | Genitive |
| GER | gerundive |
| INS | instrument |
| JUS | jussive |

| | |
|---|---|
| M | morpheme, masculine |
| MSL | meters at sea level |
| NEG | negation |
| NOM | nominative |
| O | object |
| PST | past tense |
| SG | singular |
| SNNPRS | Southern Nations and Nationalities Regional State |
| VOC | vocative. |

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# Sociolinguistics and culture

# Language contact and its effects on language use of the Gurage varieties of Muher

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Social and linguistic contact between speakers of diverse Gurage varieties, as
well as the influence of the surrounding Cushitic languages, has contributed
to the establishment of widespread bi- or multilingualism. However, the ac-
tual extent and effects of language contact in the Gurage Zone are not clearly
known. Therefore, the main objective of this research is to investigate language
contact and its effects on language use of Muher. The Muher community lives
in the north-western part of the Gurage Zonal administration of the Southern
Nations, Nationalities, and Peoples' Regional State. Muher speakers are bilin-
gual in Amharic, the official working language of the country, and Ezha, one of
neighboring languages the Gurage varieties. A mixed research method is used
for data collection. The findings show that Muher is often used in the home and
within the community, and is highly influenced by the dominant official working
language of the country, Amharic, and the neighboring language, Ezha. It is very
hard to find monolingual speakers of Muher. Amharic is used in all official set-
tings in Muher, such as in schools, in court, in health centre's and in administra-
tion. Muher children are bilingual with Amharic prior to starting school. Elders
tend to use their mother tongues, while young people mix their mother tongue
with the dominant language, or tend to speak Amharic. Generational transfor-
mation of Muher is decreasing in urban areas. In Wolkite and Hawariyat, most
of the children have Amharic as their L1.

**Keywords**: language contact, language endangerment, language shift, language
use, speech accommodation theory

## 1. Introduction

The main objective of this research is to investigate language contact and its effects
on language use of Muher, a Gurage language of the Semitic language family. Muher
has approximately 90,000 speakers. Muher speakers are bilingual in Amharic, the

official working language of Ethiopia, Ezha, one of neighboring languages and also other Gurage varieties. I will investigate where and with whom they speak Muher, and what effects the language contact may have on their language.

The paper is structured as follows: The introduction presents background data about Gurage classifications and Muher. Section 2 discusses theoretical frameworks, Section 3 shows the research methodology, Section 4 discusses the language knowledge and language use of participants, Section 5 analyses the data and Section 6 presents summary and conclusion.

## 1.1   Background

Ethiopia is a country of diverse cultures and languages. Among the four language families in Africa, two of them, the Afro-Asiatic and Nilo-Saharan families are found in Ethiopia. Three sub-families from Afro-Asiatic – the Cushitic, Omotic, and Semitic are spoken in Ethiopia, and among the Semitic languages, Amharic, Tigrinya, Harari, Silt'e, Argobba and Gurage are spoken. Gurage is the most complex sub-variety in Ethio- Semitics, and its internal classification is still not well settled. Hudson (1996: 1) captures this idea, stating:

> The Gurage people and their languages presented unusual problems for research. There are several languages, perhaps as many as seven or eight, but often the individuality of these is disguised by a continuum of dialect differences, and the differences of culture as well as language, are surprisingly sustained within a relatively small area, and with much interaction.

Meyer (2011) concluded that the genetic classification of Gurage languages done so far is simply an approximation and quite nascent, so that further investigation and reclassification are needed.

Scholars who are engaged in Ethio-Semitic studies agree with three major divisions within Gurage: Northern, Eastern and Western. However, there are differences in the sub-divisions, as shown in Table 1 below.

As indicated in the Table 1, the place of Muher in the classification of the different Gurage varieties is also debated by various scholars. Hetzron's (1972) classification is preferred for this study, considering that Muher and Ezha are different language varieties within Gurage languages.

The social and linguistic contacts between speakers of diverse Gurage varieties, as well as the influence of the surrounding Cushitic languages (cf. Ullendorff 1955: 4; Hetzron 1972: 122; Crass & Meyer 2011: 1266), might have contributed to the establishment of dialects and bi- or multilingualism. However, the actual extent and the effects of language contact on individual language structures and their use in the Gurage Zone is not clearly known. Leslau (1952: 63–81; 1959: 1–7) and

**Table 1.**  Classification of Gurage varieties

| Research work | Classification | Criteria | Conclusion |
| --- | --- | --- | --- |
| Leslau 1992[1965], 1969 | 1. Eastern Gurage: Silt'e, Wolane, Zay (Silt'e is now declared as a different linguistic society from Gurage by referendum. <br> 2. Central Western Gurage: Chaha, Geyta, Ezha, Enemor and Endegagn <br> 3. Western Gurage: Muher, Mesqan and Goggot (recommend for further study) <br> 4. Northern Gurage: Kistane | Vocabulary and morphology | There was a proto-Gurage language and Gurage is a dialect cluster belonging to a single language. |
| Hetzron 1968, 1972 | Central western Gurage: Ezha, Chaha, Gumer, Gura <br><br> Peripheral western Gurage: Enemor, Endegagn, Ener, Gyeto, Mesmes <br><br> Western Gurage: Mesqan <br><br> Northern Gurage: Muher, Kistane and Dobbi | Main verb markers | Gurage is a group of different language varieties. East Gurage is a dialect cluster, Central Western Gurage is dialect cluster and Peripheral Western Gurage (Enemor and Endegagn) is dialect cluster. Northern Gurage is language cluster |
| Dinberu et al. 1987 | 1. ijja-bet speakers are Cheha, Mesqan, Zay, Silti <br> 2. ədi-bet speakers are Kistane and Mokorkor <br> 3. anə-bet speakers are Dobbi and Muher | Based on 1st person singular 'I' | Culturally, Gurage is one linguistic community |

Meyer (2006: 813–821) argued that there is a lack of sufficient and comparable data for all Gurage varieties, which are changing through the intense multilingualism of their speakers, and the resulting language-contact phenomena.

The research in this paper intends to investigate language contact and its effects on language use in the place and the language of Muher. The main reason for selecting this research topic is that I am a native speaker of Muher and my father's L1 and my mother's L1 are Muher and Ezha, respectively. Muher people are bi/multilingual speakers of Amharic, Ezha and Gurage varieties. For instance, I have had strong contacts with Ezha since childhood, especially with my mother's relatives. When I went to Ezha as a child, I was surprised that no one was able to speak Muher there; even my mother spoke Ezha, her L1, and I was the only person mixing Muher with Ezha. When my uncles came from Ezha to Muher, almost all of my family members shifted to Ezha to communicate with them. But my uncles did not try to speak

Muher, or the official working language of the country, the regional administration, the zonal and district administration, Amharic. To the contrary, my sisters from Muher who married Ezha men immediately shifted to Ezha. On the other hand, my mother never speaks Muher, even with her children. The reason behind this is not clear, and may be linguistic divergence, structural complexity, language attitude or accommodation or something else. Thus, this research project was initiated to investigate the reasons behind such asymmetrical shifts in language use.

Muher (or *mʷǝhɨr* as called by the native speakers) refers to the people, the language they speak and the area they live in. The Muher community lives in the north-western part of the Gurage Zone. Its neighbors are Ezha to the west, Mesqan and Dobbi to the southeast, Wolane to the northeast, Quebena to the northwest and the Silte zone to the south and southwest, as shown in Map1 below. As a result, many of the Muher speakers also speak one of these languages.

Muher was originally called *oxʲǝ*. The highland and lowland areas were called '*nǝnoxʲǝ*' 'the upper '*oxʲǝ*' and '*tǝtoxʲǝ*' 'the lower *oxʲǝ*', respectively. Currently, '*nǝnoxʲǝ*' 'the upper *oxʲǝ*' is called *Muher* and '*tǝtoxʲǝ*' 'the lower *oxʲǝ*' is called *Aklil*. The people of Muher Aklil are predominantly followers of Orthodox Tewahido Christianity. The present name of Muher was introduced by Saint Abunezenamarkos, and the name Aklil was introduced by AbuneYacob during the expansion of Orthodox Tewahido Christianity into the Muher Aklil area (currently, the *Muher Aklil district*). Fekede (2015: 7) asserted that, when Abune Zena Markos, a priest and missionary
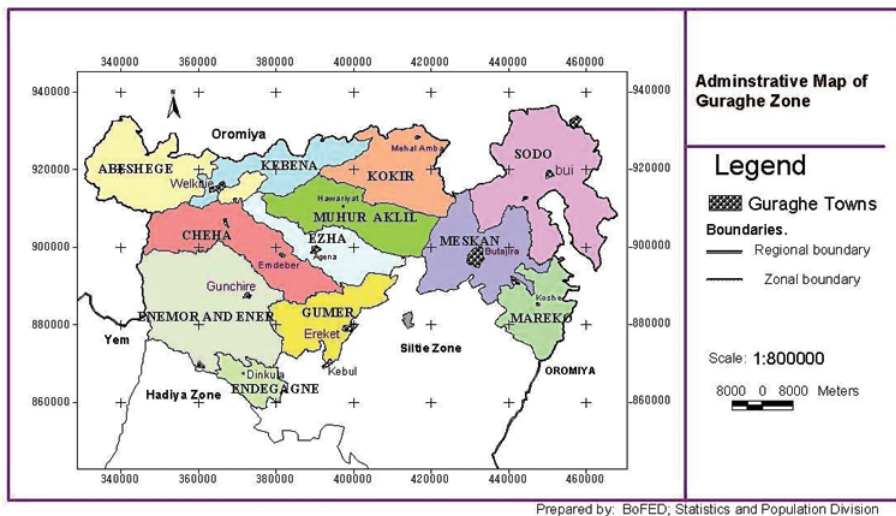


**Map 1.** Map of Gurage zonal administration. (Published with permission from the Ethiopian Southern Nations, Nationalities and Peoples' regional state finance office.)

of the Ethiopian Orthodox faith, came to the *oxʲə* and preached Christianity, the majority of the people were converted to Christianity, and abandoned their traditional beliefs and practices.

All the Gurage varieties can generally be categorized into three groups, based on the first person singular pronoun: *anə-bet, ədi-bet* and *ɨjja-bet* (Dinberu et al. 1987: 255), as shown in Table 2 below. As Meyer (2005: 41) and Hetzron (1977: 5) indicated, Muher language has two sub-varieties, one of which is *anə-bet* and the other *ədi-bet*. Additionally, *ɨjja-bet* is also spoken in the Muher Aklil district. *ɨjja-bet* speakers of Muher Aklil are *anə-bet* speakers who have shifted to *ɨjja-bet*, due to the influence of neighboring Gurage varieties, such as Ezha.

The Muher Aklil district has thirty village administrative units (*kebeles*), including Hawariyat. Hawariyat, the capital of the Muher Aklil district, is situated approximately 207 kilometers south of Addis Ababa, or 52 kilometers southeast of Welkite.

**Table 2.**  Locations of anə- bet, ədi- bet and ɨjja-bet speakers

| anə- bet speakers | ədi- bet speakers | ɨjja-bet speakers | |
|---|---|---|---|
| Muher | Kistane | Cheha | Zay |
| Dobbi | Moqorqor | Mesqan | Silti |
| | | Gumer | Endegegn |
| | | Ezha | Enemor |
| | | Gura | |

The *anə-bet* variety is spoken by the majority in the Muher Aklil district, especially in the upper parts of the river Kereb, in the eastern and southern areas. In eighteen villages of the Muher Aklil district, Muher speakers are speakers of the *anə-bet* variety of Muher. The *ədi-bet* variety is used by minority groups in the lower areas of the river Kereb. In five of thirty villages of the Muher Aklil district, (Məqorqor, Korer, Yeshehara, Chebe and Atat), *ədi-bet* varieties are spoken.

According to Meyer (2012), approximately 800 *ədi-bet* Muher speakers also live in the village of Tattessa, situated six kilometers to the east of Wolkite, the administrative centre of the Gurage zone. These Muher speakers are the descendants of a few male emigrants who moved from Meqorqor to this location three or four generations ago, around 1880. According to Meyer, Muher in Tattessa is now only used in discussion with elder men or at village meetings. Younger children usually don't speak Muher, but have a passive knowledge of it. He also asserted that the most commonly used languages in Tattessa nowadays are Ezha and Amharic. Additionally, most of the Aklil people of the Muher Aklil district have also shifted to *ɨjja-bet* (the Ezha variety) because of a history of invasion of Aklil by Ezha speakers, and migration to Cheha. After returning to their homeland, the male emigrants

usually married women from the nearby Ezha speaking group, after which their children grew up bilingual. Currently, from thirty villages of the Muher Aklil district, the following seven villages have completely shifted to *ijja-bet (*Ezha variety). These villages are Wegerawe, Feresgura, Yebejeche, Wiranfuna, Batinakeras, Dengez and Wikiye.

The 1995 Constitution of the Federal Democratic Republic of Ethiopia gives equal recognition to all Ethiopian languages through Article 5. Articles 20 and 39 of the Constitution also provide the rights of every nation, nationality and people of Ethiopia to use its language in speech and writing, to develop its own language, to express, to develop and to promote its culture and to preserve its history. However, Gurage people didn't practice their rights in formal domains, even at the community level. This right of language and culture development is not practiced in any of Gurage varieties, including Muher.

The official working language of the Gurage Zone and the Muher Aklil district administration is Amharic. Therefore, the children learn the Amharic language as a subject and use it as medium of instruction in primary school.

The language of Muher is in state of shift and endangerment due to lack of attention of the government and awareness of the community to use and develop it. One of my informants from Muher Teklehaimanot claimed that Muher speakers who knew Amharic well completely shifted to Amharic in Addis Ababa or other urban areas. He also indicated that is not only applied to urban dwellers who are Muher speakers, but said that even a mother who only went to an urban area for a short visit, carrying her baby on her back, would begin speaking in Amharic when she returned to Muher afterwards.

According to interviews with my key informants, most of the Gurage people seem to be interested in learning in their own mother tongue, but they also fear that mother-tongue education could have a negative impact on their unity, in that, if each Gurage variety learns with its own varieties, could signal the end of the unity of Gurage people as one society. They also fear that, if standardization takes place, the dominant variety wills subsume the other varieties.

## 2.   Theoretical framework

Language is used for communication in different domains: home, market, school, administration, religion, etc. As Wardhaugh and Fuller (2015: 91) pointed out, it is a normal requirement of daily living in many parts of the world that people speak several languages: perhaps one or more at home, another in the village, still another for purposes of trade, and yet another for contact with the outside world of wider social or political organization.

Benmamoun et al. (2013), defined heritage speakers as asymmetrical bilinguals who learned language 'x', the 'heritage language', as an L1 in childhood, but who, as adults, are dominant in a different language. This idea shows that heritage languages are influenced by dominant languages, due to contact.

Weinreich (1953: 1), Fasold (1984), Thomason (2001: 1) and Clyne (2003: 1) defined language contact as the use of more than one language in the same place and at the same time by people from different language backgrounds.

The potential outcome of language contact is bilingualism and multilingualism, as explained by Appel & Muysken (2005: 1), Garret (2006: 49) and Wei (2012: 26).

Language endangerment refers to the growing trend of language loss through the processes of language shift and death. Lewis and Simons (2016: 4) pointed out that, as contact between users of different languages increases; the pressure towards language shift (and eventual death) also increases.

Language contact also has a direct relationship to language attitudes. Language attitude is a feeling or response that people have toward their own language and other's language. Myer-Scotton (2006: 109) explained attitudes as assessments that speakers make about the relative values of a particular language. People may have a positive or negative attitude towards their own language and to the others' language. Language attitude may also attach to the societies who speak the language. Therefore, Language choice or use of individuals or the society in contact is also a direct relation to language attitude.

Speech accommodation theory is chosen for this research. The kernel meaning of accommodation theory is that speakers tend to accommodate their speech to people they like or whom they wish to be liked by, and they tend to diverge from those people they do not like, according to Myers-Scotton (2006: 132).

Garret (2006: 56) explains the driving forces of convergence as the need for maximal second (or third, $n^{th}$) language learnability: convergence tends to occur in multilingual situations in which language functions as a silent marker of ethnic or other group identity.

The indigenous people of Muher live in Muher Aklil district of Gurage zonal administration. Since the geographical area of Muher is very small, most of the young people of Muher migrate to different parts of the country to search of opportunity. To be effective in their working life, they have an interest in learning different languages, including the dominant language of the country, Amharic, and the language of the society where they work. Accordingly, young speakers of Muher are shifting their L1 to the dominant languages and other languages of the country. This causes the endangerment of Muher language, due to such contact.

## 3.   Research methodology

When applying field methods to the study of the effects of language contact on language use, a mixed research method is the best approach. Triangulation is also used in the analysis of this research. Berthele (2012: 4) noted triangulation as changing perspectives and using methods and data pertaining to two or more spaces in order to find answers to the respective problems. According to Berthele (2012: 4), triangulation in social research has the following four functions:

1.   Validity checking: by using other data sources (e.g. by combining different qualitative measures, or by combining quantitative and qualitative methods.
2.   Indefinite triangulation: make visible how accounts are shaped by different purposes/perspectives of social actors.
3.   Seeking complementary information: Can lead to the first interpretation, and thus is not incompatible with the validity checking function.
4.   Epistemological enrichment: transgress the limitation of particular methods by combining several approaches; encourage dialogue between paradigms.

Therefore, both quantitative and qualitative methods are used. Quantitative methods are used mostly for the analysis of language use, and the qualitative method is used mostly to cross-check the data.

Questionnaire, interview, participant observation and recording of spoken texts were used as main data collection tools/techniques. Both the questionnaire and the interview were used to collect information on the following: language contact situations, bi/multilingual abilities, ethno-linguistic vitality, linguistic accommodation strategies, and attitudes towards mother tongues and second languages. Participant observation in the market, in the home, in governmental offices and places of worship and the analysis of recorded texts were used to identify language use.

Amharic was used as meta-language, both for the questionnaire and in interviews. If the informants didn't understand the idea of the questionnaire, or the interview, I helped them by translating it into Muher, since I am a bilingual speaker of Amharic and Muher.

In order to yield a more comprehensive investigation, introspection and data from all available secondary sources were examined.

The study targeted individuals belonging to Muher ethno-linguistic groups. In terms of geographic area, the study targeted the village of Teklehaymanot, the market and town of Hawariyat and the centre of Gurage zonal administration, Wolkite.

The participants used for the study were native speakers of Muher. Participants for the questionnaire were chosen randomly from Teklehaymanot, Hawariyat and Wolkite. Participants for interviews were chosen purposefully out of those who had lived in their respective area for a long time and spoke their language natively.

An equal proportion of men and women were considered. Key informants were selected based on their linguistic ability, and their social, historical and cultural knowledge. Accordingly, the people who were included in the key informants were elders participating in Yejoka kʼⁱtʃʼa (assembly of cultural administration of Sebat bet Gurage which includes Muher Aklil, Ezha, Chaha and Gumer, Enemor and Ener, Endegagn, Gyeta, Moqorqor), as well as people working in language, administration, health, court, and the education sector. The selection and recruitments were made during the first pilot study trip 15 September 2017–14 November 2017, in areas where the sample languages are spoken.

For the study, purposefully selected Muher speakers were interviewed or asked to fill in questionnaires. The research questionnaires were distributed to sixty-five participants. Of these, thirty-two participants were male, and thirty-three female. From the total sample study, fifty-four were Christian and the remaining eleven were Muslim.

Nine key informants from Muher were selected. These key informants helped to gather and record spoken texts.

The observation process involved attendance of everyday activities in the home environment, at community gatherings, in places of worship (churches and mosques), market places, schools (elementary and high schools in rural and urban areas) and hotels.

The qualitative data were recorded with a digital recorder and, from all of the recorded audio data, the data which were helpful for the study were selected and used in the analysis. The descriptive statistical analysis of the quantitative data, which was used for the analysis of language use and language attitudes, and which was collected from questionnaires, were analyzed using descriptive statistical analysis by means of SPSS 21 software.

## 4.  Language knowledge and use

### 4.1    Language ability of participants

Fifty-eight of the respondents were Muher native speakers. For six of the respondents who were born in Ezha and married to a Muher spouse, Ezha was their L1, and one respondent who was born in Hawasa, Amharic was her L1. Her father was from Muher and her mother was from Ezha.

Regarding their L2 abilities, all the participants considered themselves multilingual. They spoke at least two of their neighboring languages, and Amharic, which is the official working language of the Federal Democratic Republic of Ethiopia, as well as the working language of the Southern Nation, Nationalities, and Peoples'

regional state and the Gurage zonal administration. Amharic is also the working language of the target area of this research i.e. the Muher Aklil district. Due to different contact situations, the respondents name Afaan Oromoo, Sidamo, Hareri, Qebena, Wolene, Silte and other varieties of Gurage as their L2 ability. Educated people of Muher and Ezha have either Ezha or Muher as their mother tongue and learned Amharic and English as a subject or as a medium of instruction at different levels. Accordingly, most educated Muher and Ezha respondents knew at least one of the neighboring languages, in addition to Amharic, English and their L1.

**Table 3.** Second language ability

| Second language ability | Number of participants | Percent |
|---|---|---|
| Amharic, English | 2 | 3.1 |
| Amharic | 7 | 10.8 |
| Amharic, Ezha, Mesqan, Soddo, Silte, Dobbi | 8 | 12.3 |
| and Amharic | 3 | 4.6 |
| Amharic and Ezha | 28 | 43.1 |
| Amharic, Ezha, English | 14 | 21.5 |
| Amharic, Ezha, Wolene | 2 | 3.1 |
| Amharic, Ezha, Afaan Oromoo | 1 | 1.5 |
| **Total** | **65** | **100.0** |

The data in Table 3 show that, for seven of the respondents, Amharic was their only L2; for twenty-eight of the respondents, Amharic and Ezha were their L2; for four-teen respondents Amharic, Ezha and English were their L2; for three respondents, who were women born into Ezha families and married to a Muher spouse, Amharic and Muher were their L2; for two respondents, Amharic and English were their L2; for eight respondents Amharic, Ezha, Mesqan, Soddo, Silte and Dobbi were their L2 and for the rest for five respondents Amharic, Ezha, Afaan Oromoo and Wolene were their L2.

Some of my key informants also associated their multilingual abilities with their communications for different usages. For instance, one of my informants in Wolkite was 50 years old. His educational background was B.Sc. in Animal Science and M.Sc. in Land Ecology. Currently he is an instructor and researcher at Wolkite University. He spoke Ezha due to the neighboring community and his mother's L1 also being Ezha. He also easily understood Cheha, due to having carried out his high school studies in Emdibir, and due to Cheha's linguistic similarity to the Ezha language. He also easily understood Mesqan and Dobbi, because Mesqan and Dobbi also shared common features with Muher and Ezha. For official usage, he spoke Amharic. Professionally, he used English as a means of communication when he presented research works and in teaching at the university.

## 4.2    Language use of participants

Language as a communication tool is used in different domains: home, market, school, administration, religion, etc. It is necessary to understand and to differentiate the uses of language varieties in different domains for different purposes. In many parts of the world, it is a normal requirement of daily living that people speak several languages: perhaps one or more at home, another one in the village, still another for purposes of trade, and yet another for contact with the outside world of wider social or political organization (Wardhaugh & Fuller 2015: 91). Language contact and the level of multilingualism have a direct relationship with the domain of language use.

This section identifies the two generally established levels of language use (see Fishman 1972: 442): (1) informal usage at home, in the family and the near neighborhood, versus (2) formal usage, the language of education, the workplace, mass media and the language of government services. Accordingly, in the following section, both the informal usage domains of language use in family, market, religion and social affairs are discussed, as well as the formal usage of the language. i.e. in schools, health centres and in court.

(1)   Informal language use

a.    *Language use with father*
In Gurage society, the father is considered to be the pillar of the family. In rural areas, children are viewed as direct decedents of their fathers and mostly speak their father's L1 as their own L1.

**Table 4.**  Language use with father

| Language use | Number of participants | Percent |
|---|---|---|
| Muher | 55 | 84.6 |
| Ezha | 6 | 9.2 |
| Amharic | 2 | 3.1 |
| Amharic and Muher | 2 | 3.1 |
| **Total** | **65** | **100.0** |

As shown in Table 4, the majority of participants used their own L1 when communicating with their fathers. Accordingly, fifty-five of the participants use Muher, and six used Ezha with their fathers. The remaining two participants used Amharic, and two mixed Amharic with Muher with their fathers.

The data indicate that the majority of participants use their mother's L1 together with their father's L1. The majority L1 speakers of Muher were born in the Muher Aklil districts, as mentioned in the preceding chapter. Minority groups

who used Amharic or who mixed Amharic and Muher were children born in an urban area. This was due to the influence of the dominant language (Amharic), and members of urban societies who were predominantly speakers of Amharic. This shows that speakers from the rural area of the Muher Aklil district acquired Muher as their mother tongue, and children born in an urban area adopted Amharic, the most dominant and official language of the country, as their L1.

**b.** *Language use with mothers*
In Gurage society, women may marry speakers of their L1, or speakers of a language other than their L1. Most of their children speak the mother's L1, and the mother may speak either in a way that mixes her children's L1 with her own L1, or she may speak her L1 and they can understand each other, due to the effect of children bilingual ability.

**Table 5.** Language use with mother

| Language use | Number of participants | Percent |
| --- | --- | --- |
| Muher | 52 | 80.0 |
| Ezha | 7 | 10.8 |
| Amharic | 2 | 3.1 |
| **Total** | **65** | **100.0** |

As shown in Table 5, the majority of participants used their own L1 (i.e. their father's L1) when communicating with their mothers. Accordingly, fifty-two participants used Muher and 11 used Ezha with their mother. The remaining two used Amharic.

**c.** *Language use with children*

**Table 6.** Language use with children

| Language use | Number of participants | | Percent |
| --- | --- | --- | --- |
| 1 | Muher | 7 | 10.8 |
|  | Ezha | 1 | 1.5 |
|  | Amharic | 12 | 18.5 |
|  | Amharic and Muher | 10 | 15.4 |
|  | No children | 35 | 53.8 |
|  | **Total** | **65** | **100.0** |

Table 6 shows that the majority of respondents, i.e., thirty-five participants, did not have children. Twelve respondents used Amharic with their children, ten

respondents mixed Muher and Amharic with their children and one respondent used Ezha with their children. The data shows that, in the towns of Wolkite and Hawaiat, Amharic was the mother tongue of the majority of the children of Muher parents. This was also confirmed by my observations in Wolkite and Hawariat.

**d.**    *Language use with Muher husband and Ezha wife, and vice versa*
Muher and Ezha are connected to each other with common cultural values. Due to cultural ties and geographical closeness, Muher and Ezha are often interrelated by marriage. Most Muher men in the study were married to women from Ezha, and vice versa. Table 7 shows the language use of Muher husbands with Ezha wives.

**Table 7.**  The language use of Muher husbands with Ezha wives

| Language use | Numbers of participants | Percent |
| --- | --- | --- |
| Muher | 17 | 26.2 |
| Ezha | 2 | 3.1 |
| Each of them speaks their own language | 44 | 67.7 |
| Ezha and Muher | 1 | 3.0 |
| **Total** | **65** | **100.0** |

As shown in Table 7, Forty-four participants responded that each of them communicated in their own mother tongue, seventeen responded that they communicated in Muher only, and one responded that they mixed Ezha and Muher when the Muher husband and his Ezha wife communicated with each other. In my research, I established that two participants responded that they communicated with Ezha. I also observed one couple from Ezha and Muher, to confirm that the majority of Muher spouses mixed Muher and Ezha or speak in Ezha with their spouse.

In contrast, my observations confirmed that the majority of Ezha men who married Muher women neither mixed Ezha with Muher nor spoke in Muher. Instead, they used their mother tongue with their Muher mate. The reason for their language choice is based on positive attitudes towards the use of their own language and their wife's language.

This result shows that Muher people have a positive attitude towards the Ezha language, but that Ezha people are more divergent in using Muher language and that they have a more positive attitude towards their mother tongue. One of my key informants from Teklehaimanot said that Muher daughters who married Ezha husbands would have completely switched to speaking Ezha when coming back to their family after a year. But Ezha women who married a Muher man never shifted to Muher. They kept speaking Ezha until their death. The informant reported that Ezha women cannot speak Muher and had no interest in speaking it.

The majority of my other informants also confirmed the above conclusion. One of my Muher-speaking informants from Teklehaimanot, who had been a married to an Ezha husband, is now a widow. She asserted that she spoke Ezha as soon as she married. Her reason for shifting language was that Ezha speakers were disgraced or dishonored when speaking their own language, Muher. She said that Ezha speakers would reject her, saying, in her own words, 'your language is very hard, not palatable or delicate, that was why I completely shifted to speak Ezha.'

**e.** *Language use of Muher with rural and urban relatives*
Gurage society is mobile by nature and socially interactive, both in rural and urban areas. In rural areas, people interact or support each other in different cultural ceremonies. The majority of the younger generation migrates to urban areas in search of a better life. Gurage people are known as traders in the towns of different parts of Ethiopia. They are also known to support their family in cultural ceremonies. The language use of Muher and Ezha people with their rural and urban relatives differs.

The participants were asked about their language use with rural and urban relatives.

**Table 8.** Language use with rural relatives

| Language use | Numbers of participants | Percent |
| --- | --- | --- |
| Muher | 54 | 83.1 |
| Ezha | 3 | 4.6 |
| Amharic | 1 | 1.5 |
| Ezha and Muher | 3 | 4.6 |
| Amharic and Muher | 4 | 6.2 |
| **Total** | **65** | **100.0** |

The majority of the participants used their L1 with their rural relatives. Table 8 shows that fifty-four participants used Muher and three used Ezha to communicate with their rural relatives. Four respondents mixed Amharic and Muher with their rural relative, three participants mixed Ezha with Muher and one respondent used Amharic with their rural relatives. For language use with urban relatives, Amharic is dominant.

**Table 9.** Language use of urban relatives

| Language use | Numbers of participants | Percent |
| --- | --- | --- |
| Muher | 1 | 1.5 |
| Amharic | 49 | 75.4 |
| Mixing Amharicand Muher | 15 | 23.1 |
| **Total** | **65** | **100.0** |

As the data show in Table 9, the majority of the respondents, i.e. forty-nine partic-
ipants, used Amharic with their urban relatives, fifteen respondents mixed Muher
and Amharic with their urban relatives and only one respondent used Muher with
their urban relatives. The data and the observations show that literate people in
urban areas or who returned from urban to rural areas mostly used Amharic with
their rural or urban relatives.

The majority of Muher key informants also confirmed that many people use
or mix Amharic with their urban relatives. A 65-year-old farmer informant from
Teklehaimanot said that the youth moved to urban areas for different reasons.
However, when they returned to rural areas, they had shifted to speaking Amharic.
In cultural meetings, to hear a person who speak in Muher from the beginning
to the end of a conversation is a very rare event. Many people continuously used
Amharic. He indicated that people in urban areas did not speak Gurage languages,
and they think that Muher, in particular, is disgraceful to speak. The key informant
reports that, even in an urban area, when Muher speakers say '*mʷamʷǝadǝrix-
ǝmwe?*' 'Good morning' to their relatives in Muher, the relatives will respond
'*ɨndǝmɨnadǝrih?*' 'Good morning' in Amharic.

The implication of the above informant's anecdotes is that the Muher language
is in the process of change. Due to intergenerational transformation, the use of the
Muher language is decreasing.

**f.   *Language use in the market***
To know the language preference of Muher and Ezha speakers, participants were
asked to explain the language use of these speakers when they communicate in the
market.

**Table 10.**  Language use in the market

| Language use | Numbers of participants | Percent |
| --- | --- | --- |
| Muher | 12 | 18.5 |
| Ezha | 1 | 1.5 |
| Amharic | 26 | 40.0 |
| Amharic, Ezha and Muher | 12 | 18.5 |
| Amharic and Muher | 12 | 18.5 |
| Amharic and Ezha | 2 | 3.1 |
| **Total** | **65** | **100.0** |

The data in Table 10 show that most Muher participants use Amharic in the mar-
ket, i.e. twenty-six used Amharic, followed by twelve who used Muher, twelve who
mixed Amharic and Muher and twelve who mixed Amharic, Muher and Ezha.
Finally, two participants mixed Amharic and Ezha as a means of communication

in the market. Muher participants only used Muher with other Muher speakers; they shifted to Ezha with Ezha speakers and shifted to Amharic with Amharic and other speakers. This was confirmed in participant observation and in interviews with key informants.

One of my key informants, who was also the Yejoka elders' representative of Muher, asserted that Muher men used Amharic and the women used their own mother tongue in different markets. For example, in Boʒəbar market, Muher speakers used Amharic, Muher or Ezha, and other Gurage varieties in the market. But speakers of Wolene, Ezha, Silte and other languages speak their own L1 in the market. Muher women also used Ezha, Wolene, Silte and other Gurage varieties with respective speakers.

My own observations confirmed that Muher people shifted to Ezha and other Gurage varieties, while Ezha people mostly used their mother tongue when interacting with speakers of Muher and other Gurage varieties in the market of Teklehaimanot, Hawariyat and Wolkite. This shows that Muher people are more accommodating in using Amharic and Ezha, but that Ezha people diverge more in using Muher.

Cooper (1976: 254) first noted the technique of systematically observing language use as it happens, as developed for the study of language usage in the market place; this seems to be a promising technique. First, it can be used as a survey method in settings in which household interviewing is not possible. Second, where such interviewing can be performed, the present technique makes it possible to compare a group's self-reported language usage (i.e. which language people claim to use in particular social contexts or for particular purposes) with actual usage.

Using the above approach, I observed two market days each in Boʒebar, Hawariyat, Teklehaimanot and Wolkite to observe transactions and language-use patterns. My observations confirmed that Boʒebar and Hawariat market are the most multilingual, and that Wolkite is also a multilingual market area. By contrast, in Boʒebar and Hawariat, commodities, materials and domestic animals are delivered from a similar area, and language use also correlates with the place of origin of the commodities or materials found in the markets. For instance, Muher, Wolene, Silte and Gumer sell domestic animals (horses, donkeys, cows, oxen, sheep and goats), animal products (butter and cheese), potatoes, cabbage, peas, beans, barley and other temperate-zone products. Most male Muher speakers used Amharic or mixed Amharic, Ezha, Wolene and Silte, based on their linguistic ability. Those trading with Muher used their own L1. The buyers or sellers in this case would be Ezha, Mesqan, Dobbi, Soddo or Amharic speakers, who came from Addis Ababa, Butajira, Wolkite and other urban areas.

Speakers of Mesqan and Dobbi sell fruits and grains like tomato, onion, chili/red peppers, maize, sorghum, local alcohol and bole (a salt block for cattle) using

their L1. Speakers of Muher, Ezha, Silte and Wolene used their own language in trade and transactions. Muher speakers might mix their language with Mesqan or Dobbi. Wolene and Silte speakers were neither mixing nor using Amharic. This is due to the attitude that Muher people assume that they understand Amharic and other Gurage varieties, while other Gurage assume that the Muher language is hard to understand and speak.

Ezha and Gyeta speakers sell clothes, pottery, artifacts, mat, coffee beans and *k'otʃʃ'o* (cultural food made of Enset or false banana) using their mother tongue during the transactions. Kambata and Hadiyya speakers sell sugarcane using Amharic. Therefore, Возebar was the most multilingual market, in which Amharic, Muher, Gumer, Ezha, Geto, Soddo, Mesqan, Wolene and Silte languages are spoken.

In Wolkite town, the most dominant language is Amharic. But Ezha, Cheha, Enemor, Muher, Quebenna, Afaan Oromoo and Haddiya are also spoken in the market.

### g.  *Language use in church*
Language use in church could be identified both by observing language use while the minister is preaching and language use during the sanctification of the Mass (congregation), which is different. During the sanctification of the Mass, the languages used in church were Amharic and Geez. While preaching, the language used was Amharic, and sometimes a mixture of Amharic and Muher in rural areas of Muher. Only Amharic was used in urban areas, i.e., in Wolkite and in Hawariat.

**Table 11.**  Language use in church

| Language use | Numbers of participants | Percent |
|---|---|---|
| Muher | 6 | 9.2 |
| Amharic | 39 | 60.0 |
| Geez | 4 | 6.2 |
| Amharic and Muher | 6 | 9.2 |
| Amharic and Ezha | 1 | 1.5 |
| Amharic, Muher and Geez | 5 | 7.7 |
| Amharic and Geez | 4 | 6.2 |
| Total | 65 | 100.0 |

As shown in Table 11, thirty-nine of the total participants responded that Muher people used Amharic in church, followed by six participants, who responded that Muher people used Muher in church, and six who responded that Muher people mixed Amharic and Muher. Five of the total participants responded that Muher people mixed Amharic, Muher and Geez, four responded that Muher people mixed Geez and Amharic, four responded that Muher people used Geez and one

of the total participants responded that Muher people mixed Amharic and Ezha in church. Geez is now a dead language that no one speaks as a mother tongue. It is only used in church as a heritage language.

**h.    *Language use in mosques***

Language use in mosques was similar to language use in church. The Quran was recited in Arabic and Amharic. Amharic was used for preaching in Wolkite and Agena. The language used for preaching in rural areas of Muher involved a mixture of Amharic and Muher.

My data indicated that thirty-three of the participants responded that Amharic was used by Muher people in mosques. Eleven respondents replied that Arabic was used by Muher people in mosques for sanctification. Two of the respondents replied that Muher people mixed Amharic with Muher in mosques, one replied Ezha, one reported a mix of Arabic and Muher and one replied that Arabic and Amharic were used by Muher people in mosques. Twelve of the respondents from Muher replied that there was no mosque in Muher area. But, while there was no mosque in the highlands of Muher, there was in fact a mosque in the lowlands of Muher, around the Aklil area.

Romaine (2010: 320) discussed that usage declined in domains where the language was once secure, e.g. in churches, in the workplace, in schools, and most critically, in the home, as growing numbers of parents no longer transmit their language to their children.

The dominant language, Amharic, was used for preaching in church and in mosques dominantly, and Geez and Arabic were used for sanctification in church and in mosques, respectively.

**i.    *Language use in other social domains***

As mentioned in the preceding chapter, all the members of *Sebat bet Gurage* are governed by the cultural laws of *jədʒokak'ʲitʃ'a* (Cultural law of cultural assembly of Sebat bet Gurage), in addition to governmental laws (Gebreyesus 1991: 10; Werku 1983 E.C.:26).Therefore, *Sebat bet* inter-tribal and inter-clan relations are dealt with at the council assembly called *jədʒoka*. At jədʒoka, the representatives of all *Sebat bet*, i.e. the clan chiefs, meet primarily to enact laws, which, with the passage of time, become customary rules of conduct controlling the behavior of Gurage (Shack 1966: 161). Issues of death, marriage, land boundaries conflicts, infidelity and highways (roads) between houses (*dʒefʷəro*) are decided in *jədʒoka*. All *Sebat bet* members have the right to use their own L1 in meetings, but rules and regulations are written, printed and distributed in Amharic, the official language of the country. All members also have the right to solve any problem within their

district, within tribes and clans. If the issue is beyond the capacity of the groups, it can be brought to *jədʒoka* to be solved by the general assembly. As members of *Sebat bet*, Muher people are governed by *jədʒokakʼʲitʃʼtʃʼa*, and they have their own system and practice that descends from *jədʒoka*. There are also other social and cultural institutions that are known in other Gurage varieties and practiced by Muher. Some of them are discussed in the following.

*iddɨr*, which is known to have its origin in urban areas and is now widespread in Ethiopia, is practiced all over Muher Aklil and Ezha. In rural areas, iddɨr, as explained by Getu (2012: 54), is a village/neighborhood-based mutual-support association, which is mainly concerned with funerals, but also involved in house construction and in providing financial support to members who have suffered the loss of cattle or other assets.

*ikʼkʼub* is also a common voluntary form of mutual support association, which is established by members mainly based on business interests; it serves the main purposes of mutual aid in matters related to creating access to savings and credit services for members. It is an informal financing system that provides basic savings and credit services to members through a rotational lottery-based system involving regular compulsory saving and nominal service charges, but with no interest, except under certain circumstances. In rural areas, contributions may be made in kind (for instance, in milk, by a group of women's collect milk or butter *ikʼkʼub*). This is called *wɨdʒo* or *damada*, which means 'collection of the same kind'. *Wɨdʒo* or *damada* is collected for the *Məskʼəl* ('the findings of True Cross') ceremony and for wedding ceremonies.

Table 12. Language use in other social domains

| Language use | Numbers of participants | Percent |
|---|---|---|
| Muher | 30 | 46.2 |
| Ezha | 2 | 3.1 |
| Amharic | 16 | 24.6 |
| Amharic, Muher and Ezha | 2 | 3.1 |
| Amharic and Muher | 15 | 23.1 |
| Total | 65 | 100.0 |

As shown in Table 12, thirty participants responded that Muher people used Muher and two responded that Muher people used Ezha in these social and cultural institutions. Sixteen participants responded that Muher people used Amharic; fifteen responded that Muher people mixed Amharic and Muher, and two responded that Muher people mixed Amharic, Muher and Ezha. When compared to rural and urban areas, the mother tongue was used more in rural areas than in urban areas.

(2)   Formal language use

**a.   *Language use in courts, health centers and in villages***
Language use outside of the ethno-linguistic influence refers to language use in for-
mal domains. As stated in the preceding sections, Amharic is the official language
at several levels: in the Federal Democratic Republic of Ethiopia; in the Southern
Nations, Nationalities Peoples' Regional state; by the Gurage Zonal Administration;
and by Muher Aklil district administration, as well. The target language (Muher)
is also highly influenced by Amharic. Due to similar results in formal language
use in health centers and other sectors of administration, language use in court is
presented as the only example:

**Table 13.** Language use in court

| Language use | Numbers of participants | Percent |
|---|---|---|
| Ezha | 1 | 1.5 |
| Amharic | 61 | 93.8 |
| Amharic and Muher | 3 | 4.6 |
| **Total** | **65** | **100.0** |

As shown for courts in Table 13, sixty-one participants responded that Muher peo-
ple used Amharic in court, fifty-eight responded that Muher people used Amharic
in health centers, fifty-five participants responded that Muher people used Amharic
in school, and forty-six responded that Muher people used Amharic in district
administration. The media used only Amharic to present different programs to
Gurage society. This data shows that the Muher people have an interest in and the
ability to speak the official working language, Amharic.

**b.   *Language use in schools***
Gurage languages are not used as the language of education for different reasons.
Currently, the language of education is Amharic in elementary schools and English
in secondary schools. The language that was used in the schools of Muher was also
Amharic.

**Table 14.** Language use in schools

| | Numbers of participants | Percent |
|---|---|---|
| Muher | 2 | 3.1 |
| Amharic | 55 | 84.6 |
| Amharic, Ezha and Muher | 1 | 1.5 |
| Ezha and Muher | 5 | 7.7 |
| Amharic and Muher | 2 | 3.1 |
| **Total** | **65** | **100.0** |

As the data in Table 14 indicate, the majority of respondents, i.e. fifty-five participants responded that Amharic was used in school. Five participants responded that students mixed Muher and Ezha, two used Amharic, two mixed Amharic with Muher and one mixed Amharic, Ezha and Muher in school. Muher was not a language of education, in line with other Gurage varieties. The dominant language in Muher Aklil schools was Amharic.

In my study, I observed school communication between students and teachers, and between teachers in Teklehaimanot elementary and secondary schools. Accordingly, in Teklehaimanot elementary and secondary schools, students and teachers never used Muher in the class room. They communicated formally in Amharic or in English, based on the formal medium of instruction.

**Table 15.**  Language use of students during break time

| Language use | Numbers of participants | Percent |
|---|---|---|
| Amharic | 32 | 49.2 |
| Muher and Amharic | 7 | 10.8 |
| Ezha and Amharic | 1 | 1.5 |
| Muher, Ezha and Amharic | 1 | 1.5 |
| **Total** | **65** | **100.0** |

By contrast, the data in Table 15 indicated that, during their break time, thirty-two used Amharic, twenty-four used Muher, seven mixed Muher and Amharic, one mixed Amharic and Ezha and one participant responded that students mixed Amharic, Ezha and Muher.

The following summaries from the interview conducted with participants from the education sector are aimed at explaining the language use situation in schools. A 60-year-old key informant, who was a senior supervisor in the Wolkite zonal administration education office, asserted that school teachers and students in the Gurage area communicated in a formal way only in the official language, Amharic.

A 52-year old Teklehaimanot elementary school teacher, who taught grades one to five, explained that he never used Muher to help his students. He used only the medium of instruction, which is Amharic. But he mixed Amharic and Muher during break time.

In my research, I also observed informants responding in the field, and I observed that Ezha elementary teachers sometimes used Ezha to help their students. Muher elementary teachers only used Amharic.

## 5.    Analysis

Muher is a native language of the people of Muher and Aklil in Muher Akli district. It is relatively the least studied and most endangered language among other Gurage varieties. The migration of people to urban areas in search of a better life, the influence of the official working language of the country, the regional state and the zonal administration, Amharic and the influence of the neighboring language Ezha and the people attitude towards their L1 and L2 contribute to the endangerment of the language.

As Benmamoun et al. state (2013: 6), heritage speakers are those who are early bilingual in a dominant language and whose native language is a minority language. In contrast to this idea, Muher is the dominant language and Ezha and Amharic are in the minority group in Muher Aklil district. Amharic and Ezha also influence the native language Muher, and the people have shifted their L1 to Ezha and Amharic.

The main cause for the language shift is a need for a high second language learnabilty. As stated by Weinreich (1953: 1), Thomason (2001: 1) and Clyne (2003: 1), more than one language is spoken in Muher at the same time by people from different language backgrounds. Muher was dominantly used in the home in rural areas of Muher, Amharic was dominantly used in the home in the towns of Wolkite and Hawariyat and mixing Muher, Ezha and Amharic was spoken, in the market and in others social domains. Muher speakers were bi/ multilingual in Amharic and Ezha languages at individual and community levels. As Myers-Scotton state (2006: 132), people will accommodate their speech to other people they like or who they wish to be liked by, and they tend to diverge from those they do not like. Accordingly, Muher people are accommodating with any neighboring Gurage varieties, and Ezha people are very divergent in their use of the Muher language.

This shows that the people of Muher have positive attitude toward using the dominant language and the neighboring language Ezha and their dialect verities, Mesqan, Chaha, Gumer and Gura. On the contrary, Ezha people in Muher market and Ezha women who married Muher men never shifted to Muher and never mixed Ezha with Muher or Amharic. This was due to negative attitude among Ezha people towards the people and language of Muher. This negative attitude was developed due to the history of border conflict between Muher and Ezha people dating back more than one hundred years, as a result of which, Ezha people were defeated by Muher people. Due to the defeat, the people of Ezha developed negative attitudes toward both the language and the people Muher.

Children born to Muher parents in urban areas and among literate people were dominantly L1 speakers of Amharic. Traders who migrated to urban areas in search of a better life also shifted their L1, Muher, to the dominant language, Amharic. The new generation in rural areas of Muher were also bi/multilingual speakers of Muher, Amharic and Ezha.

As stated by Lewis and Simons (2016: 4), an intergenerational shift occurs prototypically over three generations in which grandparents are largely monolingual speakers of the heritage language, the parents (the childbearing generation) are bilingual in the heritage language and a dominant language, and the children(the grandchild generation) are largely monolingual in the dominant language. Accordingly, children born in urban areas are becoming monolingual speakers of the dominant language Amharic.

The data in this research shows that the younger generation tends to shift to the dominant language more than their parents. Romaine (2010: 321) notes that the dominant language tends to invade the inner spheres of the subordinate language, so that the domains of use of the latter become even more restricted. Fluency in the dominant language increases with age, as younger generations prefer to speak the dominant language to get a better life, because the dominant language is tied to socio-economic advancement. The linkage between the dominant language and social mobility, along with the prestige of the dominant language and its predominance in public institutions, also leads the community to devalue their own language, culture and identity as part of a process of symbolic domination. Language use with children and siblings show that the influence of the dominant language increases with the younger generation. Proficiency in the subordinate mother tongue is higher in the older generation and decreases with the younger generation.

## 6. Summary and conclusion

This research investigated language contact and its effect on language use in the Gurage varieties of Muher. A mixed research method was used for data collection and data analysis. Both quantitative and qualitative data are collected from participants residing in the market towns of Wolkite and Hawariyat, and the village of Teklehaimanot. A representative sample of 65 people were asked to fill out questionnaires and knowledgeable people were used as key informants, such as elders from the Yejoka cultural administration representative of Muher Aklil district, civil workers of courts, health centers and education institutions and farmers and home managers. Secondary data from different sources were also consulted. Introspection method was also used to cross check the data. The analysis shows that Muher was often used in the home and within the community. Muher was shifting to Amharic and the neighboring language Ezha. Most of the time, when Ezha and Muher speakers meet in the market and participate in social affairs, both communicate in Ezha or, sometimes, each speak their own mother tongue to communicate with each other. The observation of couples from Ezha and Muher shows that a Muher woman who married an Ezha man immediately shifted to Ezha, while an Ezha woman who married a Muher man never shifted to Muher.

Amharic was used in all official settings in Muher, such as in schools, in court, in health centre's and in administration. But people used their languages during their break times within different governmental institutions. Elders usually tend to use their mother tongues, while young people tend to mix their mother tongue with the dominant language or tended to speak Amharic.

Muher children were bilingual in Amharic prior to starting school, but, in the towns of Wolkite and Hawariyat, Amharic is the L1 for most of the children. There was a generational transformation in that Muher is decreasing in urban areas. Most urban Muher people used Amharic in the home and in social domains. Note also that most of the Aklil people of the Muher Aklil district have shifted to *ijja-bet* (the Ezha variety) due to the invasion history of Aklil by Ezha; when they married women from the nearby Ezha-speaking group, their children grew up to be bilingual. Currently, out of thirty village's administrations of the Muher Aklil districts, seven farmers' village administrations have completely shifted to *ijja-bet* (Ezha variety). The sociolinguistic and linguistic data shows that Muher is highly influenced by Amharic and Ezha.

To maintain the Muher language, the following measures must be taken by society and government:

1. Develop positive attitudes in the society towards the use and development of their own language. The Gurage people, including Muher, are very mobile in search of a better life. They also completely shifted to the language of the new working or living area. This has a negative impact on their mother tongue. If they develop confidence in the use of their mother tongue and develop positive attitudes towards using their mother tongue, they can maintain their language and culture and transfer them to the new generation. This awareness creation can be accomplished by arranging different conferences and symposiums through coordination of government and community associations.

2. Documentation of the culture and the language to revitalize. Material and folk culture of Muher is highly endangered. Especially in Muher, naming, songs and cultural ceremonies are either in Ezha or in Amharic. It a very urgent undertaking to document folkloric and cultural elements of Muher in order to revitalize and transfer them to the next generation.

3. Develop orthography. All Gurage varieties including Muher lack orthography. Currently, Gurage Zonal administration culture and tourism office developed harmonized orthography for all Gurage varieties. The preparation of orthography is a good start for the development of Gurage language varieties, but it would be better to be revised by linguists and to start practically.

4. Mother tongue education. The best solution for maintaining Muher is to begin mother-tongue education at the elementary level. The Gurage zonal administration delayed for a long time beginning mother-tongue education for fear of

societal conflict if begun with some of the Gurage varieties. It would be better to prepare different meetings, symposiums and conferences with the people and different stake holders to bring mutual understanding and concision to speakers of different Gurage varieties.

## Acknowledgements

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# Ethnolinguistic perception
# and identity in Gurage

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This study was conducted with the objectives of exploring the perceptions and attitudes of speakers towards language use and ethnolinguistic identity within the complex sociopolitical and linguistic milieu of the Gurage people in Southern Nations, Nationalities and Peoples Regional State (SNNPRS) of Ethiopia. In so doing, five out of twelve groups with relatively different backgrounds were systematically selected for the study. Data was collected concurrently via questionnaires and semi-structured in-depth interviews involving a total of 386 participants. Respondents were asked to express their perceptions of the associations of language and ethnicity, and feelings about belongingness to the Gurage identity. The concurrent research design was informed by pragmatism as a theoretical framework, so findings of the mixed methods approach were integrated at the end for comparative descriptive analyses. The empirical data reveal that there is an observably different pattern of perceived association of language and ethnicity and varying senses of belongingness to the common Gurage identity across sampled groups.

**Keywords**: Gurage groups, ethnolinguistic perceptions, ethnic identity and belongingness

## 1. Introduction

After explaining the majority perception about ethnicity as a significant divisive political tool in many parts of the world from Europe to the Americas and Africa, Leach et al. (2008: 759) argue that it may be difficult to separate modern politics from either identity politics or ethnicity exemplified by the very establishment of modern European states. They also question whether it is the ethnic identity or politics that results in conflicting intergroup relations and conclude that the political context determines the impact of ethnic identity. As the home of people speaking more than 80 different languages, Ethiopia is rightly described by Zahorik

(2013) as one of the most heterogeneous countries in Africa when it comes to ethnolinguistic diversity. The country is divided into eleven administrative units, nine regional states and two city administrations, basically formulated on ethnic federalism during the last three decades. According to Kassaw (2017), 'Ethnic federalism provides ethnic groups the right to administer themselves, exercise a greater degree of command over their own resources, and maintain their own cultures and languages'. In fact, ethnolinguistic identity is not only an aspect of distinction among Ethiopians; it serves as the fundamental means of access to or denial of power and self-determination. However, the emphasis put on ethnicity as a leading political ideology of Ethiopian federalism has resulted in the struggle for identity and self-determination 'where people may protest against the ethnic category into which they had been previously put' best exemplified by the case of 'the Silt'e in Gurageland', Zahorik (2013: 94).

All 'nations, nationalities and peoples', the official reference to ethnolinguistic groups in Ethiopia, are granted the right to have their own 'Zone' or 'Special Woreda/District' in the regional constitution that underlines distinctness according to Beken (2007). However, having 56 ethnolinguistic groups, it became impossible to maintain congruence between the number of administrative Zones/Districts and the groups they host in the Southern Nations, Nationalities and Peoples Regional State (SNNPRS) where the Gurage people are located. Consequently, only certain ethnic groups have realised this right and a number of the several ethnic groups are 'a minority in a Zone/Special Woreda dominated by a particular group and that the remaining ethnic groups are living together in multi-ethnic Zones', (Beken 2007). The Gurage Zone is one of the multi-ethnic Zones in the region hosting the dominant Gurage people and two non-Gurage groups known as Mareqo and Qabena. This is just a glimpse of the broader political context of Ethiopia where ethnolinguistic identity determines people's livelihood in sociopolitical and economic aspects in particular.

Gurage is a term that ambiguously means three things: the people, the place where those people live (Gurage Zone) and the language(s) they speak. Peoples of the ethnolinguistic group officially known as 'Gurage' enjoy a favorable national recognition for their remarkable culture and dominant business activities across Ethiopian urban centres. The Gurage make up around two million of the country's population and they speak twelve varieties of a South Ethio-Semitic 'language' known by the umbrella name 'Guragina' in Amharic. These spoken Gurage varieties are controversially classified into language clusters and dialect continua by different linguists to date, but the most widely accepted categorisation is that of Hetzron (1972, 1977). Hetzron (1972) argues against the use of *dialect* in reference to the varieties since they have significant differences that do not fit the definition. He rather suggests the use of: 'East Gurage – dialect cluster, Northern

Map of the SNNPRS (Source: www.snnprboefd.gov.et)

Gurage – language cluster, Masqan – language, Central Western Gurage – dialect cluster, and Peripheral Western Gurage – dialect cluster' for descriptive conveniences, conceding a certain degree of arbitrariness in the classification.

In addition to having multiple spoken varieties, the Gurage people are said to have varying historic origins that may influence patterns of ethnic identity formation across groups. Meyer (2011) points to the historical origin of some of the Gurage people as being 'from Semitic-speaking people of the northern parts of Ethiopia who migrated into the south and settled there' based on oral traditions. There are claims by some Gurage groups about originating from the northern highlands of Eritrea, Tigray and Gondar while others were from eastern Ethiopia particularly Harar (Dinberu et al. 1987). Such narratives have created various kinds of identity formation observed among the Gurage since it is 'only the so-called *Sebat bet Gurage* comprising the Chaha (and Gumer), Ezha, Geyto, Muher (and Aklil), Inor, Endegegn (and Ener) and Meqorqor', who call themselves 'Gurage', (Meyer 2011: 1220). The other groups (namely Kistane (Soddo), Mesqan, Dobbi, Silt'e, Wolene and Zay) refer to themselves by their respective spoken varieties according to Meyer (2011). It is observable from this account that the spoken Gurage varieties exceed twelve in number since some varieties have more dialects and identity construction is further complicated by the varying histories of origin.

Fekede (2013) provides a tripartite category of Guragina as: East Gurage, encompassing Wolene, Silt'e and Zay; West Gurage, comprising Chaha, Endegegn, Ener, Inor, Ezha, Gumer, Gura, Muhir and Mesqan; and Northern Gurage, consisting of Kistane/Soddo and Dobbi. He also refers to this conglomeration of languages or dialects as 'Gurage language varieties' to avoid the endless debate over whether

to consider them languages or dialects of a language. Similarly, 'Gurage varieties' was adopted for use in this study for simplicity's sake since the number and classification of Gurage language(s) is not part of our objectives. In other words, the people are ethnically referred to as 'Gurage' and their language varieties, except Silt'e and Zay, are officially known under the umbrella term 'Guragina'. Vaughan (2003) points out the fact that the Silt'e group was formerly a part of the Gurage ethnic group until it reconstructed a distinct ethnolinguistic identity and succeeded in forming a separate administrative Zone in July 2001. Following the split, Silt'e is officially recognised as a distinct language symbolically representing the brand new ethnolinguistic group named after it, and does not politically belong to the Gurage language(s) at the moment. Besides, speakers of Zay do not have any administrative or geographical connection with other Guragina speakers, so neither outsiders nor the people themselves consider them ethnically Gurage. These realities, then, leave Wolene as the only representative of East Gurage and Masmas as an extinct member of Peripheral West Gurage (Hetzron 1972) to be included in this study. Three other varieties, Chaha, Inor and Dobbi, were also included as representatives of the Gurage clusters known as Central Western Gurage, Peripheral Western Gurage and Northern Gurage, respectively.

Amharic, which is also a federal working language of Ethiopia, serves as the working language of Gurage Zone (and the SNNPR) while other minority languages have recently been in official use for mother-tongue education, local broadcast media and public administration. The split of Silt'e from Gurage is believed to have raised fear of disintegration among the remaining members of the Gurage group by creating a sense of economic marginalisation and minoritized status though they are one of the major ethnic groups in the region.

The following sections present research questions, objectives and methods; a precise review of literature on ethnicity, language politics and belongingness; presentation of data and discussion under two themes; and summary of main points and conclusions drawn from the analyses of empirical data.

## 2.    Research questions, objectives and methods

### 2.1    Research problem and questions

The constitution of FDRE grants all nations, nationalities and peoples the right to develop and use their language and culture in Article 39 (2), so a number of minority languages have recently begun to benefit from constitutional provisions. There have been desperate desire and continuous efforts to develop the Gurage language(s) and to start mother-tongue education in elementary schools across Gurage

Zone for many years now. However, the Gurage people could not realise their language rights because of linguistic diversity further complicated by wavering ethnic identity formation and extra-linguistic factors that at times threaten intragroup unity. Besides, the fact that language is usually considered a major component and determinant of ethnic identity in current Ethiopian politics is understandably a powerful reason of heightened ethnic consciousness among the general public at large. The Gurage people are unique, surrounded by intricate narratives of ethnolinguistic identity with a high level of linguistic diversity for a small population, occupying a small geographical area, sharing many cultural aspects and a single nationality. Considering different sociolinguistic and extra-linguistic realities on the ground, two major challenges of the Gurage people become visible: (1) a threat of disintegration following linguistic lines in the era of heightened language and identity politics, and (2) a threat to language development and preservation in the long run, even if disintegration is avoided by retaining use of Amharic as a neutral medium. In other words, the diversity of spoken varieties, historical backgrounds [both fictive and real] and the sociopolitical circumstances of the time have complicated ethnolinguistic consciousness and patterns of self-identification in Gurage. Therefore, linguistic diversity and accompanying issues needed deeper understanding to manage consequences of intergroup strife. Among the important issues are the speakers' perceptions of language and ethnicity as well as their attitude towards the common Gurage identity. Even if there is a great deal of literature on the description and classifications of Gurage varieties, there is a serious research gap on sociolinguistic aspects in general and ethnolinguistic identity in particular. Therefore, this study aims to fill the research gap by examining empirical data on the following research questions:

1. How do speakers of different Gurage varieties perceive the association of language use and ethnicity?
2. How do speakers of different Gurage varieties identify themselves and express their feelings of belongingness to Gurage ethnic identity?

## 2.2   Objectives

This study has two objectives regarding the Gurage people and their language(s):

1. To examine speakers' perception about the association of language use and ethnic identity
2. To comparatively delineate patterns of ethnolinguistic self-identification and sense of belongingness to Gurage identity across the sampled group.

## 2.3   Research design and tools

Creswell et al. (2010) explicate that social inquiry is targeted towards various sources and many levels that influence a given problem, so employing mixed methods can help in understanding them better. The aim of this research is delineating speakers' perception about the link between language and ethnicity, the impact of language use on their ethnic identity, as well as expressed patterns of self-identification and sense of belongingness to Gurage identity across groups. In so doing, a concurrent integrative research design was used in which both quantitative and qualitative methods were mixed. Data collection was done in Amharic for both the question-naire and interviews by the researcher, assisted by trained data collectors for the survey. Quantitative data was collected using self-reported questionnaires with the aim of comparative assessment from a total of 363 participants across five Gurage groups. Participants were randomly selected from speakers of four Gurage varieties (Chaha, Inor, Dobbi and Wolene) and an extinct variety (Masmas) to represent the major language/dialect clusters in Gurage, and all were residents of Gurage Zone. The number of participants in the survey across groups was 95 Chaha, 94 Inor, 83 Wolene, 81 Dobbi and only 10 Masmas. At the same time, qualitative data was collected using audio-taped, semi-structured, in-depth interviews designed to explore respondents' thoughts, beliefs and perceptions about the aforementioned issues involving a total of 23 interviewees (six from Chaha, five from Inor, four from Wolene, five from Dobbi and three from Masmas). The research participants included people from all walks of life in terms of age, gender, religion, education and occupation. The raw data was translated into English, processed by SPSS 20.0 for the questionnaire, thematically organised and analysed separately and merged at the end for integration of results in the discussion.

According to Greene (2007), mixed methods research is preferred by many because it helps them to take dialectal or pragmatic positions that would bridge extremely varying worldviews. Because of the context-driven nature of language use and ethnicity, the main research paradigm that has shaped this study is prag-matism with its basic philosophy, 'that truth is found in "what works" and that truth is relative to the current situation', (McCaslin 2008: 672). In other words, the ethnolinguistic consciousness of a group and identity formation do not have fixed or universal meanings or values, so pragmatic assessment of what works in the actual Ethiopian context was considered a sound philosophical perspective in this study. In addition, Dornyei (2007) characterises concurrent research designs by using two methods in a separate parallel manner and integrating results during the interpretation phase with the purpose of broadening research perspective or testing how the findings complement or corroborate each other. In this regard, concurrent designs are invaluable when we examine a phenomenon that has several levels, and

they help researchers to combine macro and micro perspectives about broad trends in social life and how they are perceived by the individual (Dornyei 2007: 154). This study deals with the broad ethnolinguistic politics in an Ethiopian context and its specific impact on Gurage people's language use patterns and senses of ethnic belongingness. Therefore, data from both methods were separately organised under common themes and mixed at the stage of interpretation to analyse for patterns, comparisons and contrasts.

## 3.   Ethnicity, language politics and belongingness

Ethnicity is an elusive term to conceptualise because of the dynamic nature of social concepts in general and its extreme contextuality in particular. There have been a number of attempts to define the term though none of them succeeded according to Fought (2006). Besides, the term is usually used as an exchangeable concept with ethnic identity in the literature because they have so much in common, particularly the significance of language in their formation. Even if different elements combine to form ethnic identity, it seems that language always makes an important part of it. Fishman (1999) notes that,

> Language is seen as the storehouse of ethnicity: Each ethnic group expresses and identifies itself by the language it speaks, and its cultural paraphernalia is shaped by its language. Sameness of language and ethnicity creates a bond of acceptance and provides a basis for togetherness, for identity, for separateness, for solidarity, and for brotherhood and kinship.                                    (Fishman 1999: 353)

Such a strong association between language and ethnicity is documented in a large body of literature under disciplines in the humanities such as social psychology, sociology, anthropology, political science and sociolinguistics. Identity theory has been evolving since the formulation of Social Identity Theory and Social Categorisation Theory by Tajfel & Turner during the last quarter of the 20th century further developed into the Ethnolinguistic Identity Theory (ELIT) of Howard Giles and colleagues. Sachdev (1995) underlines the substantial body of literature that suggests that language is among the most salient dimensions of group identity identified by many in the analyses of ethnic and national groups. Phinney (1990) defines ethnic identity as 'a subjective sense of belonging to an ethnic group and the feelings and attitudes that accompany this sense of group membership', based on the ideas of Tajfel & Turner (1986).

In addition, Gudykunst & Schmidt (1987: 157) deem the relationship of language and ethnic identity as being reciprocal in that language usage influences the formation of ethnic identity, and ethnic identity also influences language attitudes

and language usage. Clément and Noels (1992) explain that the link is caused by the important symbolic and instrumental functions language plays in the evolution of human societies in general and ethnic collectivities in particular. Cargile et al. (1995) outline three roles that language plays in ethnic relations and identities as: articulating existing conditions; serving as a marker of group boundaries people can use to establish and refute claims of ethnic group membership; and a means of negotiating group identities as it not only assists in ethnic categorisation, but helps establish and display the meaning of those social categories. Clément and Noels (1992: 204) suggest ethnolinguistic identity to be, 'situationally bound, such that individuals slip in and out of particular group memberships as required by immediate contextual demands', following points suggested by Collier & Thomas (1988), Liebkind (1989) and Okamura (1981).

Concerning social identity formation, Diaz (2014: 63) maintains that, 'individuals are born into or ascribed particular social categories' about which they develop an awareness of membership and an emotional attachment to their 'ingroup'. Diaz deems social identity a fundamental aspect of a person's self-concept internalised through time that influences relations to others on the basis of their belonging to a certain social category. This declaration applies to ethnic identity since it is also a part of social identity. Because ethnic federalism has already institutionalised ethnic groups as fundamental constituents of the state, Habtu (2003) points out the nature of ethnic categorisation in Ethiopian context as an 'obligatory ascribed status'. 'Ethiopian citizens are required to state their ethnic affiliation, 'correct' affiliation being one based on identification with one of the 84 officially given ethnic categories; and 'correct' identification itself is based on mother tongue or household language use or descent' Habtu (2003: 21). However, Noels (2014) considers the assumptions of homogeneity within such large categories as well as expectations of a necessary correspondence between ascribed categories and self-reports of ethnic identity to be problematic. Ethnolinguistic identity is rather one kind of social identity, defined as 'that part of the individuals' self-concept that derives from their knowledge of their membership of a social group (or groups) together with the value and emotional significance of that membership', Noels (2014: 89). Moreover, though the terms ethnic and ethnolinguistic are often used interchangeably in the pertinent literature, Vincze (2013: 15) distinguishes them as they are defined by Reid & Giles (2009): an *ethnolinguistic group* is regarded as an ethnic group defined by its language, whereas *ethnolinguistic identity* is seen as an ethnic identity defined by language.

The official reference to ethnolinguistic groups in Ethiopia is 'nations, nationalities and peoples' who are 'bearers of sovereign power' to use the words of Beken (2007) in the country's constitution. Záhořík and Teshome (2009: 94) describe this reference based on the definition provided in the constitution as 'a group of

people who have or share a large measure of a common culture or similar customs, mutual intelligibility of language, belief in a common or related identities, a common psychological make-up, and who inhabit an identifiable, predominantly contiguous territory'. According to Abbink (1998: 62), 'a new ethnic-based map of Ethiopia and its regional states was introduced already in 1991' under the Transitional Government of Ethiopia where *language* was taken as the chief criterion for boundaries and ethnic identity (emphasis in original). The realisation of the overemphasised place language has in the formation of ethnic identity for Ethiopians can be taken as a context that makes ethnic identity synonymous with ethnolinguistic identity.

The significance of ethnolinguistic identity in Ethiopian contemporary politics is typically described by Smith (2007) and other critical observers as a uniquely bold approach to solving ethnicity-based conflicts in the modern period. Smith (2007: 573) states that, 'Few states in the world, and none in sub-Saharan Africa, have taken the formalisation of sub-national or ethnic identities to the same level as Ethiopia'. Abbink (1997: 160) also explains the extremes of politicised ethnicity in contemporary Ethiopia stating that, 'the discourse of ethnicity has become strongly politicised, more so than ever before, and has created "realities" which did not previously exist'. Thus, ethnolinguistic perception can be conceptualised as the consciousness level or subjective understanding of members of a group about the relationship of language and ethnic identity, which are all contextually bound.

Accordingly, ethnolinguistic identity in Gurage is also directly impacted by the ethnic federalism of the country at large which prioritises language as a major factor in ethnic designation or boundary formation. Gurage was 'widely accepted to consist three major groups of people – Sebat Bet, Soddo Kistane and Silt'e until the split of Silt'e in 2001' Nishi (2005: 158). Based on Shack (1966) who had written about 'the common set of artifacts, technology and mode of production as a people of "ensete culture complex" of southern Ethiopia', Nishi (2005) also mentions the existence of extensive intermarriage between the groups resulting from geographic proximity. Therefore, it is not surprising to question modes of Gurage identity formation among the different linguistic groups and people's attitude and perceptions concerning language use and ethnicity after the 2001 incident of identity reconstruction of the Silt'e. Woldesilassie (2015: 8) takes the politics of Silt'e identity as an interesting case that demonstrates, in a particular way, the commonplace assertion of ethnicity in the literature as a socio-political construct instrumentally used to achieve political and economic gain particularly in the context of change related to the state. Woldesilassie further notes the possibility of social and political contexts as important explanations for the distinction between belonging and identity formation, thereby belonging may function 'as a cultural and symbolic resource, as a marker of identity rather than serving as an identity itself'.

Howard (2000) explains the central tenets of social identity theory as being focused on two quite inseparable dimensions along which individuals define their identities: the social and the personal. Therefore, this study merges both issues of self-identification and subjective perceptions and sense of belongingness across Gurage groups to their official ethnolinguistic identity. Edwards (2009: 22) declares that the course of human history, and its implications for every *individual*, is by and large fuelled by perceptions of *groups* while explaining the relationship of individual and group identities of a person. According to Royce (1982: 7), people obtain their personal ethnic identity from two sources: the ethnic group itself based on how the group defines itself, and the sense of solidarity that devolves upon groups that find themselves to be different from other groups or cut off from society. Llamas et al. (2007: 78) similarly remark on the permeability of socio-cultural and linguistic boundaries asserting that, 'Historical circumstance, social hierarchy, patterns of internal and external interaction, and ideology all help determine the construction of ethnolinguistic identity'. In conclusion, ethnolinguistic perception and self-identification are two sides of a coin in that they are strongly shaped by the sociopolitical and economic contexts beyond kinship and geographical factors.

## 4.   Presentation of data and discussion

Creswell et al. (2010) note that integration of qualitative and quantitative data maximises the strengths and minimises the weaknesses of the data. They add that integration can be achieved by 'reporting results together in the discussion section of a study, such as first reporting the quantitative statistical results followed by qualitative quotes or themes that support or refute the quantitative results' (Creswell et al. 2010: 5). Data in this study was, therefore, organised with this principle in that percentage values of each item with total average are presented in tables and quantitatively described first. Then, qualitative data from the in-depth interviews are presented for comparative discussion of findings. Employing mixed methods was deemed important to meaningfully address the exploratory research questions in this study. Accordingly, this section presents results for both research tools in a way that the quantitative data precedes the qualitative one in which findings are to be compared. In some cases, however, the quantitative data appears more dominant in the description of findings whereas the reverse is true in others, which means that the primacy of quantitative or qualitative data varies depending on the nature of questions under discussion.

## 4.1   Ethnolinguistic perception among the Gurage

The main issues covered under this theme were the perceived connections between language and ethnic identity and the perceived impact of speakers' language use on their ethnic identity. Five interrelated questions in the survey questionnaire assessed these points. Some of the questions were posed directly while others were indirectly related to respondents' ethnolinguistic consciousness. In addition to the quantitative data, respondents' multilingualism and its impact on ethnolinguistic identity construction were assessed based on relevant explanations collected using the semi-structured in-depth interviews.

The first question raised in this regard was whether respondents believed their ethnic identity and language were related. Three options, 'Yes', 'No' and 'I do not know', were given for them to choose from in the survey, and the results from the sampled Gurage varieties are presented in Table 1.1 with percentage values of responses from each group and the total average for all.

**Table 1.1**  Do you think your ethnic identity is related to language?

| EIRL | Chaha | Inor | Wolene | Masmas | Dobbi | Total avg. % |
|---|---|---|---|---|---|---|
| Yes | 74.5 | 83.0 | 94.0 | 90.0 | 63.0 | 80.9 |
| No | 21.3 | 13.8 | 4.8 | 10.0 | 35.8 | 17.1 |
| I don't know | 4.3 | 3.2 | 1.2 | 0 | 1.2 | 2.0 |

The result for this question shows that respondents are highly aware of a strong link between language and ethnic identity since a total average of 80.9% answered 'Yes', only a small portion of participants (17.1%) said 'No', and an insignificant number (2%) did not know the relationship. This is an indication of heightened ethnolinguistic awareness fuelled by its significance in people's everyday interaction with the national context of ethnic federalism. Considering the contextual role of language as the most obvious symbol of ethnic identity, it would be inconceivable to expect otherwise. However, this question was raised to analyse the perception of the link between language and ethnic identity across speakers of different Gurage varieties and to see whether there is any pattern to be observed. Accordingly, those who think language and ethnic identity are connected appear proportionally high for the respondents of Wolene, Masmas and Inor covering 94%, 90% and 83% of total participants, respectively. On the other hand, respondents of Dobbi and Chaha varieties constitute the highest proportion (35.8% and 21.3%, respectively) of the entire sampled population who perceive no connection between language and ethnic identity whereas respondents of Wolene share the smallest proportion (4.8%) in this regard. Therefore, it can be argued that participants' perception of the

connection between language and ethnic identity is not uniform across speakers of different Gurage varieties.

The same question during the in-depth interview produced a significant pattern of reactions across speakers of different Gurage varieties as well. In an overall view, it is clear that people have been made aware of the significance of ethnolinguistic identity in which language is the primary signifier in their identity construction and entire sociopolitical lives. It was found among interviewees that the majority perceived a strong connection between language and ethnic identity. However, these perceptions appeared with heightened protective sentiments among groups who feel threatened by their neighbors like the Wolene and Dobbi compared to Chaha and Inor. One of the Wolene respondents (WO1) states that, 'An issue of ethnic identity begins with language as it is the most important determinant of people's identity'. He adds his observation of how serious the Wolene speakers are about maintaining their tongue as an arsenal of their ethnic identity when he was asked how a person would be treated in Wolene society if he/she does not speak the language as follows:

> Especially after the advent of ethnic politics, people have grown very serious about language use. A person cannot claim Wolene identity without speaking the language in our community. But I do not think there are people who do not speak Wolene at all being a member of the community though there may sometimes be a problem of fluency. Such tradition of extreme efforts to avoid language loss is a new arrival with the emergence of the new government structure of EPRDF where the basic ingredient of nations and nationalities' rights is having a language. There was not such a thing before as far as I know.          (WO1, Nov. 15/2017, Wolkite)

A similarly strong reaction was voiced by another interviewee of the Wolene variety when asked the same question as to how members would feel if someone does not speak his/her heritage tongue saying;

> That is quite serious. They consider such a person ignorant of his/her identity and culture, so it is hard to be in that position! Once I remember that the community elders declared a serious rule about speaking only Wolene amongst the members. This trend was even in place during the Dergue regime. There were community police who would see to it that every member of Wolene community communicates with each other *only* in Wolene language or they would charge anyone who fails to do so. That regulation is not openly practiced at the moment, but its impact is already persistent till now. My children, for instance, spoke Amharic first because we live in town and Amharic is predominantly spoken in Wolkite. However, I taught them to speak Wolene and they are now bilinguals. I think this is a common practice in our community.          (WO3, Nov. 15/2017, Wolkite)

On the other hand, speakers of Dobbi variety demonstrated a slightly lesser emphasis on language as an identity marker at the onset of our discussions. That stance, however, starts to shift towards a strong defensive sentiment of maintaining their tongue as part of their identity particularly when they think of assimilation with the neighboring Mesqan. One of the interviewees (DO1) pointed out the fact that Dobbi people use their language until the present time, but they are now more inclined to speaking Amharic. He adds that, 'The issue of language and its link to identity is not easy for me to understand. I know that Amharic and Guragina are closely related languages, but speaking Amharic does not affect my Gurage identity'. However, a second interviewee mentioned a recent experience of the Dobbi speakers in connection with language as an identity marker when they faced a sense of being assimilated to Mesqan variety saying:

> The Mesqan people have their own language, culture and identity and so do the Dobbi people. There was once an attempt made to teach Mesqan language at school and the Dobbi speakers openly resisted the attempt. There was a serious conflict between speakers of the two languages. People raised an issue that they are not Mesqan even though the district council approved of the plan to teach elementary school children of both Dobbi and Mesqan in Mesqan language. Then, the plan was forced to be dropped. The languages are actually different and communication is somehow difficult between speakers of the two varieties.
>
> (DO2, Dec. 10/2017, Butajira)

According to his points, the idea of assimilation was more worrying to the Dobbi speakers than the difficulty of language comprehension which would ensure Mesqan dominance in all of the administrative and socioeconomic sectors. He pointed out the fact that the entire political and economic administration of the district is dominated by Mesqan speakers starting with the name of the district where Dobbi is excluded. This has resulted, according to the respondents, in a serious grievance among Dobbi speakers who feel discriminated against and marginalized, even when they are prosperous in economic terms and contribute significantly to the area's development in the investment sector. A third interviewee from Dobbi underlined the points raised by the two former consultants, saying that, 'When we think of ethnic identity, what is most important is that the majority should not oppress the minority groups (clans) that make up the larger whole of Gurage people. They must avoid looking down on others in social relationships, and treat them as equals', DO5 (Dec. 11/2017, Dobbi). This remark can be taken as an expressed fear of assimilation and marginalisation of the group in sociopolitical and economic spheres of the speakers rather than a basic worry of language loss equated with identity loss among respondents of Dobbi variety.

The perception of interviewees from Masmas variety, on the other hand, is somehow divergent from the previous views we have discussed about the link between language and ethnic identity. According to one of the interviewees, 'the Masmas people speak the languages spoken around them and live in the same culture as their neighbors except that they most importantly stick to their Orthodox Christian faith. Language is not a matter of serious concern, so children are not pressured to learn the vernaculars', MA (Oct. 27/2017, Shumoro). In fact, other interviewees from the Masmas group raised their concerns about the decline of Guragina varieties even if they prioritised learning Amharic as a language that determines Ethiopian identity. This would not come as a surprise considering the lost and forgotten variety they are named after which could make them feel differently from their neighbors.

In a related second question, respondents were given five alternatives to express their perception of the level of language-ethnicity connection from the range of 'Inseparably connected', 'Highly connected', 'Somehow connected', 'only slightly connected', to 'Not connected at all' with a descending order of importance. This question was raised as a means of evaluating respondents' perception beyond the 'Yes' or 'No' responses concerning their perceptions of the language-ethnicity connection in the survey, presented in Table 1.2.

Table 1.2  How strongly do you think your language and ethnic identity are connected?

| EILC | Chaha | Inor | Wolene | Masmas | Dobbi | Total avg. % |
|---|---|---|---|---|---|---|
| Inseparably connected | 35.8 | 34.0 | 34.9 | 50.0 | 27.2 | 36.5 |
| Strongly connected | 25.3 | 31.9 | 56.6 | 20.0 | 30.9 | 32.9 |
| Somehow connected | 16.8 | 22.3 | 3.6 | 10.0 | 9.9 | 12.5 |
| A little related | 4.2 | 0 | 0 | 10.0 | 2.5 | 3.3 |
| Not related at all | 11.6 | 4.3 | 1.2 | 10.0 | 7.4 | 6.9 |
| Left unmarked | 6.3 | 7.4 | 3.6 | 0 | 22.2 | 7.9 |

The result of this question also confirms the former result since the majority (69.4%) of respondents from all varieties perceive a strong connection between language and ethnic identity while an insignificant share of the total participants think otherwise. What is interesting in this case, though, is the fact that the proportion of respondents who said 'No' or 'I don't know' when asked if they thought language and ethnic identity were related in the former question is not matched by those who evaluate the link as either 'not related at all' or left it unanswered. That is, the former respondents constitute 19.1% of the total sample while the second case covers only about 14.8%. This inconsistency can still be understood as an indicator of a dilemma in the respondents' understanding of how much it is really important to assume language as an identity marker if any challenge arises along the way.

A third point closely related to the connection of language and ethnic identity was asking respondents whether they thought that speaking other languages would affect their ethnic identity. They were similarly given three choices, 'Yes', 'No' or 'I don't know', and the result shows that nearly equal proportions of the respondents agree and disagree with the idea, 47.7% and 49.8%, respectively, that speaking other language(s) might affect the speakers' ethnic identity. However, the responses are not uniform across the groups since Wolene speakers demonstrate the highest share (71.1%) followed by Inor (52.1%) speakers who answered 'Yes' whereas Chaha speakers had the highest share (67.4%) saying 'No' followed by Dobbi (59.3%). This observation is somehow confusing coming from the highly multilingual society of Gurage to perceive speaking other languages as damaging to one's ethnic identity.

The respondents were then given additional perspective on this issue and they were asked to evaluate the effect of speaking others languages on their ethnic identity by choosing from five scales given in the questionnaire if they answered 'Yes' before. The result of their evaluation is presented in Table 1.3 with percentage values for each Gurage variety.

Table 1.3  Do you think speaking other languages has any influence on your ethnic identity?

| LOLE | Chaha | Inor | Wolene | Masmas | Dobbi | Total avg. % |
|---|---|---|---|---|---|---|
| Ext. damaging | 5.3 | 20.2 | 56.6 | 50.0 | 21.0 | 30.6 |
| Very damaging | 14.7 | 21.3 | 7.2 | 0 | 7.4 | 10.2 |
| Affects only a bit | 27.4 | 22.3 | 21.7 | 0 | 24.7 | 19.2 |
| Not that much | 21.1 | 19.1 | 7.2 | 10.0 | 19.8 | 15.4 |
| Not at all | 31.6 | 17.0 | 7.2 | 40.0 | 27.2 | 24.6 |

When considered cumulatively, only 40% of all participants perceive that speaking other languages does not affect one's ethnic identity and nearly the same proportion (40.8%) perceive rather a damaging effect. The middle level of effect represented by 'It affects only a bit' reflects the remaining 19.2% of all participants. Interestingly, respondents who answered 'No' for the first question covered 49.6%, and those who answered 'I don't know' shared 2.5% that appeared disproportionate against the 40% who perceive either insignificant or no impact of speaking other languages on their ethnic identity. This inconsistency is again an additional indicator of lack of clarity on the link of language and ethnic identity among the respondents.

Finally, the participants were asked to express their level of agreement with a given statement on five scales ranging from 'I strongly agree', to 'I agree', 'I am not sure', 'I disagree', and I strongly disagree'. The statement ran, 'It will be alright if Amharic or Oromo languages totally substitute your language since that does not affect your ethnic identity'. This was another question posed to test the respondents' commitment to their belief concerning the connection between language and

ethnic identity one more time, long after the previous questions were dealt with. Table 1.4 presents the result of this question in percentages of the whole sample.

Table 1.4  It is all right if other languages substitute yours

| OLSN | Chaha | Inor | Wolene | Masmas | Dobbi | Total avg.% |
|---|---|---|---|---|---|---|
| I strongly agree | 5.3 | 4.3 | 2.4 | 20.0 | 2.5 | 6.9 |
| I agree | 6.3 | 7.4 | 2.4 | 0 | 8.6 | 4.9 |
| I'm not sure | 8.4 | 7.4 | 6.0 | 0 | 18.5 | 8.1 |
| I disagree | 30.5 | 35.1 | 15.7 | 20.0 | 43.2 | 28.9 |
| I strongly disagree | 49.5 | 45.7 | 73.5 | 60.0 | 27.2 | 51.2 |

A significant majority of respondents (80.1%) chose either 'I disagree' or 'I strongly disagree' for the above statement; only 11.8% of all participants chose either 'I agree' or 'I strongly agree'; and 8.1% were not sure about the statement. The cumulative result once again confirms the respondents' strong belief that language is directly related to ethnic identity. However, there is still an observable pattern of assuming a strong connection between language and ethnicity among the Wolene, Masmas and Chaha groups, respectively in a descending order. Consequently, it is not easy to delineate the perception of respondents about the link of language and ethnicity in a clear pattern. The inconsistency observed above could then be an outcome of the people's exposure to multiple languages in their daily interactions, with the felt need to maintain their language(s) and identity which they feel is constantly threatened in many instances.

## 4.2   Self-identification and belongingness to Gurage identity

The pattern of self-identification and feelings of belongingness to Gurage identity among participants of this study were assessed through both direct and indirect questions included in the survey as well as the semi-structured interviews. To begin with, both the questionnaire and interview entries have an open question for respondents to name their ethnic identity as part of their biographical background. This is considered an indirect form of assessment since the respondents would answer it without serious consideration as it is a common practice in Ethiopia even for issues completely unrelated to a study of ethnicity. Then, other questions were added to further understand respondents' self-identification and sense of belongingness to the officially recognised common Gurage identity. In other words, five closely related questions were raised at different points in the questionnaire after the first point of self-identification reported at the beginning of the entire data collection. The results of these variables are discussed one by one in this section by

adding relevant points of discussion from the interview data. First, the pattern of self-reported ethnolinguistic identity of respondents for the questionnaire survey from all five Gurage varieties is presented in Table 2.1.

**Table 2.1** Participants' self-reported ethnic identity

| EID | Chaha | Inor | Wolene | Masmas | Dobbi | Total avg. % |
| --- | --- | --- | --- | --- | --- | --- |
| Gurage | 93.7 | 93.6 | 0 | 30.0 | 95.1 | 62.5 |
| Specific Variety | 0 | 6.4 | 98.8 | 70.0 | 1.2 | 35.3 |
| Ethiopian | 6.3 | 0 | 1.2 | 0 | 3.7 | 2.2 |

Considered from a total average point of view, only 62.5% of the total participants reported 'Gurage'; 35.3% answered with names of their respective Gurage varieties and a small portion (2.2%) of them wrote 'Ethiopian' as their ethnic identity. The overall picture only shows a mixed pattern of self-identification among speakers of different Gurage varieties, but there is a clear pattern of divergence across different groups when examined separately. For example, nearly all of Dobbi (95.1%), Chaha (93.7%) and Inor (93.6%) respondents reported 'Gurage' as their ethnic identity, whereas only 30% of the Masmas participants and none of the Wolene speakers share the same self-identification pattern with the rest. On the contrary, almost all of the Wolene respondents (98.8%) had identified themselves with their language variety, Wolene, followed by 70% of Masmas participants who usually refer to themselves as *Masmas Bahire-work*.

On the other hand, only 6.4% of Inor, 1.2% of Dobbi and none of Chaha participants mentioned the name of their respective Gurage varieties as synonymous with their ethnic identity. What is more, 6.7% of Chaha, 3.7% of Dobbi and 1.2% of Wolene participants mentioned 'Ethiopian' as their ethnic identity which is not legally considered an ethnic identity at all. The only indication this kind of self-identification has is when respondents are either uncomfortable with or against the way of ethnic identity assignment from available alternatives in the process that they do not approve of. It is a common trend among Ethiopians who are disappointed by ethnicity politics that they feel is discriminatory and contribute negatively to their citizenship in general.

Consistent with this pattern are the responses of participants of the in-depth interview, but the Masmas interviewees demonstrated a tendency of considering themselves one of the clans of Gurage people, not a different ethnic group, unlike the Wolene. One of the interviewees said, 'there is something called *Masmas* as a clan among the Gurage, but the language is not clearly known and it is said to be Kambata. Indeed, the clan does not have a specific language of its own that is known to the people at the moment' (MA1, Oct. 26/2017, Shumoro). He added that the

presence of multiple Gurage varieties is perceived by Masmas people as nothing more than little differences in speech instead of being bases for ethnic differences. A second interviewee from the same group (MA2) said that there was a language the Masmas people were said to have spoken in old times that he heard of on the radio broadcast sometime in the past, but he could not remember its name, 'except that the people had totally shifted to speaking Hadiyya language through time'. From these points of views, it is possible to conclude that the self-reported ethnic identity of different groups within Gurage is not uniform or clear across speakers of all varieties.

Another point included with the aim of understanding respondents' pattern of self-identification in reference to their language was asking them to name their mother tongue. This point was raised with the assumption that it helps in indirectly assessing the pattern of identity construction based on the fact that the Gurage people have a tradition of naming groups of people and districts after their spoken varieties within the Gurage Zone. The results are presented in Table 2.2 below:

**Table 2.2**  Participant's mother tongue

| MT | Chaha | Inor | Wolene | Masmas | Dobbi | Total avg. % |
|---|---|---|---|---|---|---|
| Guragina | 83.2 | 83.0 | – | 100.0 | 24.7 | 58.2 |
| Individual Variety | 2.1 | 13.8 | 95.2 | – | 45.7 | 31.4 |
| Amharic | 14.7 | 3.2 | 4.8 | – | 27.2 | 10.0 |
| Other langs. | – | – | – | – | 2.5 | 0.5 |

All of the Masmas participants, the majority of Chaha (83.2%) and Inor (83%) participants reported 'Guragina' as their mother tongue, whereas none of the Wolene and only 24.7% of the Dobbi respondents mentioned 'Guragina' as their mother tongue. Here, it is understandable that there is a visible difference in the pattern of self-identification and sense of belongingness to Gurage identity while identifying their language across speakers of the sampled Gurage varieties. Among the obvious trends in this case is the fact that speakers of Chaha variety appear to embrace their Gurage identity as closely as their Inor and Dobbi counter-parts. On the contrary, speakers of Wolene variety appear to make sure that they avoid being identified as 'Gurage' as much as possible or considering their vernacular as 'Guragina'. The case of Masmas group is, in fact, unique as they do not have a variety to consider solely their identifier or even believe that they had one in the past. Nearly all of them belong to speakers of Inor, Ener and Endegegn varieties, so this point somehow reflects their sense of belongingness in terms of naming their mother tongue as 'Guragina', rather than referring to the varieties separately.

One of the direct questions posed to participants in relation to their feeling of belongingness was if they believed speakers of all Gurage varieties belong to one

ethnic identity, 'Gurage'. Three alternative answers, 'Yes', 'No' and 'I don't know', were given in the questionnaire for participants to choose from. Table 2.3 presents the result of this query for the sampled Gurage varieties:

**Table 2.3** Do speakers of all Gurage varieties belong to one ethnic identity?

| AEID | Chaha | Inor | Wolene | Masmas | Dobbi | Total avg. % |
|---|---|---|---|---|---|---|
| Yes | 69.5 | 74.5 | 20.5 | 90 | 58.0 | 62.5 |
| No | 22.1 | 13.8 | 61.4 | 10 | 40.7 | 29.6 |
| I don't know | 8.4 | 11.7 | 18.1 | – | 1.2 | 7.9 |

On a cumulative average, a significant share of the entire sample in the survey covering 29.6% do not believe that speakers of all varieties share a single ethnic identity and 7.9% of the sample answered that they do not know. However, more than 60% of the total participants on average think that speakers of all varieties share one ethnic identity as people of Gurage. However, the responses from each variety in the survey are not close to one another on this topic. For example, the largest share of respondents who do not think that speakers of all Gurage varieties share one ethnic identity comes from Wolene at 61.4% followed by Dobbi (40.7%) and Chaha (22.1%) when individual groups are observed separately. This is interesting considering the trend of Dobbi speakers who embrace their official Gurage identity at the same time that they do not actually think speakers of all varieties belong to a single identity. On the other hand, the responses of Wolene speakers again show a certain level of paradox in this regard. Even though the majority of respondents are adamant about their ethnic distinctness from Gurage, more than 20% of them answered 'Yes' to the same question. Furthermore, the presence of more than 20% of respondents from Chaha variety who do not think that speakers of all Gurage varieties share a common ethnic identity is questionable considering their consistent embrace of Gurage identity. Even if the size of participants from Inor variety is smaller in this regard, it appears that the idea of differences is entertained across different Gurage groups on a different level. In other words, while there is a group that would like to be recognised as a distinct ethnolinguistic group, there are also others that are willing to compromise their differences and prefer to stay united within the common Gurage identity.

The same pattern was repeated by participants of the in-depth interview on their perception concerning the ethnic identity of speakers of different Gurage varieties. Most of the participants from Inor, Chaha, Masmas and Dobbi think that these people share the Gurage ethnic identity and the varieties are dialects of a given language. One of the Dobbi respondents (DO1) expressed his strong belief on the shared identity of speakers of different Guragina varieties hinting at the

people's origin that he knows. He said, 'As to me, Dobbi speakers are closely related to other Guragina language speakers. All the Gurage people claim descent from Atse Zereyaekob and Fasilladas, Gondarian kings. The legend of Gurage origin is related to Azmach Sibhat, so all Gurage people are closely related and belong to one ethnic identity', (DO1, Nov. 29/2017, Butajira). An interviewee from Inor (IN1) also pointed out that having dialectal differences was not a unique characteristic of the Gurage people which others might think. Rather, he explained the inherent feeling of belongingness to Gurage identity among the people in the following statements:

> The differences in linguistic forms do not reflect differences of the people. If I go to Kistane area, for example, they will accept me like one of them knowing that I belong to the *Sebat bet Gurage* even if it is difficult for me to speak and comprehend their Guragina properly. The same applies to someone who comes to Enemor from Kistane. The people do not prioritise their linguistic varieties when it comes to Gurage identity.                             (IN1, Oct. 27/2017, Gunchire)

However, another interviewee from Chaha answered the question with some level of insecurity in his voice referring to the fact that the speakers of all varieties have a national recognition as the 'people of Gurage'. He added, 'There is a sense of unity among the people as well; it is not just an external recognition', (CH3, Aug. 15/2015, Wolkite). Those participants who support the unity of the people instead of focusing on the differences of their linguistic varieties expressed their wishes and frustrations with diversity like this interviewee from Inor (IN2):

> I do not think Gurage identity is tied to the language at all. Having many languages among the Gurage would not have been a problem if there were studied and well organised efforts to unify those varieties. We could have seen some bright future for the language. There is also variety of languages among the Oromo, but they managed to be one and unified as a people unlike us.
>                                    (CH2, Oct. 27/2017, Guncihre)

The confusion related to having multiple tongues and the controversy surrounding this fact had seemed to change respondents' stance at the beginning when they were asked the question of shared identity. Many would begin by stating that language and identity are inseparable, and later argue that Gurage identity should not be tied to the language which is a self-contradiction. The former interviewee from Inor (IN1), for instance, answered the question of whether linguistic diversity was a challenge to Gurage identity or not in the following statements: 'The linguistic diversity does not have any impact on the unity of Gurage people as an ethnic group. However, there are differences of treatment when the language varieties are used on broadcast media… Such things have a negative influence because they initiate inter-group competition among the people'. Though he claimed there was a

complete harmony of the Gurage people irrespective of their linguistic differences at the beginning, his own response to the second question betrays the first stance. This, in turn, is an implication of the public desire to maintain unity with different levels of conviction whereas language issues are stealthily deconstructing their inherent wishes. The caution respondents take in answering such sensitive questions related to language and identity alone is a demonstration of basic discomfort with the incompatible issues of ethnic group identity and linguistic identity that confront them in major socioeconomic aspects of life and political participation among Gurage people.

A similar sentiment was reflected by many of the interviewees from these varieties, but not everyone agrees on the same level both about the significance of language in ethnic identity construction and the challenges of linguistic diversity. Another interviewee from Inor (IN5) had a slightly different stance from the above respondents on the question of whether speakers of all Gurage varieties belong to one ethnic identity. She said that all Gurage people in *Sebat Bet* have the same origin as a group and that the multiple languages are spoken by branches of one big family. Then, she mentioned that she did not have a clear knowledge of the relationship of other Guragina speakers like the *Sodo/Kistane*, though she knew that they also speak a language that is quite close to the *Sebat Bet* Gurage. Moreover, she expressed her thoughts that the Wolene speakers sound really different if she were to compare. She said, 'I had many Wolene friends in Wolkite for five years while I was in high school, but I do not remember understanding a thing they said ever. Their language is quite different from other *Sebat Bet* Guragina as well as the "Sodo" Gurage', (IN5, Oct. 27/2017, Gunchire).

This interviewee did not seem to feel any connection between the Wolene speakers and the rest of Guragina speaking population though another interviewee from Chaha (CH6) thought their demand for a separate identity was politically motivated. He argued that he had read some historical literature on Gurage people, and all of them convinced him of their strong synchronised identity. He also claimed to have multiple opportunities to meet with speakers of different varieties such as Inor, Ezha, Endegegn and others, and the only challenge related to ethnic identity came from Wolene. In his view, speakers of other varieties normally cherish being identified as Gurage. He finally remarked that, 'in my understanding, the Wolene also have similar ways of speech, dressing style, cultural elements and their demand of a different identity is rather politically motivated than being a result of actual difference'. (CH6, Jan. 15/2016, Wolkite).

On the contrary, participants of Wolene had demonstrated a completely different stance on the same issue. Almost all of them claimed a distinct ethnic identity and language from the rest of the Gurage people with a strong conviction about

their views. The first interviewee (WO1) expressed his thoughts that it is impossible to unite people who cannot communicate properly in terms of language when asked if speakers of all Gurage varieties shared a single ethnic identity. He rather felt that the Wolene and the Gurage people were put together for ease of political administration rather than their shared identity. His stance would not change later when asked to point out distinct features of Wolene identity during our discussion. His response for the second question runs:

> First of all, the Wolene people are not well known to other people of Ethiopia except that one German scholar wrote about them a few years ago explaining that Wolene is different from Gurage. But they have not yet got official recognition as a distinct group of people. Most of the Wolene population lives in poverty and backward life style because they are dominated by others. They are still using domestic animals for transportation in the twentieth century. Moreover, the Wolene are still lagging behind the rest of Ethiopian nations and nationalities in terms of access to education and economic benefits.                    (WO1, Nov. 15/2017, Wolkite)

It is observable from his responses that the question of distinct identity was immediately met with grievances of the socioeconomic marginalisation of the Wolene people. Therefore, another question was posed to check his views further and understand the issue better: 'Do you think it is easy for the Wolene people to live with other Guragina speakers in harmony if all the socioeconomic problems you mentioned were solved?'. The respondent kept his firm stance saying 'No'. Rather, he equated considering Wolene and Gurage as one with mixing water and oil because of the differences between the two. He remarked that:

> They cannot be united. Even if the government does not want to recognise the Wolene as separate from Gurage, they will continue living in suspicion and disappointment instead of feeling a sense of harmony and belongingness. This is a matter of getting recognition because it is well deserved. The Wolene people are no less than anyone like the Gurage in many ways. They can fairly compete in terms of economic power and having educated and influential members who live in big cities like Addis Ababa in the same manner as the Gurage.
>
>                                                             (WO1, Nov. 15/2017, Wolkite)

This is a point that shows a strong conviction on the part of the interviewee that keeping the two peoples together with the claim of shared identity will always be met with grievances and resistance. It is an indication of the strongly felt desire to be recognised as a distinct ethnic group and enjoy every benefit that the recognition entails: social prestige, political participation, economic development, independent administrative unit, ensuring language rights and access to education. However, the ambition to acquire official recognition appears more powerful than the actual differences of the group from other Gurage groups.

By the same token, a second interviewee (WO2) explained all the constitutional requirements of a group of people to gain recognition as a distinct ethnic group as being fulfilled by the Wolene. Yet, he complained it was not successful in gaining the desperately desired official recognition when asked to mention distinct features of Wolene identity. Then, his argument for the distinctness of Wolene from the Gurage begins by referring to a point that the Wolene ethnic group started the struggle for official recognition in 1993 (25 years ago). 'Unfortunately', he said, 'officials in the zone always claim that they are the same with Gurage because they share a common history and culture though they differ linguistically. But that is not true at all. Our language does not share a single word with other Gurage languages. The culture is not shared either', (WO2, Nov. 15/2017, Wolkite). He added that having shared traditions with people living on the same border is natural, but that does not guarantee shared identity with their neighbors. The third interviewee (WO3) also had similar views about the distinct identity of Wolene instead of sharing it with speakers of other Gurage varieties. He pointed out the different historical origins of the two groups as a basic source of their difference claiming that the Wolene are more related to the Silte and Harari than their neighboring Gurage.

None of these interviewees deny the fact that the Gurage people are highly intermarried with the Wolene and they have lived together for many centuries. However, the arguments surrounding shared ethnic identity are soured by demands of official recognition and the socioeconomic benefits that follow for Wolene participants. On the other hand, those who feel they share ethnic identity with speakers of all language varieties including Wolene seem to compromise their knowledge of the differences for fear of disintegration. Therefore, both the quantitative and qualitative data reveal that not all of the speakers of different Gurage varieties feel belongingness to Gurage ethnic identity in the same way for complicated reasons.

Another direct question posed in this regard was how they would feel about being ethnically recognised as 'Gurage' assigned to all speakers of Gurage varieties as is the case when this study was conducted. Respondents were asked to choose from a range of five levels written in phrases that would best express their feelings starting from 'extremely happy' through steps to 'extremely sad' the results of which are presented in Table 2.4:

Table 2.4  How do you feel about being recognised as a Gurage person?

| FGID | Chaha | Inor | Wolene | Masmas | Dobbi | Total avg. % |
|---|---|---|---|---|---|---|
| Extremely happy | 75.8 | 66.0 | 3.6 | 100 | 48.1 | 58.7 |
| Very happy | 12.6 | 26.6 | 1.2 | – | 19.8 | 12.1 |
| Nothing | 10.5 | 5.3 | – | – | 22.2 | 7.6 |
| Very sad | 1.1 | – | 8.4 | – | 4.9 | 2.9 |
| Extremely sad | – | 2.1 | 86.7 | – | 4.9 | 18.7 |

It is observable from Table 2.4 above that respondents' reaction to the common Gurage ethnic identity assigned to speakers of all Guragina varieties has a different pattern across sampled groups. On the one hand, all of Masmas participants, the majority of Chaha, Inor and Dobbi speakers are predominantly in the 'extremely happy' and 'very happy' zone, whereas those from Wolene variety are dominated by reactions in the opposite zone of 'extremely sad' and 'very sad'. On the other hand, 22.2% of Dobbi, 10.5% of Chaha and 5.3% of Inor speakers are found to be neutral in their reaction to Gurage identity assigned for all. What is more, nearly all (95.1%) of Wolene participants reacted as quite sad to the Gurage identity assignment for speakers of all varieties while more than 20% thought that speakers of all varieties share the same ethnic identity earlier in the survey. Besides, though they expressed a high level of support (happiness) to be recognised as 'Gurage', a significant share of participants from Dobbi (40.7%), Chaha (22.1%) and Inor (13.8%) do not think speakers of all Gurage varieties belong to one ethnic identity. Still, the neutrality of reaction among speakers of Inor is significantly consistent with the majority (74.5%) reporting they think all variety speakers belong to the same ethnic identity compared to a few participants who think otherwise, and remain either happy or neutral to be recognised as 'Gurage'. The two closely related items examined above are central points that demonstrate the complicated and problematic situation of ethnolinguistic identity construction and feelings of belongingness among speakers of different Gurage varieties.

Another question then added to assess the perceived commonalities shared by the groups in this study was asking participants whether they believed their spoken Gurage varieties had shared linguistic features. The results are presented in Table 2.5:

Table 2.5  Do different Gurage varieties share common linguistic features?

| LSFG | Chaha | Inor | Wolene | Masmas | Dobbi | Total avg. % |
|---|---|---|---|---|---|---|
| Yes | 88.4 | 94.7 | 6.0 | 80 | 90.1 | 71.8 |
| No | 9.5 | 5.3 | 72.3 | 20 | 9.9 | 23.4 |
| Don't know | 2.1 | – | 21.7 | – | – | 4.8 |

Most of the participants from Inor (94.7%), Dobbi (90.1%) and Chaha (88.4%) believe that their spoken varieties share common linguistic features while the majority of Wolene (72.3%) think otherwise, and more than 20% of them do not know if that is the case or not. This point, once again, confirms the divergence of Wolene speakers from the general population of the study concerning the ethnolinguistic identity and commonalities of their spoken varieties as a group of people. They had again confirmed their consistent claim of distinctness from the Gurage people with their response to this question as well.

Again, because it is simple to answer a question with either 'Yes' or 'No' without further explanation, a closely related question was added asking participants to identify the reasons why they think their spoken varieties share linguistic features if they answered 'Yes'. A total of four alternatives were given to choose from and an open space left for them to fill in any other reason they thought of. The four given alternatives were: peoples' geographic proximity, close kinship ties among speakers, remote kinship ties among speakers and I do not know.

In their replies, half of the Masmas, 48.4% of Chaha, 47.9% of Inor, and 39.5% of Dobbi respondents think that the cause of shared linguistic features among different Gurage varieties is close kinship ties of the speakers. On the contrary, the majority (79.5%) of Wolene respondents left this question unanswered which can be understood either as part of their consistent claim that their variety does not share linguistic features with others or that they do not know about the linguistic features other Gurage varieties share. The other factor considered to be a reason for shared linguistic features among Gurage varieties was geographic proximity of speakers according to 44.4% of Dobbi, 38.3% of Inor, 37.9% of Chaha and only 6% of Wolene respondents in the survey. On the other hand, 40% of Masmas respondents think remote kinship ties of speakers is the reason for shared linguistic features among Gurage varieties. Finally, an insignificant number of participants from all varieties answered 'I do not know' for the same question.

## 5.   Summary and conclusions

To summarise the main points of in this chapter, both the quantitative and qualitative data reveal that speakers of different Gurage varieties perceive language as strongly connected to their ethnolinguistic identity though there are certain differences of perception across different groups. There is a consistent perception of inseparable connections between language and ethnic identity among the Wolene group which indicates the speakers' desire to align their spoken variety with their ethnic identity as a central element in self-identification. In this regard, the central point emphasised by participants of this study was the significant role language plays in their identity construction serving as a shield from sociopolitical threats of dominance and discrimination by other groups. Most importantly, the participants from Wolene and Dobbi varieties clearly indicated the importance of language as an identity marker perceived from two differing perspectives. The Dobbi speakers demonstrated a strong desire to avoid assimilation with a neighboring dominant Gurage group on unequal terms while the Wolene speakers had a clear wish to acquire official recognition as a distinct non-Gurage ethnic group leading to the

constitutional rights of self-determination. The results also reveal the presence of public dilemma between deciding which group is actually fit to be considered 'Gurage' since they do not unanimously agree on the issue that speakers of all varieties belong to one ethnic identity. On the contrary, speakers of most varieties chose to compromise inter-group differences and let go of competitions for the sake of Gurage unity accepting the common identity although they feel the dilemma too. There are a number of factors that feed the public ethnolinguistic consciousness to appear this way. One sound reason could be the fact that ethnolinguistic identity is generally understood as formed based on blood ties, origins, common history, shared traditions and the psychological makeup of the people as a group in Ethiopian context. In conclusion, all of the above discussions demonstrate the lack of uniformity of public perceptions concerning the association of language and ethnicity, modes of ethnolinguistic identity construction and the nature of speakers' relationship as constituents of a given ethnic group, Gurage.

## Acknowledgements

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# Sociolinguistic functions of the secret language of Gurage females

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This paper is concerned with the sociolinguistic functions of the secret language spoken by a minority group within the Gurage,[1] namely the Fedwet. This is the name of the speakers and the linguistic variety, mainly used by women who were followers of a former local religious tradition in Gurage found in southern Ethiopia. The qualitative approach of data gathering and analysis was used. Primary data were gathered by elicitation of words, recording of free texts and interviews. A total of 20 consultants participated in the interview, 12 of them also participating in the elicitation of words and the performance of texts. The interview responses were quantified for a descriptive statistical analysis. It was found that the sociolinguistic functions of Fedwet include the establishment of a secret communication among young girls to form a specific identity, and for various religious purposes. The motive for using it is related to the social position of women and the traditional belief system of Gurage.

**Keywords**: sociolinguistic function, gender, secret language

## 1. Introduction

The discussion of sociolinguistic function begins with some attempt to define 'sociolinguistic' and 'function'. According to Wardhaugh (2006: 13), sociolinguistics is concerned with the investigation of the relationships between language and society with the goal of a better understanding of the structure of language and of how languages function in communication. The Fedwet group selectively use a secret language instead of their basic language, Chaha, on different occasions or when they need to hide their information from outsiders. It is important to find the function and the motive for using this secret language.

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1. The term Gurage has been used to designate Semitic-speaking groups surrounded by Cushitic-speaking people

This study focuses on the sociolinguistic functions of the secret language used by the group called Fedwet (a social variety mainly used by females following former local religious tradition) of the Gurage society in the area of Chaha found in Southern Ethiopia. The name Fedwet refers to females who were followers of the Damamwit 'female cult' traditional belief. Their secret language took its name, Fedwet, from the Fedwet girls who use it, although the Fedwet are part of Gurage society and speak one of the 'regular' Gurage languages, in this case, the Chaha language. Several studies exist on the Chaha language. In the Fedwet secret language, little research is available apart from Leslau (1964) and Sentalem (2005), which only focus on the description of the 'language' and cultural practices, not analyzing its sociolinguistic functions.

As Christianity and Islam replace the local religious systems, spoken Fedwet is becoming lost. The goal of this study is to investigate the sociolinguistic functions of the Fedwet who live in the Chaha area, Chaha being their natural language. Specifically, to identify the functions for which it is used and the motivation for using Fedwet, a cultural trait unique to the Gurage, before it totally vanishes.

To facilitate this analysis, the research is divided into the following sections: Section 2 presents the practice of Gurage religion and the Damamwit cult, in which Fedwet is related to the traditional belief system; Section 3 discusses related literature and the conceptual framework and Section 4 presents methodology. Subsequently, Section 5 presents the motive for using a different language, **and** Section 6 addresses the functions of Fedwet, which is analyzed in subsequent examples and also considers interview responses.

## 2.   Religion and the Damamwit cult

The Gurage people are followers of Muslim and Christian religions, such as Orthodox, Protestant and Catholic, as well as traditional religious beliefs. Shack (1966: 173–176) stated that there is no discrimination in terms of religion; the people live together peacefully. Both Christianity and Islam are outside religions imposed on the Gurage by invasion. Many people also participate in traditional religious practices alongside their systematized religion,[2] such as offerings to a divinity called Damamwit 'the female cult.' All the followers of this traditional belief are females, except their leader, who is a male called *dam^wam*. According to Shack (1966: 187–190), this cult was hierarchically structured, the central position being occupied by a female deity nobody has ever seen. The Gurage believed that

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2.   Systematized religion is governed by institution and is recognized by government as being different to traditional belief system.

Damamwit understood the multiple expressions of her supernatural power to inflict harm.

This group's traditional belief system is different from other cultural and traditional belief practices of the Gurage. All group members who are followers of the Damamit cult are called Moyet. In addition, this term is also the name of the spirit of Damamwit. Within the group, however, there is a special sub-group who speak a different 'language' through training, called Fedwet (Leslau 1964: 14–17), in order not to be understood by outsiders.

According to Shack and Habte-Mariam (1974: 38), Gurage women have, in the past, had a special style of chant sung in praise of Damamwit, the chants presented by women and girls, Damamwit is the female's protector of the traditional belief of Gurage, associated with health well-being for the community, fertility of the females and punishing irrational men.

Gebreyesus (1991: 140–143) states that the Damamwit was driven out from the Muhar area and arrived in the land of Chaha, communicated through a spirit. Shack (1966: 177–185) states that, of the many ritual ceremonies in the Gurage calendar, the Damamwit in particular is exclusive to Gurage females. Females who attend the rituals expect to receive benefits such as being cured of illness. During the festival, each of the chiefs of Moyet leads his group of females in the Fedwet songs and dancing for the honor of Damamwit. On that day, the chief has the privilege hitting with his stick anyone who misbehaves in an unacceptable way. During the festival, if the chief happens to kill someone, no punishment is imposed because it is accepted that it is an act of Damamwit and that the spirit empowered him. This exemption is only observed during the festival, and does not function other days.

## 3.   Related literature and conceptual framework

There are very few studies available on secret language in the Ethiopian context; however, there are some articles that have covered these areas. Leslau (1952: 102) works on Ethiopian minstrels' 'azmari' argot. He states that the main characteristic of this argot is distortion of the root of their basic language, Amharic, using metathesis, augmentation, reduplication, substitution of a radical and shortening procedures.

Anbessa (1987) writes about 'women's speech among the Sidama'. He states that, in traditional Sidama culture, a woman is not allowed to mention the names of her in-laws, her husband, the sub-clan of her husband or words that have the same initial syllable as any of these three. To avoid these taboo words, the women use different methods, such as circumlocutions, synonyms and initial syllable substitutions. These women's speech systematically varied from the speech of men.

Outside Ethiopia, Manfredi (2008), describes Rendók, a secret youth language of Sudan, which is an Arabic-based secret language. He argues that the secrecy of Rendók is performed through morphological manipulation of the Sudanese Arabic lexicon. Linguistically, it represents approaches of phono-morphological manipulation like metathesis, phonotactic adaptations, ungrammatical affixation and word truncation. The sociolinguistic function of this argot is used for expressing urban youth culture.

Wolfer (2011: 44) has researched 'Arabic secret languages' and states that secret languages reflect rich tradition and culture, as well as ethnic and religious diversity.

The conceptual framework applied here is based on the sociolinguistic functions of the secret language of Fedwet, thus, concepts that are related to this study are raised and discussed. Mainly, language has two key functions, which are interactive, and symbolic (Evans & Green 2006: 1). Edwards (2009: 55) also classified language into symbolic and communicative functions. The distinction between the communicative and symbolic functions lies in the differentiation between language in its usually understood sense as an instrumental tool and language as a sign or symbol.

The function of language goes beyond being a communicative instrument in multilingual communities in which, with its language, a group distinguishes itself. Therefore, language has social meaning, social connotation and is linked with identities. When we look at Fedwet, it is used more for communication, to transmit hidden information and to disclose identity. Group members used their language to categorize themselves, so that a girl who speaks the Fedwet 'language' identifies as part of the Fedwet group, using it for group membership and identity formation in addition to communication.

Lewis and Simons (2016: 16–17) define shared identity by stating that it is a community referring to any group that is unified by a sense of shared character. They also discuss how language and identity link strongly, and assert that language variety is associated with a group's identity. Also, language is so tightly bound to identity that a group may be identified by the name of their language and, their language may be identified by the name of the group or the location in which they live. The Fedwet are identified by the name of their 'language', 'Fedwet', and their language also identified by the name of the group; they use the same word for both. Thus, we can understand that language has a stronger connection with identity, in addition to other issues.

Generally, in this research, sociolinguistic functions are considered in related to culture, social change and the real situation of society.

## 4.   Method of data collection and analysis

In this study, the qualitative and quantitative approaches of data gathering and analysis were used. The targeted population were women who identified as group members of Fedwet, both when they were young and now that they were older; with no upper age limit. In another work, Leslau (1964: 2) states that, previously, girls join the group and learn Fedwet secret language when they are young, usually joining the group when they are 13 and above.

The culture of Moyet was practiced widely for a long time in the Gurage area; however, today most of the society rejects Fedwet in relation to its traditional belief. As a result, Fedwet is only known by adults who were Fedwet girls when they were young and who can recall it. Today, it is not used by the younger generation.

This study focused on primary data collection. The instruments used were sociolinguistic interviews and elicitation, both of which were recorded.

### 4.1   The sociolinguistic interview

I used the technique of sociolinguistic interview to elicit information about why subjects preferred to use Fedwet alongside their ordinary language, for which functions they are used, and why Fedwet is endangered.

Labov (1981: 8) states that sociolinguistic interview is governed by a number of goals, including its use to obtain the full range of demographic data necessary for the analysis of sociolinguistic patterns (age, residential, school, group members), to obtain comparable responses to questions that define contrasting attitudes and experiences among various sub-cultures, to trace patterns of communication among members of the neighborhood and to establish the position of the speaker in the community.

Sociolinguistic interview is used for linguistic data in different speech contexts. It comprises an informal part consisting of free conversation for eliciting language or local use, and a formal part. However, it has some limitations. According to Wolfson (1976), interview has the following limitations: it is time-consuming, small scale, has the potential for subconscious bias and potential inconsistencies. In addition, the naturalness and certainly the informality of recorded speech can be called into question, thus the interviewer needs to make the speaker feel comfortable with the situation.

Regarding the sampling method, Ilker et al. (2016: 2) stated that purposive sampling is a non-random sampling technique, it is the deliberate seeking out of participants due to the qualities of the participants. It pairs with nominated sampling, in which participants are found by asking Chaha speakers to identify those

who speak Fedwet. Speakers of Fedwet do not have the confidence to say 'I can speak Fedwet' because they are fearful of the attitude of society towards their systematized religion.

## 4.2   Elicitation

In spite of the problems pointed out in the literature, I found elicitation very useful for this study because it helped to collect linguistic data examples and sociolinguistic function. It was applied by sitting down with one consultant at a time and asking them to say Chaha equivalent words with their language. In addition to that, I asked consultants to say texts and songs in their secret language, while they tried to recall the texts (see Section 6).

The consultants included for elicited texts were 12 women who were part of the culture and speak Fedwet. In addition to these 12 consultants, eight other consultants were included who were Fedwet but who had forgotten the language. Thus, a total of 20 consultants participated in the interview to address the sociolinguistic functions, and a sample of 12 consultants participated in the elicitation of words and texts. The speakers were from the ages of 38 to 70, and above. The other eight consultants who were added for interview were women elders above the age of 70. Finding a significant number of consultants who could speak Fedwet was difficult. In order to minimize this problem, I tried to use different methods to help get better data. The first method established contact people who were accepted in the society and tried to get the data through discussion and by using relatives (researcher's relatives) who live in the area to reassure the consultants that they could have confidence in the researcher. Different works of literature, like Leslau (1964) and my elder consultants, argued that Yəbit'arə is the birthplace of Moyet practice.

The researcher tried to visit most Chaha districts and villages to gather data, however, it was difficult to find the data because of its endangerment. However, the researcher got better data at Yəbit'arə and Mokjərər Chaha villages, where people have tried to remember Fedwet because they see themselves as its cultural owners. Thus, the researcher obtained most of the linguistic data in these two villages after several trips in difficult situations. In addition, the age of the consultants and restricted use also affect the linguistic data, and it is collected by elicitation, i.e. no actual communication situation is recorded because the practice becomes devastated throughout the year. The researcher speaks Chaha as an L2 advanced speaker, and communicating with the consultants was not difficult.

To check the data, three key consultants were identified who spoke Fedwet better than the others and the researcher talked with them on the recorded data. My key consultants are Almaz (46, born in Mokyerer. Chaha is her mother tongue

and she is a housewife) Berko (62, born in Yəbit'arə village. Chaha is her natural language and she is a housewife) and Dulat Bireda (52, born in Yabit' are, but now lives in Amorameda village, Chaha district. She is participating with the culture and tourist office). She was supportive and had good know-how on the Fedwet secret language, as well as the culture. I selected these women as main consultants because of my assistant's advice, and also because they were Fedwet when they were young. They are also active members of the community, and I was asking them to identify others who speak Fedwet. They were cooperative and supportive during my data collection. I also used consultants who were speakers of the social variety, who attempted to remember when I asked them, and were also cooperative in giving the required information. However, I was not able to get as many consultants who could speak the social variety of Fedwet as I had hoped.

Regarding the analysis of the interview questions, the consultants were asked to list the purposes for using Fedwet and then their responses are counted and marked according to the frequency of the answer. Finally, the collected texts were transcribed and analyzed with frequent examples.

## 5. The motive for using a different language

According to Lewis and Simons (2016: 126), the motive for using a different language is derived from the use of language for its associated functions. Community members must perceive that there are benefits that accrue when speaking the language in appropriate places to talk about appropriate topics with appropriate people. In addition, sociopolitical issues, economic status and language contact are factors that have contribution to language alteration. Newmeyer (2003: 20) writes about the roles of formal and functional factors for language change. Formal principles play a central role by governing the organization of grammar. A functional explanation refers to properties of language users, specifically their interest in producing and comprehending language properly. However, most linguists argue that both formal and functional factors have a great role in language change.

The Fedwet group choose to use their secret 'language' instead of Chaha on different occasions or when they need to hide their information from outsiders. It is important to discover the motive for using this secret language. To identify and categorize the reasons, the collected data was analyzed and the real situations of Fedwet were considered. There are different reasons that females have initiated to use a different variety instead of their basic language Chaha. The social position of females given by society has a great role in leading them to follow traditional belief and using a different 'language' in different instances. Religion also governs

the society in all aspects, including language. Thus, the social position of Gurage females and religious practices in Gurage may answer the question of why the Gurage females use a different 'language'.

## 5.1   Social position of Gurage females

The socio-cultural situation and attitude of a society are important in understanding women's social position in any society in general and in Gurage for this study in particular. A lot has been said regarding Ethiopian male-dominated social structure, and the position of females in Ethiopia also follows this line. Accordingly, the question for this research is why the Gurage females use a different 'language'. The answer might be multifarious, but the researcher hypothesizes that it is related to power. The social hierarchy in the country is male dominant, which has a predetermined unwritten rule that labels women as 'odd' when they are believed to be deviating from it.

In Gurage culture, when families think that a girl has reached marriageable age, they select a husband for her. They do not allow her to choose her partner. Previously, girls were not even allowed to go to school. Even today, they do not have the same right to education as boys, as high schools (9–12) are far from home, and girls are compelled to drop out from school at grade eight. Even if girls want to continue, families do not allow it because of distance, and also because of different perceived fears, so most Gurage female students do not have the opportunity to complete their high school education, let alone to attend institutions of higher learning.

In addition, women are excluded from decision-making processes. According to Bahru (2002), the Gurage have social institutions that are based on traditional rules and regulations that play significant role. Minor and major disagreements are solved in the context of Gurage traditional low by clan elders, who come together to agree on the fundamental rules governing their community. Traditional governance is dominated by males, as the Gurage is a male- dominated community in all regards. There are no women representatives in the assemblies, and they are rarely allowed to present their own cases themselves.

When it comes to property ownership and sharing of family inheritance, female members of Gurage society still do not have equal rights to land share and ownership. If a girl has brothers, property is shared among them, excluding her. Girls are expected to acquire home skills like fetching water, gathering wood, cooking food, etc. When a female is married, she carries out the work of childbearing, breastfeeding and caring for and handling family responsibilities confined to household management, but she is excluded from any other concrete family decisions. These situations of low societal position prompt Gurage women to become involved in different traditional belief systems, including their systematized religion.

My fieldwork interview response shows that the culture of Moyet allowed females the opportunity to enjoy the ceremony of Damamwit celebration days with their friends. On those days, a husband does not have power over his wife, and the woman has the right to come back home in the middle of the night. Thus, this study tried to find out why Gurage women use Fedwet in different situations, instead of their natural language, and has identified several explanatory reasons for it.

As we have discussed above, the low social status of females in society is the first and the most compelling reason to lead them to use a different 'language' that is not understood by the dominant group male, so that they used Fedwet in different circumstances when they want to hide their communication.

Texts and poems that are used by the Fedwet and in the practice of Moyet culture show the position of females and their role in society. In 'Gurage' society, talking about private issues openly is restricted, especially for females. Accordingly, they do not have the chance to talk openly with their family and friends, making it a good option for them to communicate secretly with group members.

## 5.2    Religious practices of Gurage females

The traditional belief of Damamwit has a large role in Gurage society. Gurage women use their secret language for worship and for delivering their prayers to Damamwit. Gebreyesus (1991: 141) states that previously, many of the Gurage people believed that Damamwit was one of the three children of God the father. Damamwit is celebrated twice a year, in June and November, and only women and girls attend the ceremony. During these celebrations, tremendous amounts of donations are made. The group members of Moyet followed a local religious cult, whose former adherents have now become Christians or Muslims. Although they are part of the Gurage society and speak one of the 'regular' Gurage languages, they have also acquired a group-specific variety (Fedwet), which is not understood by outsiders.

The culture, in addition to the use of Fedwet, has become endangered because of the expansion of the systematized religious education (Islam and Christian) and modernization.

The low societal position of Gurage females compels them to observe different traditional beliefs in addition to their systematized religion. Religion also governs society in all aspects, including language. Group members also use their 'language' for the purpose of worshiping Damamwit. Thus, the social position of Gurage women and religious practices in Gurage answered for which specific purposes they use a different 'language.' If these are the cases that forced the Fedwet to use a different 'language', it is important to identify the usages of Fedwet. We will look at these by analyzing messages of the data that are collected through elicitation and the result of the interview.

## 6.   The sociolinguistic functions of Fedwet

Gurage secret society uses Fedwet **to communicate the private life of young girls**. Trudgill (2000: 66) argued that taboo is one of the explanatory factors that separate language. Taboo has a powerful influence on the growth of separate sex vocabularies. If women are not permitted to use the original language term, then new words or paraphrases are used. In Gurage, using taboo words is strictly forbidden, especially for females. To address this restriction and be able to have a mechanism to express their feelings without exposing themselves to judgment by others, especially men, women are obliged to use different words or change phonological shapes to hide their speech from outsiders.

Fedwet is not a language on its own, rather it is fabricated from their first language Chaha through different modifications. The main areas of divergence are deformation of morphophonological patterns, divergence of lexical and manipulation of semantic areas (Etaferahu 2019). The Fedwet text examples below tell us that, in Gurage, males are the dominant group, which indicates that females are less influential. Therefore, women express this issue of discrimination and disempowerment by using Fedwet, through which they criticise others or talk to groups and friends freely.

(1)   Fedwet *gus-we*   *əxud-m*       *nɨ-gɨrafa-xʲ*       *ji-bɨrər-e*
       man-DEF CONJ      1s-relationship:Jus-2SF 3SM-say:IMPV-1SO
       Chaha  *mɨswe*    *əxuwam əxuwam nifɨraxʲ*       *jibire*
       'The man frequently asked me unwanted relationship now and again'

In Example (1), for instance, the text is produced to speak about private issues rather than discussing them openly in society. Thus, the Fedwet group expressed these types of issues by using a different 'language'. The meanings of the words are not put (*not* on the actual *words*) as stated by the Fedwet, because they are taboo words.

(2)   Fedwet *j-ʃɨrer-jə-xuta*           *gurangur j-ɨʒaʒ-e*
       3SM-be.pleasant:IMPV-DEF:3SM   boy 3SM-see:IMPV-1SO
       *ji-ʃɨr-xuta ərtʃ jaʒe*
       'The handsome boy looks at me'

In Example (2), a discourse in which a girl is talking about different feelings with her mates when they are at the age of puberty is illustrated. The girl expresses this feeling openly to her female friends to get advice or simply to express her feelings.

In Example (3), the text shows that Gurage females have a special trust in the cult, believing that the Damamwit can do anything they ask her, and that the Gurage male is also afraid of her punishment.

(3) Fedwet  *nərwət tatʃʼinafaxə ginafire jətʼbabətʼo atbirare*

           *nərwət    ta-tʃʼinafa-xə  ginaf-r-e        jətʼabətʼo*

           Sprit-3FS  3SF-kill-3SM   leave me-3MS-1s  touch-ACC.-IPFV.

           *at-bɨr-ə-re*

           NEG:2SM-say:IMPV-1SO

    Chaha   *Dəmamwit tikʼtʼɨrxə gifire atʼibtʼe.*

           'It is a kind of cursing: Do not touch me *Damamwit* kills you'

The other function is **to exclude an unintended audience**. Trudgill (2000: 81) discusses language and context and asserts that the reason speakers use different language are not only social class, ethnic group and gender but also social context, which influences speakers to use an alternative language to pass their message to their intended specific group member. It is in this manner that speakers use Fedwet in the context of unintended audience presented.

   The following text illustrates this reality:

(4) Fedwet  *ɨʒəʒi əʃ jəgnafa eʃɨrer zədata fɨrwə kʼɨraru*

           *ɨʒəʒ-i əʃ             jə-gnafa*

           look.at:IPFV:2SFS-3SMO     3SM-leave (INTR):JUS

           *e-ʃirer                   zəd-əta fɨrwə       kʼɨrar-u*

           NEG:3SM-be.attractive:IMPV self-3SM ugly-ADJ:3SM  thing-COP:3SM

           *əʒi jədəfa gəgata eʃɨr kʼaru.*

    Gloss   'Look at him, leave aside, he is ugly, he is not attractive.'

In Example (4), the speaker talked in the context of unintended participant presented, and she talked to friend(s) about her feelings about the boy, that he may ask her for a relationship, and she is stating that she is not interested. She wants to express her feeling, because he is not handsome to her. She considers him ugly and has decided to reject him.

(5) Fedwet  *xədɨwəʃ zewət nɨrwawətʼɨnə gurmasɨjə jɨmrakʼate*

           *xədɨwə-ʃ         zewət         ni-rwawətʼ-nə   gurmas-jə*

           Interjection-3SF  you:SF:VOC  1PL-run:JUS-1PL adolescent:M-DEF

           *jɨ-mrakʼa-te*

           3SM-come:IMPV-FUT

    Chaha   *xədəʃ gərə nɨtʼanə wədəja jɨtʃənte*

           'Please let us move; an adolescent boy will come.'

(6) Fedwet  *zewət, gurmasjə gʷərjəta nafɨnakaxʲ burərem ɨdʒadʒəgo burərem*

           *zewət,       gurmasjə gʷərjə-ta na-fɨnaka-xʲ   burər-e-m*

           You-3FS,   boy-3SM  house-3SM.Poss      3SM-go-2SM

           *ɨdʒadʒəgo   burərem*

           say-1s-PAS  pull-3SM-PAS

    Chaha   *gərə, wədəja betəta nafɨkaxʲ /nɨsdɨxʲ barem*

           'You, he asked and pulled me to go with him to his home.'

In Examples (5 & 6), consecutive texts, observed that girls talk openly to each other about powerful boys. The law status of females in society is a burden to them; they shoulder this and discuss how to overcome this problem by counseling each other. The boys invade the girls' privacy without their permission and the girls share their feeling with each other, trying to hide themselves from the boys who attack them. The following is the continuation of the above conversation by the two girls.

(7)    Fedwet  *jəfɨr adɨrargi binanə bədʒɨdʒaxʲ*

                *jəfɨr    a-dɨrarg-i                binanə            bə-dʒɨdʒ-axʲ*

                why   NEG-2SF-hit:IPVF-3SMO be:COP:PFV:3SGM INS-hand-POSS:2SF

      Chaha  *jəmɨr atdərgi banə bədʒaxʲ*

      Gloss  'Why not you hit him by using your hand'

In Examples (6 & 7), when the girl spoke to her friend about the boy, she said, 'he tried to push her to go to his house without her permission'. Her friend also defended her, saying why not you hit him. This shows that even if males are dominant in society, some females attempt to oppose this culture, by criticizing each other.

   In Examples (8, 9 & 10), the texts confirm the imbalance of power between males and females. The girls replay and discuss with each other the issue that was raised in Examples (5, 6 & 7) above.

(8)    Fedwet  *bɨnaj bɨrerəm əʒinanəfo bɨrerəm gʷərjət nafɨnakaxʲ burə-r-em*

                *bɨnaj   bɨrer-ə-m            əʒinanəfobɨrer-ə-m*

                no    say:PFV-3SMS-PAS 1S-force:IPFV say:PFV-3SMS-PAS

                *gʷərijə-ta                       na-fnaka-xʲ burərem*

                house-POSS:3SM 1S-go:JUS-2SFO  say:PFV-3SMS-1SO-PAS

      Chaha  *be barəm əʃinanəfem betəta nafɨkaxʲ barem.*

               'He used force to make me enter into his house.'

(9)    Fedwet  *əʒararəfo tibrerxʲ bɨnaj bureri bɨnaj atbureri binanə*

                *ə-ʒararəfo      ti-brer-xʲ                bɨnaj      burer-i*

                1S-force:IPFV SUB-3SM-say:IPVF-2SFO IDEO:no say:IMPV:2SFS-3SMO

                *bɨnaj        at-bureri binanə*

                 IDEO:no      NEG-2SF-say:IPFV be.COP:PAS

      Chaha  *tijaʃinanfɨxʲ be bəji be atbi banə*

                Gloss 'Say no, why you did not refuse him when he pulled you?'

(10)   Fedwet  *fɨrwə jək'irarəmo jiwrəre anxurərə*

                *fɨrwə   jək'jrarəmo    ji-wrer-e                an-xurər-ə*

                how    3SGM-win:IPVF 3SGM-say:IPFV-1SGO NEG-be.PFV-3SGM:Q

      Chaha  *məmɨr jik'jəme anxərə*

      Gloss  'How? He has more power than me.'

In Examples (11 & 12), the girls are not only imposed on by the boys, but also society recognizes that males are more powerful than females, as illustrated in the examples. If a girl informs her parents that she has been abused by the boy(s), her family will punish her by forbidding her to play outside the home. The girl does not want to talk to her family about this issue, but rather prefers to go and play with her friends in this challenging situation. The following texts tell us this reality:

(11)   Fedwet   *gʷərjaxʲ girabijəm jəmənaxʲ irwawədo burer-i-ja*

             *gʷərj-axʲ*       *giraβ-jə-m*          *jə-imən-axʲ*

             house-POSS:2SF   enter:IPFV:2SF-CONV   GEN-mother-POSS:2SF

             *irwawədo*         *burer-i-ja*

             1s-tell:IPFV        say:IPFV-12SF-3SFO

             *betaxʲ gibijəm jadotaxʲ odʒja*

             'go your home and tell your mother.'

(12)   Fedwet   *zewət itfik'ijak'əre iwret'e tixurəre anriwawd*

             *zewət*        *i-fk'ak'ər-e*      *i-wret'-e*         *ti-xurər-e*

             you:2SF:VOC   1s-play:IPVF-1s   1s-go.out:IPVF-1s   2SF-forbid:IPVF-1SO

             *a-n-irwawd*

             NEG-1s-tell:IPFV

     Chaha   *gərə itfək'ʲəre iwət'e tixəre anud*

             'I do not tell; she will not allow me to go out and play.'

We have seen in the above examples that girls use Fedwet to discuss their issues with friends in order to overcome the problem when unintended audiences are present.

    Fedwet is also used within the group for **the purpose of opposing the culture of early and unwanted marriage**. Girls express their feelings of discomfort and forced entrance into marriage by using Fedwet with their age mates. This has the intention of discouraging the act of the girl by insulting her and her husband through song.

    Speakers of Fedwet not only use speech to express emotions, they also use song. The following is an example:

(13)   Fedwet             Gloss

     *abəja fedo*          'friend'

     *abəja fedo*          'friend'

     *girardo girardo*     'alas' (kind of interjections)

     *bəxəde gufra jibinado*  'they are taking bride there'

     *fəfəfə jiwrerjə*      'say 'fə' (kind of insulting)

     *gurantʃʼim tʃʼamburerjə* 'slaughtering meat'

     *gurdʒif jagirabaxʲ*    'old person get married you

     *bəzafzafujə*        taboo

     *fə bəfinaxʲ*         'in your body part'

     *tʃafər jagunafʷi*    'tuck soil'

In Example (13), the song tells us, the intention of girls in opposing early and unwanted marriage. In the Gurage area, most girls do not have the right to select their husband. Previously, families were even able to force girls to marry old men. Families mostly focused on the clan and wealth of the husband, and not the interest of their girl. Females were not influential, and so they have tried to express their feelings through chant with their friends, including criticizing and opposing the girl who married the old person, even though she did not have the power to refuse the unwanted/early marriage. The song is produced both to criticise a girl who married an old person and to criticize her husband too; in the belief that the girl addresses their message to her husband. In the above song, friends try to protest a girl's marriage because her husband is not of the same age.

Group members also used Fedwet as a means of **expressing emotion** towards the Damamwit cult.

(14)  *xəde bifɨnakwi ejawo*            when we go there
      *tʃ'amɨburj əabɨnak'wi ejawo*      we do not get meat
      *jətʃ'ək'wəsne ejawo*              we beg it
      *jətʃ'k'uwak'əsne eejawo*          we beg it
      *jəfʷanərbini ejawo*              where we put it
      *xədʒwəʃ kote ataβink'ebi*         please take care of me from bad things

In Example (14), the song shows what happens in the ceremony of Damamwit, especially in the months of the true cross, they were begging for meat by moving door to door in the act of collection. Sometimes, if they did not get as much meat as they wished, group members would use Fedwet to express their sorrow for not achieving particular goals and also express their feeling to the cult through Fedwet.

The Gurage females also used their 'language' for **religious purposes, such as** worshiping Damamwit, praying, blessing and cursing, etc. In the Example (15), the Fedwet tried to worship their cult Damamwit through beautiful song. As we have said earlier, they believed that the female cult has the power to help them and protect them from various bad things. They express their admiration by saying *ɨrki'ja guʃto* meaning 'great woman', *imənto* 'our mother' and express their feeling to her by saying 'please come here; 'on our village' *afini jəmʷokijərər tʃafər*.

(15)  *əxo xo xo*
      *mʷəwəjəto mʷəwəjətoəxo xo xo*    'spirit of Moyet'
      *mʷəwəjəto ɨrk'ja guʃto*          'great woman'
      *mʷəwəjəto imənto*                'Our mother'
      *jəmʷokijərər tʃafər eeəxo xo xo*  'mokjərər land'
      *afini mijəto eeəxo xo xo*        'Moyet rest'
      *mʷəwəjəto mʷəwəjəto*             Moyet
      *biʃəʃa jədɨmamədə eeəxo xo xo*    'converge with red '
      *o o o ejeeje*

In Example (15), they express their admiration by saying *ɨrk'ɨja guʃto* 'great woman', *imaŋto* 'our mom' and express their feeling to her by saying 'come here to our village' *afini jəmʷokijərər ʧafər.*

In addition to the interpretation of examples discussed above, this study also uses interview in order to incorporate the functions of the Fedwet and triangulate the data obtained using the elicitation presented in the previous section. As discussed in the methodology section, consultants were asked to list functions for which they used Fedwet. Here is the result of the interview.

**Table 1.** Use of the Fedwet

| Function | Number of times |
|---|---|
| To communicate private issues | 18 |
| To exclude unintended audience | 16 |
| To express feelings of emotion | 12 |
| To form identity | 10 |
| To insult others | 3 |
| To worship the female cult | 7 |
| To criticise the culture of early marriage | 8 |

There were 20 total participants in the interview presented in the table above. Amongst them, most of the consultants responded that they used Fedwet for the purpose of communicating secret issues, which coincides with expressions obtained from the text data sources. However, in addition to the first function, it is also used to exclude unintended audience, as reported by several consultants. They also used it to express feelings and for identity formation. The service of Fedwet as a means to discourage young girls and also to express the undesirability of union with older men as an insult were also among the responses obtained from the interview data. In addition to the aforementioned functions, they also used Fedwet to worship their cult.

## 7.   Conclusion

The finding of this study shows that, although Fedwet had symbolic and communication functions before, it does not have any function in the current situation. It is threatened and endangered because it has lost its functional stability in relation to the loss of the culture. The Fedwet used their secret language for a special in-group 'language' to express their feelings. These tactics helped them to escape the complex reality that they consider as a societal burden that they face because of their gender. The sociolinguistic functions of Fedwet in history were to hide the communication of females, to exclude unintended audience, to oppose unwanted

activities in the culture such as early marriage, to express feeling/emotions and for religious purposes. The motive for using Fedwet secret language was more related to the social position of females and pertained to the traditional belief system in the society. The implication of the sociolinguistic profile of the speakers tells us that Fedwet is not used by youths. Hence, the younger generation has no information neither about the culture and traditional belief of Moyet nor of the Fedwet. Thus, this study is used as a document for future research and gives information for the next generation.

## Acknowledgments

## List of abbreviations

| 1 | First person | FUT | Future | O | Object |
|---|---|---|---|---|---|
| 2 | Second person | INS | Instrumental | P | Plural |
| 3 | Third person | IPFV | Imperfective | PAS | Past |
| ADJ | Adjective | JUS | Jussive | PFV | Perfective |
| CONJ | Conjuncton | LOC | Locative | POSS | possessive |
| COP | Copula | M | Masculine | S | Singular |
| DEF | Definiteness | NEG | Negative | VOC | Vocative |
| F | Feminine | | | | |

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# Gender and women representation
# in Gurage culture of Ethiopia

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The aim of this chapter is to describe the social, cultural and political representation of women in the Gumer district of the Gurage Zone of the SNNPRS of Ethiopia. We conducted semi-structured interviews and focus group discussions (FGD) with men and women in the district, and analysed the text using critical discourse analysis (CDA). We had 19 interviewees and five FGD participants. We also made observation of events in *wikʲər* 'evening gathering' and shopping in the big and small markets where men and women shop categorically, buying different items in different sections of the market. We also consulted documents dealing with gender and women's roles in Gurage. The findings showed that there are noticeable differences between men and women in role categories, social positions, expected behaviours, and in the responses to different gender discourses. The differences were observed in the discourses of blessing, name bestowing, mourning ceremonies and proverbs, in addition to those found during interviews. Different factors, such as financial resources, societal views about men and women, and long-established cultural belief in the society contributed to the lower representation of women in social and political positions.

**Keywords**: discourse, gender, Gurage, representation, women

## 1.   Introduction

*jiʃta mot bək'ak'ət*
'Women's death is in the dining room'[1]

### 1.1   Background

Gurage refers to the people who live in the Gurage Zone of the Southern Nations, Nationalities and People's Regional State. The people are mainly farmers, and are renowned traders who have scattered across Ethiopia (Henry 2006). According to the 2007 national census statistics, the total population of Gurage is 1,867, 377. Though people differ in the dialects they speak and religions they follow, their culture and economic and social organisations are basically the same (Shack 1966; Fekede 2014b).

The administrative capital of the Gurage Zone is Wolkite. It is located to the south-west of Addis Ababa at a distance of 150 km. The Zone is divided into 12 districts, which roughly correspond to the dialect variations, and has two city administrations, Wolkite and Butajira.

The language of Gurage has thirteen varieties, which together are called Guragina (Gabreyesus, 1991; Fekede, 2015). They are grouped into North Guragina: Kistane and Dobi; West Guragina: Mesqan; Central West Guragina: Muher, Ezha, Cheha, Gumer and Gura; Peripheral West Guragina: Geto, Inor, Indegegn and Ener; and East Guragina: Welene, Silte and Zay.

This study is based on the Gumer district and the Gumer variety of Guragina. The district bordered with Silt'e Zone in the southeast, Geto in the southwest, Cheha in the northwest, and Ezha in the north. The administrative seat of the district is a town called Arekit. Based on 2007 statistics, the district has a total population of 80,178, of which 37,495 are men and 42,683 women and 2,923 or 3.65% of the population is urban dweller. The district has 18 Kebeles often called farmer's associations, a term introduced during Dergue regime (1974–1991). The names of the Kebeles are: Arekit town, Armuwa, Badina-yegor,[2] Bercherna-mocheya, Fetazer, Amdo, Dirbona-senen, Aselecha, Wusho, Injefo, Burdana-denber, Wulbaragna-tirtiro, Yesherebna-tatera, Zizenchona-teredo, Isenina-adangazo, Abesuja, Arektsheleko and Abeke.

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1.   See Example (6) for the pragmatic meaning.

2.   The suffix {-ina} is borrowed from Amharic and has the meaning 'and'. Hence, words joined by {-ina} indicate Kebeles joined together for administrative purpose.

## 1.2    Statement of the problem

In many cultures, interactions between males and females tend to be male dominated; hence, there is social inequality between the two gender groups (Tannen 1990; Zimmerman & West 1975). Social distinction between men and women is reflected in the language used both in the language structure and actual communication (Lakoff 1975). Gender inequality and lesser representation of women is reflected in curricula designed, textbooks written, the language of media, everyday communication, languages of the court, greetings, languages of cursing, proverbs and all other forms of spoken and written utterances.

Discourses represent and construct reality, and hence have great powers to form the world view in which people live and act. Many oral and written discourses of gender in many parts of Ethiopia, as in many other cultures, reflect the lower social, economic, political and academic positions of women, and the dominance of men. They also orient members of society to behave and live in the framework established through those discourses. The way gendered language is used in different discourses in Gumer Gurage and promotes or lowers the social and political positions of females in the society has not been studied so far. This study attempts to uncover whether women are represented in social, political and economic aspects of life by examining different language discourses used in the communication practices of the Gumer community to fill the gap. Thus, our focus is not to study discourse as a language structure, though this has not been totally ignored, but rather to uncover women's representation in socio-cultural practices as displayed in language use or spoken and written discourses.

## 1.3    Objectives of the study

The main objective of this study is to examine women's representation in various socio-cultural and political affairs with gender-oriented discourses in the Gumer community of Gurage. It specifically has the following specific aims:

1. Uncover how gender discourses construct roles and social positions for males and females in the general power structure;
2. Find out how the different members of the community respond to the gender discourses;
3. Find out as to how females' self- and group identities are reflected in the discourses.

## 1.4    Review of related literature

### 1.4.1    *Language, gender and discourse*

Before we consider the relationship between language and gender, it is worth explaining the difference between sex and gender. There is no clear demarcation between sex and gender, the main difference being that the former is a biological difference, while the latter is a social categorisation. Eckert and McConnell-Ginet (2003: 10) explain: 'Sex is a biological categorisation based primarily on reproductive potential, whereas gender is the social elaboration of biological sex'.

Gender is reflected in language in several ways. To begin with, 'gender is… a system of meaning – a way of construing notions of male and female – and language is the primary means through which we maintain or contest old meanings, and construct or resist new ones', and '…language itself is a tool of oppression – it is learned as part of learning to be a woman, imposed on women by societal norms, and in turn it keeps women in their place' (Eckert & McConnell-Ginet 2003: 6). Gender itself is constructed with language, as stated by Wodak (2015: 699): '…gender not only being constructed and performed through language, but also accomplished, achieved, enacted, and effected by language'. Weatherall (2002: 5) also confirms this: 'language not only reflects and perpetuates gender but language constitutes gender and produces sexism as a social reality'.

Gender is also inherently reflected in the grammar of language; all entities named are either masculine or feminine in most languages, though some languages also have a neuter gender. In fact, In Gurage, all nouns except those with features [+Human, +Feminine] are considered masculine. This partly demonstrates the default male dominance, even in the grammar of languages.

Gender is implied in our everyday communication and is used in attributing social and behavioural differences. This has been expounded by Edwards (2009: 127) with two statements: 'Do you not know I am a woman? and When I think, I must speak'. 'Men were deceivers ever'. The first statement confirms that women are talkative and the second one informs that men are untrustworthy. It can be imagined that such discourses influence how men and women perceive themselves and others, as well as how they position others during interaction. Fekede (2014a: 39) also asserts this when he says, '…what has been communicated through proverbs in particular and a language in general shapes our perception of reality and thereby our ways of life'.

Gender is not only reflected in our speech but is also socially 'embedded so thoroughly in our institutions, our actions, our beliefs, and our desires, that it appears to us to be completely natural' (Eckert & McConnell-Ginet 2003: 9).

Research on gender has considered a number of interfaces. Wodak (2015) lists the three most common concerns of post-structuralism characteristics:

(1) Gender diversity (e.g., class, ethnicity, and how these both interact with gender; multiple masculinities/femininities; differences between 'women' and 'men');

(2) Gender being 'performed' (see below) in an ongoing way, allowing for agency; performance being achieved partly through language (which is therefore constitutive); similarly, power being 'done' rather than something speakers 'have'.

(3) 'Local' or 'contingent' explanations for gendered language patterns and the importance of specific contexts (Wodak 2015: 699).

Discourse is the use of texts for representing social practices (van Leeuwen 2008: 6). A society represents itself and others to the external world through different forms of narratives, songs, pictures or arts. Ideologies of individuals and the community are embedded in discourse, and institutions are the agents through which dominant ideologies are imposed and inculcated. Institutions can include media agents and workplaces. Literature is also considered both as a discourse and an institution, 'because institutional practices and social representations are imparted with it (Shaikh & Khan 2012: 155)'.

Discourse is used in two different contexts in literature: it can be speech or writing, which normally is longer than sentences dealing with a certain subject (Foucault 2008), or 'a set of meanings, metaphors, representations, images, stories, statements and so on that in some way together produce a particular version of events'.

Discourse analysis is based on the understanding that there is much more going on when people communicate than that they simply transfer information. It is not an effort to capture literal meanings; rather it is an investigation of what language does or what individuals or cultures accomplish through language. This area of study raises questions, such as how meaning is constructed, and how power functions in a society. To conduct discourse analysis, a researcher generally selects texts.

Our study is about the ways in which social roles and identity are enacted and reflected through communication in the Gurage community. It attempts to reveal how discourses mirror the higher and lower social position of males and females, respectively, and how discourses shape the attitude and behaviour of male and female members of the community.

### 1.4.2 *Previous studies on gender discourses in Gurage*

There is no particular research that deals with gender and language in Gurage. However, there are a few studies that touch on gender while studying other general social and development issues.

Fekede (2014a) in his article Discourses of Development in Gurage Proverbs stated that proverbs in Gurage conceptualise women as devoid of ownership and less able to visualize the future, as in the following two examples:

(1)  *'b-e-nə bad  intʃ'im  təbat'*
     In-NEG land  only    male
     'In the absence of plots of land, only males were born'

In the pre-existing culture of Gurage, it was only males that inherited their parents' land. Females were not allowed to inherit land, as they leave their parents' home when they married. Thus, bearing many males without having enough land to offer to them was considered unwise (Fekede 2014a: 33).

(2)  *'məhəna e-tʃən      barə-tʃi-m    watar-əhjta    məkjərə-tʃi-m'*
     Winter   NEG-come say-3SGF-PST pole-3SGF.POSS burn-3SGF-PST
     'Assuming that autumn will not come back, she burnt her scraping pole'

In Gurage, the ensete plant is not scraped during rainy season (summer) because at that period a good harvest of the ensete plant product is not expected. Rather, it is scraped in the autumn and later, when it is sunny. A lazy woman burns her scraping pole, which was made by a carpenter, during the summer season. As a result, she may not find one during autumn, hence, she has to repay the carpenter for a new one or borrow one from her neighbours. In fact, the proverb is used in a broader context to express something unwisely spent or used while there was an option (Fekede 2014a: 34).

'The proverbs in Gurage clearly show that men's and women's roles are demarcated. In terms of power, males are more powerful and have the upper hand in economic and social affairs. The haves have more social power over the have-nots' (Fekede 2014a: 39).

Gurage Zone Culture Tourism and Government Communication Department (GZCTGC) Yegurage Wemaka provides several proverbs on gender issues, though they are not analysed from a gender perspective. An example from GZCTGC (2012: 13) states:

(3)  *'miʃt jəkʲəmʷətʃin tə-tən      jibəhʲ'*
     wife  defeat.3SGM    with-smoke cry.3SGM
     'A husband who was defeated by his wife cries with smoke'

In Gurage culture, a husband is physically strong, a winner, dominant socially and has power over his wife. If this is not the case – which is uncommon – the man is not accepted socially. The proverb here tells that the man is feeling desperate for losing his correct position by living with a wife who dominates him. As it is not expected socially for him to express his grief by crying overtly or publicly, he cries when there is smoke in the house in order to pretend the smoke caused the tears, and not the internal emotion of being defeated by a woman.

Haile (2009) and Endalegeta (2014) are worth mentioning with regard to descriptions of Gurage culture and communication practices. Guragena Yebahil Essetochu (2012) also provides several descriptions of Gurage cultural values. Tenkir (1991) compares proverbs among East, West and North Gurage languages.

## 1.5    Research design and methodology

We used cross-sectional descriptive research design and qualitative methodology. Language data were obtained from key consultant interviews (KII), focus group discussions (FGD) and participant observations. We used purposive sampling to select participants for the KII and FGD. We included four participants from culture experts of the Gurage Zone and from the Gumer district Government Communication, Culture and Tourism offices. Six elderly men and women, who are the most conversant in gender discourses in their day-to-day communication practice, were selected from six sampled villages of Gumer district, namely, Wusho, Abeke, Arekit-Sheleko, Dirbona-Senen, Burdana-Denber and Jemboro. We also selected eight students and two teachers from Arekit high school, two participants from traditional court, and two others from a women's league. There were a total of 24 participants, all of whom were native speakers of Gumer Gurage language.

We observed an event called *wikʲər* 'evening gathering of elders', in which the people had a coffee drinking ceremony and discussed different social issues. We also visited the biggest local market named *wɨrɨro*, also called *jewə-gəbja* 'market of animals' salt. We took pictures that displayed gender role categorisation. We also visited two small markets to check whether what was happening in the big market was similar or different. FGD guide, semi-structured interview guide, and field notes of participant observation were used as tools. The FGD and interview guides were used to collect information regarding power relations, women's rights and social roles. Linguistic elicitations, such as the collection of proverbs were made possible with these tools as well. Participant observation was used to practically observe gender roles and power relations in actual communication situations.

Regarding ethical issues, we obtained informed consent from the participants, who were told about the objectives and procedures of the study. They were all informed that participation in the study was voluntary, and that they could withdraw whenever they wished. Participants' permission was requested in advance before recording interviews and taking their pictures. A few participants who were Muslim, for instance, did not want their pictures to be taken. Hence, their rights were respected. As we researchers were from the same culture and spoke the same language, our cultural awareness made site entry and communication easier. We used conversation beginning gambits, such as ʃəh-*ahu e-t'rək'un* [spirit-2sGM-POL NEG-panic 'let your spirit does not get panicked'] when we mentioned gender issues.

It is customary in the culture to ask forgiveness for talking about gender and sex related issues, and in some cases for talking first when elders are expected to speak before all other participants.

The spoken and written discourses obtained using different methods and tools were analysed with critical discourse analysis (CDA), which according to van Dijk (1993: 252) is a discipline that 'studies the way social power abuse, dominance, and inequality are enacted, reproduced and resisted in text and talk in the social and political context'. Our focus was not to study discourse showing linguistic structure, but to make social analysis of gender with language data based on the views of Foucault (2008) and Fairclough (2003: 4) who states that '…language is an irreducible part of social life, dialectically interconnected with other elements of social life, so that social analysis and research always has to take account of language'.

## 1.6  Organisation of the chapter

The study has three sections: the introduction, data analysis and presentation, followed by the summary, discussion and conclusion. The introduction describes the research setting, the problem statement, the objective, the research methodology and provides a brief review of the literature. Section two provides the analysis and presentation of the findings. This part has two subsections, 2.1 and 2.2. Subsection 2.1 presents gender roles and social positions, and Subsection 2.2 deals with the participants' responses to gender discourses and identity construction. Section 3 provides the summary of the study discusses the results and offers concluding remarks.

## 2.  Data analysis and presentation

## 2.1  Gender roles and social positions

Gender roles in Gurage are evident nearly in all places, institutions and at home in terms of what men and women should do. For our purposes, we have limited our discussion to gender discourses with regard to representations and role differences of women and men in the markets, wedding ceremonies, mourning ceremonies, the traditional court system, and bestowing title names.

### 2.1.1  *Grammatical gender as reflection of social practice*
Before discussing of discourses of social gender in Gurage, it is worth mentioning how grammatical gender works in the language. In Gumer Gurage language, only animate nouns that are [+HUMAN] make gender distinctions. All inanimate objects, animals and plants actually have the default masculine gender, as in (4):

(4)    a.    *kasətʃ  ləmtʃa tʃʼən-ətʃ-m*
           Kasech twins   give.birth-3SGF-PST
           'Kasch gave birth to twin babies'

        b.    *əram-əna      tʃʼən-ə-m*
           cow-1SG.POSS give.birth-3SGM-PST
           'My cow gave birth to a calf'

        c.    *əsət-hut      nək'wər-i-m*
           Ensete-DEF uproot-3SGM-IPASS-PST
           'The ensete plant is uprooted'

        d.    *hɨ   ɨmɨr  nisa-n*
           that  stone  pick-3SGM.O
           'you, pick that stone'

As can be seen from these examples, only Kasech in (4a) has a feminine marker that is expressed as an agreement to the subject in the verb. All the other nouns functioning as subject in (4b–d) are considered masculine. The noun in (4b) refers to a cow that is feminine, but is considered masculine grammatically because it is [–HUMAN]. The noun in (4c) is a plant, and all plants are masculine; the noun in (4d) is inanimate and all such nouns are masculine. The grammatical gender, thus, informs us that the dominant gender in Gumer Gurage is masculine.

### 2.1.2    *Gender roles in markets*

We visited a market called *wɨriro* in Gumer district, and we made snapshots in different areas of the market. It was quite obvious that what one could sell and buy was separated spatially, based on gender roles. Figure 1 illustrates the section where sheep and cows were sold:



**Figure 1.** Sheep and cattle market in wiriro (left to right)

As can be seen in Figure 1, there were neither female sellers nor buyers in the sheep and cattle markets. The only woman we see standing to the right in the photo of the cattle market is Yigeremu, one of the researchers. We did, however, see a few exceptions in the cattle's market where the seller of a cow was a woman with her son, and the interview we conducted with her is discussed below. The opposite, where only women were buying and selling, is shown in Figure 2:



**Figure 2.** Food items and utensils market at wiriro

In Figure 2, we found only women selling and buying food items, such as cabbage and baskets of different sizes. We observed that women were largely shopping for food items, such as *wusa* 'product of ensete', coffee, mats, salt and ovens. We did not find men in the area where such items were sold. In fact, the market as a whole was spatially grouped as *jiʃta gəbja* 'women's market' and *jəgəmʲa gəbja* 'men's market', an instance of differentiation.

We interviewed four female and four male participants in the market to learn about the usual practice, and to find out whether the categories based on gender were permanent or temporary. All the interviewees confirmed that women usually do not go to the men's areas except in some difficult situations, such as when their husband is deceased or lives far away from the family. They also explained that it is taboo for the men to go to the women's areas.

We also observed small markets at *arək'it', dʒəmboro, dəmbər, adangəzo* and *indʒəfo*. In all of these marketplaces, the time allotted to buying and selling was limited to 2–3 hours, as compared to the big markets for which the whole day was allocated. We saw that in the mini-markets men were absent or rare. We asked people in the market about the trend, and they reported that such small markets are meant for women, as there are no cows, horses or mules sold in such small markets, and only food items and locally made furniture are available. We asked the participants as to why there is such categorisation. All the participants reported that it is simply a part of the culture they have followed since childhood. Two male participants reasoned that women are not physically strong enough to handle cattle,

and they do not have negotiating power. All the male participants added that the buying and selling of food items is assigned to women because they are responsible for preparing and processing food at home. They added that women can easily identify the quality of food items. Another response from three women participants was that men are naturally neat and respected; hence, they do not deserve to touch unprocessed *wusa* and *at'met'* (products of ensete). Such unprocessed food items cause the men to come into contact with *t'at'əra* 'watery left over of the products'. According to the participants, it is taboo for men to touch other food items, such as cheese, butter or kale, in addition to the *wusa* and *at'met'*. If men touch such items, they are attributively called *miʃtot* 'womanish'.

We met a woman in the cattle market with her thirteen-year-old son selling a cow. We asked her why she was there in the men's market. She explained that her husband was living in Addis Ababa, and she said that it was her husband who ordered her to sell the animal. We further asked her why she came to the market with her son, and she told us that she has three children: a seventeen-year-old daughter, a six-year-old son and the son with her in the market. Although she has a daughter who is older than the other children, she preferred to come to the market with her thirteen year-old son. She said that her daughter is responsible, and is more capable of managing other house chores than selling a cow.

One of the male interviewees had a different explanation as to why men do not go to the small markets. He said that men are busy and responsible for farming and controlling farm land. If a man wants to perform farming labour for others, he is usually paid very well for a few hours' work. Spending his precious time by buying and selling small items, therefore, is considered an unwise decision. He added that women usually spend the whole day at home doing tasks that do not bring them and the family much money, so it is better to assign women shopping in such small markets and leave men to do productive tasks, such as farming and selling their labour for money.

The general assumption is, thus, that men will earn money, and women will spend the money the men have earned. This further implies an economic dependency of women on men.

### 2.1.3   Gender roles in traditional courts

In Gurage, most disputes and high-level crimes are solved by traditional court system. There are five levels within the court system: a village level (*jəsera gənə* 'village association') cultural court, sets of villages level (*jəmʷɨra gənə* 'of the whole villages') cultural court', tribal level (*jət'ɨb* 'of the tribe's') cultural court, district level (*jəgʷəmarə* 'of the Gumer district') cultural court and Sebatbet Gurage level (*jədʒoka* 'the whole seven houses' cultural court (cf. GZSCCT 2012).

The first level of the court system is used to solve cases at the village level, and the issues considered include lower level disputes; violation of commonly agreed norms and regulations, such as participation in communal labour; preparing food and drink for villagers who are in mourning; participation in burial; communal cattle rearing and group protection of common resources, such as green areas and grazing lands.

In the second level courts, *jəmʷɨra gənə*, two or more villagers gather together to resolve cases that are not resolved by *jəsera gənə* 'first level court system'. This level of the cultural court is accountable to the cultural judges of the clan or clans. In the village level cultural court, participants can be from different clans residing in a certain village or villages. The cases considered at this level are more complicated and controversial than the ones at the *jəsera gənə* 'the village level court'.

At the third level, *jət'ɨb sera*, members of a single tribe from different villages come together to resolve disputes among themselves and with other tribes. The cultural judges, *jət'ɨb danə*, are selected from the tribe members by elderly people as being respectful, reasonable, ethical and orators. This level of cultural court has the power to solve cases, such as disputes within and between tribes, the burning of houses and other materials and disputes of farmlands. The rules and regulations to solve tribal level issues are called *jət'ɨb q'itʃ'a* 'of the tribe's regulation'.

The fourth level court, *jəgʷəmarə sera*, includes not only the usual cultural judges but also other representatives and additional cultural judges newly elected by the assembly of the clan. These additional cultural judges are *jək'itʃ'a danə* 'regulation judges or rulers', *jəgurda danə* 'judge of promise', *jəsamɨr danə* 'judge of fertility', *jaŋk'it danə* 'judge of justice', *jəʒir danə* literally judge of stick, actually referring to 'judges that measure plots of land', *jəgondər nigʷɨs* 'king of clans' who often wear bracelet called *gondər*, and *abəkʷat* 'the matured'. This all-inclusive broader court level is responsible for solving various problems related to social, political and economic issues. Cases such as murder, burning of someone's house, causing disability to someone, robbery, disputes over farm land and other security issues are resolved at this level. In addition, cases that have already been heard in the other lower level cultural courts, but which have not yet been resolved are heard in this cultural court.

The fifth and the highest level of the cultural court system in the Sebatbet Gurage is called *jəʤoka kʲitʃ'a* 'of the regulation of Yejoka'. At this level, the most complicated and critical cases from all villages, clans and tribes of the Sebatbet Gurage are heard. Cases that could not be resolved in the clan level cultural court are also heard and re-investigated at this level. The cultural judges at this level are those selected from among those considered to be the best cultural judges of each clan by the general assembly of the council of the whole Sebatbet Gurage. They are selected based on the positive contributions they or their parents have made to the community. The cultural judges stay on as members at least until the presented

cases are resolved. In most cases, however, the judges serve for a long period of time, if the council proposes and has found their skills and expertise important.

The Gurage people have great respect for and obedience to the cultural court. Unless a case goes beyond the cultural court, it is not usually taken to the modern court. Individuals are not usually encouraged to take any of their cases directly to the modern court before they have been heard in either of the cultural courts.

Our KIs reported that women have no direct participation in any of the five levels of the traditional courts. All cultural judges, attorneys and, in most cases, witnesses at each level are men. As the consultants reported, there has never been a woman judge in any of the cultural court systems. In addition, cases are usually presented to the court by men. If women have cases to present to the cultural court, they are usually represented by a man who is *məro* 'a cultural attorney'. The consultants also said that there have never been female *məro* 'attorney' at any of the court levels. This implies an instance of exclusion of women from the court system, in fact, which is a reflection of the trend in other socio-political participation.

In the cultural court system, the role of women is preparing and serving food and coffee for the attendants of the cultural court. Of the KIs, four of the elderly men said that, in the remote past, women were not allowed to listen to the court cases at all. But recently, they have won the right to listen to court cases.

We asked six women consultants what they feel about the cultural court system in relation to male and female participation. Three of them said that the absence of women's participation in the cultural court system is not a problem. They added that men have greater experience and skill in analysing situations, explaining cases in the court, reasoning and making judgments than women, and that these things are better done by men.

The remaining three women participants responded that all cultural judges, cultural attorneys and witnesses are men, and they are sometimes biased to protect one another above women. Women could have better opportunities to clearly express their problems to the cultural court and to get justice if they were allowed to explain their own cases by themselves. They also mentioned that there is a traditional belief that a woman will become infertile if she speaks in public about her own or other's cases, as in (5):

(5) *iʃta    ʤəfʷərə    b-otʼtʼa    dən    ji-tʼərk*
women  village.yard  CON-goes  belly  3SG-gets.dry
'If a woman goes to a village court, she becomes infertile'

Here socially, women are encouraged to stay at home by creating the fear that they may not be fertile if they go to the court (the village yard refers to place where traditional court decisions are made). The fact that women are meant for household chores but not for court is further witnessed in a proverb, as in (6):

(6)  **j-iʃta      mot   bə-kʼakət**
 of-women  death  on-livingroom
 'Women's death is in the living room'

Unlike men who may die in war, abroad or elsewhere, a woman often dies in her house, since she goes nowhere but is kept at home for household chores.

In (5), the feminine gender is expressed with default masculine gender in both the con-verb and the main verb. The subject *iʃta* 'women' is lexically feminine, but *botʼtʼa* 'if one goes out' and *jitʼərk* 'it gets dry' can be either masculine or neuter like 'it' in English. Actually, it was possible to state them as *botʼtʼatʃ* and *titʼərk*, respectively in the feminine gender. But this is acceptable only when referring to a particular woman, rather than to all women.

Six elderly men participants responded that there is no prescribed rule and regulation that prohibits the participation of women in the cultural court system. However, the system has only been practiced by elders, and is simply adhered to. Four of the participants also explained that women are usually shy and cannot give explanations to the cultural court, as they do not have experience in speaking in public. Hence, it was better for them to be represented by men. The remaining two elderly men, however, responded that these days, there are some brilliant and confident women who could explain their cases at public if they were given the chance, although it is not the actual cultural practice. They contradictorily added that they do not think that women can be cultural judges at the cultural court, as they lack prior knowledge and experience of it. One of them said that there has never been a woman who has claimed the right to participate in the cultural court system. He also said that they would not be prohibited if they publicly claimed the right of participation.

Actually, and contrary to what has been reported above, there were two exceptional cases mentioned regarding women's participation in traditional courts of Gurage. A woman who was a pioneer in appearing in court and fighting for women's rights 200 years ago in Gurage, probably from Ezha district, was *Yekake Werdwet*. She fought against men's right to marry more than one wife at a time. She brought the case to the cultural court and claimed that if men can marry more than one wife, women should also have the same right of marrying more than one husband at a time. The case caused a number of problems for Gurage cultural judges, since she was logically correct. At last, she received permission to marry any number of husbands she wanted to, but was warned not to fight for any other women's rights, and not to spread the case to the other Gurage women. In fact, all husbands were secretly ordered to whip their wives if they cooperated with the *Werdwet* in the agenda she raised.

Another woman called *Mengistet* in Gumer district worked as attorney some 45 years ago. She used to ride her mule to every court in the district, and was a very articulate and wise woman. Currently, we find several women judges in civil courts, but not yet in the Gurage traditional court system.

### 2.1.4 Gender roles and representation in biħʲə 'mourning'

One of the main cultural events in the Gumer community is the mourning ceremony. In the community, when a person dies, villagers gather and share the sorrow with the family. The villagers identify the items required for the mourning ceremony, and there is division of labour based on gender. Men prepare the coffin and burial clothes, dig the grave and send information about the death to relatives who live far away from the family. Young men collect fire wood for the ceremony and help in serving coffee, which is made by the women, and carry the dead body to the burial place. Women prepare the meals required for the participants of the mourning. They also make coffee and prepare cereals in large amounts to serve all the guests who come from near and far for the ceremony.

Participants' keen cry and performance in the mourning varies by gender. Men often take the front positions, and women follow them. This is clearly related to the power hierarchy. Usually, men hold *alənga* 'a cultural whip', with which they hit their own backs to express their sorrow. Women often fall down on the ground repeatedly to express their sadness.

When an adult man dies who has participated in war, community leadership and in the cultural court system, who was wealthy, and/or generous in *wəkʲa* 'giving cattle for the poor, a special mourning ceremony called *jəkʷim biħʲə* 'of standing and crying' – which actually is a mourning song and performance – is practiced. *Jəkʷim biħʲə* is also performed when a *t'uri* 'dexterous', obedient, generous, economical and polite woman dies.

*Jəkʷim biħʲə* is an essential cultural performance with which the society commemorates and acknowledges the contributions and good conduct of the dead. By doing so, the society teaches the young generation what is expected of them. This cultural performance is coordinated and performed by elderly men. They discuss and decide in groups whether the deceased deserves *jəkʷim biħʲə* or not by enumerating what extraordinary things that person did for the community. This cultural mourning performance is accompanied by a poem that describe the things the deceased did in his or her life time. The poem is prepared based on the dead person's contribution and is graded if its content is true, not exaggerated or downgraded.

The poems of *jəkʷim biħʲə* for men and women are quite different, though the performance is similar. Recently, it was decided by *jədʒoka* court to avoid *jəkʷim biħʲə* due to religious orientation. We have provided sample poems recited during

*jəkʷim bihʲə* for men and women. Because the poems recited for men are numerous, and our focus is on women's representation, we have provided only couple of mourning poems for men, the rest appearing in an appendix at the end of the article. We have, however, presented all the women's mourning poems we have here.

(a)  Songs of *jəkʷim bihʲə* for men:

(7)  ***wərko  tə-banərə***
shelter 3sɢ-demolished
'A shelter (fort) is demolished'
***jifte          t-e-gəwarə***
front 3sɢ-ɴᴇɢ entered for
'With no support in the front'
***jañkʲe            t-e-gəwarə***
behind 3sɢ-ɴᴇɢ entered for
'With no support from the behind'
***tʃotə-m      ʃənən  wərə***
plough-ᴘsᴛ shenen went
'He ploughed and became rich'
***Abo    mis***
What  man
'what a man'

The poem can be summarised as, we the alive have lost a shelter or fort as the dead was our shelter. Without support from the front or from the behind, with his own effort, he worked hard and became a rich person; what a great man!

(8)  ***awi          sima  awi***
wild.animal  listen  wild.animal
'You wild animal listen'
***j-adəbabaj  gʷəntʃo  zobe***
of court      hyena    zobe
'The avenue (court) hyena, zobe'

The poem metaphorically and figuratively presents the deceased as a wild animal, and as if he was like hyena that was never defeated in court cases.

We could not find the actual meaning of the word, *zobe*. It is often associated with wild animals, which metaphorically shows bravery and strength. It is worth mentioning that the word *wərko* has a broader context than just a shelter or a fort, possibly referring to the village, an entrance or even a country.

We have summarised from the mourning songs (Appendix 1) the best qualities, behaviours and roles a man should have so that he may deserve *jəkʷim bihʲə*. These are:

–   protector expressed by the term shelter
–   courageous (not fearful)
–   warrior
–   guard
–   provider of food during holidays
–   hard worker/successful
–   owner of cattle and horses which signifies being warrior & judge
–   rescuer
–   wise man who knows cultural rules and procedures
–   judge or prosecutor
–   brave/strong

Generally, a man is expected to be generous, a protector, rescuer and hard worker, steady, wise, a warrior, an orator, knowledgeable of the culture, rules and court procedures, and strong enough to perform all his tasks.

(b)  Songs of *jəkʷim bɨhʲə* for women

The mourning songs meant for deceased women also reflect the socio-culturally expected roles of women approved by society. These are, of course, mainly determined by men who shape the world of the community, as in the following examples:

(9)  **zobe-m   banə-naħʲ**
   zobe-and existed- for you(SGF)
   'You(SGF) could have zobe'
   **wərko banə-naħʲ**
   shelter existed-for you(SGF)
   'You(SGF) could have wərko'
   **miʃt-nət      həna-naħʲ**
   woman-hood forbade-you(SGF)
   'Being a woman forbade you(SGF)
   **abo   miʃt**
   *what  woman*
   'What a woman'

The mourning song in (9) expresses regret that the woman could not have the mourning song that she actually deserved because she was a woman and it was therefore denied to her. The implication is that some mourning songs are reserved for men, despite women have similar qualities or having played similar roles in the community.

The mourning song in (10) was chanted to honour a deceased woman for her good behaviour:

(10)   **ti-gəba-m         iʃiʾ**
        when-enter-PST ok
        'she says ok (welcome) when someone comes in'
        **ti-wəṭʾa-m           iʃiʾ**
        when-go.out-PST ok
        'she says ok (goodbye) when someone goes'
        **zih  adʒjət  e-rəhwɨ-ja        bəʃi**
        this  ajyet   NEG-find-3sGO  thousands
        'This *adʒjət* cannot be found for thousands birr'.
        **ahera-hʲta        bədʒennət  j-əʒi**
        soul-3SG.POSS  heaven       3SG-see
        'Let your soul be in the heaven'
        **abo   miʃṭʾ**
        what  woman
        'What a woman!'

The song reads: she used to say welcome to anybody who comes into her home, and she used to say goodbye to anybody who goes out of her home. This woman with the title name of *ajyet* cannot be found with the price of thousands. Let her soul be in the heaven; what a good woman!

(11)   **amər-ahʲ            gʲəra**
        conduct-3SG.POSS  cool
        'Your behaviour is cool'
        **jə-bʃa   dannəra**
        of-red   tanned. hide
        'It is like a red cow's tanned hide'
        **j-orwər     dabəra**
        of -spring  cloud
        'The cloud of spring time'
        **wəhe  miʃt**
        good   woman
        'A good woman!'

The song in (11) describes the deceased woman as having had good conduct, which is metaphorically described as a smooth, furry tanned skin that is used for sleeping, and by a spring cloud that protects from the blazing sunlight.

    The song in (12) expresses the quality of the deceased woman in terms of dexterity:

(12) *jə-t'uri*      *bit'ir*
of-dexterous  bowl
'The bowl of a dexterous woman'
*e-rəwin*     *ʃintr'*
NEG-exist  hunger
'It does not have a hanger (it is always in use)'
*j-awər-e*       *tə-rtʃ'ir*
3SG-put-LOC  with-filtered. butter
'It is kept with filtered butter'
*abo*   *miʃt'*
what  woman
'What a woman!'

This song describes a dexterous woman's bowls do not have hangers to be hanged on since they are always in use to feed the family and guests, and that the bowls are always kept with spiced and filtered butter meant for feeding people, then closing the chant with surprise phrase 'what a good woman!'

The songs in (13a–c) are all about the woman's good qualities in welcoming guests and providing them with food and drink:

(13)  a.  *bazəra- hʲ*       *humu*
guest-3SGF.POSS  thousand
'Your guests are in thousands'
*jə-ʃat*     *dən*   *nibu'*
of-granary  inside  bee
'It is like the bees inside the hive (granary)'
*j-irsi-m*         *tə-rk'i-m-u*
to-younger-and  with-elder-FOC-COP
'It is to the younger and elders'
*wəhe*  *miʃt'*
good  woman
'A good woman!'
b.  *b-ahʲa*         *wərədʒə*
LOC-your (SGF)  gate
'At the gate of your home'
*jə-bazəra*  *wədʒə*
of-guest   herd
'A herd of guests'
*wəhe*  *miʃt*
good  woman
'A good woman!'

c. ***bazəra ti-rəmd***
   guest   3SGF – love
   'She loves guests'
   ***ti-kəram ti-wərd***
   in-go.up   in-go.down
   'when one travels up and down'
   ***jə-rtʃi-m       tə-gərəd***
   for-boy-and to-girl
   'To males and to females'
   ***wəhe miʃt***
   good   woman
   'A good woman!'

The song in (13a) says your guests are as numerous as bees in their hives and that you serve them equally irrespective of their ages; what a woman you are! In a similar vein, the song in (13b) reveals that there are several guests in the woman's place, described as 'your village yard', and the number of people is metaphorically expressed as 'herds'. The song in (13c) also states that the woman loves everyone in the village, irrespective of their gender.

To summarise, the major of attributes or qualities that Gumer society expects of women based on mourning songs are:

– dexterity and provision of service
– obedience
– having good conduct
– having a welcoming personality
– impartiality

**2.1.5**   *Gender roles and representation in aʒəmənə 'wedding ceremony'*
The wedding ceremony is one of the main cultural events in Gumer society. After the mate selection and marriage has been proposed, couples prepare for marriage, often with a wedding ceremony. In this cultural event, men are responsible for preparing firewood, renewing the compound's fence and preparing an ox to be slaughtered for the ceremony. Women are responsible for preparing butter, *wusa* 'bread of ensete', *afindʒa* 'pepper' *səhər* 'non-alcoholic homemade beer', *t'əla* 'alcoholic homemade beer', and decorating the house. All these preparations are facilitated and financed by the bridegroom, the bride's family and other relatives.

One of the cultural rituals in the wedding ceremony is *misagʲə*', a promise of a gift from parents and close relatives to the bridegroom and bride as an encouragement and support for their newly established married life. As elderly people explain, in earlier times, family members – especially the father and the mother of the bridegroom – actually gave what they had promised. But recently, the promise

is made as a cultural practice, and what has been promised is not practically given to the bridegroom and bride. Procedurally, the *misagʲə* is started by the father of the bridegroom, then followed by his mother and then by his other relatives. The *misagʲə* below is an excerpt:

(14)  **Misagʲə**
    a.   *j-ahə             bikʷirə   tə-kʷərəta*
        GEN-you(SGM)  mule     with-saddle
        'For you(SGM) a mule with its saddle'
    b.   *j-ahʲ jeb-əram  tə-mʷəsata*
        GEN  -you(SGF) milking-cow with-calf
        'For you(SGF) a milking cow with its calf'

The promised gift for the bridegroom is a mule, but can also be a horse or an ox. The promised gift for the bride is almost always a milking cow. We asked the implications of these promised gifts, and the consultants explained that the bridegroom is expected to travel for different social affairs, like dispute resolving, and this is why he is promised a mule or a horse. The ox is promised to him so that he may use it for farming, as farming is basically the role of the man. The wife is expected to process and serve food to the family. Hence, a milking cow is promised to her in order to help her with her new responsibilities in life. It was realised from the consultants that *misagʲə* 'gift promise' is not currently being fully practiced as it was in the past; hence, the practice is endangered.

    The other event in a wedding ceremony is *dərət* 'blessing' of the newly married couple. A few examples of blessings for the bride groom and the bride are as follows:

(15)  **Dərət 'blessing' for both mates**
    a.   *nimadʒə j-ab-hu*
        Love     3SG-give-2PL
        'Let God give you(PL) love'
    b.   *bərəka  j-ab-hu*
        blessing 3SG-give-2PL
        'Let you(PL) be blessed' or 'God bless you'
    c.   *abba-na  adot-əna    bəro*
        father-my mother-my say
        'Let you be able to support your parents'
    d.   *t'ən-o*
        bear-2PL
        'you(PL) bear children'
    e.   *ahə         bə-dunja   ahʲ      bə-tkə     kʲəm-i*
        You(SGM) with-wealth you(SGF) with-child win-2SGM
        'You(SGM) win her with wealth you(SGF) win him by giving birth to children'

As can be seen from the examples in (15), the best wishes for both the bridegroom and the bride are about love, being blessed, supporting their parents in the future and being able to bear children. There are also blessings made specifically to the bride, as shown in (16):

(16)   **Dərət 'blessing' for the bride**
   a.   *t-adota-hʲ*          *fizəʒ*
         From-mother-your(sɢF) better(sɢF)
         'Be better than your(sɢF) mother'
   b.   *ta-mat-ahʲ*                *fizəʒ*
         From-mother-in-law-your(sɢF) better(sɢF)
         'Be better than your(sɢF) mother-in-law'
   c.   *tə-mʷərəʃa-hʲ*                *iʃta*   *fizəʒ*
         From-husband's. brothers-your(sɢF) wives  better
         'Be better than the wives of your husband's brothers'
   d.   *dʒəndʒir tikə bə-dəna-hʲ*          *jə-t-fət'ər*
         Thick    child in-belly-your(sɢF) 3sɢ-PASS-created
         'Let a strong child be created in your(sɢF) womb'
   e.   *ba-jər jar    tikə bə-dəna-hʲ jə-t-fət'ər*
         on-air travel in-belly-2PLF    3sɢ-PASS-create
         'Let a son who may travel by plane be created in your(sɢF) womb'

The best wishes and blessings for the bride as shown in (16) are to give birth to sons who may be great people, and who may be rich enough to travel by plane and that the bride will surpass the bridegroom's brothers' wives, the groom's mother and her own mother in cooking and house-keeping.

The highest wedding best wish, however, is most typically 'You (the bridegroom) win her by wealth you (the bride) win him by bearing a number of children', which implies that the bride's role in the newly established family is giving birth to children, while the bridegroom's role is to amass as much wealth as possible. It encourages a competition between the new husband and wife in wealth making and child bearing, respectively.

### 2.1.6   *Gender roles and representation in title name bestowing*

Titles names are given by the Gurage community to individuals for doing and being extraordinary things, for bravery, charity, negotiating power, having wealth, being hard-working, for community representation, etc. The name-giving process usually entails a feast, which includes slaughtering a sheep or an ox, depending on the social and economic status of the person named. Though such naming is mainly practiced for men, women are also given honour names (cf. Fekede, 2014b). The most common title names for men are *abəgaz, damo/ daməs, eshʲ arib, bərdəfərə,*

*bərkəfətə, fəŋk'ir, jəgən ab, bədət/ abazinab, mʷira bənəsə, ʃakatʃ, wəma, arwase, azmatʃ* and *wənʒət arib* (see Appendix 2).

The tile names given to men are based on culturally and socially required roles that men in the community are expected to fulfil. The major roles are thematically summarised as follow:

–   be a participant in, and successful in war
–   have resources and share them with the needy
–   mediate between people and resolve disputes
–   play a leadership role
–   be a good public speaker
–   rescue people in danger or difficulty

Women's roles, as we have seen, are largely limited to household chores and feeding family and guests. Thus, the community does not expect them to have the qualities men should have, such as bravery, being mediators, leaders, rescuers or warriors. Therefore, there are no such several title names given to women. In fact, we could find only two title names assigned to women:

–   *adʒjət* 'handy'/'dexterous' – given to a woman who is the best cook, feeding family and guests, manages food items and household utensils properly, keeps the home neat and decorated and who is active.
–   *jət'uri dərma* 'daughter of a dexterous' – given to a woman whose mother is the best cook, but who is herself dexterous, as well. It is also given to women whose personality is beyond what is expected of their age, and to women who are advanced in discipline and knowledge. Actually, *dərma* is a young mare or horse (pony) that usually runs very fast, used here metaphorically to express the good quality of a young woman.

The two titles given to women are mainly related to roles in serving family and guests, cooking, housekeeping and food management as well as personality traits like extreme patience, calmness and silence.

One of our consultants explained the reasons for the differences in title bestowing, saying, 'Since long years ago, women had not been directly involved in wars, public speaking, judgment providing, community representation and dispute resolving, hence, they do not deserve the titles related to such tasks. All the titles given for men and women are based on what they do, and how they behaved in the community. So, all the titles of men and women are related to their socio-cultural roles in their families and society at large'.

### 2.1.7    *Gender roles and political representation*

It was confirmed by the Gumer district Women, Children and Youths Affairs experts that there were no female leaders in any of the kebeles in the district. Additionally, although there are 21 sector offices in the district, only four of them – namely, women's affairs, health office, state's communication and animal husbandry sectors – are led by women. In the kebele, which may refer to village or district, women are leaders only in women's associations, such as women development groups, women's league and women's edir 'association meant for helping a deceased family'. All cultural institutions and associations, such as the cultural courts at all levels, are led by men. In cultural institutions, women do not even elect their representatives.

We attended a community level meeting organised by the district agriculture office in one of the kebeles. Among the issues under discussion was monitoring the performance of a farmland management committee formed in the previous meeting. It was decided that the committee was not efficient, and discussions were held with the participants about the perceived reasons for the weaknesses of the committee. Most of the men claimed that there were very few men in the previous meeting, so that the members of the committee were proposed by women with the result that the committee was weak. They also suggested that a new selection be made when there were sufficient men in attendance. Based on this observation, some women were asked how they felt about the situation. They explained that majority of the men in the community are not usually interested in being represented by women, believing that women are not even capable of electing appropriate men representatives. The women also explained that they themselves do not believe that they can represent the men. Although government officials requested that the women be represented and coordinate the community in different developmental affairs, the women suggested that men represented them.

Although the political representation of women in Ethiopia is in the process of improving, it is still limited, not only in the Gumer community but also in other parts of the country. This has been reported in different sources: 'There are no known **quotas** to encourage women's participation in politics in Ethiopia; women have the same rights as men to vote and to be elected to political positions. As of 2009, only 13% of the mid-level executive and judicial positions were held by women. Of high-level positions, such as ministers and high court judges, women held only 26.6% <www.genderindex.org>. This trend has somehow changed positively towards women holding high level positions (50% women ministers have been brought to power) since 2018 (2011 E.C.) due to social movements across the country seeking equal representation in economy, social systems and power.

### 2.1.8    *Gender roles and social participation*

In many social affairs and joint sessions, women's participation is very limited. As both the experts and an elderly person whom we interviewed explained, women do not participate actively. They said that, compared to what they had observed in other areas, women's participation in meetings in the Gumer district is very limited. Usually, the women wait for the men to forward ideas and opinions.

Women do not participate in any level of the cultural court system in the community. As the consultants said, although women are members of *idɨr*, they usually send their monthly fee rather than attending the *idɨr* meetings and participating in decision making during the meetings. Additionally, women do not usually participate in varying community representation and leadership, such as public speaking and coordination. The situation seems to be the general trend for women in Ethiopia, in that they feel restricted although the existing situation permits them to participate. This has been seen in the literature as follow: 'Freedom of movement is restricted in certain parts of Ethiopia on account of national security concerns. There do not appear to be any legal restrictions specifically on women's freedom of ***access to public space***; however, some women may face restrictions on a day-to-day basis' <http://www.genderindex.org>.

### 2.2    Responses to gender discourses and construction of identity

### 2.2.1    *Responses of participants to various gender discourses*

Throughout the interviews and the FGDs, it was realised that different groups of the Gumer community have different attitudes towards the different gender discourses in the community. Most of the youth, especially secondary school students, argued that the lack of women's participation in different social affairs, especially in the cultural court system, is unfair and needs to be improved. They also claimed that different expressions and cultural practices, like job classification, among men and women also need to be improved. However, some of the female students who participated in the FGD explained that they still believe that some household chores, like cleaning house, preparing cultural food, making and serving coffee, are better done by women, reasoning that although it is fine for them (girls) if their brothers assist them in such household chores, the community considers it taboo for the men to be involved in such kitchen tasks. Hence, they said, it is better to save face for their men, brothers and husbands.

Most of the elderly women believe that cultural gender differences have been practiced for so long and have become so natural that they cannot be changed easily. Some of them believe that in the cultural court system, it is better to be represented by men, as men are more experienced, knowledgeable and skillful in

public speaking and judgment than women. They also believe that some food items that culturally are considered to be taboo for men to do them need to be managed by women. They think that men do not deserve such work as they are naturally blessed and neat.

Both the men and women consultants believed that women are incapable of public speaking and decision making. Hence, they need much prior change and improvement in their knowledge and experience before they participate in community representation and leadership roles (cf. Wodak 2015: 698). This indicates that there is a misconception by members of the community about men's and women's nature and personalities.

### 2.2.2   *Gender discourses and identity construction*

People's behaviour and personality are the results of the socio-cultural environment in which they grow up. People usually behave and act differently in their work place, village, schools, playing fields, etc. Hence, secondary schools and offices were taken as examples where the men's and women's different personalities and performances would be reflected.

Some secondary school teachers from Arekit Secondary and Preparatory School were interviewed about the reflections of the gender differences in the curricular and co-curricular activities in the school. They explained that girls do not usually express their ideas freely in the presence of boys in the classroom, in clubs and in students' meetings. Due to these problems, there was a unique club called *iɲa ləɲa*[3] 'we for us' in the school. This club was organised particularly for girls in addition to the other clubs in which males and females may take part. The aim was to encourage girls to discuss issues concerning them freely.

The teachers said that the differences in cultural practices have resulted in different attitudes towards boys and girls. The boys do not usually want girls to represent them. The boys usually say *k'əmis inilbəs inde*? 'Shall we wear a dress?' This is to mean that to be represented by girls is equivalent to being a girl, and implies that girls are not capable of representing boys. Additionally, girls are not usually interested in being representatives of their classmates. Sometimes, when teachers and even students elect girls for different coordination tasks, they usually propose that the boys represent them, and they suggest that they act as assistants to the boys.

The experts also explained that most of the women in many offices are usually too shy to speak in public, not daring to take administrative or leadership roles and usually proposing men for such positions, unless it is mandatory for the women.

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**3.**   This phrase is actually Amharic, and can be translated in Guragina as ***jinam tina*** 'we for us'.

Recently, there have been new developments, and most cultural practices and events are being changed. In past times, women never attended the cultural court system. But nowadays, they have at least started to listen to the court while serving coffee. In addition, during *wik$^{j}$ər* 'evening social gatherings', women were not listening to the talks and discussions. But these days, they have at least started to listen to them and forward some ideas and suggestions, although they do not set the agenda for discussion.

In the past, women rarely participated in farming, but these days they assist their husbands in small farming. Women are also organised in groups by the government, and they participate in group farming and cereal production in order to become financially independent.

As the elderly people and experts confirmed, women had never participated in public meetings and discussions in the past. Currently, they have started attending joint community meetings, although they still do not usually express their ideas freely in the presence of men.

## 3.   Summary, discussion and conclusion

### 3.1   Summary

The objective of this article was to investigate women's representation in sociocultural and political affairs with gender-oriented discourses in the Gumer community of Gurage. We used cross-sectional design and qualitative research methodology to obtain and analyse data. Key consultant interview, focus group discussions and participant observation with corresponding tools interview guide, FGD guide and side-notes, respectively, were used.

The study showed that gender and power in Gumer Gurage are highly integrated, as discovered through various discourses. Power was expressed through representations in various social, cultural and political affairs, and these were practically demonstrated by role assignments, expected socio-cultural behaviours and daily routines. Figure 3 below demonstrates power differences in the role assignments and expected behaviours of men and women.
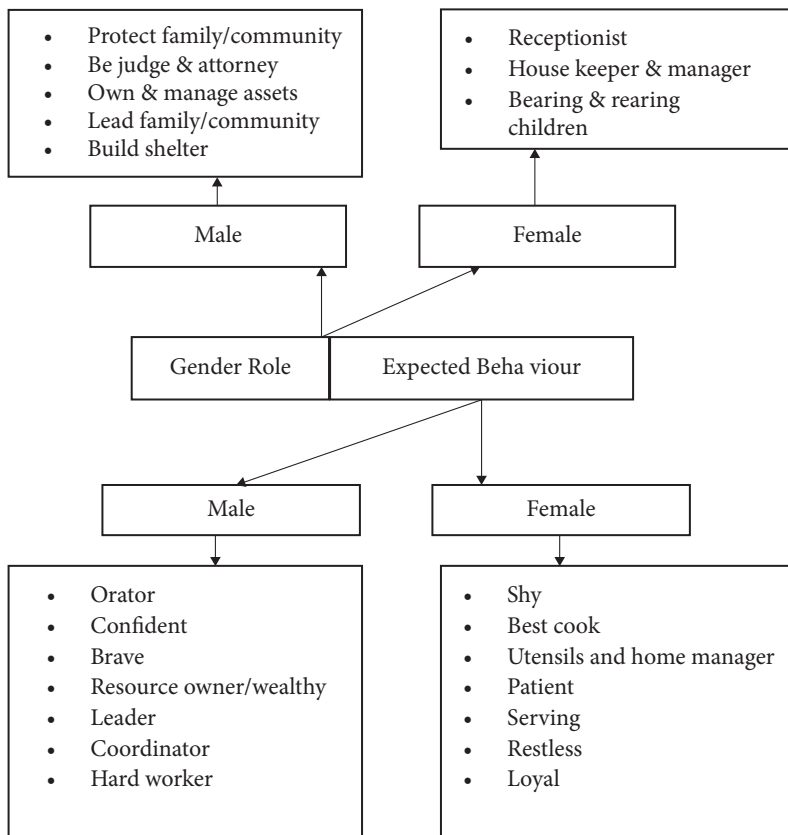
**Figure 3.** Gender roles and expected behaviours

## 3.2 Discussion

In this article, we tried to find out how gender discourses construct the roles and so-cial positions of men and women in general power structures (Weatherall 2002: 42), how different members of the community respond to gender discourses and how female's self- and group identities are reflected in the discourses. We found that different genres, such as the language used in mourning, weddings, title name bestowing, blessing and proverbs position men's and women's roles and representa-tions quite differently.

Different linguistic strategies are used to make such distinctions, including differentiation in role assignments in which women are portrayed as obedient, servers, feeders of guests and the family, who should not go to courts and who are powerless (Weatherall 2002: 65–67). Differentiations have also been made spatially,

as demonstrated in markets, where we find *jiʃta gəbja* 'women's market' and *jəgəmʲa gəbja* 'men's market', in which things to be bought and sold and even areas for buying and selling are gender bound. This is similar to what Weatherall (2002: 68) says: 'the street could be considered alongside the family and schools as an institution where gender relations are ordered'.

Some proverbs were found to be downgrading women roles and some utterances that instil fear in women not to assume certain male roles. For instance, it was said in folklore that if women go to the courts, they will not bear children, which is the main role of a woman in the society in which a woman may be divorced if she does not bear children.

All linguistic means are used to make differentiation. For instance, morphologically the default gender is masculine, and even women in some cases are expressed by the male gender. In fact, all objects and animals are grammatically masculine in Gumer and in Gurage, in general. Lexically, women's title names were limited to just two, but men's titles numbered in the tens. At semantic and pragmatic levels, all the genres we have discussed demonstrated gender-role differences and low representation of women.

We found that the people responded to many of the gender discourses by saying that women are less capable of performing certain tasks, such as public speaking, being judges and attorneys, even of leading certain groups in schools (Weatherall 2002: 65). Women themselves refrain from claiming participation in the cultural court system, thinking that this is natural to the system (Eckert & McConnell-Ginet 2003: 9).

The gifts promised during 'misagʲə', such as a horse for a man as an encouragement to travel and participate actively in various socio-cultural affairs, and a milking cow for a woman to show that she is responsible for household chores, especially food preparation, pragmatically limit roles in the community. This is consistent with Edwards (2009: 127), who claims that language is used in communication to attribute behavioural and social differences.

Women's self- and group identities were not generally different from those imposed on them by men in the society. With a few exceptions, our women consultants and female students accepted the differentiations and low representation as a normal. Some even accepted that they lack some of the skills and wisdom that men have. This is consistent with Fekede (2014a: 39) who says, '…what has been communicated through … language … shapes our perception of reality and thereby our ways of life'.

### 3.3   Conclusion

Based on our analysis of the findings from interview and discourses from different genres, we can draw the following conclusions:

1.  In all socio-cultural and political practices, women and men have significantly different power, being less for women than for men.
2.  Participants' responses to various gender discourses revealed that women are less capable than men in different social roles, such as decision making.
3.  Women's self- and group identification showed that women, to a large extent, accepted the lesser power given to them by society, and in some cases considered it appropriate.

The main causes for gender differences in the varying gender discourses for men and women were:

–   Economic incompetence: women were not able to own and manage fixed assets, such as farmland. As a result, they had to go to their husband with no financial or resource contribution. The house, farmland, cattle, etc., are already resources the husband brought from his family. Due to that, the women could not make decisions about those resources.
–   Lack of knowledge and awareness: the misperception about men and women is another main cause for gender differences. Neither men nor women members of the community believe that women are capable of fixed assets management, negotiation, public speaking, election or doing big business.
–   Lack of exposure: the participants explained that women in Gumer were not directly involved in public speaking and other responsibilities that men face. Hence, they lack experience in leadership, public speaking, and dispute resolution.
–   Cultural transmission: almost all participants agreed that the main cause for all of the gender differences is due to the preexisting cultural system, which has long been in place. Hence, the practice and the status quo have continued through the generations without anyone's trying to improve or change them. Most of the elderly people said *zam fit'rətmətawʃ* 'it is just its nature'.

Current efforts by the government to improve women's representation in all social and political affairs and the increase in the girls' formal education may improve the traditional long-standing low status and position of women in Gumer district and the Gurage zone in general in years to come.

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## Appendix 1.  Males mourning songs

| | | |
|---|---|---|
| 1. | *wərko təbanərə* | 'A shelter is demolished' |
| | *agaz kersima egəwalə* | 'Agaz (title) Kersima who does not care' |
| | *tisəhʷi jañkʲe nər* | 'When retreated he is at behind' |
| | *abo mis* | 'What a man!' |
| 2. | *wərko təbanərə* | 'A shelter is demolished' |
| | *bəhətʃ bəməkʼəle* | 'There in Mekelle' |
| | *ɨrsas təhətərə* | 'Dressed with bullets around his waist' |
| | *abo mis* | 'What a man!' |
| 3. | *wərko təbanərə* | 'A shelter is demolished' |
| | *tɨkʷijən jərəpərə* | 'What you had been protecting' |
| | *jəmʷan ateghʷərə* | 'Whom you delegate to' |
| | *zega bet gəfərə* | 'The poor are going to migrate' |
| | *abo mis* | 'What a man!' |
| 4. | *wərko təbanərə* | 'A shelter is demolished' |
| | *nipʷar təməsikʼərə* | 'Feast of thunderbolt and feast of the cross' |
| | *jəmʷan ateghʷərə* | 'Whom you delegated' |
| | *abo mis* | 'What a man!' |
| 5. | *wərko təbanərə* | 'A shelter is demolished' |
| | *bərən bətət mʷərə* | 'At up and down sides' |
| | *tʃotəm ʃənən wərə* | 'He worked hard and excelled' |
| | *wəhe mis* | 'A good man!' |
| 6. | *wərko təbanərə* | 'A shelter is demolished' |
| | *jahə kʲərə kʲərə* | 'Around you' |
| | *tʼuri aŋgəfərə* | 'Always surrounded by best horse' |
| | *wəhe mis* | 'A good man!' |
| 7. | *wərko təbanərə* | 'A shelter is demolished' |
| | *titʃən kʼirawikəm* | 'The public awaited you when you come' |
| | *tatjədig te bʷarikəm* | 'You are not found to rescue' |
| | *abo mis* | 'What a man!' |
| 8. | *wərko təbanərə* | 'A shelter is demolished' |
| | *jogət gəmba zarə* | 'The venue of pot's spirit' |
| | *jəsrat kʲərə kʲərə* | 'The frame of the procedure' |
| | *əkʷa təsəppərə* | 'It is broken today' |
| | *wəhe mis* | 'A good man!' |

9.  *awi sɨma awi*　　　　　　'The wild animal listen you wild'
    *jadəbabaj gʷəntʃo zobe*　'The avenue (court) hyena, zobe'
10. *awi sɨma awi*　　　　　　'The wild animal listen you wild'
    *jambbəssa mʷəsa zobe*　'The cub of a lion, zobe'
11. *awi sɨma awi*　　　　　　'The wild animal listen you wild'
    *gəgməta ambbəssa zobe*　'He himself a lion, zobe'
12. *awi sɨma awi*　　　　　　'The wild animal listens you wild'
    *gəmam ambbəssa zobe*　'Brave and a lion, zobe'

## Appendix 2.  Males' title names

1.  abəgaz/agaz 'war leader' – Given to a man who participated in different wars, and is usually a leader during war.
2.  *Damo/daməs* 'wealthy' – Bestowed on a man who owns large number of cattle and other fixed assets.
3.  *eshʲ arɨb* 'confronter' – Given to a man who usually dares to confront enemies during war.
4.  *bərdəfərə* 'brave' – Given to a man who dares to step into the enemies' territory during war; to a person who is usually brave enough to knock on closed doors; to a man who confronts and challenges very difficult problems that others avoid.
5.  bərkəfətə 'courageous' – Given to a man who directs people in war and other life struggles; to a man who begins war and other societal changes to enable others follow the same direction and change.
6.  *fəŋkʼir* 'uplift'/'winner' – Given to a man who is able to cross enemy borders during war; to a man who challenges existing systems in a society; to a man who challenges administrators and their mismanagement of society.
7.  *jəgən ab* 'father of community'/'leader' – Given to a man who protects community members; to a man who shares his resources with the poor; to a man who coordinates and leads the community; and to a man who mediates disputes between people.
8.  *bədət/abazɨnab* 'donator' – Both are given to a man who is generous; who shares his resources with the poor.
9.  *mʷira bənəsa* 'winner'/'persuasive'/'victorious' – Given to a man who is a gifted public speaker, whose words, ideas and expressions are convincing or persuasive, who has winning ideas.
10. *ʃakatʃ* 'mediator' – Given to a man who is a good mediator; who usually resolves conflicts between people.
11. *wəma* 'wealthy/donor' – Given to a rich man who shares his resources with the poor.
12. *arwase* 'life saver' – Given to a very decisive man in the community; to a man who usually helps people in trouble.
13. *azmatʃ* 'war leader' – Given to a war leader; and by extension for temporary use to a bridegroom who leads his attendants.
14. *wənʒət arɨb* 'fast attacker'/'frontier' – Given to a man who is a fast attacker during war.

**Appendix 3.** Proverbs about Females

1. *mɨs tijaʒna k'ak'ra* 'when a husband sees her appétit less'
2. *zəngɨr tijaʒna bura* 'when a wall sees her voracious'
3. *miʃt jək'jəmʷətʃn tətən jibəhʲ* 'A man defeated with a woman cries with smoke'
4. *tik'ʲəm biwri jəmʃtəna* 'whom do you win; my wife'
5. *bazəa bangəpa inim miʃt* 'if guests did not come, all women are wives'
6. *banzənəbə inim bet* 'if it did not rain, all huts are houses'
7. *tisəmʷja tʃətʃm, tizəfʷja* 'while she declined when kissed, she accepted while forced'
8. *tantʃ'ənətʃ miʃt wəbada* 'consultation with woman who did not bear child is like'
9. *təfərəz mɨs marəda* 'travel on foot with a horseman on a horse'
10. *abana jəgʷadəne, adotəna jəbəkərətʃe tərakəsom jark'o*
    'my parents quarrel because my father is hungry and my mother could not feed him'
11. *ɨrsɨja gərəd jəmis atars*, 'a small girl is not small for a man'
12. *ɨrsɨja tɨnkɨja jambɨr əjars* 'a small pot is not small to cook cabbages'
13. *gərəd miʤatʃa basatʃətʃ gamʷə jəmis sənatʃim*
    'If a girl could cross a hearth, she is ready for marriage'
14. *jəzəjə-gurz bejawəʤənme bəhʲnəna jitsrasəri barətʃm*
    'An aged spinster said, people make fun of me though I won't be get married'
15. *jiʃta hʷet jat'əfa bet*
    'couple of women destroy a house'
16. *jiʃta gurz etezəz*
    'old women never obey'

# Grammar (syntax and morphology)

# Manner of movement in Amharic

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Movement is a situation type with a source, a goal, a path, timeline and a figure. It starts from the source, and heads towards the goal, along the path, a timeline, and speed, and terminates at the centre of the goal. It comprises sub-movements that define the main movement in subordinate clauses predicated of compounds involving the verb 'to say'. The path could be straight, sloppy, bumpy, etc., which defines the movement as durative, iterative and terminative. The speed can be slow, extra slow, fast or extra fast, which characterizes the figure as sober or edgy, and his stature as awkward or elegant, depending on the path, age and gender. This paper argues that both the manner of movement and the behaviour of the figure are expressed in subordinate clauses of extended verbal stems, derived adjectivals, nominals, and prepositional phrases, all of which are treated here as manner adverbials necessitated by the lack a productive category of lexical manner adverbs in the language.

**Keywords**: movement, source, goal, path, manner, adnominal, adverbial, adjectival and figure

## 1. Introduction

One aspect of Amharic[1] grammar that has not received any attention in the descriptive or comparative literature such as (Leslau 1995; Hartmann 1980; Hudson 2010) is aktionsart, a notion that relates to the internal structure of situations, that is actions, events and states and their manner of occurrence and forms of expressions (Platzack 1979). Actions can be divided into types and sub-types on the basis of their degree of spontaneity, intensity, iterativity, durativity, directionality, etc, which are often expressed in manner adverbs in languages which have a productive category. Amharic does not have such a category (Getahun 1995; Leslau 1995; Baye 2009), and hence uses subordinate clauses and phrases as manner expressions actions.

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**1.** Amharic is the most widely spoken Semitic language of Ethiopia, which serves as a national lingua franca and a working language of the Federal government.

A movement action starts from one point in space and time, the source, and heads towards another space, the goal, across a path. Looked at from the perspective of the source, the movement starts from the centre, continues steadily in some manner along the path until it reaches the goal and terminates there by getting into its centre. Within this general movement action there are sub-movements which define the main action in terms of its duration in time, manner, path, and the behaviour of the figure. The entire movement and its sub-movement actions are presented below, (see also appendix one for a more complete list):

(1)    A: source / goal                                              B: goal /source
       tänässa   > wät't'a   > tärammädä > tädarräsä  > därräsä     gäbba
       'got up'    'got out'   'walked'      'got close'   'arrived'    'entered'
       gäbba    < därräsä  < tädarräsä  < tärammädä < wät`t`a  < tännässa
       'entered'   'arrived'   'got close'    'walked'      'got out'   'got up'
       **Movement and Directionality of Sub-movements**

As can be observed, the movement action consists of the sub-movements of 'getting up', 'getting out' of the centre of the source, 'A', 'walking ahead, 'getting close to the goal, 'arriving at the goal' and 'getting into' the centre, 'B'. From the perspective of the source, 'A', the movement action is 'going' and from the perspective of the goal space, 'B' it is one of 'coming', both of which are unspecified in terms of their cause, agency, purpose, temporal duration, manner, and the path along which they take place.

The cause of movement could be an internal impulse or external force. The agent could be a self- or other-induced person and the purpose could be urgent or routine. The path could be sloppy or bumpy, etc., which may partly define the types of sub-movement actions, their manner, and the behaviour of the (self)-agent figure and the forms of expressions required to describe these (Levinson 2003: 97; Talmy 1985, 2000). The speed of the sub-movements from 'A' to 'B' could also be slow, extra slow, fast or extra fast depending again on the type of path and the degree of urgency of the purpose that triggers the movement action to take place. The type of path and urgency of purpose may define the behaviour of the agent as sober or edgy, and his/her appearance as awkward, clumsy, or elegant, etc.

A question that may arise from this situation of movement and sub-movements concerns the expressions of manner and the behaviour or stature of the figure, given that Amharic does not have a productive category of lexical adverbs of manner, as stated above. This paper argues that both the movement and its manner are expressed in subordinate clauses headed by simple or extended verbal predicates, as reported for Semitic (Slobin 2004: 25), and the behaviour of the figure in derived adjectives and nouns. To this effect, the paper is organised into five sections, of which the first is this brief introduction. The second concerns the manner of movement and degree of speed, while the third deals with the manner and behaviour of

the figure. The fourth section discusses the types of path, manner of movement, behaviour and stature of the figure in motion, and finally, section five provides a short summary. The data is mainly introspective, drawn from my 'conscious experience' (Talmy 2000: 6) of the language, which I am a native speaker. The description of the facts is general linguistic, with little or no commitment to any school of thought or theoretical framework. The purpose is to describe the internal morpho-syntactic structures of the expressions of manner of movement and the behaviour of the (self-) agent, both of which may relate to the type of path and urgency of purpose.

## 2.   Manner of movement and degrees of speed

A movement action can be classified into types on the basis of speed and the path along which it takes place. In terms of the former, it can be described as slow, extra slow, fast or extra fast, and in terms of the latter, it can be defined as straight or meandering, sloppy or bumpy, etc.

### 2.1   Slow manner of movement

A physical movement from a source space to a goal space along a path is bound to be either slow or fast. In Amharic, this is expressed in ideophone-based compound verbs or in prepositional phrases where nouns of manner occur as complements. The ideophones that serve as first member of the compounds include the following:[2]

(2)   [k'äss]   '(be) slow'
       [rägaa][2] '(be) sober'
       [zəgg]   '(be) patient

These ideophones of manner end in long (geminate) segments, which is characteristic of such forms in the language in general. As they stand, the forms are expressions of warnings for the agent (figure) to be low in speed, sound, and high in patience. The forms are unspecified for class membership or part of speech. Their generic meaning is simply '(be) slow'. The compound verbs in which they occur as

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2.   A reviewer remarked that the transcription of this word, [rägaa] was 'weird', but did not say why. The word is an ideophone and like any other such forms in the language, it ends with a long segment, in this case, a phonetic long vowel [aa]. In a context of compounds in which it occurs as a first member, it ends with a short [a], thus, the contrast between [rägaa] 'sober' and [raga bäl] 'be sober', in both of which it has a function of warning or reminding the (self-) agent to watch his/her steps. Unlike gemination which has both lexical and grammatical functions, phonetic vowel length has only a discourse function of mild warning (Alemayehu 1987).

first member are headed by the verb 'to say' -l, 'says' *al-* [3] 'said' or its completive (ge-rundive) alternant *bəl-* 'having said'. Such compounds come in imperfective, pro-gressive, perfective, and completive aspectual forms, as shown below (Baye 2006):[4]

(3)   Imperfective                          Progressive
      k'äss yi- l – al                       k'äss əyyä-al-ä
      slow 3SG-say:IMPF.-PRS.                slow PRG.-say:PF.-3SGM.
      '(he) slows down'                      '(he) is slowing down'
      räga yi- l -al                         räga əyyä -al-ä
      sober 3SGM.-say:IMPF.-PRS.             sober PRG.-say:PF.-3SGM.
      '(he) gets sober'                      '(he) is getting sober'
      zəgg yi-l-al                           zəgg əyyä -al-ä
      patient 3SGM.-say:IMPF.-PRS.           patient PRG.-say:PF.-3SGM.
      '(he) gets patient'                    '(he) is getting patient'
      Perfective                             Completive[4]
      k'äss al-ä                             k'äss bəl-o
      slow say:PF.-3SGM.                     slow say:CMPL.-3SGM.
      '(he) slowed down'                     '(he) having slowed down'
      räga al-ä                              räga bəl-o
      sober say:PF.-3SGM.                    sober say:CMPL.-3SGM.
      '(he) got sober'                       '(he) having gotten sober'
      zəgg al-ä                              zəgg bəl-o
      patient say:PF.-3SGM.                  patient say:CMPL.-3SGM.
      '(he) got patient'                     '(he) having gotten patient'

The second member of the compound occurs as: *-l-* 'says', *al-* 'said', *əyyä-al-*, 'saying', *bəl-* 'having said', to express the four aspectual types respectively and it also shows the person affixes /yi- /- ä/ and /-o/, the last one being genitive, but all referring to

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**3.** In structures of quotative clauses, -l- and *al-* occur as main verb as in:

[Kasa [ʔəne ʔə-   hed      -all   - ä hu] [al – ä]        /  **[yi-l-al]**
K.    I     1SG- go:IMPF. -PRS. -1SG  say:PF.-3SGM. /  **3SG-say:IMPF.-PRS.**
Lit. 'Kasa 'I will go' said'                              **'K. 'I will go' says'**

**4.** A reviewer pointed out that what is labelled here as 'completive' is a con-verb or gerundive, which, in my view, is a type of verbal stem heading a subordinate clause, which, in Amharic, has no tense (Leslau 1995: 347). The completive, on the other hand, is a type of aspect, like the per-fective, progressive, imperfective, etc., which refers to the end point of a situation and is, hence, different from the perfective (to which the reviewer alluded), in that the latter 'denotes a situa-tion viewed in its entirety without regard to internal temporal constituency', (Comrie 1998: 12), whereas the completive looks at the internal temporal constituency and 'puts emphasis on the termination of the situation', ibid p. 18, (see also Bybee et al. 1994: 57).

a third person, nominative subject, which may be phonetically null as its reference is recoverable from the agreement affixes or the communicative context.

As can be observed from the aspectual paradigm in (3) above, the form of the progressive is based on the form of the perfective, which has a root pattern $c\text{-}c_1c_1\text{-}c\text{-}$, as in säbbär- 'broke', for example, and the completive depends on the form of imperfective, which follows the pattern $\text{-}c\text{-}c_1c_2\text{-}$, as in type A verbs like -säbr- 'break' (Leslau 1995: 300; Baye 2004: 321). The perfective and the completive are suffixing, whereas the imperfective is prefixing of person, and suffixing of number or gender. The suffixes in the completive are genitive in form, though they refer to a subject which is nominative. Hence the contrast between the perfective in (a) and the progressive in (b) below:

(4)  a.  säbbär-š         break:PF.-2SGF      'you broke'
     b.  ʔəyyä- säbbär-š  PRG.-break:PF.-2SGF 'you (be) breaking'
     c.  säbr-äh          break:CMPL.-2SGM.   'you having broken'

Given that these forms here are triliteral, one may argue that such an account does not hold for bi-literal verbs, specifically for such verbs as *bälla* 'ate' *sämma* 'heard', etc., for example, which have lost their root-final consonant, and which, as a result, show up the consonant [t] in their completive, but not in their imperfective forms. It is true that verbs that have lost their root-final consonant show the consonant in only in their verbal, and also in their nominal gerundive forms, irrespective of types of stem or number of root consonants. Consider the following examples of type A verbs:

(5)  a.  yi-säm-al (Imperfective)                  '(He) hears'
     b.  sämm-a (Perfective)                       '(He) heard'
     c.  ʔəyyä-sämm-a (Progressive)                '(He is) hearing'
     d.  sämt-o (Completive/gerundive)             '(He) having heard'
     e.  mä-sma-t (Nominal (infinitive) gerundive) 'hearing'/'to hear'

That the imperfective, perfective, progressive, verbal gerundive (completive) in (d) and the nominal gerundive (infinitive) in (e) have different patterns of affixation and that only the gerundives show the place holder [t] is obvious, but this is a phonological process and, hence, tangential to the main issue at hand, which is the morphosyntactic behaviour of the progressive and completive aspectual forms, and not of their phonetic shape.[5]

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5.  A reviewer remarked that the 'completive 'ends' in the vowel -ä, i.e. actually has the pattern c-ccä, not c-cc', which is the pattern followed in the present description and elsewhere in the literature (Leslau 1995: 418). Whether the vowel -ä is morphological or phonological is not clear, because the reviewer has not provided examples, nor does (s)he describe the context

With both the aspectual forms and the agreement features overtly realised, the ideophone compounds are classified as verbs (Baye 2006; Mengistu 2002). The compounds suggest that the (self) agent makes little or no sound, uses low speed and takes maximum care in his/her movement towards the goal along a path which may be tough and rough, thus requiring care, for which reason forms like [ragaa] 'be sober' are used.

The same ideophones also serve as base forms for the derivation of nouns of manner, as in the following:

(6)  k'äss-ta [k'ässəta] 'slowness'
     rəga-ta                 'soberness/ calmness'
     zəgg-ta [zəggəta] 'patience'

Such nouns occur with the preposition *bä* 'with/in' and describe the manner of movement expressed by the verb *hed-* 'went' in structures, as in the following:

(7)  a.  Kasa [bä- k'ässəta]  hed-ä
         K.     with slowness  go:PF.-3SGM.
         Lit. 'K. went with slowness.'
     b.  Kasa [bä- rgata]      wät't'-a
         K.     with sobriety  getout:PF.-3SGM.
         Lit. 'K. got out with calmness'
     c.  Kasa [bä- zəggəta] gäbb-a
         K.     with-patience enter:PF.-3SGM.
         Lit. 'K. entered with patience/calm.'

Now consider the following structures of slow manner of movement in which a compound verb is used:

(8)  a.  Kasa k' äss al – ä
         K.     slow   say:PF.-3SGM.
         Lit. 'K. said, slow' / 'K. slowed down'

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where c-cc- ä is attested. There is, however, a vowel -ä in the position preceding the agreement inflections of gerundive/completive stems as in:

säbr-ä-h   'You M. having broken'
säbr-ä-š   'You F. having broken'

the position where -ä- is found is a morpheme boundary in which epenthesis takes place leading to subsequent phonological processes, which cannot be entered into here for reasons of scope and level of description.

    b.    [Kasa [[kʼ äss əyyä – al – ä]        hed -ä]],     {wätʼ-a, tärämmädä,
           K.      slow PRG.-say:PF.-3SGM. go:PF.-3SGM. {got out  walked,
           gäbb-a,  etc}
           entered, etc}
           'K. slowing down went' 'K. went slowly'

    c.    [Kasa [[kʼäss bəl       -o]      hed -ä]]
           K.      slow  say:CMPL. -3SGM. go:PF.-3SGM.
           Lit. 'K. having slowed down went'

(9)   Kasa [[bä – kʼässəta]  hed -ä]
       K.    with – slowness go:PF.-3SGM.
       Lit. 'K. went with slowness'

In (8a) *al-* 'said' is in the perfective aspect, which shows a completely slowed-down movement of 'going'. (8b) is in the progressive aspect indicated by the prefix *əyyä-* attached to *al-* 'said', showing that the movement is in progress. (8c) is in the completive/terminative aspect indicated by the gerundive variant *bəl-*, which shows that the movement has reached its terminal point, but with the implication that it will be followed by a subsequent action of consequence.

The structure in (9) has the prepositional phrase [*bä kʼässəta]* 'with slowness', in which the derived noun *kʼässəta* 'slowness' describes the manner of the movement action as being unhurried. The progressive aspect shows that the action covers an extended temporal or spatial distance. This is in contrast to the completive aspect, which takes only the endpoint of the movement action as its focus.

In the structures in (8a–c), the head of the compound -l- 'say', *al-* 'said' or *bəl-* lit. 'having said' does not express any action of 'saying' as such, it only shows the aspectual types and carries the agreement affixes that refer to the (self-) agent figure and interacts with the manner ideophone *kʼäss* 'slow' to show that the movement is low in speed.

## 2.2   Extra slow manner of movement

This is a manner of movement of going along a path that takes a long time to cover the distance between the source and the goal. Such a movement is expressed in verbs that are derived from basic roots through reduplications of a penult root consonant and insertion of a continuant consonant like /n/ in initial positions, as shown in the following paradigm:

(10)

| Basic roots | Extended roots | Reflexive stems | gloss |
|---|---|---|---|
| k-r-f-f | n-k-r-f-f | tä-nkäräffäfä | 'get-slowed down' |
| kʼ-r-f-f | n-kʼ-r-f-f | tä-nkʼäräffäfä | 'get-moving sluggishly' |
| g-l- ǧ-ǧ | n-g-l- ǧ-ǧ | tä-ngälaǧǧäǧä | 'get- moving awkwardly' |

Such extended roots serve as bases for the derivation of middle or causative stems, the former derived with the prefix /tä-/ and the latter with /a(s)-/. No simple perfective or completive stem is derived from either the basic or the extended roots, since perfectives like *käräffäf-* and *k'äräffäf-* are unacceptable.

Consider now the following examples of structures of very slow manner of movement predicated of extended stems like those above:

(11)  a.   [Kasa [[əyyä- tä-nkäräffäf -ä]      wädä  bet-u
           K       PRG.- MD.-slow:PF. -3SGM.  to      house-3SGM.POSS.
           hed -ä]],         {mät't'a, gäbba}
           go:PF. -3SGM. {came,    entered}
           Lit. 'K. being sluggish went to his house' 'K. went home in a sluggish
           movement'
      b.   ˀ[Kasa [[tä-nkärfəf – o]       wädä  bet-u                  hed -ä]],
           K.     MD.-slow:IMPF.- 3SGM. to      house-3SGM.POSS. go:PF. -3SGM.
           {mät't'a,  gäbba}
           {came,    entered}
           'K. went to his house having been sluggish' / K. went to his house having
           been moving sluggishly'

The reason (11b) is questioned seems to be related to the middle reflexive verb, which is in the completive aspect showing the termination of the movement action, whereas the extended reduplicated stem *tä-nkärfəf-* refers to the iterative or durative nature of the same slow movement, which results from the reduplication of the penult root consonant [f][6] or from the inherent lexical meaning of the same reduplicated stem, denoting sluggish movement in contrast to forms like *täkläfləf- 'bustle'/ 'run about'*, which are also reduplicated, hence durative/iterative, but showing non-sluggish movement. That this may be is supported by other structures like the following, in which reduplicated stems in the same completive aspect are possible.

(12)  [Kasa [[tä-ndärdər – o]     wädä  bet-u                  hed -ä]],     {gäbba,}
       K.     MD.-trot:IMPF.- 3SGM. to      house-3SGM.POSS. go:PF. -3SGM.
       Lit. 'K. having trotted down went to his house' 'K. went home having trotted
       downhill'

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**6.** A reviewer commented that (11b) is questioned (?) not because of a mismatch between the reduplication of the root consonants, which shows durative/iterative action, and the completive aspect, which shows the end point of the movement action, but 'must have another cause', although s(he) has unfortunately not specified what that other cause would be. Furthermore, s(he) states that structures like (9b) 'well exist' in Amharic, which is true, but such structures have reduplicated stems, which denote non-sluggish movement, as in the example in (9c) above.

Here *tä-ndärdər-* 'trot' is an iterative downward movement along a sloppy path, and is bound to be fast because of the effect of gravity on the figure's speed and manner of movement.

In contrast to ideophone-based verbal compounds, prepositional phrases and extended middles/reflexives that express low speed movement, there are those that express very fast manner of movement, which is described next.

## 2.3    Fast manner of movement

This is a type of movement expressed in a prepositional phrase or in a subordinate clause predicated of verbs in the progressive or completive aspect. Examples of such structures include the following examples:

(13)   a.   [Kasa [[bä – fəťnät] hed-ä]]
　　　　　　K.　　by-speed　　　go:PF.-3SGM.
　　　　　　'K. went with speed'
　　　b.   [Kasa [[fäťn-o]　　　　　　hed- ä]]
　　　　　　K.　　speed:CMPL.-3SGM. go:PF.-3SGM.
　　　　　　Lit. 'K. having speeded up went' 'K. went by having speeded up'
　　　c.   [Kasa [[əyyä- fäťťän-ä]　　hed- ä]]
　　　　　　K.　　PRG.-speed:PF.-3SGM. go:PF.-3SGM.
　　　　　　'K. speeding up went' 'K. went by speeding up'

In (13a), there is one instance of a movement action done with speed which is expressed by the prepositional phrase. In (13b), there are two consecutive phases of the same movement action, the first of which is done with increased speed and the second with a sprint. In (13c) there are two concurrent actions of speeding up and dashing off to the goal of the movement.

### 2.3.1    *Very fast manner of movement*
A very fast manner of movement is expressed by the progressive or completive aspectual form of the verb *rotˋ-* 'run', or its derived nominal counterpart *ručˋčʼa* 'running', serving as a complement of a prepositional head of manner/instrumental function. Consider the following examples:

(14)   a.   [Kasa [[bä – ru čč'a] hed -ä]],　　{mäťťʼa, därräsä}
　　　　　　K.　　by -running　　go:PF.-3SGM. {came,　arrived}
　　　　　　Lit. 'K. went by running'
　　　b.   [Kasa [[rotˋ – o]　　　　　　hed -ä]],　　{mäťťʼa, wäťťʼa, gäbba,　därräsä}
　　　　　　K　　run: CMPL.-3SGM. go:PF.-3SGM. {came,　left,　entered,　arrived}
　　　　　　Lit. 'K. having run went' 'K. went having run'

    c.   Kasa [[əyyä – rotʼ – ä]    hed -ä],    {mätʼtʼa}
       K    PRG.-run:PF.-3SGM. go:PF.-3SGM. {come}
       Lit. 'K. being running went' 'K. went by running'

In these structures, the verb stem *'rotʼ'-* 'run' and the noun *ručʼčʼa* 'running' describe themovement as very fast. When the speed becomes extra fast, the verb '*bärrär-*' 'flew', or *kännäf-* 'jetted off', (lit. 'winged off'), is metaphorically used in the same progressive or completive aspect. In other words, 'run' and 'running' are substituted by 'flew' and 'jetted' to express the manner of movement as high-speed.

  (15)  a.  [Kasa [[əyyä – bärrär-ä] hed -ä]],    {mätʼtʼa,}
         K    PRG.-run-3SGM.   go:PF.-3SGM. came
         'K. being flying went' 'K. went flying'
      b.  [Kasa [[bärr -o]        hed -ä]],    {mätʼtʼa}
         K.    fly: CMPL.-3SGM. go:PF.-3SGM. {came}
         'K. having flown went' 'K. went flying'

The facts presented so far show the ways in which manner of movement is expressed in terms of speed that is fast, very fast and extremely fast. The increasing degree of speed requires subordinate clauses headed by compound verbs in the completive or progressive aspect, their metaphoric extensions and prepositional phrases as its expressions.

## 2.3.2   *Extra fast manner of movement*
This is a type of movement that is not only very high in speed but also abrupt and sudden, such as that of an athlete, for example, in a race when he breaks away from his competitors with a sprint and makes it to the finishing line. Expressions of such fast, abrupt and sudden movements include verbs of high speed such as *täfätälläk-* 'got dashed off' and *täsfänätʼtʼär-* 'got ejected off', as in the following examples:

  (16)  a.  wənǰäläňň-očč-u  kä- tä-däbbäkʼ-u-bb-ät
         criminal-PL.-DEF.  from-MD.-hide-3PL.-APPL-3SGO
         [[əyyä – tä-fätälläk -u]   wätʼtʼ -u]
         PROG-MD.-dash:PF.-3PL.  get out:PF.-3PL.
         lit. 'The criminals from where they hid by dashing off got out'
         'The criminals got out from where they hid by dashing off.
      b.  wənǰäläňň -očč-u  kä- tä-däbbäkʼ-u-bb-ät
         criminal-PL.-DEF.  from-MD.-hide-3PL.-APPL-3SGO
         [[tä-fätlək -äu]         wätʼtʼ -u]
         MD.-dash-CMPL.-3PL. get out:PF.-3PL.
         lit. 'The criminals from where they hid having dashed off got out'
         'The criminals got out from where they hid having dashing off'

(17)  a.   [t'əyyət-u   [[əyyä – tä -s – fänätt'är-ä]     wät't'-a]][7]
           bullet-DEF. PRG.-MD.-CS-eject:PF.-3SGM.   get:out:PF.-3SGM.
           'The bullet got out by getting ejected' 'The bullet got ejected out'[7]
      b.   [t'əyyət-u   [[tä- s- fänt'ər -o]              wät't'-a]]
           bullet-DEF. MD.-CS-eject:COMPL-3SGM. getout:PF.-3SGM.
           Lit. 'The bullet got out having ejected off'

Note that in such structures as (16b) the movement is not 'going', as such, but 'getting ejected' out of a definite centre with a sudden flip, and then slowing down to normal speed of regular strides at which point it becomes 'going' or 'walking' and, when this is the case, (16b) appears in the form in (18) below.

(18)   wənjäläňň -očč-u  kä- tä-däbbäk'-u-bb-ät           [[tä-fätlək -äu]
       criminal-PL.-DEF.  from-MD.-hide-3PL.-APPL-3SGO MD.-dash-CMPL.-3PL.
       wät'ətä -u]         hed-u
       getout:CMPL.-3PL.t go:PF.-3PL.
       lit. 'The criminals from where they hid having dashed off, having gotten out
       went'
       'The criminals went having dashed off and gotten out of where they had hidden'

Here the gerundive clause [tä-fätlək-äu] '(they) having dashed off' describes the manner of 'getting out' of the bounded hideout, which the immediately next gerundive clause [wät'ətä -u] '(they) having gotten out' describes, and the entire complex subordinate clause, [tä-fätlək -äu wät'ət -äu], '(they) having dashed off and gotten out' describes the manner of 'going', which the main verb *hed-u* '(they) went' describes.

## 3.   Manner of movement and behaviour of figure (mover)

In the preceding sections, expressions of slow, very slow, fast, very fast and extra fast manners of movement have been presented. In this sub-section, two types of behaviour that define the figure making the movement are presented. The figure's behaviour could be described as extremely frenzied/erratic, or awkward and clumsy, depending on the degree of speed, the sense of urgency of purpose, the type of path and gender, which is sensitive to manner of movement as alluded to earlier on.

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7.   This is taking note of the fact that *t'əyyət* 'bullet' is inanimate, and hence neither rational nor the action volitional.

### 3.1    Sluggish manner of movement, behaviour and stature of figure

As stated before, sluggish manner of movement takes a long time to cover a very short distance. The figure making such a movement is characterized as one who is dragging his feet along the path and appearing clumsy and awkward in his attire and motion. Such movement and behaviour are often associated with a male person who is tall, slim and lanky in the eyes of Amharic speakers. It does not characterise females in general, or those who are short and slim in particular because, culturally,[8] women are generally supposed to be high in speed and low in speech. A sluggard figure (mover) is referred to by adjectival terms, and his sluggish movement by extended verbal stems, derived from reduplicated and extended stems formed in the manner shown below.

(19)    Basic roots   Extended roots   Reflexive stems
    k-r-f-f          n-k-r-f-f          tä-nkäräffäfä    'got slow'
    k'-r-f-f         n-k'-r-f-f         tä-nk'äräffäfä   'got sluggish'
    g-l- ğ-ğ         n-g-l- ğ-ğ         tä-ngälağğäğä    'got clumsy'
    Adjectives   gloss
    kärfaff-a        'lagging'
    k'ärfaff-a       'sluggard'
    gälğağğ-a        'clumsy'

The adjectives in the paradigm are derived from the partially reduplicated quadriliteral roots with the suffix /-a/, and the gemination of the ultimate root consonant, whereas the reflexive/middle verbs come from the extended quinqueliteral ones derived with the prefix /tä-/,[9] as shown earlier on. No simple perfective or

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8.   This is true among Amharic speakers who raise their daughters with advice to be more active in work and less in talk, and their sons to be strong, sober and careful in doing things.

9.   A reviewer took tän- as a prefix in such middle reflexive forms, but did not show its distribution in relation to tä-, the regular medio-passive marker. I argue that there is only one prefix tä- and that the segment /n/ following it, (tä-), is one of a set of consonants inserted at initial positions of reduplicated roots/stems to extend the form and meaning of the basic reduplicated root. Compare the following examples:

| | | |
|---|---|---|
| Basic reduplicated root: | K'-t'-k'-t' | 'pound' |
| Active: | K'ät'äk'k'ät'-ä | 'pounded' |
| Passive: | tä- K'ät'äk'k'ät'-ä | 'was pounded |
| Agentive Nominal: | K'ät'k'at'-i [K'ät'k'ač'] | 'one who pounds' |
| Extended reduplicated root: | n-K'-t'-k'-t' | 'tremble' |
| Passive: | tä- nK'ät'äk'k'ät'-ä | 'got trembled' |
| Causative passive: | / a- tä -nK'ät'äk'k'ät'-ä / [anK'ät'äk'k'ät'-ä] | 'cause someone get trembled' |
| Result Nominal: | ənk'ət'k'ət' | 'fever' |

completive verbal stem is derived from either the reduplicated or extended roots, since such simple forms as *käräffäfä* 'sluggard', or extended ones like *näkäräffäfä* are not acceptable. Such extended forms can only occur as bases for the derivation of reflexive and causative stems like *tä-nk'äräffäfä* 'got sluggish' and *a-nk'äräffäfä*, 'cause one be sluggish' respectively.

Consider now the following structures of sluggish movement:

(20) a. [Kasa [[əyyä-tä-nkäräffäf -ä]    wädä bet-u              hed -ä]],
      K   PRG.- MD.- slugish-3SGM. to    house-3SGM.POSS. go:PF.-3SGM.
      {mät't'a, gäbba}
      {came,   entered}
      Lit. 'K. getting sluggish went to his house (home)'

     b. ˀKasa [[tä-nkärfəf- o]              wädä bet-u
      K.    MD.-sluggish-CMPL.-3SGM. to    house-3SGM.POSS.
      hed -ä],      {mät't'a, gäbba}
      go:PF. -3SGM. {came,   entered}
      Lit. 'K having been sluggish to his house went'
      'K. went to his house having been/gotten sluggish'

(20b) is questioned (?) because the reflexive verbs that are also derived from the partially reduplicated roots refer to an action that is sluggish, thus, durational, and that such verbs cannot occur in the completive aspect because the latter refers to the endpoint, not to the entire phase or duration of a slow movement action.

The figure who makes such a sluggish movement is referred to by the adjective *kärfaffa* 'sluggard', which is derived from the verbal stem *kärfaff-* with the suffix / -a/ as stated earlier. The following is an example in which both the verb and the adjective occur:

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In Amharic, the causative and the passive are mutually exclusive, in the sense that the presence of one excludes the other. Their basic pattern of ordering is causative – passive – stem. In the derivation of the causative, the passive marker tä – deletes, leaving /n/ intact, and the form surfaces as /a-nK'ät'äk'k'ät'-ä/ 'cause someone get trembled'. The segment /n/, would not have appeared in *[anK'ät'äk'k'ät'-ä]* 'cause get s.o. trembled' and in the corresponding noun *[ənk'ət'k'ət']* 'fever' had it (/n/) been part of the passive prefix tä-, as claimed by the reviewer and also reported in others, like Leslau, (1995: 493).

At the lexical level, there is a similar process of stem extension, in which the prefix *as-*, which shows regular causation, is used to extend the basic stem and meaning of forms, as in the following:

fällägä    'wanted'/'looked for'
as-fällägä   (i) 'cause someone look for something'
        (ii) *'became necessary'*

Such extensions of roots and stems extension are common morphophonological processes in the language (Baye 1999: 56)

(21)   [[ya [kärfaffa säw-əyyä]] [[əyyä tä-nkäräffäf -ä     mät't -a]]]
       that sluggard man -SGL.   PROGMD.-sluggish-3SGM. come:PF.-3SGM.
       lit. 'That sluggard man being sluggish came'
       'That sluggard man came sluggishly'

Both the adjective and the verb remind one of a male person who is tall, slim and stooping. The feminine counterpart of (21) would be (22) below.

(22)   [[ya-čč    [käläflaffa set-əyyo]]           [[əyyä tä-kläfälläf -äčč
       that-3SGF busy-bodied woman-SGL..PRG.. MG-being busy-bodied-3SGF
       mät't -ačč]]]
       come:PF.-3SGF
       lit. 'That busy-bodied woman being busy-bodied came'
       'That busy-bodied woman came (being) busy-bodied.'

This type of movement is likely to cause stumbling over things, and this often leads to disapproval by on-lookers, both male and female. The form *kärfaffa* 'sluggard' and *käläflaffa* 'busy-bodied' refer to male and female figures, respectively. Females are expected to move fast, but with care, and males to move with speed that is consistent with their gendered (power) status and the situation. Inconsistent movement leads to expressions as in (21), in which the male figure is needlessly lacking in speed, and in (22), in which the female figure is fast, as expected, but lacking in care and focus.

## 3.2    Extra fast movement and behaviour of figure

This is a type of extremely fast movement where the figure shows edgy or frantic behaviour. As with expressions of a sluggish manner of movement, the expression of a frenzied manner of movement requires extended verbal or adjectival stems as its expressions. The manner of derivation is as shown below:

(23)   Basic root  Extended root  Middle/Reflexives stem              Derived adjective
       k-w-k-w    n-k-w-k-w      tä-nkäwäkkäw-ä 'got frenzied'  käwkaww-a 'frenzy'
       k'-ž-k'- ž  n-k'-ž-k'- ž    tä-nk'äžäk'k'äž-ä 'got erratic'  k'äž'k'ažž-a 'erratic'
       l-f-l-f     k-l-f-l-f       tä-kläfälläf-ä 'got feverish'   käläflaff-a 'feverish'

The middle predicates that are derived from the extended roots occur as head of subordinate clauses of manner that modify the movement described by the verb of the main clause, as in the following examples:

(24)   a.   [Kasa [[əyyä -tä-nkäwäkkäw-ä]  mät't' -a]]
            K.    PRG.- MD.-be:frenzy-3SGM. come:PF.-3SGM.
            'K. came being/behaving frenzied/feverish'

b. ˀKasa [[tä-nkäwkəw-o    mät’t’ -a]
    K.   MD.-be:frantic-3SGM. come:PF.-3SGM.
    'K. came behaving /having been frantic'

(25) a. [Kasa [[əyyä – tä-kläfälläf-ä]    mät’t’ -a]]
    K.   PRG.-MD.-be:restless-3SGM. come:PF.-3SGM.
    Lit. K. being/behaving/looking frantic came'
    'K. came frantic'

b. ˀKasa [[tä-kläfəlf-o]    mät’t’ -a]
    K.   MD.-be:restless-3SGM. come:PF.-3SGM.
    Lit. 'K. having been frantic came.'

Here again, the middle verbs in the (a) structures of (24) and (25) are derived from the reduplicated roots, and they show that the movement actions are iterative or durative. Such verbs can occur in the progressive aspect, which is marked by the prefix *əyyä*, and not in the completive, which indicates termination points of actions. The (b) structures in both (24) and (25) are questioned because the stems of the verbs are durative, whereas their aspect is completive.

The corresponding adjectives *käwkawwa, k'äžk'ažža*, and *käläflaffa*, derived from the reduplicated stems *käwkaww-*, 'frenzy' *k'äžk'ažž-* 'erratic' and *käläflaff-* '*feverish*' with the suffix /-a/ can occur in simple noun phrases in which they modify the behaviour of the figure referred to by the head noun.

(26)   Kasa [k’äžk’ažža säw]   nä-w
    K.   erratic   person be-3SGM.
    'K. is an edgy/erratic person'

So far the description has focused on the speed-based manner of movement and on the behaviour of the figure involved. The expressions employ reduplicated stems that show that the movement action takes long duration, often iteratively, and the figure looks sluggish and awkward. Such verbs of duration cannot occur in the completive aspect, since this aspect focuses on the end point of movement actions. In what follows, the path, its types and the effect it has on the manner of movement and the behaviour of the figure are described.

## 4.   Types of path, manner and behaviour of figure

As stated in the introduction, a path can be straight, sloppy, bumpy, meandering, narrow, wide, etc., and movement along each path may require a different form of verb to describe its manner and the behaviour of the moving figure.

## 4.1    Straight path, manner and behaviour

Movement along a straight/plain path is expressed by a compound verb derived from the ideophone *sätätt-* 'be straight/direct/simple' and the gerundive/completive form *bəl-o* 'having said' of the verb 'to say', considered earlier on. The following is an example of expressions of simple and direct movement:

(27)  a.  [kasa [[sätätt    bəl-o]            mät't'- a]],      {wät't'-a, gäbb-a}
          K.    be:straight say:CMPL.-3SGM. come:PF.-3SGM. {left,      entered}
          Lit. 'K. having said straight came'
          'K. came straight forward'

Since the path is plain and straight, the figure can cover a long distance in a relatively short period of time, moving with his head up, making regular but fast strides, behaving and looking composed. The verb used for such manner of movement is in the completive and not progressive aspect, since the movement in such a path is almost instantaneous. Hence, structures like the following would be excluded:

      b.  *kasa sätätt    əyyä-al- ä        mät't'- a        {wät't'-a, gäbb-a}
          K.    straight PRG. -say-3SGM. come:PF.-3SGM. (left,      entered}
          Lit. 'K. came saying straight' 'K. came (being) straight'

## 4.2    Sloppy path, manner, and behaviour

This is a path that is slapdash or steep, and movement along such a path could be risky, often causing a fall and/or rolling down the slope, or forcing the figure to trot down or squat carefully in order to avoid falling. Both the rolling and trotting movements are expressed by two reflexive verbs derived from extended roots of the type shown below:

(28)  Basic root  Extended root  Reflexive stem  Gloss
      k-b-l-l     n-k-b-l-l      tä-nkäballäl-ä   'roll down'
      d-r-d-r     n-d -r-d-r     tä-ndäräddär-ä 'trot downhill'

Now consider the following examples of rolling down movement of descending a slope:

(29)  [Kasa k'ulk'l ät-u-n [[əyyä -tä-nkäballäl-ä]      wärräd -ä]]
      K.      slope-DEF.-PP PRG.-MD.-roll-roll:PF.-3SGM. descend:PF.-3SGM.
      Lit. 'K. rolling down the slope descended' 'K. descended the slope by rolling down'

Note that, in such expressions, the main verb of the movement action is *wärräd-* 'descended' and not *hed-ä* 'went', as such. Descending down a slope is iterative and instantaneous, and it takes several cycles of fast rolling, trotting or squatting down the sloppy path to get to the bottom of it, then travelling the remaining distance to the goal by walking. This walking phase is not spelled out in (29), but is implied. The structure would be ruled out, at least conceptually, if the verb were to occur in the completive aspect as in the following:

(30)  ˀ[Kasa [[k'ulk'l ät-u-n tä-nkäball -o]        wärräd-ä]]
       K.    slope-DEF.-PP  MD.-roll-roll:CMPL.-3SGM. descend:PF.-3SGM.
       Lit. 'K. having rolled down the slope descended'
       'K. descended the slope having rolled down'

The main verb *wärräd-ä* '(he) descended' is in the perfective aspect. It can occur in its completive form, *wärd-o* '(he) having descended', or in the progressive counterpart *əyyä- wärräd-ä* 'descending', in a subordinate clause that modifies a main clause headed by the perfective or imperfective form of the verb *hed-* 'go' as in (31) below:

(31)  [Kasa [[k'ulk'l ät-u-n əyyä-tä-ndärädär-ä]        wärd-o]]
       K.    slope-DEF.-PP  PRG.-MD.-trot-trot:PF.-3MSG descend:CMPL.-3SGM.
       hed- ä      / yi-hed-al]
       go:PF.:3SGM.   3SG-go:IMPF.-PRS.
       Lit. 'K. trotting down the slope, (he) having descended went / will go'
       'K. went/will go having descended the slope by trotting'

In such structures, the middle verb *əyyä-tä-ndärädär-ä* 'trotting' which is in the progressive aspect indicates the iterative (durative) nature of the trotting manner of the descending action expressed by the verb *wärd-o* 'having descended', which is in the completive aspect suggesting that the action has reached its end point and is viewed as a complete whole in the sense of (Comrie, 1981) but with a possibility for another action of movement to follow. That ensuing action can be expressed by the verb *hed-* 'go' occurring in either perfective or imperfective aspect showing that the 'going' action is viewed as a complete or incomplete whole, respectively.

## 4.3   Bumpy path and manner of movement

This is an uneven path with many bumps and barriers, both natural and man-made, that may cause stumbling and/or falling. One has to hop over each bump or ramp to reach his goal. The form used to express such a manner of movement is a compound verb derived from the ideophone *ənt'at'-* 'hop' and the verb 'to say' – *l-* 'says' – *al-* 'said' or its alternant *bəl-* 'having said'. The following are examples:

(32)   a.   [Kasa [[ənt'at't' əyyä – al-ä]      hed – ä]]
             K     hop     PRG.- say:-3SGM. go:PF.-3SGM.
             Lit. 'K. saying hop went.' 'K. went (by) hoping'
       b.   [Kasa [[ənt'at't' bəl -o]      hed- ä]]      {wät't' -a}
             K     hop say: CMPL.-3SGM. go:PF.-3SGM. {left}
             Lit. 'K. having said hop went'
             'K. went having hopped'

The verb of the subordinate clause in (32a) is in the progressive aspect, thus marking several instances of hopping, whereas the one in (32b) is in the completive aspect, showing only one such act. If the bumps are ridge-high and many, the verb to use is a reduplicated form *zäll-l-* 'jump' used in the progressive aspect, as in structures like the following example:

(33)   [Kasa [[əyyä- zälläl- ä]  hed – ä]]
        K      PRG.-jump-3SGM. go:PF.-3SGM.
        'K went (by) jumping over.'
        'K went by making several jumps'

If there is only one bump to cross, the same verb can be used, but only in the completive aspect, as the action is non-iterative, but single and instantaneous. Hence, the following:

(34)   [Kasa [[zäll -o]           hed – ä]]     {wät'ta, gäbba}
        K.     jump:CMPL.-3SGM. go:PF.-3SGM. {left,     entered}
        Lit. 'K having jumped went'
        'K. went having jumped.'

Note that in this structure, the verb *zäll-o* '(he) having jumped' is not reduplicated and the aspect is completive, unlike its counterpart *əyyä-zälläl* 'jumping' in (33), which is reduplicated and in the progressive aspect suggesting an iterated, or plural, instance of the same action.

In a path that is meandering, crowded, congested and with only one narrow passage, one may find his/her way out by taking turns and twists or jostling through the crowd, or by slipping through the narrow passage. The verb used for this type of movement is a derivative of the root š-w-l-k 'slip', as shown below:

(35)   Basic root  Reduplicated root  Progressive       Completive  Adjectival
        š-w-l-k     š-w-l-k-l-k        šulläkk əyyä -alä šulläkk bəlo šollakka

Consider now the following examples in which the reduplicated form of the verb in the progressive aspect and the non-reduplicated counterpart in the completive aspects are used.

(36) a. [Kasa [[əyyä - tä-šlokälläk -ä]            wät't' -a]]
        K.    PRG.-    MD.-slip-slip-:PF.-3SGM. get out:PF.-3SGM.
        Lit. 'K. slipping- slipping through get out'
        'K. got out by slipping through'
    b. [Kasa [[šulləkk bəl-o]            wät't'-a]]
        K     slip        say:CMPL.-3SGM. get out:PF.-3SGM.
        'K. having slipped through got out'
    c. ˀ[Kasa [[šulləkk əyyä -al-ä]        wät't'-a]]
        K.    slip-slip- PRG.-say:PF.-3SGM. get out:PF.-3SGM.
        'K. slipping through (several times) got out'
        'K. got out by slipping through several times'

The middle verb *tä – šlokälläk* - 'got slipped through' in the subordinate clause in (a) is reduplicated and is in the progressive aspect, which is indicated by the element əyyä. The reduplication shows that the action is iterative, and hence durative. The verb of the main clause is in the perfective aspect, showing the action of getting out as a completed whole. In the structure in (b), *šulləkk* is derived from the same root /š-w-l-k/ through the gemination – not reduplication – of the ultimate and penultimate consonants to serve as an ideophone base for the compounds *šulləkk bəl-o* '(he) having slipped through' in the completive aspect in (b), and *šulləkk əyyä-al-ä* lit. 'saying šulləkk' in the progressive aspect in (c), in both of which the compounds express a single individual action of slipping through, which is quick and careful. The structure in (c) is questioned because the ideophone *šulləkk* suggests a single instance of a quick action of slipping, whereas the head of the progressive compound *əyyä – alä* 'saying' refers to an action that is durational. Furthermore, the verb of the main clause, *wät't'-a 'got out'* is in the perfective aspect, which refers to an action that is complete and past and which may not match with a verb that expresses an action that is in progress. The structure can be salvaged if the perfective verb *wät't'-a* 'got out' is replaced by the imperfective counterpart, *yi- wät'-al* 'will get out', as in (37) below:

(37) [Kasa [[šulləkk əyyä -al-ä]      yi- wät'-al]
        K.    slip- PRG.-say:PF.-3SGM. 3SGM.-get out:IMPF.
        Lit. 'K. by slipping through (several times) gets out'
        'K. gets out by slipping through several times'

Here, the progressive aspect of the subordinate clause and the imperfective aspect of the main clause refer to a recurring occasional single instance of a quick slipping movement.

On the other hand, (36c) would be acceptable if we substitute the figure Kasa, which refers to a single definite individual, by a definite noun of collective reference. Consider the following example:

(38)  [säw-u      [[šulləkk- əyyä -al-ä]    wät't'-a]]
     man. -DEF. slip PRG.-say:PF.-3SGM. getout:PF.-3SGM.
     Lit. 'The people by slipping through left (one by one).
     'The people left one by one (by) slipping through.'

The reading here is to many individuals of a definite collective who got out of a bounded space, one by one by slipping out through a narrow opening (path). The focus is on the manner of slipping out by each one of the collective. When the focus is on how each one of them completed the rest of the movement action towards the goal, the subordinate clause would have the completive form *wät't – [wät'ət-] 'having gotten out'* as its head and the main clause would have the perfective *hed-* 'went'. When this is the case, the structures in (38) above would appear in the form in (39a) or (39b):

(39)  a.  [säw-u          [[[šulləkk əyyä -al-ä]    wät'ət-o]            hed- ä]]
        people -DEF. slip PRG.-say:PF.-3SGM. get:out:CMPL.-3SGM. go:PF. 3SGM.
        Lit. 'The people slipping through having gotten out went'
        'The people went having gotten out by slipping through'
    b.  [säw-u        [[[šulləkk əyyä -al-ä]      əyyä- wät't'-a]    hed- ä]]
        people -DEF. slip- PRG.-say:PF.-3SGM. PRG.- get out:PF.  go:PF. 3SGM.
        Lit. 'People getting out by slipping through went'
        'The people went having gotten out by slipping through'

In (39a), the verb *hed-* 'went' of the main clause is in the perfective aspect. The verb *wät'ət-* 'having left' of the subordinate clause is in the completive aspect and the compound verb *šulləkk əyyä -al-ä* 'slipping through' is in the progressive aspect, which shows the iterative or habitual nature of the action. In other words, the verbs of the two subordinate clauses are in the progressive, and completive aspect, the latter referring to the end point of the slipping out action that has been going on iteratively, but then gets capped by a main verb, which is in the perfective aspect.

    It is possible for the two subordinate clauses in (39) to be in the completive aspect and the verb of the main clause in either the perfective or imperfective aspect, as in (40a) and (40b) respectively:

(40)  a.  [säw -u        [[šulləkk bəl-o]            wät'ət-o]
        people -DEF. slip       say:CMPL.-3MSG  leave:CMPL.-3MSG
        hed- ä]]
        go:PF. 3MSG
        Lit. 'The people slip having said leave having said went'
        'The people went out by having slipped (and) gotten out'

b.   [säw-u        [[šulləkk bəl-o]            wät'ət -o]
     people -DEF.   slip     say: CMPL.-3MSG leave- CMPL.-3MSG
     yi- hed- al]]
     3MSG- go:IMP-PRS.
     Lit. 'The people slip having said leave having said go'
     'The people (will) go by having slipped (and) gotten out'

In each of these structures, we observe two stacked subordinate clauses and one main clause. The aspect of the verbs of the first subordinate clause can be progressive and the second completive, or the first can be completive and the second progressive, or both clauses can be in the completive aspect. In all of them, the first subordinate clause modifies the second, which in turn modifies the main clause headed by either a perfective or imperfective verb. When the verb of the main clause is imperfective, it is followed by the existential auxiliary verb *-al*, which shows a non-past habitual action. The aspectual pattern of the verbs of the subordinate and the main clauses, observed throughout, can be generalized as follows:

(41)              Subordinate
            Clause 1    Clause 2           Main Clause[10]

| Clause 1 | Clause 2 | | Main Clause |
|---|---|---|---|
| Progressive | Progressive | | Perfective |
| Progressive | Completive | | Imperfective + Aux |
| Completive | Completive | | |

Functionally, the first subordinate clause headed by a verb in either the progressive or completive aspect is an adjunct modifier for the second subordinate clause headed by a verb in either progressive or completive aspect, and this modified clause in turn serves as an adjunct modifier for the main clause, which is headed by a verb in either perfective or imperfective aspect. The first subordinate clause specifies the manner of the movement action and the behaviour of the figure, both determined by the speed of movement, the type of path and the gender and stature of the figure.

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10. A reviewer commented that this representation is ad hoc, but (s)he did not say why and how it is so. The description throughout has shown that the subordinate clauses that express the manner of the sub-movement actions fall into such a pattern, and that the aspect of the verbs that express the general movement of 'going' described by the verb of the main clause is perfective or imperfective, the latter followed by an existential auxiliary expressing tense. This is a pattern that one can draw from the general linguistic description of the facts, which would, otherwise, remain discrete, against the dictum that any linguistic description should prove its descriptive adequacy by leading to some level of generalization.

## 5.   Conclusion

The purpose of this paper was to make a general linguistic description of the situation of movement in Amharic. Conceptually, movement has a force or purpose, a source, a goal, a path and a figure, which performs the movement action along a path in some manner and time line. The movement could be slow, very slow or extra slow, fast, very fast or extra fast in terms of speed, all of which are expressed in subordinate clauses, prepositional phrases, and derived adjectives and nouns of manner. The verbs of the subordinate clauses of manner are in progressive and/or completive aspect, and the verbs of the main clause that expresses the main movement action are in perfective or imperfective aspect. The behaviour of the figure is specified as sober or edgy, and his stature as awkward or elegant, as determined by the type of path, the speed of movement and the gender of the figure, which require the use of derived adjectives and nouns as their expressions.

The path along which the movement takes place could be straight, sloppy, bumpy, meandering, narrow or crowded, on the basis of which the manner of the movement action is described as simple and instantaneous, iterative, durative, requiring hopping and/or jumping across bumps or squatting and trotting down slopes or clawing up hills. The verbs of the subordinate clauses are derivatives of roots, which undergo reduplications and insertion of consonantal radicals, such as [n] in initial positions. The extension of the root or stem through reduplication and/or insertion contributes meaning to the manner of movement and behaviour of the figure. The aspectual pattern of the verbs of the subordinate clauses that describe the manner of the movement action is progressive and/or completive, the former showing iterative/durative, and the latter terminative action. The aspect of the verb of the main clause is perfective or imperfective, the latter suggesting a (non)-iterative habitual action, and that such imperfective verbs are followed by the existential auxiliary *al-*, which shows non-past tense. The description has shown that movement in Amharic and other languages of the region is expressed by subordinate clauses, prepositional phrases and derived adjectives, as also reported in Meyer (2007) for Muher, and Tries (2008) for Kambata, Semitic and Cushitic languages respectively. Such categories function as expressions of manner of movement predicated of the general verb of motion *-hed-* 'go' and the behaviour and stature of the figure expressed by the subordinate clauses headed by verbs in the progressive or completive aspect.

## Acknowledgements

Note the following abbreviations:

| | | | |
|---|---|---|---|
| APL. | Applicative | SGM. | Singular Masculine |
| AUX. | Auxiliary | PRG. | Progressive |
| CMPL. | Completive | PF. | Perfective |
| DEF. | Definite | POSS. | Possessive |
| IMPF. | Imperfective | PRS. | Present |
| MD. | Middle | PL. | Plural |
| SGL. | Singulative | | |

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## Appendix

| afägäffägä | 'stepped back' | 'got up/rose' |
|---|---|---|
| ak'änna | 'ascended' | 'trotted down' |
| ak'warrät'ä | 'crossed over' | 'squatted' |
| amärra | 'headed toward a goal' | 'got roaming about' |
| anäkkäsä | 'limped' | 'moved about with pride' |
| azäggämä | 'trudged along' | 'got sluggish' |
| dahä | 'crawled' | 'got moved about' |
| därräsä | 'arrived' | 'got rolled down hill' |
| ənt'at' alä | 'hop-stepped' | 'wandered aimlessly' |
| färät't'ät'ä | 'ran off like a shot' | 'move about a little due to illness' |
| gäbba | 'entered' | 'got moving here and there' |
| galläbä | 'galloped' | 'strode' |
| hedä | 'went' | 'got oneself hurled' |
| mät't'a | 'came' | 'got ejected' |
| rot'ä | 'ran' | 'got slipped through |
| tädarräsä | 'got almost arrived' | 'got moving about aimlessly' |
| tägwazä | 'traveled' | 'swayed restlessly' |
| täk'arräbä | 'got nearer to goal' | 'got oneself hurled' |
| täk'bäzäbbäzä | 'moved erratically' | 'descended' |
| tämmämä | 'moved as a large crowd' | 'got out' 'ascend' 'climb' |
| tämzägäzzägä | 'move fast in long strides' | 'jumped over/off' |
| täkläfälläfä | 'run about' 'busy-bodied' | |

# Serial verb constructions in Sezo

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Serial verb constructions in Sezo are formed by simple juxtaposition of two or three verbs without any marker of coordination or subordination. The components of a serial verb construction are always contiguous and do not allow syntactic constituents to intervene between them. They form one intonational group and do not allow multiple marking of grammatical features, such as subject, tense, polarity and other syntactic dependency markers. All serial verb constructions attested in Sezo are asymmetrical because they always consist of one major verb and one or two minor verbs. The major verb which comes from a semantically and grammatically unrestricted class of verbs is always the main verb. The minor verb is either a motion or a posture verb and encodes directional (deictic), valency changing or aspectual information. The minor verbs cannot be treated as auxiliaries, because they are able to occur as lexical verbs outside serial verb constructions.

**Keywords**: Sezo, serial verb construction, asymmetrical serial verb, major verb, minor verb, direction, valency, aspect

## 1. Introduction

Serial verb construction is phenomena that occurs cross-linguistically in many languages of the world, most frequently in languages of West Africa, East Asia, Amazonia and Oceania (Aikhenvald 2006: 1). However, the phenomenon is not common in Ethiopian languages. So far, verb-verb sequences with characteristics of serial verb constructions have been reported for some Omotic languages such as Sheko (Hellenthal 2010: 334–341) and Northern Mao (Ahland 2012: 601–607). The aim of this paper is to provide an analysis of a cluster of verbs attested in Sezo in the light of the properties of serial verb constructions proposed by scholars such as Aikhenvald (2006) and Haspelmath (2016). The discussion of serial verb constructions of Sezo is organised in the following way: section one introduces the paper, section two provides brief information about Sezo and its speakers and

section three gives information about the methodology. Section four is a short review of cross-linguistic definitions of serial verb constructions, and sections five and six are dedicated to the description of the formal and semantic properties of serial verb constructions in Sezo. Section seven concludes the paper.

## 2.   Sezo and its community of speakers

Sezo belongs to the Omotic language family and, more precisely, is one of the Mao group of languages spoken in western borderland of Ethiopia, Oromia Regional State, West Wollega Zone, Begi and Qondala districts. The language is closely related to the Non-Gonga group of Mao languages, such as Hozo, Bambasi-Diddessa (Northern) Mao and Ganza (Fleming 1988, Bender 2003). The population figure for the Sezo speaking community has not been clear up until now. But Girma (2015: 2) estimates speakers of Sezo as numbering between 7,000 and 10,000, depending on the 2007 population and housing census of Ethiopia.[1]

   Sezo can be considered to be an endangered language because it is not used by all members of the community, especially the young generation. The language is mostly used by the older generation. Its use is also highly restricted to communication within the home. The language exists only in oral form and has no written form. In general, literacy in the language does not exist, and in this area, Oromo, a language belonging to the Cushitic family, is the medium of instruction and wider communication.

   Sezo exhibits SOV and SV constituent orders in transitive and intransitive clauses. In the structure of phrase and clause, modifiers precede heads, possessor nouns precede possessed nouns and dependent clauses precede main clauses. The language is agglutinating, as the morpheme boundaries in the word are clear-cut. Sezo consists of twenty-two consonants and five short vowels. Consonant gemination and vowel length are phonemic. Root-internal sibilant harmony is a common phenomenon in the language. The language has two-level tones, which play a significant role in the lexicon. Sezo is a nominative-accusative language in which the nominative is always marked and the accusative is marked differentially. The pronominal system distinguishes between inclusive and exclusive first-person plural. Mood is the most prominent category in verbal inflection, though aspect and

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1.   According to CSA (2008), the number of all Mao people who live in different parts of the country is 43,535. Apparently, this number includes different Omotic and Nilo-Saharan speaking groups, such as Bambasi-Diddessa Mao, Hozo, Sezo, Anfillo and probably Gwama, who use the term 'Mao' as their ethnic denomination. The census data does not show the number of these groups independently.

tense also play role. The passive is indicated by impersonal construction. Converb constructions are among multi-verbal constructions attested in the language. Switch-reference is indicated by the presence of a subject clitic on the converb (Girma 2015).

## 3.   Methodology

This study follows qualitative research methodology. The data used for this paper were collected mainly through elicitation method in 2015 in Asosa, the capital of the Benishangul Gumuz Regional State and the Begi town of West Wellegga Zone, Oromia Regional State. Some data have also been extracted from texts recorded from 2011 to 2013 for other research. The data used in this paper are presented in a four-line format. The first and the second lines respectively present the phonetic representation of the data and the morpheme-by-morpheme segmentation. The elements in the second line are purely phonemic. The third and the fourth lines present the glossing and the free translation, respectively. The data are then described in detail.

## 4.   Serial verb constructions: A cross-linguistic overview

In order to assess the proposed serial verb constructions in Sezo, some sort of definition of concepts needs to be established first. In the literature on verb serialisation, the term 'serial verb construction' is generally reserved for constructions in which at least two verbs occur in the same clause with no morphological linker. However, definitions of serial verb constructions vary in the aspects they include. For instance, Foley and Olson (1985: 18) view a serial verb construction as a type of construction in which verbs sharing a common subject or object are merely juxtaposed, with no intervening conjunction. Déchaine (1993: 799) describes it as 'a succession of verbs and their complements (if any) in a single clause with one subject and one tense or aspect value'. According to Bisang (1995: 138), a serial verb construction is 'the unmarked juxtaposition of two or more verbs or verb phrases (with or without subject and/or object) each of which would also be able to form a sentence on its own'. Durie (1997: 290) defines a serial verb construction as a structure consisting of a sequence of two or more verbs acting together as a single verb. By consolidating the various defining features of serial verb constructions stated in the above definitions, Aikhenvald (2006: 1) gives a more detailed definition as follows:

> A serial verb construction is a sequence of verbs which act together as a single predicate, without any overt marker of coordination, subordination, or syntactic dependency of any other sort. Serial verb constructions describe what is conceptualised as a single event. They are monoclausal; their intonational properties are the same as those of a monoverbal clause, and they have just one tense, aspect, and polarity value. […] Each component of an SVC must be able to occur on its own.
> (Aikhenvald 2006: 1)

As can be observed, Aikhenvald includes the following grammatical and semantic properties in her definition of serial verb constructions:

a.   There is no marker of syntactic dependency between the components of a serial verb construction.
b.   Each component of a serial verb construction is able to occur as a main predicate in other constructions.
c.   The verbs in a serial verb construction share at least one core argument.
d.   The verbs in a serial verb construction share one tense, aspect, mood and polarity value.
e.   SVCs are monoclausal; they have the same intonational properties as a clause with a single verb.
f.   The verbs in an SVC describe something conceptualised as a single event.

On the basis of their compositional properties, Aikhenvald (2006: 3) classifies serial verb constructions into two types. Accordingly, serial verb constructions are referred to as asymmetrical if they consist of two verbs of unequal status, i.e. a major verb that comes from a semantically and grammatically unrestricted class of verbs, and a minor verb that is selected from a semantically and grammatically restricted group of verbs (such as motion and posture verbs). In this type of serial verb construction, the major verb carries the lexical meaning and acts as the semantic head of the whole construction, while the minor verb adds grammatical specifications such as aspect, direction, manner and mood to the meaning of the major verb. In symmetrical serial verb constructions, all the verbs that constitute the construction come from semantically and grammatically unrestricted class. They have equal grammatical status and none of them determines the semantic or grammatical properties of the whole construction. According to Aikhenvald, 'asymmetrical and symmetrical serial verb constructions are better viewed as extremes on a continuum' (2006: 37). With regard to the evolution of verbs in such constructions, Aikhenvald (2006) makes an insightful generalisation stating that, while the combination of two major verbs in the symmetrical SVCs tends to become lexicalised, a minor verb in the asymmetrical SVCs tends to become grammaticalised. The typical grammaticalisation paths for minor verbs in asymmetrical SVCs include the following (Aikhenvald 2006: 30ff):

a.  Motion verbs tend to develop into markers of tense, aspect mood directionals and adpositions.
b.  Verbs with the meanings of 'give', 'take', 'do' and 'make' tend to develop into valency changing markers.
c.  Verbs with the meanings of 'pass' or 'exceed' are frequently grammaticalised to comparative and superlative markers.
d.  Verbs of saying are often grammaticalised to complementisers.

A further formal classification made by Aikhenvald (2006: 37) is between contiguous and non-contiguous serial verb constructions. Serial verb constructions are referred to as contiguous if they do not allow any other constituents to intervene between the constituting verbs. Those which allow other constituents to occur between components are called non-contiguous. In relation to this, Aikhenvald (2006: 4) states that the more contiguous the components of a serial verb construction are, the closer the whole construction comes to a prototypical serial verb construction.

In a more recent work on serial verb constructions, Haspelmath (2016: 296) gives a definition that differs from Aikhenvald's in some aspects. His definition reads as follows:

> A serial verb construction is a monoclausal construction consisting of multiple independent verbs with no element linking them and with no predicate-argument relation between the verbs.

As can be seen, Haspelmath's definition consists of five key features, out of which four are the same as those given by Aikhenvald (2006). These are the features of monocausality, absence of any marker of syntactic dependency, presence of multiple verbs and independence of the constituting verbs. The remaining feature that has not been discussed in Aikhenvald (2006) concerns the relationship between the verbs that constitute serial verb construction. According to Haspelmath (2016: 305), constituting verbs of a serial verb construction do not have a predicate-argument relation. This excludes causative and complement clause constructions from the domain of serial verb constructions. Haspelmath (2016: 306–307) also excludes the criterion of 'expressing single event' from his definition, because serial verb constructions may express multiple events. He considers the sharing of tense, aspect, mood and arguments, as well as a single intonation contour as unnecessary criteria because there are no constructions that would be excluded from the class of serial verb constructions only because they lack these properties.

To be able to describe the topic under investigation, this paper follows an eclectic approach. The paper mainly adopts Aikhenvald's (2006) approach as it consolidates key features of serial verb constructions proposed by different scholars such as Foley and Olson (1985: 18), Déchaine (1993: 799), Bisang (1995: 138), Durie

(1997: 290) etc. and gives a variety of possibilities for their classification. Additional features of serial verb constructions that are not included in Aikhenvald's (2006) definition will be described on the basis of ideas proposed by Haspelmath (2016).

## 5.   Formal properties of serial verb constructions in Sezo

Serial verb constructions in Sezo consist minimally of two verbs clustered together without any morphological or tonal marker of coordination or subordination (1a). But often three verbs can also be clustered as in (1b).

(1)   a.   [jámáˈtúːʃ hèzzálèzbòláː]
           *jé-má- túː-ʃ          hèzz- hel=**hèzz-bòl**-á:*
           DEF-man-PAU-NOM beat.VN 3PL= **beat-get/REC** -DCL
           'The few men beat each other'.
      b.   [wànágìʃ hánˈmálté ʃákˈ- ʃénbùgùltíjáː]
           *wànágì-ʃ        hán=mál-té        ʃák'- **ʃén-bùgùl**- tí-á:*
           Wanagi-NOM 3SG=son-DAT/LOC goat- **trade-drop**- give/APPL- DCL
           'Wanagi sold a goat for (the benefit of) his son'.

The serial verb constructions in (1a) and (1b) are formed from two and three verbs, respectively. In both cases, the verbs in V$_1$ position (i.e., *hèzz-* 'beat' and *ʃén-* 'trade; buy') are the main verbs of their respective constructions. The remaining verbs in the two constructions have different functions. As can be understood from the free translation of the examples, the function of the verb *bòl-* 'get' in (1a) is to mark reciprocity. In (1b) while the verb *bùgùl-* 'drop' deictically indicates the direction of the action expressed by the verb *ʃén-* 'trade; buy', the verb *tí-* 'give' marks the applicative (cf. §§ 6.1 and 6.2 for further information).

From the formal and (to some extent) semantic properties they show, one would ask whether the constructions in (1) could be analysed as verb compounds. Indeed, the combinations show considerable similarity with verbal compounds in that they refer to a single event and share grammatical values such as tense, aspect and mood (Aikhenvald 2006: 32). However, they are better analysed as serial verb constructions because words in a compound mostly retain a meaning similar to their meaning as isolated words, and those attested in Sezo do not show this property. For instance, in serial verb constructions consisting of two verbs such as in (1a), one of the verbs necessarily imparts grammatical meaning, rather than retaining its lexical meaning. In serial verb constructions consisting of three verbs such as in (1b), two of the verbs have grammatical function (cf. §§ 6.1 and 6.2 for the further discussions on the functions of such minor verbs).

In relation to this, one would also ask whether the verbs that convey such grammatical meanings are auxiliary verbs. Although it is possible to assume that the verbs are in the process of grammaticalisation into auxiliaries, it is difficult to treat them as auxiliaries at this stage because they are not fully grammaticalised entities; they are able to occur as lexical verbs in clauses outside serial verb constructions. For instance, the verbs *bòl-* 'get' and *tí-* 'give', which have a valency adjustment function in (1a) and (1b), and the verb *bùgùl-* 'drop', which encodes a deictic or directional information in (1b), have the ability to occur as lexical verbs to express dynamic events as shown in (2) below:

(2)   a.   [wànágìʃ gìzbòláː]
           *wànágì-ʃ      gìzz-    bòl-áː*
           wanagi-NOM money get-DCL
           'Wanagi got money'.
      b.   [wànágìʃ gùːdbùgùláː]
           *wànágì-ʃ      gùːd-    bùgùl-áː*
           wanagi-NOM garbage drop-DCL
           'Wanagi dropped (discarded) garbage'.
      c.   [wànágìʃ háːté gìzˈtíjáː]
           *wànágì-ʃ      hàː-té         gìzz-    tí-áː*
           wanagi-NOM 1SG-DAT/LOC money give-DCL
           'Wanagi gave me money'.

The occurrence of the verbs as main verbs in simple clauses as in (2) suggests that they are not fully grammaticalised auxiliaries. A verb can be considered to be a member of a serial verb construction if it is able to occur independently without another verb, and is able to express dynamic event outside a serial verb construction. A verb is considered to be a dynamic event expression when it is used in predication function (Haspelmath 2016: 302). However, auxiliaries cannot be used in predication function.

In Sezo, serial verb constructions such as in (1) do not allow any constituent to intervene between them. According to Aikhenvald (2006: 37), such constructions are classified as 'contiguous'. Their intonational property is also the same as that of a monoverbal construction. This means no pause or intonation break is allowed between the components of a serial verb construction. In Sezo, concordant (multiple) marking of grammatical features on each component of a serial verb construction is not allowed. Markers of grammatical features such as mood, person, tense and negative, and other syntactic dependency markers such as relativisers, coordinators and complementisers occur once per serial verb construction as illustrated in (3) below:

(3)  a.   [ʃwáːbòlkékʼéːdóláː]
         **ʃw(áː)-bòl**-ké-kʼéː- dól=j-áː
         **see-get/REC**-NEG-NEG-1PL.INCL=FUT-DCL
         'We (including you) shall not meet (lit: we will not see each other)'.

    b.   [hèzzálèzbòlìʃ máːtuːʃ namsʼapʼpʼi]
         hèzz-    **hél=-hèzz- bòl-ʃ**        máː-túː-ʃ      nam=sʼapʼpʼi
         beat.VN **3PL=beat- get/REC-REL** man-PAU-NOM 2PL=root
         'The few men who beat each other are your (2PL) relatives (lit. your roots)'.

In (3a) the negative markers -**ke** and -**kʼe**, the inclusive first-person subject proclitic
**dól**=, the tense marker **j**- and the declarative mood marker -**áː** occur only once after
the verb in V$_2$ position, and have scope over the whole verb phrase. In the same
way, the serial verb in (3b) is subordinated by a single relative clause marker -**ʃ**.

In terms of their composition, serial verb constructions attested in Sezo can be
considered as 'asymmetrical'[2] because they are composed of verbs of unequal status.
In all the attested serial verb constructions of Sezo, one of the components comes
from a semantically and grammatically unrestricted class of verbs and becomes
the main verb. Minor verbs, which convey grammatical meaning come from a
semantically restricted class (usually motion and posture verbs). These verbs have
a variety of semantic properties, in which case they render grammatical functions
as valency adjustment, deictic and aspect marking. The following table presents an
exhaustive list of minor verbs in Sezo serial verb constructions, along with their
position of occurrence and function (cf. §§ 6.1 and 6.2 for the order of minor verbs).

**Table 1.**  Position of occurrence and function of minor verbs

| Minor verb | Gloss | Position of occurrence | | Function |
|---|---|---|---|---|
| | | **Before the main verb** | **After the main verb** | |
| *kw(áː)* | 'come' | | X | Directional (deictic) |
| *j(áː)* | 'go' | | X | Directional (deictic) |
| *bùgùl* | 'drop' | | X | Directional (deictic) |
| *bol-* | 'get' | | X | Valency changing |
| *hàw-* | 'take' | | X | Valence changing |
| *ti-* | 'give' | | X | Valence changing |
| *kw(áː)* | 'come' | X | | Aspectual |
| *kó-* | 'sit' | X | | Aspectual |
| *ʔéːw-* | 'approach' | | X | Aspectual |
| *ʃò-* | 'walk' | | X | Aspectual |

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**2.**  Symmetrical serial verb constructions are virtually absent in Sezo. Some of the asymmetrical
serial verb constructions in Sezo formally and semantically correspond to those forms analysed
as verb compounds in Northern Mao (cf. Ahland 2012: 415–424).

The following section is devoted to the detailed description of the semantic properties of the above listed verbs in serial verb constructions of Sezo.

## 6. The semantics of minor verbs in serial verb constructions of Sezo

Cross-linguistically, asymmetrical serial verbs possess a variety of semantic properties and cover a vast semantic range. In relation to this, Aikhenvald (2006: 22–27) identifies eight recurrent semantic categories of asymmetrical serial verb constructions. These are serial verb constructions with directional and orientational semantics, serial verb constructions of aspect, tense and extent of change, serial verb constructions of secondary concept serialisation, serial verb constructions of complement-clause-taking verbs, serial verb constructions of increasing valency and specifying arguments, serial verb constructions of reducing valency, serial verb constructions of comparatives and superlatives and serial verb constructions of event arguments. Among these semantic categories, only serial verb constructions of direction, serial verb constructions of increasing valency, serial verb constructions of reducing valency and serial verb constructions of aspect and tense are attested in Sezo.

### 6.1 Serial verb constructions with directional (deictic) minor verbs

Jacobs (2015: 64) interprets directional serial verb constructions as those consisting of minor verbs indicating the direction of the action expressed by the main verb. In Sezo, directional serial verb constructions are formed from a major verb referring to the action and a minor verb with a deictic function. Verbs with deictic function are motion verbs such as *kw(áː)-* 'come', *j(áː)-* 'go' and *bùgùl-* 'drop'. While the first expresses the direction to the speaker (the deictic centre), the remaining two minor verbs express direction away from the speaker. Consider the following:

(4)  a.  [jéʔíːnsíja kwèskwámò]
         *jé-ʔìːnsí-jà    kwès- kwá-mò*
         DEF-log-ACC *drag-come*-2PL.IMP
         'You (PL), drag the log towards here

     b.  [jéʃák'k'ìjà báljé]
         *jé-ʃák'k'íʾí-jà    bál-j-é*
         DEF-goat-ACC *hold-go*-2SG.IMP
         'You (PL), take the goat away from here'.

     c.  [ʃwáːkwáː]
         *ʃwáː-kw-áː*
         *see-come*-2SG.IMP
         'You (SG), look here'.

    d.   [ʃwá:jé]
        *ʃwá:-j-é*
        *see- go*-2SG.IMP
        'You (SG), look there'.

    e.   [jámá:ʃ túmˈté hìŋkʼ kápˈʼjá:ʃté…]
        *jé-má:-ʃ        túm-té        hìŋkʼ    kápʼ-já:-ʃ-té*
        DEF-man-NOM wall-DAT/LOC like_this **look-go**-REL-DAT/LOC
        'When the man looks at the wall (away from the deictic centre) like this…'

    f.   [wànágìʃ twà:nsíjà kò:lbùgùlá:]
        *wànágì-ʃ       twà:nsí-jà  **kò:l-bùgùl-á:***
        wanagi-NOM spear-ACC **throw-drop**-DCL
        'Wanagi threw the spear (away from the deictic centre).'

As can be observed, the minor verbs in Example (4), i.e. ***kw(á:)-*** 'come', ***j(á:)-*** 'go' and ***bùgùl-*** 'drop' do not impart lexical meaning in such constructions. Rather they encode whether the direction of the event expressed by the major verbs is towards or away from the deictic centre. Cross-linguistically, asymmetrical serial verb constructions involving motion verbs to express deictic function is extremely common in serialising languages (Aikhenvald 2006: 22).

## 6.2    Serial verb constructions with valency changing minor verbs

Another tendency for languages that display asymmetrical serial verb constructions is that the subset of the relatively closed class of verbs (minor verbs) involved may determine the valence properties of the major verb. In Sezo, too, verbs play significant role in valency changing operations. The following subsections describe such operations.

### 6.2.1   *Serial verb constructions with valency increasing minor verbs*
In Sezo, the benefactive (applicative) construction that increases the valence of the verb is indicated by a serial verb construction involving ***ti-*** 'give' as a minor verb. In such constructions, the minor verb introduces an oblique object that benefits from the action carried out by the subject. Examples (5b) and (6b) illustrate the benefactive function of the verb ***ti-*** 'give'. Structures without the applicative are given in (5a) and (6a) for contrast.

  (5)   a.   [jáʃá:ʃ ʃèmmósˈsˈá:]
           *jé-ʃá:-ʃ            ʃèmm- **hósˈsʼ-á:***
           DEF-woman-NOM garment- **wash**-DCL
           'The woman washed clothes'.

b. [jáʃáːʃ hánmálté ʃèmmósʼˈtíjáː]
*jé-ʃáː-ʃ*          *hán=mál-té*          *ʃèmm- **hósʼsʼ-tí-áː***
DEF-woman-NOM 3SG=son-DAT/LOC garment- **wash-give/** APL-DCL
    'The woman washed clothes for (the benefit of) her son'.

(6) a. [jégízˈzíjà kʼázé]
*jé-gízzí-jà*          ***kʼáz-é***
DEF-money-ACC **leave-2SG.IMP**
'Leave the money'.

b. [jégízˈzíjà híɲˈʃáːté kʼázˈtíé]
*jé-gízzí-jà*          *hín=ʃáː-té*          ***kʼáz-tí-é***
DEF-money-ACC 2SG=woman-DAT/LOC **leave-give/APL-**2SG.IMP
'Leave the money for (to the benefit of) your wife'.

As can be observed, in structures where the applicative minor verb *tí-* 'give' is used, an obligatory beneficiary object with dative case role is introduced. The absence of the dative/locative case marked beneficiary object in the presence of the minor *tí-* 'give' verb and the use of the dative/locative case marked beneficiary object in the absence of the minor verb *tí-* 'give' derives ungrammatical (or at least incomplete) structures such as the following:

(7) a. *[jáʃáːʃ ʃèmmósʼˈtíjáː]
*jé-ʃáː-ʃ*          *ʃèmm- **hósʼsʼ-tí-áː***
DEF-woman-NOM garment- **wash-give/** APL-DCL
Intended meaning: 'The woman washed clothes for (the benefit of) somebody'.

b. *[jáʃáːʃ hánmálté ʃèmmósʼˈtíjáː]
*jé-ʃáː-ʃ*          *hán=mál-té*          *ʃèmm- **hósʼsʼ-áː***
DEF-woman-NOM 3SG=son-DAT/LOC garment-DCL
Intended meaning: 'The woman washed clothes for (the benefit of) her son'.

This substantiates that the minor verb *tí-* 'give' has a valency increasing function in such constructions.

**6.2.2**   *Serial verb constructions with valency decreasing minor verbs*
In Sezo, minor verbs can also be used in valency decreasing operation. The verbs which are involved in such operation are ***ból-*** 'get' and ***háw-*** 'take'. They respectively indicate the reciprocal and the benefactive form of the verb. Semantically, the reciprocal describes action of two agents on each other (8). The benefactive expresses that something is done for one's own benefit (9).

(8)  a.  [jémáláqundìʃ tʼàːŋáltʼàːŋbòláː]
         *jé-máláqundì-ʃ       tʼàːŋ-    hél=**tʼàːŋ-bòl-á:***
         DEF-children-nom kick.VN 3PL=**kick-get/REC-DCL**
         'The children kicked each other'.
     b.  [dàːʃ ʃwèːlbòlkékʼéːdǎː]
         *dàː-ʃ            ʃwèːl-bòl-ké-kʼéː-dà -j-á:*
         1PL.EXCL-NOM **insult-get/REC-NEG-NEG-1PL.EXCL-go/FUT-DCL**
         'We (excluding you) will not insult each other'.

(9)  a.  [kàltúmìʃ wàpálá ʃénàwáː]
         *kàltúm-ʃ         wàpálá **ʃén-hàw-á:***
         Kaltumi-NOM earring **buy-take/BEN-DCL**
         'Kaltumi bought earring for her own benefit'.
     b.  [wànággébìʃ hálkʼèsìjà hùzzàwáljáː]
         *wànági-gébì-ʃ      hél=kʼès-jà      **hùzz-hàw-** hél-j-á:*
         wanagi-AP-NOM 3PL=land-ACC **till-take/ben** 3PL-go/FUT-DCL
         'Wanagi and his associates will till their land for their own benefit'.

Note that the benefactive is not the same as reflexive construction because, as described above, the benefactive indicates that something is done for one's own benefit and the reflexive indicates that the agent does something to, on or by himself. Consider the following:

(10)  [wànágìʃ híŋkʼèsìjà hínʔòphùzzàwáː]
      *wànági-ʃ        hín=kʼès-jà    **hín=ʔòp-** hùzz-hàw-á:*
      Wanagi-NOM 3SG=land-ACC **3SG=self** till-take/BEN- DEC
      'Wanagi tilled his land on his own for his own benefit'.

As can be seen, whereas the benefactive is indicated by the minor verb *hàw-* 'take', *the* reflexive is periphrastically expressed by a noun phrase consisting of the pronoun *hín=* 's/he' as a proclitic and the noun *ʔòpì* 'self'.

## 6.3  Serial verb constructions with aspect marking minor verbs

Minor verbs in aspectual serial verb constructions describe the internal temporal constituency of the event identified by the major verb. Based on the syntactic position of the minor verbs, two types of aspectual serial verb constructions have been identified in Sezo. These are serial verb constructions in which the minor verb precedes the major verb, and serial verb constructions in which the minor verb follows the major verb. These are respectively referred to as aspectual serial verb

constructions with minor verbs in V$_1$ position, and aspectual serial verb constructions with minor verbs in V$_2$ position.

**6.3.1**   *Aspectual serial verb constructions with minor verbs in V$_1$ position*
In Sezo, the progressive aspect that expresses an ongoing event at the point of temporal locus and the perfect that indicates the relevance of a past action to a continuing event are encoded by minor verbs occurring in V$_1$ position. The verbs that are used to express the progressive and the perfect aspect are ***kóː-*** 'sit' ***kw(á)*** 'come'. In fast speech, the verbs are mostly realised as ***kó-*** and ***ká-*** (cf. (11a) and (12a)). In addition, grammaticalised converbs of the same verbs; ***kón-*** 'sit and' ***kán-*** 'come and' have also been attested as markers of progressive and perfect aspect markers (cf. (11b) and (12b)). These are considered as grammaticalised forms because it is impossible to separate the converb marker from the verb root.

(11)   a.   [jáˈmáːʃ kóːn gònzíja kókˈáːʃáː]
        *jé- máː-ʃ      kóː-n   gònzí-ja  **kó-kˈáːʃ-áː***
        DEF-man-NOM sit-CNV corn-ACC **sit/PRG-eat_roasted_grain-** DCL
        'Having sat down, the man is eating corn'.
     b.   [jámáˈlíʃ zíns' kónzín'sáː]
        *jé-málí-ʃ   zíns'-  **kón-zín's-áː***
        DEF-boy  run.VN **sit.CNV/PRG-run-**DCL
        'The boy is running'.
(12)   a.   [hàːʃ hákˈás' káháhàmpáː]
        *hàː-ʃ     há-kˈás'     **ká-há=hàmp-áː***
        1SG-NOM 1SG.POS-work **come/PFV-1SG=finish-**DCL
        I have finished my work'.
     b.   [hàːʃ hákˈás' kánáhàmpáː]
        *hàː-ʃ     há=kˈás'     **kán-ha=hàmp-áː***
        1SG-NOM 1SG.POS=work **come.CNV/PFV-SG=finish-** DCL
        I have finished my work'.

**6.3.2**   *Aspectual serial verb constructions with minor verbs in V$_2$ position*
In Sezo, the habitual aspect that signals an event that is happening as a habit or a regular pattern, and the prospective aspect that expresses that something is about to happen are marked by minor verbs occurring in V$_2$ position. The two aspectual meanings are respectively encoded by the verbs *ʔéːw-* 'approach, come nearer' and *ʃóː-* 'walk'. Illustrative examples are given below:

(13)   a.   [hà:ʃ hákwà:ʃté ʔìmsíʃ pà:t'é:wpìʃá:]
            *hà:-ʃ        há=kwà:ʃté          ʔìmsí-ʃ*
            1SG-NOM 1SG=come-REL-LOC rain-NOM
            ***pà:t'***[3] *– ʔé:w-pìʃ-á:*
            **rain.v-approach/PRS**-be.IRR-DCL
            'When I arrived, the rain was about to rain'.

       b.   [wànágìʃ pítítnàʃàwté hánˈkʼéshúzʃòwá:]
            *wànágìʃ        pítít-nàʃ-ʔàw-té            hán=kʼés-* **húz-ʃò-á:**
            wanagi-NOM frequent-ORD-day-LOC 3SG=land **till-walk/HAB-** DCL
            'Wanagi frequently tills his land'.

Imparting aspectual meanings, such as progressive, continuative meanings by verbs of motion is cross-linguistically attested in many languages of the world (Aikhenvald 2006: 23).

## 7.   Conclusion

The objective of this paper was to describe serial verb constructions attested in Sezo based on a synchronic data collected in 2015 in Asosa, the capital of the Benishangul Gumuz Regional State and the Begi town of West Wellegga Zone, Oromia Regional State. The paper has shown that serial verb constructions in Sezo are formed from two or three verb sequences clustered together without any marker of coordination or subordination. Such verb sequences are contiguous because they do not allow syntactic elements to occur between them. Markers of grammatical features such as mood and negative are marked once per serial verb construction. The components of a serial verb construction of Sezo are asymmetrical because they consist of verbs of unequal status: a major verb and one or two minor verbs. The major verb in a serial verb construction is dominant, as it expresses the action or the event and occurs as a head of the whole construction. The minor verbs are semantically dependent on the major verb. They render grammatical functions such as providing deictic information, valency changing and aspect marking.

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**3.**   In Sezo, the nominal and verbal forms for 'rain' are suppletive.

## Acknowledgements

## Abbreviations and symbols

| | | | |
|---|---|---|---|
| 1, 2, 3 | 1st, 2nd, 3rd person | INST | Instrumental |
| - | Morpheme boundary | LOC | Locative |
| = | clitic boundary | NEG | Negative |
| ' | Downstep | NOM | Nominative |
| [] | Phonetic representation | PAU | Paucal |
| ACC | Accusative | PL | Plural |
| AP | Associative plural | POS | Possessive |
| APPL | Applicative | PRF | Perfect |
| BEN | Benefactive | PRG | Progressive |
| CNV | General converb | PRS | Prospective |
| DAT | Dative | REC | Reciprocal |
| DEC | Declarative | REL | Relative clause marker |
| DEF | Definite marker | SG | Singular |
| DEM | Demonstrative | V | Verb |
| EXCL | Exclusive | $V_1$ | Verb occurring in the first syntactic slot |
| FUT | Future | $V_2$ | Verb occurring in the second syntactic slot |
| HAB | Habitual | | |
| IMP | Imperative | VN | Verbal noun |
| IRR | Irrealis | | |
| INCL | Inclusive | | |

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# Number marking in Nuer nouns

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This paper investigates the formation of number in the nouns of Nuer, a Nilo-Saharan language spoken both in South Sudan and Ethiopia. Forming plurals in Nuer is by itself quite irregular: there are many different ways. Suffixing the [-nɪ̱] after words that end in sounds other than [l] and [r] is the first way. [l] and [r] take [-ɪ̱] after them, which is the second way. There are also many other ways of forming a plural from singular, including suppletion, vowel shortening, change in vowel quality and internal vowel modification (this last way is quite unpredictable in nature). There is also a null (Ø) formation of plurals with no distinction between singular and plural. Other closely related languages like Dinka (South Sudan) and Anyuak (both Ethiopia and South Sudan), see Reh (1996), share many of the same plural formation processes.

**Keywords**: Nuer, singular, plural, singulative, suffixation, tone change

## 1. Introduction

Nuer is the language spoken in two neighboring countries: The Republic of South Sudan to the west and the Federal Democratic Republic of Ethiopia to the east. In Ethiopia it is spoken in Gambella National Regional State situated in the south-western part of Ethiopia. The major languages spoken along with Nuer in Gambella include the local languages Anyuak, which is closely related language to Nuer (Reh 1996), Majang, Opo, Komo as well as highlander languages such as Amharic, Tigrinya, Afaan Oromoo and finally English (as a language of instruction from grade 5). Nuer and its closest relative Dinka fall under the western branch of Nilotic of Nilo-Saharan super family (Bender 1975: 6 and Reh 1996: 250). Nuer became a written language prior to the appearance of the translation of the New Testament that was done in 1963.

This paper investigates number marking on nominative nouns in Jikäny dialect of Nuer. Nuer distinguishes between different numbers, and its number inflection is highly irregular. The paper is structured as follows: Section 2 presents the previous

studies, Section 3 deals with methodology, Section 4 presents the present study: the research gap and the findings. Section 5 presents the productivity and concluding remarks are given in Section 5.


## 2.   Literature and the three numbers of Nuer

The literature has shown that Nilo-Saharan languages have extremely rich number-marking systems. According to Dimmendaal (2000: 214), referring to Serzisko (1982), there are two systems of nominal categorization: the numeral-classifier type and the noun-class type. Dimmendaal pointed out that there are two types of noun-class languages, agreeing classification and non-agreeing classification: 'In the former, nominal modifiers, as well as verbs, may agree with, or are coindexed with, the head noun. In the non-agreeing-classification type, noun-class markers tend to be restricted to nouns'.

 Nuer clearly complies with the noun-class type, and further, with the agreeing type. There is number agreement between the noun-phrase and the verb, and there is also noun-phrase-internal agreement, for example between attributive adjectives and the noun they modify, see (1).

(1)  **Singular**                         **plural**
 [kʷátʃ mị̱ˈlʷal riŋ-ɛ]           [kʷàtʃ nị̱ˈtị̱ˈlʷa:l riŋkɛ]
 kʷátʃ mị̱ˈlʷal riŋ-ɛ           kʷàtʃ-nị̱ˈtị̱ˈlʷaal riŋ-kɛ
 tiger.SG SPEC.SG red.SG run-3SG tiger-PL SPEC.PL red.PL run-3PL
 'a red tiger is running'           'red tigers are running'

Dimmendaal (2000: 214–216) says that in the Nilo-Saharan phylum, there are many languages that distinguish between singulative, plural and replacive marking, all of which are also inflected for singular and plural, as in (2), with examples from Masalit language:

(2) |        |                       | **Singular** | **Plural**  | **Gloss**         |
    | ------ | --------------------- | ------------ | ----------- | ----------------- |
    | a.     | Singulative marking   | /barjaŋ-i/   | /barjaŋ/    | 'shoe'            |
    |        |                       | /anyiŋ-gi/   | /anyiŋ/     | 'fly'             |
    | b.     | Plural marking        | /mana/       | /mana-ta/   | 'maternal uncle'  |
    |        |                       | /daa/        | /daa-si/    | 'mother'          |
    | c.     | Replacive marking     | /mal-ko/     | /mal-ta/    | 'chattel'         |
    |        |                       | /siren-di/   | /siren-i/   | 'cooking place'   |

Dimmendaal does not mention Nuer, and Nuer clearly does not have this tripartite system. Nuer does have singulative in addition to singular and plural, but the replacive is not found.

Plural formation in Nuer is quite irregular. Suffixing-*nɪ́* after words that end in sounds other than *l* and *r* is one way. *l* and *r* take -*ɪ́*after them, being allomorphs of the same morpheme. There are many other ways of deriving a plural from a singular, including suppletion, vowel shortening, change in vowel quality and internal vowel modification, this last way being quite unpredictable in nature. There is also a zero formation of plurals, a case in which there is no distinction between singular and plural. Though with slight differences, Anyuak, a close language to Nuer shares some of these processes of inflection (Reh 1996: 144). Crazzolara (1933: 28) merely mentioned and described the plural formation in Nuer. The dialect Crazzolara studied is Yɔaanyaang, one of the varieties spoken in Western Nuer land. It doesn't usually appear on the list of the dialects in the literature I came across, and I am not sure which one it corresponds to from the list provided by Frank (1999) and others.

Frank (1999) described some of these processes in quite a precise way. In previous works, the role of tone, its interaction with vowel quality, lengthening etc., has never been described. This paper describes number marking in Nuer both segmentally and supra-segmentally, and as shall be seen below, each process is a combination of two or more processes. Frank described the same dialect that is used in this study; however, he used the variety called Gaaji̲o̲ok, a south dialect. His study is also less comprehensive than the present one, and he did not include tone change.

According to Baerman (2012), 'the striking feature of Nuer case and number suffixes is their combination of formal simplicity with extreme distributional complexity. On the one hand this is manifested by a wealth of inflection classes that are so poorly differentiated from each other that it looks on the face of it that the bulk of the forms must be memorized'. The title of his paper underlines this: 'Paradigmatic Chaos in Nuer'. Based on Frank's data, it does not include tone change.

The variety under the study here is the Gaajaak variety of Ji̲käny /dʒɪ́käɲ/, the dominant variety of Ethiopian Nuer. This paper includes descriptions of the singulative as well as tone change, which have not been presented in the previous literature on Nuer.


## 3.   Methodology

The data used in this paper were formally collected from native speakers in Gambella and substantiated through informal discussions with native friends in Addis Ababa. The native intuition of the present researcher has helped in the data analysis, together with the linguistic knowledge the researcher acquired at Addis Ababa University over the last nine or ten years. This paper describes the number marking in Nuer both segmentally and supra-segmentally.

## 4.   The present study

This study identifies some ways of forming plurals from singulars in Nuer. All plural nouns in Nuer are formed by the ways described in this paper. Generally speaking, plural nouns are formed from singular nouns with the addition of plural markers; either, one way plus tone or a combination of more than one way together with tone. Count nouns, collective nouns and mass nouns take singulative markers. This means that every noun in Nuer has a plural and singulative (either marked morphologically or expressed in a clause). Loan words also follow the processes in Tables 1 and 2 (see Section 5). Table 1 summarizes number formation in Nuer. Among the methods of number formation identified by this paper, suffixation is the most frequent.

Each rule is either a segmental or a supra-segmental or a combination of both, as can be seen in the following table and in the examples to follow. Notice that the same process can be used for reverse effect (see also Baerman 2012: 476), such that vowel lengthening of some nouns is used for plural formation, while for other nouns vowel shortening has this function.

There are several ways of forming plurals in Nuer. The main processes identified in research are the following: suffixation, vowel insertion, phonation, vowel quality change, final consonant alternation, vowel deletion, glide insertion, tone change, vowel lengthening, vowel shortening, suppletion and zero (null) formation. There would be more processes if one used the all words in Nuer.

**Table 1.**  Some major types of plural formation in Nuer

|  | Processes | | Singular | Plural | Gloss |
|---|---|---|---|---|---|
|  | Segmental | Supra-Segmental | | | |
| Suffixation | Suffixation | Tone change | [kʷátʃ] [lúl] | [kʷàtʃní] [lùlí] | 'tiger(s)' 'Lul(& friends)' |
|  | Suffixation |  | tʷàɲ] | [tʷàɲní] | 'torch(s)' |
|  | Suffixation | Tone change & vowel shortening | [tʃʷà:l] | tʃʷálí | 'sac(s)' |
|  | Suffixation & phonation | Tone change &vowel lengthening | [wâr] | [wʌ̰̀:rí] | 'shoe(s)' |
|  | Suffixation & vowel quality change& vowel insertion | Tone change & vowel length | [tùrbìl] | [tùrbíɛ:lí] | 'vehicle(s)' |

**Table 1.** (*continued*)

| Processes | | Singular | Plural | Gloss |
|---|---|---|---|---|
| **Segmental** | **Supra-Segmental** | | | |
| Suffixing & vowel insertion & phonation | Tone change & vowel shortening | [tɔ̠ːr] [tɔ̠́ːrɪ̠] | [tɔ̠́ː̠rɪ́] [tɔ̠́ː̠rɪ́] | 'preterm(s)' 'field(s)' |
| Suffixation & vowel insertion | Tone change | [kɔ̂m] | [kɔ̀amnɪ́] | 'chair(s)' |
| Suffixation | Vowel shortening | [t̠ɛ́ːn] | [t̠énɪ́] | 'catfish(es)' |
| | Other processes group | Tone change & vowel lengthening | [gát] | [gàːt] | 'child(ren)' |
| | | Tone change & vowel shortening | [kàːr] | [kár] | 'offspring(s)' |
| | | Tone change | [wùm] | [wúm] | 'nose(s)' |
| Vowel quality change & final consonant change | Tone change | [rɔ̀w] | [rɔ́t̠] | 'hippo(s)' |
| Vowel deletion | Tone change | [rɔ̂al] | [rɔ̀l] | 'quarrel(s)' |
| Vowel quality change | Tone change | [bɪ́l] | [bɛ̀l] | 'maize(s)' |
| Vowel quality change & glide insertion | Tone change | [gʷɛ̀ː] | [gʷɪ̀j] | 'sandstone(s)' |
| Suppletion | Tone change | [jâŋ] | [hɔ́k] | 'cow(s)' |
| | | [tɪ́t] | [tɪ́t] | 'hand(s)' |

These phonological processes cluster in a variety of different groups. I have given the main ones in Table 1, but there are others as well. Suffixation is used in many of the combinations, and tone change in nearly all, while some plural expressions are quite such as suppletion and zero marking rare.

**Table 2.** Singular, plural and singulative

| No | Singular | Plural | Singulative | Gloss for singulative |
|---|---|---|---|---|
| *Cow* | [jâŋ] | [hɔ́k] | [lʷɔ́ɲ/ jàːːŋ] | 'herd of cattle' |
| *Water* | – | [pɪ́w] | [pìäh] | 'much water' |
| *Milk* | – | [tʃâk] | [tʃàːːk] | 'much milk' |
| *Tiger* | [kʷátʃ] | [kʷátʃ] | [kʷàːtʃ] | 'herd of tigers' |
| *buffalo* | [mɔ́k] | [mɔ́k] | [mɔ̀ːːk] | 'herd of buffalos' |

Singulative inflection is lexically determined. Some nouns in Nuer can express singulative as shown in Table 2: with internal vowel modification, vowel length and tone change. Other nouns express singulative with the prenominal specifier, followed by a noun in the singular form (Section 4.12, Example (15)), in which case the form of the noun is similar to the singular. Each rule type is presented in the following subsections.

## 4.1 Suffixation of -n*i̱*/-*i̱*

This method employs replacing a vowel i.e. deleting and inserting a vowel as in (3a), suffixing the plural allophone (-*i̱*) as in the other examples. It takes not only this but also internal vowel modification, as in (3b), vowel lengthening, again as in (3b), vowel shortening, as in (3d) and vowel insertion, as in (3c). The (-*i̱*) suffix works with liquid sounds (3l, r) only. The other one -*ni̱* works with other consonants. See these as shown in the examples below. Recall that not all nouns express singulative inflectionally. In those cases the singulative column in (3) and subsequent examples will simply be marked by a hyphen.

(3) | **Singular** | **Plural** | **Singulative** |
|---|---|---|
| a. [t̪ɔ̰:r] | [t̪ɔ̰ᴀ̈rí] | – |
| | t̪ɔ̰ᴀ̈r-í̱ | |
| | prematurely born child-PL | |
| | '(a) pre-mature born child(ren)' | |
| b. [wár] | [wᴀ̰̈:rí] | |
| | wᴀ̰̈:r-í̱ | |
| | shoe-PL | |
| | 'shoe(s)' | |
| c. [t̪ùrbìl] | [t̪ʷɔ̰rbìɛ:lí̱] | |
| | t̪ʷɔ̰rbíɛ:l-í̱ | |
| | car-PL | |
| | 'car(s)' | |
| d. [t̪ɔ̰:r] | [t̪ɔ́ᴀ̈r-í̱] | |
| | t̪ɔ̰ᴀ́̈r-í̱ | |
| | field-PL | |
| | 'field(s)' | |
| e. [rʷàt̠ʃ] | [rʷà:t̠ʃní̱] | – |
| | rʷà:t̠ʃ-ní̱ | |
| | talk-PL | |
| | 'talk(s)' | |

f. [ŋʷɛ́t     [ŋʷɛ̀tní]                      -

ŋʷɛ̀t-ní

young-PL

'youngster(s)'

g. [tʷátʃní]    [tʷàtʃní]                     –

tʷátʃ-ní

skin-PL

'skins of small animals'

h. [tʷàɲ]    [tʷàɲ-ní]                    –

tʷàɲ-ní

torch-PL

'torch(s)'

i. [kà:ŋ]    [kà:ŋní]                    –

ka:ŋ-ní

trumpet-PL

'trumpet(s)'

k. [tʷál]    [tʷàlí]                    –

tʷàl-í

water lily-PL

'water lilies'

l. [tʷár]    [tʷà:rí]                    –

tʷà:r-í

song-PL

'songs'

As can be seen, the tone, vowel insertion or modification or deletion and suffixation of -*i* work together. For example, in (3a) the long vowel is shortened (length deleted) and /-ï̈-/ is inserted together with the suffix. The same is true for (3d). In Example (3b) /*a*/ is changed to /ï̈:/, and together with suffix -*i* distinguish the plural from singular. There is also insertion of /-ɔ-/ and an /-ɛ-/ in the first and the second syllables, respectively. The tone also changes as we move from singular to plural. What emerges surfaces as low tone in singulars turns into a level tone in plurals as can be seen with Examples (1a, c and d). In (3b), the high tone follows the pattern taken by the rest of the examples, high becoming low in the plural. The tone of the suffix is always high.

The suffixation/-*ní*/-*í* is also used along with internal vowel modification in some words, increase in vowel duration in some words and sometimes on its own for other words. The suffixes -*ni* and -*i* are allomorphs of each other.

As can be seen in these examples, the plural forms carry a low tone regardless of whether their singular has low or high tone. The case of (3e) is the only exception in which the low tone appears with both forms, singular and plural, but in which

vowel length intervenes. Again, as the case was with its allomorph /-í̱/, the tone of the suffix /-ní̱/ is high throughout the data.

## 4.2 Increase in vowel duration and tone shift

Increasing the duration of the internal vowel is one of the ways of deriving plural from singular. This process co-occurs with the change in tone, the singulars having high tone while the plural counterparts have a low tone, as shown in the following examples:

| (4) | | Singular | Plurals | singulative | Gloss |
|---|---|---|---|---|---|
| | a. | [ɡát] | [ɡà:t] | – | 'child(ren)' |
| | b. | [tíɛt] | [tìɛ:k] | – | 'piece(s) of ground maize' |
| | c. | [ɡá̱r] | [ɡà̱:r] | – | 'cultural scar(s) on the face of male Nuer' |
| | d. | [t̪ák] | [t̪à:k] | [t̪À::k] | 'ox(en)' |
| | e. | [dʒá̱ŋ] | [dʒÀ:ŋ] | – | 'dinka(s)' |
| | f. | [dʒá̱l] | [dʒÀ:l] | | 'guest(s)' |
| | i. | [kʷáɲ] | [kʷà:ɲ] | [kʷà::ɲ] | 'slave(s)' |

The tone of the above way is low for singulars and high for plurals. Again, there is no vowel alternation, shift or modification in any way. Only (4d and i) have inflected singulatives.

## 4.3 Vowel shortening and shift in tone

As opposed to the above way of deriving plurals, this method employs the shortening of the stem vowel together with change in tone. The tone of the words varies, depending on the nature of each word.

| (5) | | Singular | Plural | Singular | Gloss |
|---|---|---|---|---|---|
| | a. | [kà:r] | [kár] | – | 'offspring(s)' |
| | b. | [mà:r] | [már] | – | 'relation(s)' |
| | c. | [rʷá:l] | [rʷàl] | – | 'incest(s)' |
| | d. | [tʷá:r] | [tʷàr] | – | 'bee(s)' |

In this method of the singular has a low tone, the plural will take a high tone, for example in (5b), where the low tone falls on singular and the high tone appears with the plural, as opposed to the rest of the examples.

## 4.4    Change in tone

This way of forming plurals from singulars is done by changing the tone of the word, but without changing anything else: Body parts such as the nose, the head, etc., and others are the best examples, as below:

(6) | | Singular | Plural | Singulative | Gloss |
|---|---|---|---|---|---|
| | a. | [wùm] | [wúm] | – | 'nose(s)' |
| | b. | [wɨ̀tʃ] | [wɨ́tʃ] | – | 'head(s)' |
| | c. | [mùr] | [múr] | – | 'vagina(s)' |
| | d. | [tʃùl] | [tʃúl] | – | 'penis' |
| | e. | [t̪ùɲ] | [t̪úɲ] | – | 'mucus |
| | f. | [kùm] | [kúm] | – | 'lit(s) of goards' |
| | g. | [pàm] | [pám] | [pɐ̀::m] | 'rock/stone/mountain' |

As one can see above, the shape of each singular form and its plural counterpart look exactly the same, except in their tone patterns. The singulars have a low tone, while plurals are true opposites. No other aspect of the words has been affected by the formation of the plural.

## 4.5    Internal vowel and final consonant alternation and tone shift

In this method of plural formation, a change is seen in the root vowel(s) and the final consonant of the word, and tone pattern varies from word to word, i.e. tone irregularities is evidenced, as shown below:

(7) | | Singular | Plural | Singulative | Gloss |
|---|---|---|---|---|---|
| | a. | [ɲàl] | [ɲár] | [ɲà::l] | 'girl(s)' |
| | b. | [ròw] | [rót̪] | – | 'hippopotamus' |
| | c. | [rɨ́äj] | [rìɐ̈t̪] | – | 'canoe(s)' |

As with other methods above, the consonant mutation and changes in tone mark the distinction. In this method, as the case might be for the rest of the methods, the tone shift is not predictable. It seems that each word has its own way of forming its plural from the singular. The first two, (7a) and (7b), have the same tone patterns: low tone singulars and high tone plurals. The example in (7c) appears with the opposite tone pattern: high and low for singular and plural, respectively. In contrast to these, the (7d) has low-low for both singular and plural.

## 4.6   Dropping a vowel and tone shift

Dropping a vowel is another way of plural formation. In this method, only the second vowel is dropped.

| (8) | | **Singular** | **Plural** | **Singulative** | **Gloss** |
|---|---|---|---|---|---|
| | a. | [rɔ̂al] | [rɔ̀l] | – | 'quarrel(s)' |
| | b. | [tɔ̂ar] | [tɔ̀r] | – | 'a kind of plant' |
| | c. | [kɔ̂ar] | [kɔ̀r] | – | 'a tree of acacia family' |
| | d. | [kʷɔ̰:r] | [kúr] | – | '(one) hundred(s)' |
| | e. | [rʷɔ̰:n] | [rún] | – | 'year(s)' |

In this method, the second vowel is dropped as we move from singular to plural. This is accompanied by the shift in tone. Singulars, as we can see in the first three examples do have a falling tone, while plurals have a low tone. The low tone follows the loss of the second vowel /a/ in most cases (of Nuer nouns). On the other hand, if a noun or any word in the language has a vowel /u/ following the onset and is followed by a vowel, that vowel is considered as glide /w/ or phonologically influenced (labialization, palatalization, etc.), given the kind of consonant it follows. In the case of number, this usually, but not always, comes with singulars. The plurals, as can be seen in the examples above, have the second vowel deleted and /u/ is no longer a glide, since it comes with no influence from other sounds. The tone is in variant, as we can see with (8e) as opposed to (8d,f).

## 4.7   Shift in vowel quality (voice) and tone shift

This ninth way of deriving plurals employs the shift of vowel quality, i.e. moving from plain vowel to its breathy counterpart or from breathy vowel to its plain counterpart. The change of voice in the following examples is unpredictable, as it also involves shifting from one voiceless vowel to a different voiced one, as in the examples and their explanations below:

| (9) | | **Singular** | **Plural** | **Singulative** | **Gloss** |
|---|---|---|---|---|---|
| | a. | [lʷâk] | [lʷi̤:k] | – | 'cattle barn(s) |
| | b. | [bíl] | [bɛ̀l] | [bɛ̤::l] | 'a lot of maize/corn/grain' |
| | c. | [tíɛr] | [tiär] | – | 'clitoris(s)' |
| | d. | [kɛ́m] | [kɛ̀m] | – | 'a kind of tree' |
| | e. | [rɔ̀k] | [ró:k] | – | 'robe(s)' |
| | f. | [kɔ̰́l] | [kɔ̀l] | – | 'skin(s)' |
| | g. | [kʷán] | [kʷàn] | [kʷʌ̰::n] | 'too much food(s)/tuff' |
| | h. | [mɔ̰́k] | [mɔ̀k] | [mɔ̀::k] | 'too many buffalo(es)' |

The change in voice quality presented in these examples is not one-way direction. This means that if the vowel of the singular is breathy, then the vowel in its plural counterpart is plain, and the reverse is true. For instance, the vowels in Examples (9a, c, and e) are breathy in their plural forms and non-breathy in their singular forms. Those in (9b, g) are breathy in their singular form and non-breathy in their plurals. On the contrary Examples (9f, h) are breathy both in the singular and plural, but with different qualities. One might also notice the tone variation in each case and the length in certain vowels, as in (9a, e).

## 4.8   Zero/null formation

Zero formation of the plural is witnessed in the list of words in which the tone is either uniform or absent. The words for 'hand', 'hear' and 'buttock' are the examples of this class of plural formation, as in the following examples:

(10)       **Singular**   **Plural**   **Singulative**   **Gloss**
    a.   [tɨt]       [tɨt]       –            'hand(s)'
    b.   [dʒɨ́t]      [dʒɨ́t]      –            'ear/ear(s)'
    c.   [wɔ̤t]       [wɔ̤t]       [wɑ̤̀ːt]       '(very big) buttock(s)'

In these words, there is no change in tone, vowel and or anything else, such as suffixation or vowel length. We should therefore call it a zero derivation of plural.

## 4.9   Addition of glide j, vowel change and tone shift

With sounds that are followed by labialization/palatalization, and end in a vowel (most cases), the glide *j* is added to the end of the word in the singular form to form the, as shown in the following examples:

(11)       **Singular**   **Plural**   **Singulative**   **Gloss**
    a.   [tʃʷɛ̀ː]      [tʃʷíj]      [tʃʷɛ̤̀ːː]      'kind of fish'
    b.   [gʷɛ̀ː]       [gʷíj]       –            'sandstone'
    c.   [kʷɔ̀ːk]      [kʷíj]       –            'thorn'
    d.   [mìɛ̀ː]       [míj]        –            'hair animal's tail'

Some of these nouns seem to be non-count, for example, those in (11a and d) are uncountable. The other two are count nouns. Even in noun(s) that end in other consonants (-*k*) as in (11c) have taken the glide *j* to form the plural. The suffixation of *j* glide comes along with the vowel change and the shift from low tone to high. This might be because *j* is close to the high vowel /*i*/ so that it influences/assimilates the /ɛ/, and also because /i/ is a high vowel and attracts a high tone.

## 4.10  Suppletion and tone shift

Another way of deriving plurals is by suppletion, shifting to a completely different word with a completely different shape. This process is quite rare and does not affect many nouns.

(12)

| | Singular | Plural | Singular | Gloss |
|---|---|---|---|---|
| a. | [jân] | [hɔ́k] | [jà::ŋ/lʷɔ̀ɲ] | 'cow(s)' |
| b. | [rà:n] | [nâ::t̪] | [nàt̪] | 'human being(s)' |
| c. | [ʧíɨk] | [màn] | [mɹ̀::n] | 'women' |

The tone patterns of the words in this example differ from example to example. In (12a), the singular caries the falling tone and its plural counterpart has a high tone. On the other hand, the singular has a low tone, while the plural counterpart has just a falling tone. In contrary to (12a) and (12b), in Example (12c) both the plural and singular have a low tone.

## 4.11  Singulative

Singulative (sɢv) targets both the collective nouns mass nouns. The singulative that is said to be particularly found in Nilo-Saharan languages is expressed differently in Nuer. While it is marked morphologically with affixes in many Nilo-Saharan languages, as mentioned by Dimmendaal, the singulative in Nuer is marked: (1) with suppletion and/or internal modification for collective nouns, (2) with the deletion of the glide and/or the internal modification, (3) a combination of both vowel length and modification (change), as presented in Example (13), or (4) it can be expressed with the help of specifier in a clause, as in (12).

(13)

| | | Plural | gloss | singulative | gloss |
|---|---|---|---|---|---|
| Collective nouns | a. | [hɔ́k] | 'cows' | [lʷɔɲ/jà::ŋ] | 'herd of cattle' |
| | b. | [lèj] | 'animals' | [rʷâl] | 'herd of (wild) animals' |
| | c. | [nâːt̪] | 'people' | [bʷɔn/nàt̪] | 'group of people' |
| Mass nouns | d. | [pìw] | 'water' (PL) | [pîäh] | 'too much water' |
| | e. | [ʧʷêj] | 'soup' (PL) | [ʧʷɛ ::] | 'too much soup' |
| | f. | [rʷɛj] | 'saliva'(PL) | [rʷɛ̈::] | 'too much saliva' |
| | g. | [ʧàk] | 'milk' (PL) | [ʧàːːk] | 'too much milk' |

|  | | | |
|---|---|---|---|
| *Count nouns* | h. [wɔ̀t̪] | [wɔ̀t̪] | [wÀ̤::t̪] | 'too big buttock(s)' |
| | i. [kʷä́n] | [kʷàn] | [kʷÀ̤::n] | too many food stuff |
| | j. [mɔ́k] | [mȍk] | [mö́::k] | 'to many buffalo(es)' |
| | k. [p̀äm] | [p̋äm] | [p̀Á̤::m] | 'too many rock/mountain' |
| | l. [t̪ä́k] | [t̪äk] | [t̪Á̤::k] | 'too many ox(en)' |

While the words in Examples (13a, b and c) are true plurals that describe collective entities that take many things as a group, those in (13d, e, f and g) describe mass nouns as more than the expected or the amount needed at a time. Lastly, for count nouns, the number of entities (members) of a group exceeds the required or normal amount.

For any noun that does not inflect for singulative as mentioned above, singulative can be expressed with the help of specifier in the clause, as presented in the following examples:

(14)  **Singular**  **Plural**  **Gloss**

a.  [rɔ̀w]  [rót̪]  'hipopotamus(es)'

*Clause*:  [mí̤ t̠ʃalí̤ rɔ̀w gʷìt̠ʃɛ̀]

mí̤  t̠ʃal-í̤  rɔ̀w  gʷìt̠ʃ-ɛ̀
SPEC call-NARR hipo  see-3SG
'look at what is meant by/called hipo'

b.  [rí̤äj]  [rìÄ̤t̪]  'canoe(s)'

*Clause*:  [rí̤äj tè: pìɲ !bà:ŋ]

rí̤äj  tè:  pìɲ  !bà:ŋ
canoe exist. 3SG down without
'canoe exists without/everywhere '

In Example (14a and b), the hippopotamus and canoes exist in large numbers and the interpretation of the clause either with the specifier (SPEC) as in (14a) or the preposition (PREP) 'without' help make it clear. The singular form is indeed intact, and it represents the addressee as a group, possibly together with the specifier.

## 5.  Productivity

Based on the findings presented in this study, the researcher claims that suffixation and internal modification are more productive than any other process. While internal vowel modification interferes with other processes, such as *-ní̤/-í̤*, vowel length, and refers to complete vowel change as well, suffixation incorporates almost

(if not all) the loan words that can be found in this study. The words in the following examples are loan words taken from different languages.

(15)

| | | Singular | Plural | Singulative | Gloss |
|---|---|---|---|---|---|
| | a. | [tʃɔ:k] | [tʃɔak-ní] | – | 'chalk(s)' (English) |
| | b. | [t̪ùrbìl] | [t̪ʷɔ̰̂rbîɛ:l-í] | – | 'vehicle(s)'(unknown) |
| | c. | [bùrmìl] | [bʷɔ̰̂rmîɛ:l-í] | – | 'barrel(s)' (Amharic) |
| | d. | [kɔmpʲɔ̰̀tèr] | [kɔmpʲɔ̰̀tèr-í] | – | 'computer' (English) |
| | e. | [tàlɛ̀pò:n] | [tàlɛ̀pò:n-ní] | – | 'telephone' (English) |
| | f. | [t̪ɑ́n] | [t̪ɑ̰̀n-ní] | – | 'dishes' (Arabic/Amharic) |
| | g. | [jʲɔ̰̀m] | [jʲɔ̰́:m] | – | 'tin can' (Arabic) |
| | h. | [láptóp] | [láptóp-ní] | – | 'laptops' (English) |
| | j. | [téjbòl] | [téjbòl-í] | – | 'table' (English) |
| | k. | [pìlɑ̰̀tʃ] | [pìlɑ̰̀tʃ-ní] | – | 'flash' (English) |
| | l. | [tʃâdʒèr] | [tʃâdʒèr-í] | – | 'charger' (English) |
| | m. | [lɑ̰̀mɑ̰̀:r] | [lɑ̰̀mɑ̰̀:r-í] | – | 'tower' (Arabic) |
| | o. | [kîj] | [kîj-ní] | – | 'key' (English) |
| | p. | [rádʲèw] | [rádʲèwní] | – | 'radio' (English) |
| | q. | [pèn] | [pɛ̰̀n-ní] | – | 'pen' (English) |

Though very rare, there is still evidence that loan words can be internally modified to conform to the process of internal vowel modification, as can be seen in (15q). All the loan words in (15) have suffixes in their plural forms. Loan words only have their singulative expressed in a clausal context.

## 6. Concluding remarks

In conclusion, tone plays a crucial role in Nuer, generally in all aspects of the language, and particularly in number formation. Suffixation and internal vowel modification are productively the most dominant, since they come with vowel length, complete vowel change and other processes, as well.

In my experience, I have never come across any other language with such an overwhelming system of number marking. Nuer might therefore be the only such language in the Ethiopian context in particular, if not in the world, in general.

## Acknowledgements

## Abbreviations

| NARR | Narrative | PREP | Preposition | SG | Singular |
|------|-----------|------|-------------|-----|----------|
| Ø | Null | SEPC | Specifier | SGV | Singulative |
| PL | Plural | | | | |

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# Case-marking in Semitic in the light of the evidence in the Ethiopian language area
## Linguistic convergence and divergence

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Languages in the Ethiopian language area typically exhibit a two-case system from a morphological point of view. This paper discusses the question as to how this observation can be aligned with the circumstance that, for Semitic in general, a three-case system is usually reconstructed. It will be argued that case endings can also emerge in a secondary process, as is widely recognised in typological linguistics, and that the cyclicity observed in this context can well be framed in terms of processes of linguistic convergence and divergence. Thereby, both the morphological aspects of case as well as the thematic roles of case will be discussed.

**Keywords**: Amharic, Afroasiatic, Arabic, Berber, case, convergence, Cushitic, Gəʿəz, Hebrew, Omotic, re-analysis, thematic roles

## 1. Introduction

As Tosco (1994) has shown, a two-case system is statistically prevalent in the Ethiopian language area. Given the genetic and linguistic complexity of the Ethiopian area, it is with good reason assumed to be the geographical origin of Afroasiatic, and it is reasonable to explore the likelihood of an early two-case system in the case of Semitic, as well.

There are at least three different concepts of linguistic evolution, which may partially overlap. One model assumes a unidirectional development from one more or less contiguous temporal and geographical origin or state, explaining a situation deriving from the underlying data of that origin and giving an essentially mono-genetic picture. A second model allows for parallel developments, referring to one or more scenarios that do not necessarily have to be projected back to a uniform origin or state, amounting to a polygenetic scenario. A third model gives room to

cyclic processes in linguistic evolution. Jespersen's cycle describing the syntactic and semantic shifts in expressing negation is a well-known case in point (cf., e.g. Lucas 2007). The river-delta model developed by Pisani (1952) formally captures such cyclic processes. In the context of this paper, the concept of cyclicity is important insofar as case (i.e., a system of marking dependent nouns for the type of relationship they bear to their heads) can emerge secondarily, and does not have to constitute the original state of affairs in a language family. What is more, processes of convergence and divergence have been recognised as playing an important role in language development (cf., Diem 1978; Diem 1981; Edzard 1998). To put it simply, case is a phenomenon that can come and go. In the following, I will discuss this issue with a focus on the Ethiopian language area.

This chapter, which aims at arguing for the precedence of a two-case system, is organised as follows: after an examination of the morphological side of the question of case in Section 2, with data from Semitic, Berber, Cushitic and Omotic, the syntactic-functional side of the question is explored in Section 3 in a comprehensive Afroasiatic framework. Section 4 concludes this chapter.

## 2.    The morphological side of the question

When the morphology and grammatical roles of case are compared within Semitic on the one hand, and Afroasiatic on the other, it is remarkable that one traditionally reconstructs a three-case system (-*u*, -*i*, -*a*) for Semitic (this is the mainstream position, at least), while for Afroasiatic at large (excluding Egyptian and Chadic – without overt marking of case, as far as we know) a two-case model is preferred. Incidentally, the latter model also corresponds better with the situation in the sound plural in Arabic (nominative -*ūna* vs. genitive/accusative -*īna* in the masculine, and nominative -*ātun* vs. genitive/accusative -*ātin* in the feminine) as well as with indefinite Arabic diptotes (nominative -*u* vs. genitive/accusative -*a*). Appleyard (2011: 48; 2012: 205f.) reconstructs a common Cushitic system with nominative *-i, absolutive *-a, genitive *-i in the masculine short vowel conjugation (in the feminine *-a, *-a and *-(a)ti respectively). An anonymous reviewer thinks that the feminine data here, in conjunction with the masculine, make an original three-case system more likely, a point with which I disagree. Tosco (1994) considers the nominative marker in Cushitic as going back to an original focus morpheme, a phenomenon typical of Cushitic (cf., Owens 2018: 144). This requires us to be careful with the terminology. In many cases, the term subject case may be more appropriate than the term nominative. In Berber, one finds the following situation, taking Tashlhiyt as an example (cf., Elmedlaoui 2012: 161f.; cf. also Chaker 2018: 166). A free state (independent, marked by an *a*-prefix) is opposed by a construct state (dependent,

marked by a *u*-prefix). The construct case, not to be confounded with the construct state in Semitic, is assigned to the noun in the following syntactic contexts:

– when the noun is the argument of a preposition (other than *ar* 'until');
– when the noun constitutes an adnominal genitive (this does not hold for all varieties of Berber);
– when the noun is the first argument (non-focalised subject) in a VSO sentence construction;
– when the noun is determined by a cardinal number from one to ten, or by a [± Question] adverb, like *mnnaw* '(how) many (?)'

Adding an example of the adnominal genitive to Elmedlaoui's examples (again: this is not to say that the Berber genitive construction can be equated with the Semitic construct annexation), one arrives at a group of examples as follows (1):

(1)  State/case in Tashlhiyt Berber
     *i-ssuda$_1$ u-rgaz$_2$* (CS) *f=$_3$w-ag$^w$mar$_4$* (CS) 'the man$_2$ rode$_1$ on$_3$ the horse$_4$'
     *a-xam$_1$ u-rgaz$_2$* 'the tent$_1$ of the man$_2$'
     *uššan-n* 'jackals' (FS) vs. *sin$_1$ w-uššan-n$_2$* (CS) 'two$_1$ jackals$_2$'
     *mnnaw$_1$ w-ag$^w$mar-n$_2$* (CS '(how) many$_1$ horses$_2$ (!/?)'

Within Semitic linguistics, one finds positions that reconstruct a three-case system (*-u, -i, -a* in the singular; *-ū, -ī* in the plural) to Common Semitic (Proto-Semitic) one the one hand, and positions that reconstruct a system in which an absolutive case (ending in *-a*) stands in contrast with a nominative case (ending in *-u*). The former position (e.g., Hasselbach 2013; Weninger 2011; Al-Jallad & van Putten 2017; Huehnergard 2019) can be associated with reconstructing methodologically according to what Robert Hetzron has called the 'principle of archaic heterogeneity', i.e., orienting oneself at the historically most complex morphological situation, as being found mainly in Old Babylonian Akkadian and Classical Arabic. Huehnergard (2019: 61) also reconstructs a locative *-u(m)* and a directional *-isa* (> *-ah(a)* in West Semitic), with the caveat that the latter two could also be considered adverbial endings (in themselves, of course, good candidates for the origin of case endings). What is more, Hasselbach (2013: 69f.) argues that the commonalities in the case system of East Semitic Old Babylonian and West Semitic Classical Arabic are too clear to be merely coincidental. In support of this position, one can also adduce evidence of residual case marking in languages that are only (or mostly) attested in consonantal script, notably Ugaritic (cf., Al-Jallad and van Putten 2017: 95f.), marginally also Epigraphic South Arabian, or in languages that have lost case marking (also from the perspective of the evidence of extant vowel markers), notably Biblical Hebrew (for a summary presentation of possible examples, cf., e.g., Cassuto 2018).

The latter position (e.g., Rabin 1969; Retsö 1997, 2006; Owens 1998, 2018), which takes a reductionist approach, allows for the secondary emergence of case (or at least parts of the case system) and is in better congruence with the situation found in parts of other branches of Afroasiatic, notably Berber, Cushitic and Omotic, in which a morphological three-case system is untypical (see above). Assyriologists from Gelb (1965) to Streck (2000) have also expressed sympathy for this view, pointing to the irregular distribution of case endings (especially as regards names) in Old Akkadian and Amurrite, respectively.

Or, as Rabin (1969) argued, case represents a later development of what originally was termed state (as still holds for Berberology), according to the following model (apud Hasselbach 2013: 16):

(2)  State in Semitic and Afroasiatic
    *-a*   absolute state (unmarked)
    *-u*   emphatic state
    *-Ø*   predicative state
    *-i*    governed state

Case, if attested at all, may also be quite randomly distributed, e.g., in later stages of Akkadian (cf., Idasiak 2018). Owens (2018, following Versteegh 1981) makes much of the (also attested) circumstance that final vowels on nouns, even if existent, may be either randomly distributed or the result of vowel harmony. The first observation is supported by vowel distribution in Amorite (cf., Waltisberg 2011: 29, apud Owens 2018: 108; cf. also Streck 2011) (3):

(3)  Distribution of final vowels in Amorite
    *-Ø*: agent of transitive verb; subject of intransitive verb; PRED; VOC; GEN
    *-a*: agent of transitive verb; subject of intransitive verb; PRED; VOC; GEN
    *-u*: agent of transitive verb; subject of intransitive verb; PRED; VOC
    *-i*:  GEN

The second observation pertaining to vowel harmony is supported by an example provided by the grammarian al-Farrā', who juxtaposes the apparent alternatives *al-ḥamd-u lu-llāhi* vs. *al-ḥamd-i li-llāhi* (*Maʿānī* I: 4). Similar phenomena can be observed in verbs, e.g., Cairene *zurt-a-ha* 'I/you visited her' vs. *zurt-u-hum* 'I/you visited them' (cf. Owens 2018: 105).

While some Semitic languages such as Old Babylonian Akkadian and Classical Arabic indeed exhibit a (morphologically marked) three-case system, the Ethio-Semitic scenario is typologically closer to the Afroasiatic two-case systems. In this context, one must also note the co-existence of diptosis (*-u, -a*) and triptosis (*-u, -i, -a*) in Classical Arabic. Gəʿəz also exhibits a contrast between an accusative marked by *-a* (*-ä* in modern transcription, and phonologically motivated allophones) and a plain non-accusative *-Ø* (covering nominative, except for numerals,

in which a *u*-ending is found, and genitive). According to Weninger (2011: 1132) 'NOM and GEN merged due to the phonological merger of *\**u* and *\**i* to an ending *\*-ə that was certainly still present when the written norms of Gəʕəz were established during Aksumite times'. (Interestingly, the form *ʾabu-* 'father', as a representative of Gəʕəz nouns *tertiae infirmae*, in the construct state represents both nominative and genitive.) Here is the paradigm (cf., Butts 2019: 129) (4):

(4)  NON-ACC vs. ACC in Gəʕəz

|                       | NON-ACC | ACC     |
|-----------------------|---------|---------|
| ending in consonant   | *nəguś* | *nəguśä* |
| ending in *-i*        | *ṣäḥafi* | *ṣäḥafe* |
| ending in *-e-, -a, -o* | *ʾarwe* | *ʾarwe* |

Morphologically, the *-a* of the accusative overlaps with the *-a*-ending of construct nouns, but the latter probably has to be explained as a relic of an original element *-ya* (cf., Hasselbach 2013: 53f.). Alternatively, Tropper (2000) suggests associating the *-a*-ending of construct nouns with the absolutive case found elsewhere in Afroasiatic. *A priori*, the possibility of a mere epenthetic vowel cannot be dismissed, either. Owens (2018) – unconvincingly, in my view – also glosses the *-a*-ending of construct nouns as ACC. Nöldeke (1862: 758f., apud Hasselbach 2013: 53) argued that the allomorph *-ha* of the accusative in personal names reflected an original (suffixed) word underlying the accusative marker.

Of special interest is the *-u*/*-a* contrast in numerals (e.g., *xamsət-u* vs. *xamsət-a* 'five'), in which three perspectives can be found in the literature (cf., Owens 2018: 154ff.). Weninger argues (2011: 1133) that the *-u* is originally a proleptic 3M.SG pronoun. A second perspective (personally transmitted by Jan Retsö) views the *-u* as an *emergent* (as opposed to a relic of a) non-accusative construct marker. In a third (most traditional) perspective, the *-u* is seen as a nominative case relic (Tropper 2002: 80).

The important observation here is that case markers can emerge secondarily, as opposed to being relics of an alleged common (proto) system. Suffixed (and/or grammaticalised) adpositions are – typologically speaking – not unusual sources of case endings. The following model (adapted from Lehmann 1985) illustrates this point (5):

(5)  A model of the emerging of case endings
     stage 1: relational noun + adposition or case affix →
     stage 2: secondary adpostion →
     stage 3: primary adposition →
     stage 4: agglutinative case affix →
     stage 5: fusional case affix

The examples provided by Kahr (1976) and Lehmann (1985) mostly revolve around location and direction, and do not directly pertain to the elementary cases (see below).

This is, of course, not to deny that case endings can indeed be reduced or vanish. Later stages of Akkadian clearly show a convergence of cases (for a cogent overview, cf., Idasiak 2018). As is well known, in context with the emergence of Arabic diglossia (or polyglossia), scholars have pointed to the loss of both morphological case and case functionality. Important contributions to this topic include papers and monographs by Ferguson (1960) and Fück (1950) (contact with non-Arabic speakers in the aftermath of the Arabic-Islamic expansion), Corriente (1971) and Diem (1991) (loss of case and loss of case functionality), and Blau (1969) (shift from synthetic (Old, including case) to analytic (Neo, including caseless) structures). A sort of push-chain mechanism then accounts for the emergence of analytic case markers for highlighting the genitive (genitive exponents, e.g., Hebrew *šel* and dialectal Arabic *māl*) and the accusative (*notae accusativi*, e.g., Hebrew *ʾēṯ* and Judeo-Arabic *ʾilā*).

Owens (2018), in a response to a paper by Ahmad Al-Jallad and Marijn van Putten (2017), puts forth interesting arguments in favor of an old case-less variety of Arabic that even predates the classical (*-u, -i, -a*) system. However, he does not provide any explanation for the emergence of the systems in Old Babylonian Akkadian and Classical Arabic.

Ideas that could be advanced in support of the secondary emergence of the elementary cases (as opposed to an original state are the following. Accusative endings typologically often result from the grammaticalisation of directional postpositions (cf., notably Kulikov 2009; thanks also to Stefan Schaffner, personal communication). The Akkadian ventive suffix on verbs is a clear case in point, even though the Assyriological literature does not discuss this suffix in explicit connection with case (despite its adverbial character, reminiscent of the adverbial functions of the dependent case/accusative in Semitic). The same holds for the so-called *he locale* in Hebrew, a directional *ā*-suffix, which has been associated with the adverbial function of the accusative (or absolutive) (6):

(6)   The ventive and the accusative in Akkadian and Hebrew
       *illik* 'he went' (go.PRET.3SM)   →   *illik-am* (go.PRET.3SM-VENT) 'he came'
                                              ('he went hither')
       *šarr-um* 'king' (NOM)           →   *šarr-am* 'king' (ACC)
       *ʾáreṣ* 'earth'                  →   *ʾárṣ-ā́(h)* 'to the earth'

As far as the genitive is concerned, it is not unusual that relational adjectives are grammaticalised to *-i*-endings marking this case (Stefan Schaffner, personal communication). Here, the Semitic *nisba*, the *-ī*-suffix of relational nouns and adjectives

across Semitic (and derivational expansions thereof, such as *-awi* in Amharic or *-a'i* in Modern Hebrew), is a perfect case in point (7):

(7)   The *nisba* in Semitic
      *miṣr* 'Egypt'        → *miṣrī* 'Egyptian' (person or adjective)' (Arabic)
      *šēm* 'Sem'          → *šēmī* 'Semitic' (Hebrew)
      *hajmanot* 'belief'   → *hajmanotawi* 'religious' (Amharic)
      *'iton* 'newspaper'   → *'itona'i* 'journalist' (Hebrew)

Tosco (1994: 226ff.) shows that four logical combinatoric possibilities of case-marking are attested in the Ethiopian area (8):

(8)   Logical possibilities of case-marking in the Ethiopian area
      A:  morphological marking of the object only
      B:  morphological marking of the subject only
      C:  morphological marking of both object and subject
      D:  languages with neither object nor subject marking

Possibilities A and B are statistically most relevant in this context: while C plays a role as well, D occurs rarely. A basically reflects the situation in Ethio-Semitic, with object-marking as follows (cf., Tosco 1994: 226) (9):

(9)   Object markers in Ethio-Semitic
      Gəʻəz:                    *-a ~ -ha; la-*
      Tigre:                    *ʾəgel- ʾəl-*
      Tigrinya:                 *nə-*
      Amharic, Argobba, Gafat:  *-n*
      Harari:                   *-u/-w* (after vowel)
      Gurage:                   *ä-, yä-, lä-, nä*

As regards Cushitic, object markers (in the absence of subject markers) are found in Central Cushitic (Bilin, Awngi, and Xamtanga) as well as in Eastern Cushitic (Dullay). Omotic languages in this context include Kefa, Basket, Aari, Dime, and Hamer.

   The opposite scenario B (cf., Tosco 1994: 226f.) is found in Eastern Cushitic languages, such as Somali, Rendille, Bayso, Dasenech, Arbore, 'Afar, Saho, Oromo, and Dirayta, as well as in Highland East Cushitic, such as Sidama, Burji, Hadiya, Kambata, and Gedeo (cf., also Mous 2012: 369–376). Relevant Omotic languages include Gamo, Wolaytta, Zayse, and Koyra. In addition to vowel affixes, tonal and stress patterns are instrumental in this context. It appears that tonal marking here constitutes an areal feature transcending Afroasiatic. The following is an example taken from Harar Oromo (cf., Owens 1985: 101, 251) (10):

(10) Nominative vs. accusative in Harar Oromo
    a. *sárée-n adii-n ni iyyi-t-i*
       dog-NOM white-NOM FOC bark-F-IPF
       'The white dog is barking'.
    b. *haat-tii okkóttée goot-t-i*
       mother-NOM pot make-F-IPF
       'Mother is cooking (lit. making the pot)'.

Nilo-Saharan languages (which are not Afroasiatic) exhibit clear minimal pairs (cf., Dimmendaal 2014: 1). Again, it is the nominative that is marked by a different tonal pattern (here: an additional high tone on the direct object) (11):

(11) Nominative vs. accusative in Maasai (Eastern Sudanic)
    a. *é-dɔ́l émbártá*
       3SG-see horse.ACC
       'He sees the horse'.
    b. *é-dɔ́l émbartá*
       3SG-see horse.NOM
       'The horse sees him'.

As regards scenario C, the East Cushitic language Boraana is a case in point. Here, one finds an opposition between a subject case terminating in *-i*, vs. an absolute case terminating in *-a* (which also functions as citation case), e.g., *nam-í* '(a) man' (subject) vs. *nam-a* '(a) man' (predicate) (cf., Sasse 1984: 112) (12):

(12) Subject vs. predicate case in Boraana (East-Cushitic)
    *nam-í* '(a) man' (subject)
    vs.
    *nam-a* '(a) man' (predicate)

Afar displays a similar scenario, with an *i*-ending for the nominative and genitive and an *a*-ending for the absolutive (cf., Appleyard 2011: 48) (13):

(13) Nominative and genitive vs. absolutive case in Afar
    *awk-í* '(a) boy' (NOM, GEN)
    *awk-á* '(a) boy' (ABS)

Omotic languages typically also follow scenario C (cf., Zaborski 1990; Azeb 2012: 450–453).

Again, one must keep in mind that one or two of the three vowels (*-u, -i, -a*) regularly occur somewhere in a comparative Afroasiatic perspective, but never all three in conjunction (outside Semitic). While the *a*-ending is relatively stable, the *i*- and *u*-endings usually converge to one of the two vowels, e.g., to *-u* ind Gəʿəz and, widely, to *-i* in Cushitic.

## 3.   The syntactic-functional side of the question

So far, we have concentrated on the morphological side of the question of case. *A priori*, at least within Semitic, both a two-case and a three-case scenario are conceivable as underlying the actual surface scenarios in individual languages in a generativist derivational sense for a theoretical overview, cf. Haspelmath 2009.

Going a step further, a survey of the functional range of the dependent case (accusative) in Semitic and Afroasiatic (mainly Cushitic) is instructive. Next to the elementary function of marking the direct object the dependent (or oblique) case in Semitic (mainly Akkadian, Classical Arabic, Ethio-Semitic: here Gəʿəz and Amharic) has many functions that are reminiscent of the situation in marked-nominative languages, i.e., languages that oppose a nominative and an absolutive case (cf., König 2009; Handschuh 2014; Edzard 2018a/b). Beyond the elementary function of marking the direct object, the following functions of the accusative (dependent, oblique) case can be observed across the Ethiopian language area.

One typical function of the accusative case is the marking of the predicate. Here are examples from Cushitic, Omotic, and Semitic (cf., Edzard 2018a: 187 and 190f.; Edzard 2019: 210) (14):

(14)  Accusative case-marking on the nominal predicate in Cushitic, Omotic, and Semitic
  a.  K'abeena                              (Eastern Cushitic; Crass 2005: 264)
      *ku      manc^u    moggaancoh^a*
      DIST.M man.NOM thief.ACC.COP.M
      'That man is a thief'.
  b.  Wolaytta                       (Omotic; Lamberti and Sottile 1997: 225)
      *he    bitann-ey  laagge*
      that  man-NOM friend.ACC
      'That man is a friend'.
  c.  Classical Arabic
      *kāna        Zayd-un    qā'im-an*
      be.3M.SG.PF Zayd-NOM stand.PTC-ACC
      'Zayd was standing'.
  d.  Gəʿəz
      *konä         nəgus-ä*
      be.3M.SG.PF king-ACC
      'He became king'.
      *rəgəmt-ä     təkun          mədr*
      cursed.F.ACC be.3F.SG.JUSS earth
      'The earth shall be cursed'.

e.    Amharic
*əssu-n   b-əhon        al-adärg-äw            näbbär*
he-ACC  in-be.1SG.IPFV  NEG-1SG.IPFV-it.DEP  be.3M.SG.PF
'If I were him, I wouldn't have done it'.

In (14c–e), the accusative depends on the verb 'to be'.

Expressing adverbials is another important function of the dependent case. Here are relevant examples from Akkadian, Arabic, and Amharic (15):

(15)   Accusative marking on adverbials in Semitic
a.    Akkadian
*šarrāq-am abull-am    iṣbatū*
thief-ACC   city_gate-ACC seize.3.PL.PRET
'They seized the thief at the city gate'.
b.    Arabic
*qāma          Zayd-un   ʾiǧlāl-an            li-Bakr-in*
get_up.3M.SG.PF Zayd-NOM honor.MAṢDAR-ACC  for-Bakr-GEN
'Zayd stood in honor of Bakr'.
c.    Amharic                                        (Leslau 1995: 892ff.)
*ləǧ-u     əǧǧ-e-n      yazä-ññ*
child-DEF hand-my-ACC take.3M.SG.PF-me.DEP
'The child took me by the hand (handwise)'.

The marking of the focus by the dependent case is a further case in point. First, here is an example from Eastern Cushitic (Arbore) that illustrates the use of an unmarked nominative vs. a marked nominative in focus (16):

(16)   Focus marking on subjects in Arbore (Eastern Cushitic)
a.    Arbore                        (Eastern Cushitic; Hayward 1984: 113f.)
*faraway         zéhe*
horse.PRED/FOC died
'A horse died'. (answer to the question: what died?)
b.    *farawé   ʔí-y      zahate*
horse.NOM  PVS-3SG die.3SG.F
'A horse died'. (unsolicited statement)

In Arabic and Amharic, one finds examples such as the following, with the focused noun in the accusative/absolutive (17):

(17)   Focus marking on subjects in Arabic and Amharic
a.    Arabic
*ʾinna Zayd-an   qāʾim-un*
FOC   Zayd-ACC stand.PTC-NOM
'(Indeed,) Zayd is standing'.

b. Amharic
*əwnät-wa-n*       *näw*
truth-her.DEP-ACC  be.3M.SG.IPF (COP)
'She is right'.

In (17a) the accusative depends on the focus marker *ʾinna*.

A focus-marking function is also obvious in the following case taken Gəʿəz, supposed that *fäqäd-ä-kä* 'your will' constitutes the subject (cf., Waltisberg 2002: 50) (18):

(18) Focus marking on subjects in Gəʿəz
*yəkun      fäqäd-ä-kä              bäkämä bä-sämay wä-bä-mədr-ni*
be.3M.SG.IPF will-ACC-you.2.M.SG.DEP like   in-heaven CONJ-in-earth-too
'Your will be done on earth as in heaven'.                    (Mt. 6:10)

Thematic roles, as reflected by case, are by no means static. In certain cases, one can observe the syntactic re-analysis of grammatical subjects as objects. This happens, e.g., in the expression of possession in Arabic dialects (19):

(19) Syntactic re-analysis in Arabic dialects
*ʿind-ī    hiya       >  ʿand-i    yyā-ha* 'I have her/it (fem.)'.
at-I.DEP   she.INDEP      at-I.DEP  ACC.she.DEP

Modern Hebrew, mainly in its colloquial registers, features comparable cases, in which the accusative marker *ʾet* precedes the grammatical subject. There are already traces of this phenomenon in Biblical Hebrew, in which *ʾēṯ* precedes the subject in passive clauses and existential sentences (cf., e.g., Edzard 2018a: 196f.) (20):

(20) Syntactic re-analysis in Modern Hebrew
*gam kan yeš  ʾet ha-beʿayot        ha-ʾele*
also  here EXIST ACCDEF-problem.PL DEF-DEM.PL
'Here too there are these problems'.

In Ethio-Semitic verboids, possession is expressed by either a preposition plus dependent pronoun (so in Gəʿəz) or by an existential verb plus dependent pronoun (so in modern Amharic) (21):

(21) Verboids in Gəʿəz and modern Amharic
a. *b-o / b-ottu*
in-3SM.ACC
'he has (lit. in him [is])'
b. *allä-w*
exist\3SM.PFV-3SM.ACC
'he has (lit. there is for him)'

Syntactic re-analysis is especially evident in the following example. While (a) represents the expected Amharic version of 'he is hungry', with 'he' in topicalised position, (b) reflects the re-analysis of the subject as an object (22):

(22)   Syntactic re-analysis in Amharic verboids
  a. *əssu rabä-w*
    3SM be_hungry\PFV.3SM.-3SM.ACC
    'he is hungry (lit. he it hungers him)'.
  b. *əssu-n  rabä-w*
    3SM-ACC be_hungry\PFV.3SM-3SM.ACC
    'he is hungry (lit. him it hungers him)'.

Alternatively, the later example could also be analysed in terms of focus marking ('as regards him'; cf. Edzard 2016: 153).

   Without downplaying the circumstance that the genitive in many Semitic languages is either marked by a final vowel (typically *-i*) or a genitive exponent, it is nevertheless remarkable that native Arab(ic) grammatical theory uses a basic dichotomy with common terminology that applies to both case and mood. While the term *rafʿ* 'independent case/mood' refers to both the nominative and the indicative, the term *naṣb* 'dependent case/mood' refers to both the accusative (in its variety of functions) and the subjunctive, the commonality being that both the independent nominative and indicative (in Classical Arabic) are marked by a *u*-ending, and both the dependent accusative and subjunctive by an *a*-ending (23):

(23)   Case and mood endings in Classical Arabic
     on noun      on verb
  *rafʿ* *al-kitāb-u* 'the book' (NOM) *taktub-u* 'you (MS) write' (IND)
  *naṣb* *al-kitāb-a* 'the book' (ACC) *ʾan taktub-a* 'that you (MS) write' (SUB)

While there also exist two terms for the genitive (*ǧarr* and *ḫafḍ*), the latter case is not part of this classical Arabic relational system, which also refers to mood.


## 4. Conclusion

When one considers an assumed common or (Proto)Semitic as a direct offshoot of Afroasiatic, it is hard to see how a three-case system (*-u, -i, -a*) can descend directly from Afroasiatic, unless, of course, one uses the term common or (Proto)Semitic in the sense of prototypical Semitic, with the claim that Old Babylonian Akkadian and Classical Arabic (and vestiges of case in Ugaritic) in its morphological regularity represent the typical Semitic scenario. I would suggest not excluding the possibility that an overt three-case system (represented by *-u, -i, -a*) may emerge

independently, given that overt two-case systems always feature *-u* or *-i* for nomina-
tive and genitive, and *-a* for accusative/absolute. What is more, statistically, there
is a good chance in languages such as Akkadian and Classical Arabic that underly-
ingly only exhibit the three vowels *a, i*, and *u* that the three cases may be represented
by precisely these three vowels, and that morphological regularity is the result of
processes of analogy and convergence. After all, unless one pursues a Nostratic
model, one would not claim a common origin for case endings in the nominal
paradigms *šarr-u-m, šarr-i-m, šarr-a-m* ('king', NOM/GEN/ACC) in Akkadian and
*amic-us, amic-i, amic-um* 'friend' (NOM/GEN/ACC) in Latin.

   Taking into consideration that the accusative is as frequent as it is multifunc-
tional, it makes sense to consider the nominative as marked, even in cases in which
this does not hold from a morphological point of view. As marked nominative
languages can be characterised as 'a mixture of ergative/absolutive and nominative/
accusative systems' (cf., König 2009: 535) it is reasonable to argue that case systems
in Afroasiatic can diverge from such a system, and then reconverge to such a system
again, hence the title of this paper. Convergence is an expected process in a linguistic
contact area (Sprachbund) (cf., e.g., Appleyard 2011 for Semitic-Cushitic/Omotic
relations), as is evident in the evolution of case-marking in marked-nominative
languages in Nilo-Saharan, Cushitic, and Omotic.

## Abbreviations

| | | | |
|---|---|---|---|
| ACC | accusative | JUSS | jussive |
| CONJ | conjunction | M | masculine |
| COP | copula | MAṢDAR | verbal noun (Arabic) |
| DEF | definite | NEG | negation |
| DEM | demonstrative | NOM | nominative |
| DEP | dependent (case) | PRET | preterite |
| DIST | distal | PF | perfect |
| EXIST | existence | P(L) | plural |
| F | feminine | PRED | predicate |
| FS | free state | PVS | preverbal selector (Arbore) |
| FOC | focus | PST | past |
| GEN | genitive | PTC | participle |
| IND | indicative | S(G) | singular |
| INDEP | independent (case) | SUB | subjunctive |
| IPF | imperfect | VENT | ventive |
| IPFV | imperfective | VOC | vocative |

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# Reduplication in Oromo

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The morphological processes of reduplication in Oromo involve copying a root or a stem, entirely or partially. The latter requires replication of a prosodic CVC template from the left side of the base. The process may require adapting the onset of the adjacent syllable as a coda of the prosodic template. The copied portion, reduplicant, of a root or a stem is prefixed to the latter. However, if the base consists of a geminate or a cluster, the prefixing of the copied reduplicant would be constrained to a CV by a dissimilation rule. In a total reduplication, as in partial reduplication, the copied root or stem is placed to the left of its base. The word classes amenable to total reduplication are nouns, determiners, numerals, adverbs and adpositions, while those agreeable to partial reduplication are adjectives and verbs. Functionally, reduplicated nouns assume a predicative role and adpositions an adverbial role. The reduplicative forms of the other word classes are limited to their respective canonical functions, essentially with the sense of augmentation in terms of quantity, frequency or intensity.

**Keywords**: reduplication, partial, total, prosodic, copy

## 1.   Introduction

Reduplication, as a linguistic term, is one of the basic morphological operations by which roots, stems or words are formally adjusted so that they can be semantically fit in a sentence or in an utterance.[1] The other means of such operations are affixation, stem modification and suprafixation or suprasegmental modification, as pointed out by Payne (1997: 29). The operation of reduplication involves repetition by copying the entire root, stem or word (total copying) or by copying part

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1.   Based on prototypical definitions, in the present paper, *root* is the lexical unit of a word that cannot be reduced to smaller constituents, while *stem* is a word or part of a word (which may be a root or an affixed root) to which affix(es) can be attached. When an operation is applied, a root or a stem is considered a *base*.

of the latter forms (partial copying) and affixation. As to the source of reduplicants (reduplicated materials) across languages, Matthews (1991: 134f.) suggests that, in the case of prefixal and suffixal reduplication, they originate from the beginning and the end of the base, respectively, while in the case of infixal reduplication, they originate either from the beginning, the middle or the end of the base. Matthews further proposes that even total reduplication may be considered prefixal or suffixal, depending on the general pattern of the language. Although the forms of partial reduplication are generally considered to be prefixal, suffixal or infixal, they may involve complex processes. For instance, the following Tagalog (Philippines) examples present three different patterns of partial reduplication: (a) *sulat* 'writing' > *su-sulat* 'will write'; (b) *magpa-sulat* causative > *magpa-pa-sulat* 'will cause to write'; (c) *basa* 'reading', *mambasa* infinitive > *mam-ba-basa* nominalisation (Spencer 2001: 130). In (a), what is copied is simply the initial CV- of the base, whereas in (b) it is the final -CV of the first component, which marks causativity, and in (c) it is the initial CV- of the second component. In partial reduplication, the reduplicant may be just a segment or a concatenation of segments (consonants and/or vowels) or may be a prosodic constituent – syllable, foot, morpheme, etc. (Spencer 1991: 1). Making such a grammatical distinction by imposing a prosodic requirement on the segmental material copied from and affixing to the base is a case of prosodic morphology (McCarthy 2006; McCarthy & Prince 1988, 1993, 2001).

The general purpose of reduplication is to produce a new word so as to satisfy a grammatical or lexical requirement. If a reduplicative operation is for the former requirement, it is inflectional and, if for the latter, derivational. Usually, reduplication signifies such iconic meanings as repetition, frequency, increase or intensity. However, the meaning may sometimes be non-iconic and opposite to the preceding senses, that is, it may mean diminution or attenuation (Moravcsik 1978; Bauer 2003; Katamba & Stonham 2006, among others). As observed by Moravcsik (1978: 325), no predictive generalisation can be suggested concerning meanings of reduplicative constructions. For instance, in the above Tagalog example *sulat* 'to write' > *su-sulat* 'will write', the reduplication marks the grammatical feature of futurity (Bauer 2003: 32); it expresses neither augmentation nor diminution.

The concern of this paper is to examine and describe the formal and semantic properties of reduplication in Afaan Oromoo (for brevity, 'Oromo' hereafter), which is one of the Lowland East Cushitic languages that is widely spoken in Ethiopia. The Oromo people of Ethiopia are 25,489,024, constituting 34.45% of the total population of the country (*F.D.R.E. Population Census Commission* 2008). The language is also spoken in central and northern Kenya as well as in Somalia along some regions bordering Ethiopia. The reduplicative operations of the language will be dealt with in relation to word classes. Accordingly, we will examine reduplication in nominals

(Section 2), verbs (Section 3), adverbs (Section 4) and adpostpositions[2] (Section 5). Moreover, reduplicative outputs will be further examined from the perspective of inflectional operations involving case and focus. The latter are grammatical categories in which case is a form that marks the grammatical relation of nominals to other words in a sentence, and focus is a form or part of a sentence that highlights the centre of interest for interlocutors. Although Oromo has different kinds of formatives for the representation of various types of case and focus markers, only those necessary for descriptions will be employed here. For a better comprehension of the structural and functional properties of reduplication in the language, investigation of morphological operations will also be dealt with in syntactic contexts. The data that are analysed in this paper are from the Hararghe (eastern) variety of Oromo, which were obtained, essentially, introspectively and verified by two native speakers of the variety (See Acknowledgements).

## 2.    Nominal reduplication

In this section, we will examine the processes of reduplication in relation to nouns, determiners, adjectives and numerals, as well as their co-occurrence. While nouns, determiners and numerals undergo total reduplication adjectives undergo partial reduplication. We will look at each one of them at a time.

### 2.1    Nouns

The form of reduplication in relation to nouns involves copying the entire root and putting it before the latter. As we shall see later in the case of partial reduplication, the reduplicant copied from the base is prefixed to the latter and undergoes morphophonemic processes. With respect to total reduplication, simply the reduplicant combined with the base form a compound word. In the analysis, in the case of partial reduplication, the reduplicant is conjoined to its base with a hyphen, in the total reduplication the reduplicant, which is a copy of the entire base, is simply made to juxtapose the latter, but is not fixed to it. Nonetheless, the tonal pattern of reduplication shows that the reduplicant and its base together form a single phonological word, taking a single accent (otherwise, each independent word has its own accent). In all cases of total reduplication, there is tonal marking

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2.   The motivation for this study is the brief account of nominalisation of iterative verbs in Shimelis (2015).

to show that the form resulting from total reduplication operates as a single unit or a compounded word.

Based on some words that are distinct in meaning as a result of tone difference, Habte (2003) considers Oromo a tone language. On the other hand, Stroomer (1995) suggests that Oromo is a stress language in which a syllable in a word is accented and heard as more prominent than others. However, according to Owens (1980, 1985), Banti (1988), Hayward and Gemetchu (1996) as well as Shimelis (2015), Oromo is a language in which a syllable in a word is accented and perceived as more prominent with high pitch, hence a pitch-accent language. On the contrary, a tone language distinguishes lexical and grammatical meanings of words based on pitch specification of their syllables. That is, pitch differences of syllables result in phonemic contrasts that cause meaning difference in words. Unlike in tone languages, in which pitches alternate over a word, high tone in Oromo occurs towards the right end of a word whose other syllables are low. As pointed out by Owens (1985: 29), either the penultimate or final syllable of a nominal root can be accentuated involving high tone. In other words, if the penultimate is H, the pitch spreads to the final, but if the penultimate is L, it is only the final that is H. Considering the fact that basic tones of roots and morphemes may alter in syntactic structures, Owens (1985: 37) generalises that Oromo may be considered a pitch-accent system from the perspective of pitch occurrence at the basic lexical level, and a tonal system from the perspective of surface realisation.

In Oromo, the total reduplication of a noun is used with the quotative verb *ʤeʔ-* 'say' together resulting in a composite verbal structure. That is somewhat similar to composite words that are formed from ideophones combined with auxiliary verbs, as in (1) below. In the ideophonic construction, the semantic content is carried by the ideophone, while the grammatical information is provided by the accompanying auxiliary verb.

(1)   *c'al    ʤeʔ-ø-e*
      quiet say-3MS-PFV
      'He kept quiet.' (Lit. He said quiet)

Below, in Example (2b), the composite verbal structure involving total reduplication that is a complement to the verb states the subject of the sentence, *ʃuuroo* 'porridge'. The reduplication results in a sense different ('flat taste') from that of the source simple noun ('water') in (2a). The auxiliary verb accompanying the reduplication, as in (1), provides grammatical information of person, gender, number and aspect.

(2)   a.   *ʔintal-n-i* [*ʔintalti*]  **biʃáan**  *fid-t-e*                    [*fidde*]
           girl-COP-EP           water   bring-3MS-PFV
           '(The) girl brought water.'

b. *ʃuuroo-n*      **bifaan bifáan³** *dʒeʔ-t-i*             [dʒetti]
porridge-NOM water    water    say-3FS-IPFV
'The porridge has a flat taste.'

Tangentially, the reason for the feminine agreement on the verb for the subject *ʃuuroo* 'porridge' is the fact that the eastern variety of the language tends to associate long word-final non-low vowels with the feminine gender. On the contrary, the agreement inflection on a verb for nouns ending in the open vowel *-a* is usually masculine. The sense of the subject noun in (3a) is 'women' (collective) and that of the subject noun in (3b) is 'men'. Nonetheless, in both cases the agreement on the verb is that of masculine singular (See also Owens 1985: 95).

(3) a. *beer-n-i* [*beerri*]      *duf-ø-e*
     women.COL-NOM-EP   come-3MS-\
     '(The) women came/have come.'
   b. *orm-ø-i* [*ormi*]      *duf-ø-e*
     men.COL-NOM-EP   come-3MS-\
     '(The) men came/have come.'

The singular counterpart of *beera* 'women' (collective) is *dubartii* 'woman', of which the plural form is *dubartoota* 'women'. Nonetheless, some speakers use the singular form also for plural. In the case of *orma* 'men', the singular counterpart is *namicca* 'man' (singulative), which is derived from *nama* 'person/human'.

The Hararghe variety of Oromo does not formally distinguish between the perfective aspect (conflating past tense) and the present perfect. For instance, *ɲaat-t-e* eat-3FS-\ may have a perfective sense ('She ate') or a present perfect sense ('She has eaten'). On the contrary, for example, the western variety has distinct forms. In (4a) the verb is perfective, while in (4b) it is present perfect. Observe that, in the latter case, the main verb is accompanied by an auxiliary verb.

(4) a. (*ʔisiin*) *ɲaat-t-e*
     (she)    eat-3FS-\
     'She ate.'
   b. (*ʔisiin*) *ɲaat-t-ee*      *dʒir-t-i*                 [ɲaatteetti]
     (she)    eat-3 FS-CNV exist-3 FS-IPFV
     'She has eaten.'

In the present study, the nominative case is marked in a manner different to a degree from previous studies such as Bender & Mulugeta (1976), Gragg (1976), Owens

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**3.** A high tone (H) on the first of a double vowel signifies that the suprasegmental feature is borne by the whole long vowel. In this study, tone marking is limited to reduplicated compound words where H tone is marked by an acute accent and L tone by absence of marking.

(1985), and Griefenow-Mewis (2001). In the present study, the Oromo nominative marker is considered to be *-n*. Nonetheless, the marking surfaces in different forms depending on the ending of the host stem.[4]

Fabb (2001: 69) observes that reduplication of the entire base is similar to compounding, in which independent words together form a new one. As seen in (2b), the compounding is exocentric, in which the two juxtaposed elements are combined without a head-modifier relationship and the compound is not a hyponym of any of the two elements. In other words, the meaning of the compound is obtained from the whole unit, and not compositionally from the sum of the two elements. The fact that the two elements constitute a single unit could also be construed from the tone marking as (2b) demonstrates. The compound is a single word, and as such takes one H tone, that is, one of its syllables is accented. Owens (1985: 35) observes that, in nominals, it is the penultimate syllable whose tone should be specified, and from that the rest could be determined. If the penultimate bears H tone, that would spread to the right (to the final syllable), but it is L if the final syllable is H. For instance, the noun *bi?áan* 'water' in the absolute case (object of an imperative verb) is H on its final syllable and the penultimate syllable is L. On the other hand, the *biʃaan biʃáan* has only a H tone on the second member of the compound. A similar situation is observed in the example below, in which the meaning of the base is 'honey', and that of the reduplicative compound is 'sweet (like honey)'.

(5)  ʃuuroo-n      **dayma dáymá** ʤe?-t-i [ʤetti]
     porridge-NOM honey  honey  say-3 FS-IPFV
     '(The) porridge is sweet.' (Lit. The porridge says honey honey)

In both (2) and (5), the H tone occurs towards the right end. In Example (2), the H tone is on the ultimate super-heavy syllable while in (5), the occurrence is on the penultimate CVC- syllable and spreads to the ultimate -CV. Unlike in (2), in

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4.

(i)   *-n* after a long vowel (e.g. *saree* 'dog' > *saree -n*);
(ii)  *-n-i* after dropping the final short *-a* of the base and following a simplex consonant of the latter (e.g., *mana* 'house' > *man-n-î*) (*-i* is epenthesis breaking the impermissible final *-CC-*);
(iii) *-ø-i* (*-i* is epenthesis) after dropping the final *-a* that is preceded by a consonant cluster or gemination (e.g., *harka* 'hand' > *hark-ø-i, ?ibidda* 'fire' > *?ibidd-ø-i*) (the nominative case is represented by *-ø-* (zero));
(iv)  *-t-i* after a feminine (or considered feminine) noun ending in a consonant preceding the final vowel (e.g., *?intala* 'girl' > *?intal-n-i* > *?intal-t-i* (epenthesis) (In the western (Macca) variety, *?intala* 'girl' > *?intal-n-i* > *?intal-l-i*); *raada* 'heifer' > *raad-n-i* > *raad-t-i* [*raaddi*]; *lafa* 'land' > *laf-n-I* > *laf-t-i*); *biyya* 'country'> *biy-n-i* > *biy-t-i..*
(v)   No marking after a noun ending in a consonant (usually *-n*) (e.g., *biʃaan* 'water' > *biʃaan; midaan* 'grain' > *midaan; k'anɲɲuur* 'ant' > *k'aɲɲuur*).

which the ultimate super-heavy syllable has attracted the H tone, in a case like (5) the H tone that is attracted towards the relatively heavy penultimate syllable spreads to the right. The Oromo nouns resulting from whole-word reduplication are of the exocentric compound type in which the combined elements are not in a head-dependent relationship. The meaning of the compound is the contribution of both elements, but is not predictable. However, as in Examples (2) and (5), the reduplicative compound with altered sense of the base noun describes the property of the syntactic subject. It is generally the case that the meaning of reduplication of concrete nouns reflects the property of the base noun. The reduplicative compounds of temporal nouns, rather, reflect the frequency of those of the base nouns, implying the repetitive occurrence of something.

(6) *ganámá* 'morning' > **ganama ganámá** 'every morning'
*kamísá* 'Thursday' > **kamisa kamísá** 'every Thursday'

As the example below illustrates, reduplicative temporal compound nouns have an adverbial role in a sentence.

(7) *sar-i-cc-ø-i*        **ganama ganámá**  *dut-ø-a*
dog-EP-SGV-NOM- EP morning morning bark-3MS-IPFV
'The dog barks every morning.'

The purpose of reduplicating nouns, as the examples demonstrate, is to provide interpretations that would not otherwise be obtained from the respective individual nouns. For instance, in the case of (2), considering the simple noun for description would result in *biʃaan ʤeʔ-t-i* [*ʤetti*] 'She/It says water' or 'She is asking for water'. This interpretation is totally different from what the reduplication conveys. In a nominal reduplication that involves an auxiliary verb, as in (2) and (5), the reduplicative compound is a contributor of the semantic substance, while the auxiliary verb is responsible for the grammatical information. Reduplicative compound nouns accompanied by an auxiliary verb assume a predicative role. As a result, such nouns do not, for instance, inflect for case (one of the properties of nouns), as their simple counterparts do. While (8a) is possible (8b) is not. In the latter case, one might expect the sense 'for flat taste', but the output is not a sensible one.

(8) a. *biʃaanii-f*
water-DAT
'for water'
b. * *biʃaan   biʃaanii-f*
water    water-DAT
?

As seen below in (9a, b), total reduplicative nouns similar to the ones above are also found in Amharic, which belongs to the Semitic family, but which is in a convergent relationship with Oromo within the Ethiopian linguistic area. In the structures below, the accent on the reduplicative forms marks stress, unlike H tone in Oromo, hence Amharic is a stress-accent language unlike the pitch-accent Oromo.

(9)  a.  *t'əʤʤ-u*    ***wɨha wɨhá*** *yɨ-l-ʔall*[5] [*yɨlall*]
        mead-DEF  water water 3MS-say-exist.IPFV (AUX)
        'The mead has a flat taste.'
    b.  *t'əlla-u* [*t'əllaw*]    ***mar   már***   *yɨ-l-ʔall* [*yɨlall*]
        traditional.beer-DEF honey honey 3MS-say-exist.IPFV
        'The traditional beer is as sweet as honey.'

In the discussion above, we saw the morphological organisation and semantic implications of reduplicative compound nouns. Now we will look at the way they are further organised involving inflection for focus. With respect to case, they are not agreeable to it, as they are functionally predicative. In the example below, the reduplicative compound noun is focused for a contrastive information that is contrary to what the interlocutor may presuppose. As regards the tonal marking, the reduplicative form is marked on the right end of the second element, indicating that they are a unit within the predicate accompanied by the auxiliary verb. The suffixed focus marker retains its characteristic tone (Owens 1980: 164).

(10)  *ʃuuroo-n*      ***biʃaan biʃáaní-llée*** *ʤeʔ-t-u* [*ʤettu*]  *ni=ʔan*[6] [*niin*]
     porridge-NOM water   water-FOC  say-3FS-SUB       FOC=1s
     *ɲaadd-ø-a*
     eat-1s-IPFV
     'I will eat the porridge, even if it has a flat taste.'

In the subsection below, we will investigate the formal and functional characteristics of reduplicative determiners.

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5.  *-l-* is considered to be the result of reduction from the root *b-h-l* 'say'. According to Desta (1970: 101), the Amharic *ʔal-ə* said-he 'he said' resulted from the reduction of *b-* and alteration of *-h-* to *-ʔ-*; hence *b-h-l > ʔ-l* [*ʔalə*]. In the example above, the guttural *ʔ-* is also deleted and what remained from *b-h-l* is simply *-l*.

6.  *ni=* is a preverbal clitic (Owens 1985: 60).

## 2.2   Determiners

Determiners are grammatical units that limit the referent of a noun. Traditionally, they are considered as adjectives when they modify a noun, and as pronouns when there is no apparent concomitant noun. In the present study, however, they are considered determiners, whether or not a noun is present. Below, in (11a) the head of the noun phrase is present, whereas in (11b) it is left for pragmatic retrieval.

(11)   a.   *kitaaba **san** fid-i*
             book     that  bring-2IMPV
             'Bring that book.'
        b.   ***san** fid-i*
             that   bring-2IMPV
             'Bring that.'

Of the determiner types in Oromo, demonstratives are considered here as they may undergo reduplication. All languages seem to have at least two demonstrative types with two degrees of distance – proximal and distal (Diessel 1999: 2; Payne 1997: 102, among others). The Oromo proximal and distal demonstratives functioning as subject and object are provided in the table below.

| Subject demonstratives | | | | Object demonstratives | |
|---|---|---|---|---|---|
| Number | Gender | Proximal | Distal | Proximal | Distal |
| Singular | M. | *kun(i)*[7] 'this' | *sun(i)* 'that' | *kana* 'this' | *san* 'that' |
| | F. | *tun(i)* 'this' | | *tana* 'this' | |
| Plural | | *kun(i)* 'these' | *sun(i)* 'those' | *kana* 'these' | *san* 'those' |

The proximal masculine demonstratives in both subject and object functions are structured on the stem consonants *k-n*, whereas for the feminine on *t-n*. The distal demonstratives, which do not distinguish gender, are structured on the stem consonants *s-n*. In both proximal and distal cases, the subject demonstratives are distinguished by the vowel pattern *-u-(i)*, while object demonstratives are distinguished by *-a-a*. The object case in Oromo is identified as 'absolute',[8] due to the fact that nouns in the object function are distinguished by the absence of marking, in other words, by adopting the citation form.[9]

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7.   The final (*i*) is phonetically optional. In the eastern variety of Oromo, *k* is usually phoneticised as the voiceless uvular fricative [X] regardless of position in a word (e.g. [X*un(i)*] 'this', [*muXa*] 'wood, tree'). Nonetheless, in the transcription here, simply *k* (the underlying representation) is employed.

8.   'Absolute' is preferred to distinguish from the ergative languages that mark the subject of intransitive verbs or the object of transitive verbs in the 'Absolutive' case.

9.   The employment of *k/t* for distinguishing the masculine and feminine gender is a Cushitic feature (Tosco 2000: 92).

With respect to number, it is the masculine singular form that is also employed for proximal plural and, similarly, it is the common singular distal form (which functions for both masculine and feminine singular) that is also used for distal plural.

The type of reduplication the demonstratives undergo is total, as illustrated below. The meaning that results from the operation is identifying some referents in a large group. The reduplication is iconic in that the phonetic quantity implies plurality of what it signifies.

(12)  a.  *kun(i)* 'this'(M.)  > ***kun kún(i)*** 'these ones' (all male or male and female)
      b.  *tun(i)* 'this' (F.)  > ***tun tún(i)*** 'these ones' (all female or nouns ending in a non-low vowel)
      c.  *sun(i)* 'that'  > ***sun sún(i)*** 'those ones' (all male or male and female)

Each of the reduplicated forms takes an H tone that reflects its being a single derived unit, a compound, as illustrated below.

(13)  *harr-oot-n-i* [*harroonni*] ***kun    kún(i) kiyya***
      donkey-PL-NOM-EP      these  these  mine
      'These donkeys are mine.'

Notice that the sentence is a nominal one with no main verb (also no copula). The simple object demonstratives in (14) are counterparts of the subject demonstratives *kun* 'this' (M.), *tun* 'this' (F.) and *sun* 'that' (epicene), respectively.

(14)  a.  *kana* 'this'(M.)      > ***kana kána*** 'these ones' (all male or male and female)
      b.  *tana* 'this' (F.)      > ***tana tána*** 'these ones' (all female or nouns ending in a non-low vowel)
      c.  *san* 'that' (epicene) > ***san sán*** 'those ones' (epicene)

The reduplicative demonstrative in (15a) is subject, whereas the one in (15b) is object.

(15)  a.  ***sun    sún***   *gurgur-am- ø-an*
          those  those  sell-PAS-3PL-PL
          'Those ones have been sold.'
      b.  *ʔintal-t-i*    ***kana káná*** *dʒaal-at-t-i*
          girl-NOM-EP these  these  like-MD-3FS-IPFV
          'The girl likes these ones.'

In each example, the compound determiner is without its noun head.

Like compound nouns, the subject compound determiner inflects for focus, while the object compound determiner inflects for both case and focus. In (16a), the inflection of the subject compound is that of focus, while in (16b) the inflection of the object compound is case, and in (16c) those of case as well as focus.

(16)  a.  *reʔee-n*  **tun  tún-úu**  *gurgur-am-t-e*
  goat.col-nom  these  these.f-foc  sell-pas-f-pfv
  'Even these goats have been sold.' (Lit. Even these ones goats have been sold)

  b.  *reʔee*  **tana tánaa-n**  *ʔisii gammad-siis-i* [*gammacciisi*]
  goat.col  these  these.f-inst  her  happy-cs-impv
  'Make her happy with these goats.' (Lit. Make her happy with these ones goats)

  c.  *reʔee*  **tana tánáa-n-úu**  *ʔisii gammad-siis-i* [*gammacciisi*]
  goat.col  These  these.f-inst-foc  her  happy-cs-impv.2s
  'Make her happy even with these goats.' (Lit. Make her happy even with these ones goats.)

In (16a), *reʔee*, which is in the collective sense, is considered to be feminine due to the non-low terminal vowel, as pointed out earlier. This is why the determiner compound is feminine, in agreement with the gender of its head.

## 2.3    Adjectives

As attributes of nouns, Oromo adjectives agree in gender, number and case with the nouns they modify. While gender and case distinctions in adjectives are expressed by suffixation, plurality is signaled iconically by reduplication, which involves prefixation of the copied material from the stem. In some cases, additional phonological processes, such as assimilation and/or vowel reduction, take place. In plural adjectives, the language employs two types of reduplication, depending on the structures of the stem. They are treated here as Type I and Type II adjectives. The two types are distinguished from each other in the presence or absence of gemination or consonant cluster. While the latter are absent in Type I, they are present in Type II. In the two subsections that follow we will discuss the structural and semantic characteristics of the reduplicative forms of the two adjective types.

### 2.3.1    *Type I adjectives*
As indicated above, the adjectives of this category are distinguished by the absence of gemination or cluster in their roots. When they are attributes of plural nouns, they undergo reduplication, in which the copied reduplicant is prefixed to the base. Accordingly, the template of a prosodic unit of a CVC syllable structure is copied from the left end of the root and is prefixed to the latter. While copying the CVC from a root with such a structure is direct, copying from the roots with a CVVC structure or with initial CVV- or CV- involves adjusting what is copied to a CVC template, even if it affects the onset of the adjacent syllable to the right. Thus, the

copied CVC reduplicant is prefixed to the base, and that is followed by a phono-
logical process of assimilation of the coda of the reduplicant syllable to the onset
of the base.

   The assumption that the material to be copied for reduplication should be
a CVC template of the prosodic unit of a syllable is seen, for instance, in the re-
duplicated plural form of the adjective *ʔadii* 'white'. The root is *ʔad-* and what is
copied for reduplication according to the prosodic rule is CVC, which means in
this case the whole root. Thus the copied *ʔad-* is prefixed to the base and results in
*ʔad-ʔad-*, which is not actually used. Then, for the phonetic (surface) representation,
the phonological processes of deleting the medial glottal stop follows, and conse-
quently the neighboring vowel is lengthened (compensatory lengthening). Hence,
the form of the plural form of the adjective appears as *ʔadaadii* 'white', which is
in use. Accordingly, the data below exemplify the descriptions given about Type I
adjectives that involve copying a CVC template.

(17)      **Base**                **Reduplication**            **Reduplicative**

     a.   *c'im-* 'strong'   > *c'im-c'im-*        > [*c'icc'im-*] (plural)

         $c_1VC_2$-            $c_1VC_2$-$c_1VC_2$-      $c_1VC_1c_1VC_2$-

     b.   *laaf-* 'soft'     > *laf-laaf-*         > [*lallaaf-*] (plural)

         $c_1VVC_2$-         $c_1VC_2$-$c_1VVC_2$-     $c_1VC_1c_1VVC_2$-

     c.   *gabaab-* 'short' > *gab-gabaab-*    > [*gaggabaab-*] (plural)

         $c_1VC_2VVC_2$-    $c_1VC_2$-$c_1VC_2VVC_2$-   $c_1VC_1c_1VC_2VVC_2$-

In (17a), since the $c_1VC_2$- structure of the stem of *cimaa* 'strong (M.)' concurs with
the required template for reduplicant, the copying is that of the whole root, while
in (17b), in the stem of *laafaa* 'soft (M.)', the syllable is reduced to fit the required
template, $C_1VC_2$-. In (16c), in the root of *gabaabaa* 'short (M.)', that is *gabaab-*, the
adjacent syllable to the right has been made to lose its onset (*gab.aab-*) so as to
satisfy the templatic prosody of the reduplicant, CVC.

   Instead of the above $C_1VC_2$- copying for the reduplication of Type I adjectives,
an alternative analysis could be copying the first CV- of the root and prefixing to
the base, which should undergo gemination of its first consonant. Accordingly,
for instance, *c'im-* 'strong' > *c'icc'im-* 'strong' (plural) appears to be a result of the
process *c'im-* > *c'i-c'im-* > *c'i-cc'im-*. But the approach does not seem to be plausible.
Especially, how and why the initial *c-* of the base is geminated does not seem to be
explicable. Furthermore, it does not work for such a root with initial guttural as *ʔad-*
'white': *ʔad-* > *\*ʔa-ʔʔadii* (quite different from the accepted plural form, *ʔadaadii*,
and not acceptable, at least in the eastern variety of the language).

### 2.3.2 *Type II adjectives*

In Type II adjectives, which are characterised by their roots containing either a geminate or a cluster of consonants, reduplication for plural formation involves, as in relation to Type I adjectives, a templatic copying of a prosodic CVC. But here the prefixing of the reduplicant is constrained. Unlike in the reduplication of Type I adjectives, the strategy requires phonetic reduction of the reduplicant CVC to CV. The purpose is to avoid gemination, as in the case of Type I adjectives, so as to contrast quantitatively with the geminate or cluster of the base. Thus, the reduplication culminates with prefixing a CV reduplicant to the base, as seen in the examples below. Fikadu (2014: 193) considers the suspension of gemination to be due to blockage by the subsequent gemination, hence dissimilation in gemination. His argument is plausible, but needs to consider alternatively the existence of a cluster (not only a geminate) as a constraint for disallowing the prefixing of a CVC. In (18a), the constraint is due to the existing gemination, while in (18b), a cluster.

(18)     **Base**                                    **Reduplicative**
    a.   *bat't'-* (*bat't'ee* 'flat')        > *ba-bat't'-*        [*babat't'-*] (plural)
         $C_1VC_2C_2$-                       $C_1V$-$C_1VC_2C_2$- $C_1VC_1VC_2C_2$-
    b.   *furd-* (*furdaa* 'fat/thick (M.)') > *fu-furd-*        [*fufurd-*] (plural)
         $C_1VC_2C_3$-                       $C_1V$-$C_1VC_2C_3$- $C_1VC_1VC_2C_3$-

Both Type I and II adjectives may be marked for both case and focus. Example (19a) is that of Type I, in which a root contains neither geminate nor cluster and (19b), that of Type II, in which a root contains either geminate or cluster.

(19)   a.   *nama*      ***dedɗéer-áa-fíi-s***     *ni=tah-ø-a*               (root = *ɗeer-*)
            person.COL tall.PL-M.-DAT-also FOC-fit-3MS-IPFV
            'It also fits tall people.'
      b.   *nama*      ***k'ak'alʔ-áa-fíi-s***     *ni=tah-ø-a*              (root = *k'alʔ-*)
            person.COL thin.PL-M.-DAT-also FOC-fit-3MS-IPFV
            'It also fits thin people.'

Observe the structural difference between the adjectives from the viewpoint of the templates of the reduplicants. In (19a), the template of the reduplicant is CVC-(*dedɗ-*), while that of (19b) is CV- (*k'a-*). In the latter case, the reduplicant has been reduced to CV- as a result of dissimilation from the cluster in the root.

## 2.4   Numerals

From the viewpoint of their occurrence as modifiers of nouns, numerals are treated here with the other nominals. The reduplicated forms provide a distributive sense. However, in the case of the numeral for 'one', it may also provide a partitive sense, depending on context. In (20a), the total reduplication of *tokko* 'one' resulted in a compound word. But in (20b), what is copied is already a compound and the result of the reduplication process is double compounding, that is, two independent compounds in juxtaposition, which is what the H tone on each of the two compounds signifies.

(20)   a.   *tókko* 'one'                 > ***tokko tókko*** 'one each'
        b.   *kuɗa-ʔafúr* 'fourteen'  > ***kuɗa-ʔáfúr kuɗa-ʔáfúr*** 'fourteen each'

Below, in (21a) the 'simple' compound, and in (21b) the 'complex' compound limit the distributive quantity of their head nouns, *kitaaba* 'book' and *K'arfii* (the standard unit of money in Oromo; in Amharic *Birr*).

(21)   a.   *bar-siis-aa-n*              *kitaaba*    ***tokko tókkó*** *nu-f* [*nuu-f*]
            learn-CS-NMZR.m-NOM book.ABS one    one    us-DAT
            *kenn-ø-e*
            give-3MS-PFV
            '(The) teacher gave us one book each.'
        b.   *Umar K'arfii*[10]     ***kuɗa-ʔáfúr kuɗa-ʔáfúr*** *nu-f* [*nuu-f*] *kenn-ø-e*
            Umar *K'arfii*.ABS fourteen     fourteen     us-DAT       give-3 MS-PFV
            'Umar gave us fourteen *K'arfii* each.'

The reduplicative numeral for 'one', as indicated above, may give a partitive sense apart from the distributive meaning like the rest of reduplicative numerals. The example below is an illustration of the partitive interpretation.

(22)   *nam-n-i*            ***tokko tókkó*** *gaarii-da*
        person.COL-NOM-EP. one    one    good-COP
        'Some people are good.'

The compound reduplicative numerals, like the object compound reduplicative determiners, inflect for both case and focus.

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10.   In the noun phrase *K'arfii **kuɗa-ʔáfúr kuɗa-ʔáfúr***, *K'arfii* is not inflected for the plural number, as is also the case, for instance, in Amharic, where *Birr* co-occurs with a numeral more than one (e.g. *səbatBɨrr* 'seven Birr').

(23) *bar-siis-aa-n*            *barat-oota* **tokko tókkóo-fí-llée** *kitaab-ota*
learn-CS-NMZR.M.-NOM student-PL one     one-DAT-FOC book-PL
*kenn-ø-e*
give-3MS-PFV
'(The) teacher gave books even to some students.'

## 2.5 Co-occurrence of reduplicative nominals

Of the reduplicative nominals discussed above, adjectives, determiners and numerals may co-occur in noun phrases. But reduplicative nouns may not, since they assume a predicative role in syntactic structures. When reduplicative adjectives, determiners and numerals co-occur in a noun phrase, it is two of them that co-occur at a time, and the pattern is that of their simple counterparts, in which the head noun is on the left immediately followed by the adjective and then, either the numeral or determiner coming next or numeral and finally determiner – Noun + Adjective + Determiner/ Numeral. In (24a), the co-location in the noun phrase is Noun + Adjective + Determiner while in (24b) Noun + Adjective + Numeral.

(24) a. *ʔintal-t-i*      *timaatim* **diddíim-áa kana káná**     *nu-f* [*nuu-f*]
girl-NOM-EP tomato.ABS red.PL-M.ABS these these.ABS us-DAT
*kenn-i-t-e*
give-EP-3FS-PFV
'(The) girl gave us these red (ripe) tomatoes each.'
b. *ʔintal-t-i*      *timaatim* **diddíim-áa**    *torba tórbá nu-f* [*nuu-f*]
girl-NOM-ep tomato.ABS red.PL-m.ABS seven seven us-DAT
*kenn-i-t-e*
give-ep-3fs-PFV
'(The) girl gave us seven red (ripe) tomatoes each.'

In the case of the co-occurrence of simple numeral and determiner, the former may precede the latter – Noun + Adjective + Number + Determiner. For example, *hoolota fufurda lamaan kana* sheep fat two these 'These two fat sheep'.

     While the reduplicative determiner in (24a) is in the absolute case, the reduplicative numeral in (24b) does not show distinction between the absolute and nominative case. Again, while the former has a sense of selection, the latter has a sense of distribution. In both examples, the attributive adjective comes immediately next to the head noun. The reason why the attributive adjective has precedence is possibly due to the fact that it is the inherent property of the subject. Altering the sequence of the modifiers would be ungrammatical (\**timaatim kana-kana diddiim-aa*; \**timaatím torba-torba diddíim-aa*).

## 3.   Verbal reduplication

Like the adjectives, verbs may be grouped into Type I and Type II depending on the shape of their roots. The two types are distinguished from each other by the presence or absence of gemination or cluster. While the latter are absent in Type I verbs, they are present in Type II. As in the case of the adjectives, the material to be copied for reduplication is of CVC template originating from the left side of the base and is prefixed to the latter.

### 3.1   Type I Verbs

As in the case of Type I adjectives whose roots do not contain a geminate or a cluster of consonants, the template to be copied is CVC. The latter may be obtained even by affecting the onset of the adjacent syllable on the right and, when a long vowel is encountered, by simplifying it to a short one. As in the case of adjectives, the assumption that the reduplicant is of CVC template can easily be seen from the way monosyllabic verbs are sometimes reduplicated in the western variety, for instance, *mur-* 'cut' > *murmur-*. However, the reduplication surfaces as [*mummur-*]. As also in reduplicative adjectives, in the reduplicative output here the final consonant of the prefixed reduplicant is assimilated to the onset of the base. The examples in (25) illustrate the reduplication processes of Type I verbs whose root involves a long vowel.

(25)    **Base**              **Reduplicative**
    a.   *ɖiib-* 'push'          > *ɖib-ɖiib-*           [*ɖiɖɖiib-*] 'push repeatedly'
         $C_1VVC_2$-            $C_1VC_2$-$C_1VVC_2$-   [$C_1VC_1VVC_2$-]
    b.   *bak'ak'-* 'tear'(intr.) > *bak'- bak'8ak'-*      [*babbak'ak'-*] 'tear at several places'
         $C_1VC_2VC_2$-        $C_1VC_2$-$C_1VC_2VC_2$- [$C_1VC_1C_1VC_2VC_2$-]

Observe that in (25b) the CVC-template is carved by including the onset of the syllable to the right.

     The verb *daf-* 'be quick, fast', the function of which is adverbial, undergoes partial reduplication, as in (26), resulting in the sense of 'very quickly' (adverbial). As with any finite verb, it inflects for gender and number.

(26)   *bar-siis-tuu-n* [*barsiiftuun*] *kitaaba*    ***daddaf-t-ée***
       learn-CS-F.-NOM                book.ABS  quick.ITR-3FS-CNV
       *dubb-i-s-t-i* [*dubbifti*]
       speak-EP-CS-3FS-IPFV
       '(The) female teacher reads (the) book very fast.'

### 3.2 Type II verbs

The reduplicative behaviour of this class of verbs is also similar to that of the corresponding Type II adjectives, as indicated above. The distinguishing factor is the presence of a -CC- within the root in terms of either a geminate or a cluster. Consequently, the prosodic reduplicant CVC is constrained by dissimilation to CV. Here are examples:

(27) **Base** **Reduplicative**
    a. *fannis-* 'hang' > *fa-fannis-* [*fafannis-*] 'hang several things'
       $C_1VC_2C_2VC_3$- $C_1V$-$C_1VC_2C_2VC_3$- [$c_1VC_1VC_2c_2VC_3$-]
    b. *ʔarraab-* 'lick' > *ʔa -ʔarraab-* [*ʔaʔarraab-*] 'lick lightly/repeatedly'
       $C_1VC_2C_2VVC_3$- $C_1V$-$C_1VC_2C_2VVC_3$- [$C_1VC_1VC_2C_2VVC_3$-]

In this category, the meanings of the reduplicative forms may be iconic or not, depending on the kind of message a speaker wishes to convey.

In the Hararghe variety, a few Type I verbs have been found to be deviating from the typical reduplication pattern of the class and seem to adopt that of Type II. While they are expected to prefix CVC, which is typical of the class, they rather prefix CV, as Type II verbs do. After having checked with various varieties of the language (Mac'c'a, Boorana, Tuulama and Baalee), it was discovered that the alteration is observed only in the Hararghe and part of the Mac'c'a (western) varieties. In the Baalee variety, alternate uses of CVC- and CV- have been observed. Below are comparative examples based on the root of the verb *ɗooh-* 'burst'. In (28a) the prefixed template is CVC-, while in (28b) CV-, resulting in *doddooh-* and *dodooh-*, respectively.

(28) **Base** **Reduplicative**
    a. *ɗooh-* 'burst' > d**oh**-*ɗooh-* [*doddooh-*] 'burst repeatedly' (Expected pattern)
       $C_1VVC_2$- $C_1VC_2$-$C_1VVC_2$-
    b. *ɗooh-* > **do**-*ɗooh-* [*dodooh-*] (Existing pattern)
       $C_1VVC_2$- $C_1V$-$C_1VVC_2$-

In (28a), the prefixing based on a CVC- template goes with the norm of the language, whereas in (28b) constraining the template falls out of the pattern. The reason the particular verbs such as *ɗooh-* 'burst', *c'iis-* 'lie down', *looh-* 'crawl, creep (of reptile)', etc. fall out of the reduplication pattern of the class needs further investigation.

In the examples below, both perfective and imperfective verbs are focused. In the Hararghe variety, as already seen, the imperfective is normally marked with the preverbal focus clitic *ni=*, as in (29a). The perfective may also be marked similarly when emphasis is required, as in (29b).

(29) a. *gurbaa-n foon     ni=**mummur-ø-á-llé***
      boy-NOM meat.ABS FOC-cut.ITR-3MS-IPFV-FOC
      '(The) boy does cut meat into pieces.'
   b. *gurbaa-n foon ni=**mummur-ø-é-llé***
      boy-NOM meat FOC-cut.ITR-3MS-PFV-FOC
      '(The) boy did cut meat into pieces.'

Note that in both constructions the focus marker terminates with the short *-e*. This is due to the fact that the verb is a main one and not a completive converb with a final long *-ee*, requiring a main verb to follow it. On the contrary, as seen below, a converb with its final long vowel is followed by the focus marker and then a main verb.

(30) *gurbaa-n foon **mummur-ø-ée-llée**     hin-kenn-i-n-e***
     boy-NOM meat cut.ITR-3MS-CNV.PFV-FOC NEG-give-EP-CM-PFV
     '(The) boy did not give meat having cut into pieces.'

The verb in (29) and (30) is in a reduplicative form based on the templatic reduplicant CVC-. Verbs from the counterpart class whose reduplicative pattern is based on prefixing CV- also behave in the same manner. For instance, *fafannis-* 'hang repeatedly' could fit in similar templates of the verb in the three examples seen below.

(31) a. *gurbaa-n foon     ni=**fafannis-ø-á-lle***
      boy-NOM meat.ABS FOC-hang.ITR-3MS-IPFV-FOC
      '(The) boy does hang pieces of meat.'
   b. *gurbaa-n foon     ni=**fafannis-ø-é-lle***
      boy-NOM meat.ABS FOC-hang.repeatedly-3MS-PFV-FOC
      '(The) boy did hang pieces of meat.'
   c. *gurbaa-n foon     **fafannis-ø-ée-llée**     hin-fit'-n-e* [*hinfinʔe*]
      boy-NOM meat.ABS hang.ITR-3MS-PFV-FOC NEG-finish-CM-PFV
      '(The) boy did not even finish hanging pieces of meat.'

Unlike finite verbs, those referred to as 'infinitive' behave as nominals and alternatively as verbals. As nominals, they may be inflected for case and, if necessary, additionally for focus. Accordingly, the structure in bold in (32a) is nominal while the one in (32b) is verbal.

(32) a. *gurbaa-n foon     **mummur-uu-n-í-llée***
      boy-NOM meat.ABS cut.ITR-NMZR-INST-EP-FOC
      *hin-gammad-n-e* [*hingammanne*]
      NEG-happy-CM-PFV
      '(The) boy was not happy even by cutting meat into pieces.'
   b. *foon*.ABS san ***mummúr-úu** k'ab-t-a* [*k'abda*]
      meat     that cut.ITR-INF have-2S-IPFV
      'You have to cut that meat into pieces.

The evidence for **mummúr-úu** in (32b) to be verbal is the fact that it is accompanied by the verb *káb-* 'have/possess' grammaticalized to manifesting the sense 'have to/ must'. If *káb-* retains its lexical sense 'have/possess', it would be preceded by a nominal as in *foon k'ab-t-a* [*k'abda*] meat have.you-IPFV 'You have meat'.

## 4. Adverbial reduplication

There are few typical adverbs in the language. They modify verbs and adjectives in terms of place, time and manner. Adverbs normally undergo total reduplication. Below, in (33a) the reduplication is that of *suuta* 'slowly', while in (33b) it is that of *t'ik'k'o* 'little'. In (33a) the compound expresses the manner of the verbal action, while in (33b) the compound expresses the degree of the verbal sense.

(33) a. *Abrahim* **suuta súutáa-n** *mana* *ʤaar-ø-e*
Abrahim slow slow-INST house.ABS build-3MS-PFV
'Abrahim built a house gradually.'

b. *Kadiʤa ʔafaan* **t'ik'k'o t'ík'k'ó** *ni=beek-t-i* [*nibeeyti*]
Kadija language.ABS little little FOC=know-3FS-IPFV
'Kadija knows the language very little.'

## 5. Adpositional reduplication

In Oromo, prepositions are rare, and the language is rather postpositional. As in the case of nominals and, partly, adverbs, reduplication of adpositions is carried out by total copying of the root. The function of the reduplicative is to express iterativity along with an iterative verb. In (34) the reduplication of the preposition *gama* 'on the side of, toward' provides an adverbial function. The reduplication is a combination of *gama* (shortened form of *gamas* 'yonder/over there/that side') with its final vowel lengthened due to the suffixed conjunction but deleted – *gamaa-fii gamana* 'thither-and hither' > *gamaa gamana* 'thither (and) hither' (forwards and backwards) (English: *hither and thither* 'backwards and forwards').

(34) *gurbaa-n* **gamaa gamáná** *deddeem-ø-a*
boy-NOM thither hither go.ITR-3MS-IPFV
'(The) boy goes is wandering.'

The reduplicative form may be inflected for case and focus; *gamaa gamanaa-f* 'for that side and this side'; *gamaa gaman-uma* 'just on that side and this side' (or 'just that way and this way').

In (35) the postposition *gubbaa* 'on, over' is copied entirely and is put before the base to indicate that several people are sitting on mules.

(35) *ʔorm-ø-i*        *gaang-ota* **gubba gúbbáa** *tattaaʔ-ø-a*
men.COL-NOM-EP mule-PL on    on     sit.ITR-3MS-IPFV
'The men are sitting on (the) mules.'

In isolation, the postposition is *gubbaa*. But as a reduplicant, it undergoes phonetic reduction, *gubbaa > gubba*, and the reduplicative emerges as *gubba gubbaa*. The postpositional reduplicative compound may be inflected for case and focus; *gubba gúbbaa-f* 'for the top of each one'; *gubba gúbbáa-llée* 'even on/over each one'; *gubba-gúbbáa-fí-llée* 'even for the top of each one'.

Apart from the reduplication types discussed in the sections above – basically total and partial – Oromo has a frozen type as observed by Lloret (1988: 167f); for example, *galgálá* 'evening', *gurgúrúu* 'selling' (*gurgur-* 'sell'). The structures of frozen reduplicatives are fixed and it is difficult to reanalyse and determine the roots they emerged from.

## 6. Conclusion

In Oromo, both total and partial reduplication are encountered. Total reduplication involves copying a root or a stem. On the other hand, partial reduplication involves copying a CVC prosodic template. In the latter case, copying is done from the left side of the base. The process may involve drawing the onset of the adjacent syllable on the right to the coda position of the reduplicant so as to satisfy the prosody of the template. While the reduplicant of total reduplication is juxtaposed before the base, that of partial reduplication is prefixed. The prefixing of the CVC template involves constraint if a geminate or a cluster exists in the base, in which case the template is reduced to CV. In some cases, the copying and prefixing processes of reduplication may be followed by such additional phonological processes of assimilation and/ or reduction. As regards the direction of attaching a reduplicant to the base, it is contrary to the general pattern of the language, which is normally suffixing. Total reduplication is often encountered in relation to nominals, adverbs and adpositions, while partial reduplication commonly occurs in adjectives and verbs. In Oromo, partial reduplication, which is essentially the characteristic of adjectives and verbs, is more productive than total reduplication.

To sum up, in Oromo total reduplication of nouns function as predicates, while reduplication of other word classes generally signifies augmentation. Partial reduplication is usually iconic, and results in signifying increase in quantity, frequency

or intensity. In some cases, however, the opposite diminutive interpretation may be implied. In addition to investigating the characteristics of both total and partial reduplication types in Oromo, various related inflectional operations have also been examined.

## Acknowledgements

## Abbreviations and symbols

| | | | |
|---|---|---|---|
| 1 | first person | IPFV | imperfective |
| 2 | second person | ITR | iterative |
| 3 | third person | L | low tone |
| ABS | absolute | Lit. | literally |
| AUX | auxiliary | M | masculine |
| C | consonant | MD | middle |
| CM | clause marker | NEG | negation |
| CNV | converb | NMZR | nominaliser |
| COL | collective | NOM | nominative |
| COP | copula | PAS | passive |
| CS | causative | PFV | perfective |
| DAT | dative | PL | plural |
| DEF | definite | S | singular |
| EP | epenthesis | SGV | singulative |
| F | feminine | SUB | subordinate |
| FOC | focus | V | vowel |
| H | high tone | ø | zero, formally absent |
| IMPV | imperative | * | ungrammatical/unacceptable |
| INF | infinitive | | |

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# Verbal derivations in Inor

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This paper is concerned with the verbal derivation of Inor (which is the group's self-designation), formerly called Ennemor, its Amharic name, a Peripheral Western Gurage language in the southern part of Ethiopia. Conducting research on this topic is a task well worth doing, as a detailed work has not been carried out on this area. Verbal derivation applies to the verb stem and has the function of increasing or decreasing arguments, as well as conveying intensity, reciprocity or reflexivity. It may do so by affixation or by altering the stem's morpho-phonological properties. However, not all root morphemes of a simplex stem may apply to all the possible derivational processes. The linguistic data have been collected from consultants. The findings show that affixes that are involved in the verbal derivational processes in Inor are the passive prefix *tə-*, and the causative prefixes *a –* and *at-* that are attached to a template (Berhanu & Hetzron 2000: 39–44 for Inor, Rose 2007: 411 for Chaha). Another group of derivational morphemes (internal root-morpheme modification) increases the number of consonants vis-à-vis the simplex by reduplication of root-consonants, and insertion of an additional vowel *a* after the first or second root-consonant in combination with the passivizer *tə-*. The findings of this study also show that certain derivations are only applicable to a restricted set of root-morphemes.

**Keywords**: verb, derivation, Gurage, language, Ethiopia

## 1. Introduction

Inor is spoken by 167,745 people (CSA 2008: 75), who live in the Gurage Zone of the Southern Nations, Nationalities and People Regional State. It is one of the South Ethio-Semitic languages grouped under Peripheral Western Gurage along with Ener, Endegagn and Gyeto (Hetzron 1977: 17).

The main objective of this study is to provide a description of the verbal derivation of Inor. Based on a morpho-phonemic process that changes a root-morpheme into a verb, verbal derivation involves morpho-syntactic features of the root-morpheme

like changing the number of arguments (e.g. causative and passive), intensity, reciprocity and reflexivity of the action. But not all root-morphemes of a simplex stem apply all the possible derivational processes. This means that there are certain root-morphemes that are restricted to specific derivations. The simple verb stem *dəgəs-* 'make a feast', for instance, occurs only in one derived form, i.e., the indirect causative *addegəs-* 'cause to make a feast'. Furthermore, a large number of verbal stems occurring with derived forms lack a simplex counterpart.

The derivational analysis in this paper is presented as follows: a brief background of Inor verbs is discussed in Section 2. Following derivation of causatives (including adjutative) in Section 3, medio-passive/reflexive is presented in Section 4. Sections 5 and 6 deal with frequentative and reciprocal derivations, respectively. Section 7 discusses the bound roots with lexicalized affixes, and the final section concludes the paper.

## 1.1   Methodology

The research method used in this paper is qualitative. The data were gathered in spring 2015 and 2016 from two male native speakers of Inor, Tigistu Muraga (35 years old) and Nasir Awol (30 years old) and one female native speaker, Weynishet Haile (20 years old), who live near Gunchire, through elicitation in both group and individual sessions. Recordings of natural conversation or free texts and interviews were also used to supplement the elicited data. Further, an exploration of secondary data available through the published literature has been made as a base for the present study and for cross-checking.

## 2.   A brief background of Inor verbs

Semitic languages are morphologically non-concatinative languages in that a verb consists of discontinuous consonantal-roots between which vowels can be inserted (Lipinski 1997: 201; Moscati 1980: 71; Rose 1997: 11; Rose 2007: 404; Ullendorff 1971: 37; Goldenberg 1994: 29). These consonantal roots convey the lexical semantics of an entry, and a vowel pattern or template carries grammatical information (Ullendorff 1955: 33; Rose 2007: 403–404; Goldenberg 1994: 29). Hence, verbs in Semitic are analyzed as consisting of two morphemes: a root and a pattern combined to form a verb, neither of which can be used in isolation to form that actual verb (Goldenberg 1994: 29). Normally, Semitic verbs contain triconsonantal roots (cf. Hetzron 1977: 76), which are represented by the symbol C in the template. For example, in the template, $C_1$, $C_2$ and $C_3$ represent the first, second and third consonants of the verb, respectively.

Verbs in Inor, as in any other Semitic language, involve two layers: lexical consonantal root and grammatical template. These verbs distinguish three conjugations: perfective, imperfective and jussive/imperative, each with its own defining characteristics. That is, the base of each conjugation has a distinct root and pattern or template containing CV-slots, whereby the C-slots are filled in by the corresponding number of root-morphemes (consonants)[1] and the V-slots by vowel melodies of various qualities. Each base obligatorily combines with a specific set of subject agreement marker. For instance, the template for expressing the perfective with triconsonantal root-morphemes is $C_1 \partial C_2 \partial C_3$-. By filling in the empty C-slots with a concrete root-morpheme, like √*dng* 'hit', the perfective base \**dənəg*- of the verb 'hit' is formed. The imperfective and jussive templates are -$C_1 \partial C_2 C_3$ and -$C_1 C_2 C_3$ with the corresponding bases \*-*dərg* and \*-*dɨrg*, respectively. In each conjugation, the template can further be of two types: simplex and complex or derived. The simplex verbal stems are formed from the template having simple CV-slots, while a template involving formatives and internal modifications derive complex verb stems.

The majority of Inor root-morphemes consist of three consonants. There also exist many root-morphemes containing two and four consonants, though most of the root-morphemes with two consonantal roots were originally derived from trilateral roots which lost a weak consonant. However, in such weak verbs there is a vocalic element with a radical function. For instance, the root-morphemes for the verb *bekə*- 'weep' are √*bkə*, but the Semitic root for this verb is √*bkj*.[2] Roots having more than four consonants occur very rarely.

In Ethio-Semitic languages, verbs are most frequently classified into types: type A, type B and type C. The classification is based on the quality of the vowel occurring between the first two radicals and gemination of the originally penultimate consonant with three consonantal roots if the language allows gemination (Hetzron 1972, 1977: 70; Rose 1997: 11). However, gemination cannot be used as a defining feature in classifying Inor verbs, as it belongs to non-geminating languages.[3] However, while Inor has lost gemination, the alternation between consonants in the stem, such as voicing or *k/x* or *n/r*, is a reflection of former gemination, and also

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**1.**  In weak verbs, the C-slot can also be filled in with vocalic radicals. Also, see footnote 2.

**2.**  Weak radicals in many Semitic languages include the approximants w and y and the post-palatal (velar, pharyngeal and glottal) consonants x, ʔ, ʕ, h, and ħ. When a post-palatal weak consonant occurs as final consonant in a Common Semitic (CS) root, it is always realized as a final root-vowel \* in Wolane (Meyer 2006: 52; Bergsträßer 1989[1928] cf. Meyer 2006: 64). The same fact is reported in Inor verbs of the same sub-type.

**3.**  In some Western Gurage dialects (Chaha, Inor, Gumer), geminates were devoiced and then simplified, leaving stem alternations where related dialects have geminates (Rose 1992, 1997: 13). Also Rose (2006: 848) groups Inor under non-geminating languages along with Chaha and Gyeto.

serves as a definitional feature for verb type classification (see Hetzron 1977: 70; Berhanu & Hetzron 2000: 24; Völlmin 2017: 49 for Gumer). For example, the verb *səpər-* 'break' is type A because the *p*, which is originally \**bb*, only appears in the perfective, but not in the imperfective or jussive, as in *jisəβir* or *əsiβir*, respectively. This can be compared with the type B verbs, where the *p* appears throughout the conjugations: *ʤəpəβ-/jiʤəpiβ/ədəpiβ* 'block'. The same pattern is found for other voicing pairs and for *n/r*. However, not all type A verbs show voicing alternations. Some have a consistent voiceless consonant throughout the conjugations, and are assumed to have an underlying voiceless consonant, such as /t/, /t'/, /k/, /k'/, as in *ʔətər-/jiʔətir/iʔitir* 'kill'. A few type A verbs have a consistent voiced consonant in all verb forms, as in *dəgər-/jidəgir/ədəgir* 'be tight (plant)'; *kəbər-/jikəbir/əkəbir* 'joke' (see Berhanu 1996: 60, Berhanu & Hetzron 2000: 28). In the case of such verbs with no consonant alternations, the vowel quality serves as a criterion. Another diagnostic in the classification of verbs, particularly Western Gurage languages, is palatalization, i.e., palatalization occurs if the initial root consonant is palatalizable (a coronal obstruent or a velar), otherwise palatalization of the penultimate consonant if velar;[4] if neither of these conditions are met, the front vowel *e* appears in the first vocalic position of the stem in the non-geminating languages (Hetzron 1977: 71; Rose 1997: 14, 2007: 405). Berhanu and Hetzron (2000: 28) also indicate that if there is no palatalizable consonant, the subsequent vowel of a type B verb assumes palatality: *e/i*. Inor data also confirms their generalization. These palatal elements never appear in the imperative/jussive forms (*ʒəʔərə/jiʒəʔir/əzəʔir* 'split'), but they do appear in the perfective and imperfective.[5]

Furthermore, vowels in the jussive/imperative characterize classification of verbs. The jussive/imperative template shows a distinction between type A and type B. Type A has a transitive ccc vs. intransitive CCəC distinction, whereas type B is CəCC.[6] The vowelless template originally marked transitive verbs with an active subject, while the template with the vowel *ə* occurred with intransitive verbs or verbs with an inactive, neutral or patient subject (Yohannes 2015: 116). Besides, type C is characterized by both the vowel *a* and the consonant alternations

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**4.**   Inor has the front vowel with velars, too. Berhanu (1997: 100), cf. Rose 1997: 14, footnote 4, maintains this is a C^ʸe sequence. The present data also confirms this idea.

**5.**   The second reviewer of this paper stated that neither the *e* nor the palatalization appears in the imperative/jussive forms. Indeed, this works for triconsonantal roots. However, in contrast to tri-consonantal and majority of bi-consonantal roots of type B, a number of bi-consonantal roots of this type have the vowel *i* instead of *e* in the imperfective and *i* or *e* instead of *ə* in the jussive/imperative. Also see Berhanu & Hetzron (2000: 28).

**6.**   From diachronic point of view, Western Gurage maintains a Proto-Ethio-Semitic distinction between intransitive (CCəC) and transitive (ccc) jussives (Rose 1997: 12; Leslau 1992: 484).

if applicable. The imperfective has the strong alternant. Whether the jussive has the weak alternant or not seems to depend on the verb. If it is n/r, the *r* is found.

|        | *Perfective* | *Imperfective* | *Jussive* |                  |
|--------|--------------|----------------|-----------|------------------|
| Type A | səpərə       | j-səβɨr        | əsiβɨr    | 'break'          |
|        | dənəgə       | j-dərg         | ədɨrg     | 'beat'           |
|        | zəkərə       | j-zəgɨr        | əzɨgər    | 'jump'           |
| Type B | dʒəpərə      | j-dʒəpɨr       | ədəpɨr    | 'finish'         |
|        | mezərə       | j-ɱezɨr        | əɱəzɨr    | 'count'          |
|        | fenəgə       | j-fenɨg        | əfənɨg    | 'carry'          |
| Type C | zapətə       | j-zapɨt        | əzapt     | 'lose one's way' |
|        | ʃakədə       | j-ʃagɨd        | əʃagɨd    | 'distribute'     |
|        | banərə       | j-banɨr        | əβarɨr    | 'demolish'       |

Type D, which is relatively rare, is characterized by a labialized consonant in the initial position and a vowel *ə* between the first two consonants in the jussive in Chaha/Ezha (cf. Rose 1997: 16). Rose (2007: 406) also states that type D has labialization, and the vowels characteristic of type B, but shows consonant alternations of perfective and imperfective vs. jussive, whereas type B has consistent voiceless or *n* throughout, evidenced as *bʷənəs/jɨwəns/jəwərs*. On the other hand, verb type D and F of Meyer (2006: 59–61), are characterized by the vowel *ō* following the first root-consonant in the perfective and imperfective paradigms, but *u* in the jussive/imperative and the vowel *u* following the first root-consonant in all templates, respectively. According to him, with certain bi-radical verbs the vowel *ō*, of type D, is the result of diachronic loss of a former bilabial approximant *w* as medial root-consonant, and he assumes that most probably the vowel *u*, of type F, is a reflex of a labialized consonant that disappeared diachronically. However, the present author treats these verb types (types D and F of other researchers) as type A verbs. This is because the presence of these back vowels is the effect of the presence of co-articulated labial sounds as labialization is also phonemic in Inor. It can also be the effect of the disappearance of bilabial approximant *w* at word-medial or -final position diachronically by tracing its back feature to the vowels (and consonants as well if applicable). Besides, Inor possesses vowel rounding.

There is no uniformity among previous authors on classifying quadriconsonantal verbs into types. Some of them classify this group of verbs into types using the defining features mentioned above, but others treat them separately. For instance, Meyer (2006 for Wolane, Meheretu 2015 for Gyeta and Yohannes 2015 for Endegegn) group this set of verbs into types A, B, C and (D and F for the Wolane case only) on the basis of the quality of the vowel following the second root-consonant in the three conjugations as the main feature. Völlmin (2017: 49 for Gumer) also classifies the quadriconsonantal verbs into two types: type E and

F. The former features the vowel *ə* after the second radical in the perfective and imperfective only, whereas in the jussive it appears after the first radical while the latter is characterized by the vowel *a* which appears after the second radical in all three bases. On the other hand, according to Rose (1997: 16 for Ethio-Semitic languages in general, 2006: 843–844 for Endegegn and 2007: 406 for Chaha) quadriconsonantal verbs are treated separately. The present analysis on Inor also supports the idea that classifies quadriconsonantal verbs into types A, B and C, with the quality of the corresponding vowels following the second radical, the vowel in the first vocalic position being zero.[7]

All the verbs that are discussed above are verbs that have 'sound' root consonants. Inor also has many verbs that historically lost weak root consonants on the surface, but instead one finds *a, ʔ* or labialisation or palatalization. The same defining features that are mentioned above can also be used to classify these verbs into types, as their conjugation patterns are systematic. Prunet (1996) referred the radical *a* to as guttural /A/, which he assumed to be a guttural consonant that occupies and satisfies the C-slot of a template but spreads onto any adjacent V-slots. To show those verbs with vocalic radical *a*, for instance, the verbs *təpa* 'be strong' (< tbA) and *gəpa* 'enter' (< gbA) are given. These are type A verbs, due to the *ə* vowel in the perfective and to the fact that *p* alternates with *β* and the jussive does not have *ə* between the first two consonants: *təpa/jitəβʔa/ətiβʔa* and *gəpa/jigəβʔa/əgiβʔa*, for the perfective/imperfective/jussive conjugations. The presence of glottal stop *ʔ* in the imperfective and jussive verb forms, but not in the perfective, shows that it only appears after sonorants, including *β: βʔ, wʔ, w̃ʔ, ɱʔ, mʔ,nʔ, rʔ, r̃ʔ, lʔ, yʔ* (cf. Berhanu and Hetzron 2000: 12).There are type B verbs with final *a*, too, as in *bet'a* 'dilute milk with water' (< bt'A). These type B verbs with final or initial *a* lack the *e* vowel in the imperative, a characteristic of most of type B verbs: *elʔa/jelʔa/əlʔa* 'want to do something' (< AlʕS) and *menʔa/jiɱnʔa/əmənʔa* 'be full'.

There are also type C verbs with medial *a or ʔ*. These verbs with medial *a*, however, are derived from triconsonantal verb roots that diachronically lost a weak medial consonant while in those with *ʔ*, the glottal *ʔ* is preservation of the original *ʔ or *ʕ. These bi-consonantal roots with medial *a* or tri-consonantal roots with medial *ʔ* are considered as exceptional type C in the present work, as they do not maintain the vowel *a* throughout the conjugation but instead have the *ə* vowel in the imperfective: *dasə/jidəs/ədas* 'demolish' (< dAs) and *saʔarə/jisəʔər/əsaʔar* 'beg' (< sʔl).[8]

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7.    According to the second reviewer of this paper, quadrilaterals are not classified as types, but the present author doesn't accept this idea.

8.    In most Gunnən-Gurage languages, an original intervocalic glottal stop is lost, which often results in the merger of two mid-central vowels into a low-central vowel, thus, *ʔə>*əaˀ*a, as in *təsaʔarə/təsarə* (Inor/Eža) vis-à-vis *səʔələ* (Gəˀəz) 'ask' (cf. Tsehay 2016: 39). The other laryngeals

Verbs with a root glide are often bi-consonantal on the surface but behave in systematic ways similar to triconsonantal verbs. The distinction between type A and B is evident from the voicing patterns, the vowels between the first two consonants in the jussive/imperative and the presence of the *e* vowel.

The final glide palatalizes or labializes the preceding consonant (Degif 2000): *sətʃʼə/jisətʃʼ/əsitʼe* 'drink' (< stʼj) and *tʼəpʷə/jitʼo/ətʼu* 'suck' (< tʼbw), which are type A verbs. Note that in the second verb, *β* is realized as *w* when labialized, which is then realized as *əw →o* or *iw → u* in the imperfective and jussive, respectively.

There are also typical irregular verbs that cannot be grouped under verb types A, B and C, due to their irregular forms. However, for the reason of space, the present paper does not discuss such verb groups.

The following sentential examples showing all the verbal distinctions discussed above are given to show the basic word order of Inor:

(1) a. *abaɲa eʔə səpərʼə/jisəβir/əsiβir*
 aba-ɲa  eʔə səpər-ə / j-səβir/
 father-POSS:1SG[9] wood break:PFV-3SGM:PST 3SGM-break:IPVF
 ə-siβir
 3SGM-break:JUS
 'My father broke/breaks wood/let my father break wood'.

 b. *abaɲa ʃətərʼə/əʃtər.*
 aba-ɲa  ʃətər-ə/ ə-ʃtər
 father-POSS:1SG be.wither:PFV-3SGM:PST 3SGM-be.wither:JUS
 'My father is withered/let my father be withered.'

 c. *abaɲa əmisxuda assepərənʼɨ.*
 aba-ɲa  ə-mɨs-xuda
 father-POSS:1SG ACC-man-DEF:3SGM
 at-səpər-ə-n-ɨ
 ID:CAUS-break:PFV-3SGMS-3SGMO-PST
 'My father caused the man to be broken.'

___

have completely disappeared (cf. Leslau 1951: 214) as in examples from himself: *nasə* 'lick' (*√lhs), *harə* 'know' (*√khl), *waʔə* 'swallow' (*√wḥṭ), example from the present study *bar-* 'say' (*√bhl). Further, the other laryngeals and *ḥ* as third radical have become zero: as in *nəfa* 'blow' (*√nfḥ), *fəta* 'untie, dissolve' (*√ftḥ),

**9.** See the gloss of the abbreviations at the end of the paper.

## 3.   Causatives

Causativization is characterized by increasing the number of arguments by chang-
ing the transitivity of a verb, i.e., it changes an intransitive verb into transitive and
transitive into a ditransitive one. Semantically, it involves the relation between the
causing event and the caused event. In causative derivation, a verb can occur in two
forms: direct causative or indirect causative. In the former case, the subject (which
is also an agent argument) of the verb is directly involved in the action, while in
the case of the indirect causative, the agent is not the direct causer of the action
expressed by the verb, rather it motivates others to perform that specified action.

### 3.1   Direct causative

The direct causative is marked by the prefix *a-*, which is attached to a stem whose
simplex form is both intransitive and transitive, though the causative derivatives
formed from the former are most frequent. In the case of derivation of intransitive
verbs with a simplex root, the previous subject is demoted to the direct object (the
patient/causee), while a new agent argument or causer who performs the action is
added.[10] Hence, the intransitive verb forms with a simple stem possess two argu-
ments (agent and patient) in the direct causative.

The derivatives of the direct causative in different verb types with tri- or quadri-
consonantal roots are shown in the following examples:

Direct causative derivatives of type A of intransitive:

(2)            *Perfective*      *Imperfective*   *Jussive*
    Basic:     nəpərə[11]        jiřəmịr          əmbər       'live'
    Derived:   a-řəpərə          jařəmịr          a:mbịr      'allow to live'
    Basic:     bịrək'ət'ə        jiβrək't'        əβrək't'    'spoiled (child)'
    Derived:   a-βrək'ət'ə       jaβrək'ịt'       a:βərk'ịt'  'make (a child) spoiled'

The template pattern of direct causative derivations of these intransitive triconso-
nantal roots with the corresponding basic form is conjugated as follows:

               *Perfective*      *Imperfective*   *Jussive*
    Basic:     $C_1 ə C_2 ə C_3$-      $-C_1 ə C_2 ị C_3$     $-C_1 C_2 ə C_3$
    Derived:   a-$C_1 ə C_2 ə C_3$-   -a-$C_1 ə C_2 ị C_3$   -a-$C_1 ị C_2 ị C_3$

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**10.** Mengistu (2000: 318 for Amharic) states that in the causative *a-*, the causee does not have
control over the event. The causer acts directly and may achieve the result volitionally or non-
volitionally. The causer is always involved in the event, and can be initiating a natural process
or may exert effort.

**11.** Note that all the forms provided are in 3SGM.

As can be seen in (2), prefixation of the direct causative *a-* has a phonological effect on some roots, i.e.,*n* of *nəpər-* and *b* of *bɨrək'ət'-* get spirantized into nasalized *r̃* and bilabial fricative *β*, respectively.[12] Furthermore, the person marker *ə-* in the jussive assimilates to the direct causative marker *a-* whereby the long vowel *a:* is created.

Direct causative derivatives of type B (with vowel e) of intransitive:

(3)            *Perfective*   *Imperfective*  *Jussive*
    Basic:     betədə         jɨβetɨd         əβatɨd   'be wide'
    Derived:   a-βetədə       jaβetɨd         a:βatɨd  'widen'

The triconsonantal roots of type B verbs in this derivation are conjugated as in the following:

                *Perfective*      *Imperfective*   *Jussive*
    Basic:     $C_1eC_2əC_3$-      $-C_1eC_2ɨC_3$    $-C_1əC_2C_3$
    Derived:   $a-C_1eC_2əC_3$     $-a-C_1eC_2ɨC_3$  $-a-C_1əC_2ɨC_3$

Direct causative derivatives of type C of intransitive:

(4)            *Perfective*   *Imperfective*  *Jussive*
    Basic:     zak'ʷərə       jɨzak'ʷɨr       əzak'ʷɨr   'talk nonsense'
    Derived:   a-zak'ʷərə     jazak'ʷɨr       a:zak'ʷɨr  'cause to talk nonsense,
                                                         talk more'

The templates of direct causative derivations of type C verbs are conjugated as follows:

                *Perfective*      *Imperfective*   *Jussive*
    Basic:     $C_1aC_2əC_3$       $-C_1aC_2ɨC_3$    $-C_1aC_2ɨC_3$
    Derived:   $a-C_1aC_2əC_3$     $-a-C_1aC_2ɨC_3$  $-a-C_1aC_2ɨC_3$

In contrast to this, a large number of simplex stems of transitive verbs starting with a consonant lack the direct causative form, but have only the indirect causative. In other words, unaccusative verbs that lack causatives with *a-* do have the causative form with *at-*. Such forms are generally interpreted as the causative of the passive, e.g. *at-dənəgə [addenəgə]* 'cause to be hit'.

Direct causative derivational process also applies to transitive simplex roots of various verb types. In this case as well, the agent of the simplex verb takes the position of the direct object to be a patient in the causative derivation when another new argument of the derivation which directly causes the action expressed by the verb is introduced, due to the occurrence of the valence increasing morpheme, i.e., the direct causative marker *a-*.

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12. In Inor, word-initial bilabials and alveolar nasal of a word are spirantized when a prefix is attached to them as in the following manner: *b→β, bʷ→w, m→ɱ, mʷ→w̃, w→w̃, n→r̃* (Berhanu & Hetzron 2000: 19).

Direct causative derivatives of A of transitive verbs:

(5)  |  | *Perfective* | *Imperfective* | *Jussive* |
Basic: zəkədə | jizəgid | əzigid | 'remember, recall'

|  | *Perfective* | *Imperfective* | *Jussive* |  |
| --- | --- | --- | --- | --- |
| Basic: | zəkədə | jizəgid | əzigid | 'remember, recall' |
| Derived: | a-zəkədə | jazəgid | a:zigid | 'make someone remember, recall' |
| Basic: | sirəsərə | jisrəsir | əsərsir | 'level the floor of a house' |
| Derived: | a-srəsərə | jasrəsir | a:sərsir | 'make someone level the floor of a house by scraping off the uneven place' |

The conjugational pattern of these direct causative derivations of triconsonantal roots is shown below:

|  | *Perfective* | *Imperfective* | *Jussive* |
| --- | --- | --- | --- |
| Basic: | $C_1 \partial C_2 \partial C_2$ | $-C_1 \partial C_2 i C_2$ | $-C_1 i C_2 i C_2$ |
| Derived: | $a\text{-}C_1 \partial C_2 \partial C_2$ | $-a\text{-}C_1 \partial C_2 i C_2$ | $-a\text{-}C_1 i C_2 i C_2$ |

Direct causative derivatives of triradical roots of type B (both with palatalization and with vowel e) of transitive verbs:

|  | *Perfective* | *Imperfective* | *Jussive* |  |
| --- | --- | --- | --- | --- |
| (6) |  |  |  |  |
| Basic: | nekʲəβə | jiřekʲiβ | əřəkiβ | 'ride' |
| Derived: | a-řekʲəβə | jařekʲiβ | a:řəkiβ | 'help to mount, ride (on a horse)' |
| Basic: | fenəgə | jifenig | əfənig | 'carry, load' |
| Derived: | a-fenəgə | jafenig | a:fənig | 'make someone to carry, load' |

The template pattern of these direct causative derivations of triradical roots is shown in the following:

|  | *Perfective* | *Imperfective* | *Jussive* |
| --- | --- | --- | --- |
| Basic: | $C_1 e C_2 \partial C_3$ | $-C_1 e C_2 i C_3$ | $-C_1 \partial C_2 i C_3$ |
| Derived: | $a\text{-}C_1 e C_2 \partial C_3$ | $-a\text{-}C_1 e C_2 i C_3$ | $-a\text{-}C_1 \partial C_2 i C_3$ |

Direct causative derivatives of triradical roots of type C of transitive verbs were not attested.

However, as mentioned above, the causative derivation in *a-* has semantic restrictions on its association with transitive verbs, i.e., it is plausible with certain transitive verbs, but it creates ungrammaticality when it applies to others. Put differently, there exist unaccusative verbs lacking causatives with *a-*, as in (7).[13]

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13. According to Degif (1996b), the prefix *a-* can attach to all unergative verbs except 'go' and 'descend', ex. *dak'ə* 'laugh' versus *a-dak'ə* 'make laugh'. It cannot attach to unaccusative verbs unless they have a transitive/intransitive alternation, such as *bəsərə* 'cook' vs. *a-bəsərə* 'cook something' or *k'ʲət'ə* 'be tired' versus *a-k'ʲət'ə* 'tire someone'. For example, the verb *nəzəzə* 'dream' does not have

(7)  *Simplex verb root*                *Direct causative*
    fənəβə  'break off (bread)'  *a-fənəβə  'make break off'
    səpərə  'break'         *a-səpərə  'cause to break'
    k'ənəβə  'insult'        *a-k'ənəβə  'make to insult'
    dənəgə  'hit'          *a-dənəgə  'make to hit'

It is important to note that affixation of another prefix ending in a vowel, like the relative and jussive prefixes, to this causative marker causes a vowel lengthening.[14]

    There are certain simplex root-morphemes whose meaning is totally changed when the direct causative *a-* is attached to them. In some of these verbs, this situation also results in reduction of an argument. Consider the examples in (8).

(8)  *Simplex verb root*                *Direct causative*
    xəna       'call up'    a-xəna       'shout, be noisy'
    bəta       'inherit, take'  a-βəta       'marry off'
    xʷəʔə [xoʔə]  'spill (TR)'  a-xʷəʔə [axoʔə]  'spill (INTR)'

## 3.2   Indirect causative

In Inor, any simplex root has an indirect causative counterpart. In other words, unlike many other possible derivations, the indirect causative can be derived from any root-morpheme, whether the corresponding simplex stem is transitive or intransitive. This indirect causative verb is derived from a simplex template by attaching the prefix *at-* to the template. When *at-* is affixed to the template of simplex stems, another argument that acts as a subject of newly derived form is created. This newly added subject initiates the subject of the simplex stem, which appears in the direct object position in the derivational form, to perform the verbal action. The sentential examples in (9) illustrate this fact. However, depending on the semantic nature of some verbs, the meaning of the verbs may be changed when *at-* is prefixed to the corresponding simplex stems:

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a causative *a-rəzəzə* '*make* someone dream'. As to Rose (2007: 412), unaccusative verbs which lack causatives with *a-* do have them with *at-*, generally interpreted as the causative of the passive: ex. *at-səpərə* 'cause to be broken'. As a result, the prefix *at-* may act as a causative for verbs which do not have a causative in *a-* or as a true factive: 'make someone do something' (as against the causative 'make it possible/necessary for someone to do something' (cf. Hetzron 1977: 72–73).

**14.**  The second reviewer of this paper commented that there is a long vowel at the beginning of all the causative imperfective and jussive forms. However, this is true for the causative jussive forms, but not for the causative imperfective form, because the prefixal person marker in the imperfective is only *j-*, rather than *ji-*. An epenthetic *i* is inserted only if the verb begins with a consonant. Therefore, in the causative imperfective form of a verb, the person marker is *j-*, which precedes the causative prefixes *a-* or *at-*, whereby there is no long vowel created.

(9)  a.  *tɨkəxuda ʃərəd bən̩ʔa.*
tɨkə-xuda          ʃərəd  bən̩ʔa
child-DEF:3SGM food   eat:PFV:3SGM:PST
'The child ate food.'

b.  *ətɨkəxuda ʃərəd aβən̩ʔaxun̩ʼɨ.*
ə-tɨkə-xuda              ʃərəd  a-bən̩ʔa-xu-n-ɨ
DAT-child-DEF:3SGM food   D:CAUS-eat:PFV-1SGS-3SGMO-PST
'I made the child eat food.'

c.  *ət̩ʼajxuda atβen̩ʔaxun̩ʼɨ.*
ə-t̩ʼay-xuda                at-bən̩ʔa-xu-n-ɨ
DAT-sheep-DEF:3SGM ID:CAUS-eat:PFV-1SGS-3SGMO-PST
'I caused the sheep to be eaten.'

The prefix *at-* is sometimes analyzed as composed of causative *a-* and passive *t-*. Regarding this, Berhanu and Hetzron (2000: 42) state that *a-t-:* attached to a type B form, even if the base is type A, is a factitive, i.e., force to do. The illustrative example they provided is *ařekʲəβə* 'make it possible to ride (a horse), (type B), *atrekʲəβə* 'order to ride' (*nəkʲəβə* 'mount, ride a horse' (type A)) and, according to them, with type C it is often a causative of reciprocal.

The derivative marker *at-* can be prefixed to simplex stems of all types (types A, B and C) as shown below, respectively.

Indirect causative derivations formed from triradical roots of simplex stems of type A:

(10)              *Perfective*    *Imperfective*  *Jussive*
Basic:     səpərə      jɨsəβɨr       əsɨβɨr    'break'
Derived:   at-sepərə   jatsepɨr      a:tsəβɨr  'order to break'

The conjugational pattern of triconsonantal roots of these derivations is shown below:

|         | *Perfective* | *Imperfective* | *Jussive* |
|---------|---------|---------|---------|
| Basic:  | $C_1 \partial C_2 \partial C_3$ | $-C_1 \partial C_2 iC_3$ | $-C_1 iC_2 iC_3$ |
| Derived: | $at-C_1 eC_2 \partial C_3$ | $-at-C_1 eC_2 iC_3$ | $-at-C_1 \partial C_2 iC_3$ |

Indirect causative derivations formed from triradical roots of simplex stems of type B (both with palatalization and with vowel *e*):

(11)              *Perfective*    *Imperfective*  *Jussive*
Basic:     ʒəʔərə      jiʒəʔir       əzəʔir    'split'
Derived:   at-ʒeʔərə   jatʒeʔir      a:tzəʔir  'order to finish'
Basic:     met̩ʼərə     jiɱet̩ʼir      əɱət̩ʼir   'choose'
Derived:   at-ɱet̩ʼərə  jatɱet̩ʼir     a:tɱət̩ʼir 'order to choose, select'

The conjugation pattern of these derivations is as follows:

|  | *Perfective* | *Imperfective* | *Jussive* |  |
|---|---|---|---|---|
| Basic: | $C_1 \partial C_2 \partial C_3$ | $-C_1 \partial C_2 \dot{\imath} C_3$ | $-C_1 \partial C_2 \dot{\imath} C_3$ | (type B with palatalization) |
| Derived: | $at\text{-}C_1 e C_2 \partial C_3$ | $-at\text{-}C_1 e C_2 \dot{\imath} C_3$ | $-at\text{-}C_1 \partial C_2 \dot{\imath} C_3$ | |
| Basic: | $C_1 e C_2 \partial C_3$ | $-C_1 e C_2 \dot{\imath} C_3$ | $-C_1 \partial C_2 \dot{\imath} C_3$ | (type B with vowel e) |
| Derived: | $at\text{-}C_1 e C_2 \partial C_3$ | $-at\text{-}C_1 e C_2 \dot{\imath} C_3$ | $-at\text{-}C_1 \partial C_2 \dot{\imath} C_3$ | |

Indirect causative derivations formed from trilateral roots of simplex stems of type C:

| (12) |  | *Perfective* | *Imperfective* | *Jussive* |  |
|---|---|---|---|---|---|
| | Basic: | banərə | jiβanɨr | əβanɨr | 'demolish' |
| | Derived: | at-βanərə | jatβanɨr | a:tβanɨr | 'order to demolish' |

The template of these derivations is conjugated as follows:

|  | *Perfective* | *Imperfective* | *Jussive* |
|---|---|---|---|
| Basic: | $C_1 a C_2 \partial C_3$ | $-C_1 a C_2 \dot{\imath} C_3$ | $-C_1 a C_2 \dot{\imath} C_3$ |
| Derived: | $at\text{-}C_1 a C_2 \partial C_3$ | $-at\text{-}C_1 a C_2 \dot{\imath} C_3$ | $-at\text{-}C_1 a C_2 \dot{\imath} C_3$ |

Prefixation of the indirect causative marker *at-* to the template of simplex stems of type A and type B with palatalization affects the template vowels of the stems occurring following the first root consonant(with the exception of those bi- and tri-radical roots which have quadrilateral templates with very complicated conjugations like *ʔijə* 'wait for' and *sijə* 'buy' which this paper drops, only discussing more straightforward verbs). That is, the basic pattern is that there is an *e* that is inserted in type A and type B with palatalization. Any verb that already has an *e* (either type B or as part of its conjugation due to a defective glide) does not acquire it with *at-*.Thus, in all conjugations, the indirect causative derivation of this verb type has the same template form with the simplex as well as the derived form of the template of type B verbs with front vowels. On the contrary, affixation of the indirect causative derivative *at-* to the simplex stems of type B (with the vowel *e*) and type C causes no change, thus, the simplex stems and their indirect causative derivation counterparts of these type have identical template vowels, i.e., *e* and *a*, respectively, following the first radical.

As for other verbs with other vowels in the target position, there appears to be variability, but it can be analyzed systematically, although this paper drops them. Some of these verbs take *e* and some do not, and some have both a former guttural and a glide and some have a former guttural somewhere in their roots.

Assimilation (voice and manner) of consonants takes place when the causative derivative marker *at-* is affixed to the template of the simplex stem, i.e., the alveolar stop of the marker *at-* is totally assimilated to the following consonant if the prefix

is attached to the simplex stem beginning with the alveolar stop *d*, alveolar fricatives *s* and *z* and/or post-alveolar affricates *ʃ, ʒ, tʃ, dʒ* and alveolar and post-alveolar ejectives *t'* and *tʃ'*. The following examples illustrate this fact.

(13)  *Simplex verb root*            *Indirect causative*
        dənəgə  'hit'            \*at-dənəgə ˃ addenəgə  'order to hit'
        zəmədə  'pull'           \*at-zəmədə ˃ azzemədə  'order to pull'
        ʒəpərə  'return'          \*at-ʒəpərə ˃ aʒʒepərə  'make to return'

The plosive *t* of the marker, further, changes to its voiced counterpart *d* when the first root-consonant of the simplex stem is the palatal or velar voiced plosives *gʲ* or *g*, respectively, as in the following examples:

(14)  *Simplex verb root*            *Indirect causative*
        gʲekʲərə  'straighten'     \*at-gʲekʲərə ˃ adgʲekʲərə  'cause to straighten'
        gəfərə  'release'          \*at-gəfərə ˃ adgʲefərə   'order to release'

The first root *g* of the second example is palatalized into *gʲ* due to the presence of the mid front vowel *e*, which is inserted in the process. However, this palatalization of the first root-consonant never occurs with co-articulated counterpart of the corresponding consonant as in:\**at-gʷənər ˃ adgʷenərə* 'order to cut the leaf of false banana' (˂ the simplex tri-radical type A verb *gʷənər*).

## 3.3   Adjutative

Adjutative derivation shows an action in which a person is involved to help another person who performs the action.[15] The indirect causative marker *at-* with *a*-insertion yields adjutative form.

(15)               *Perfective*  *Imperfective*  *Jussive*
        Basic:    wəka        jiwəga        əga        'pound'
        Derived:  at-waka[16]  jatwaga      a:twaga    'give help in pounding'
        Basic:    fə̃ʔə̃r̃ə̃      jifə̃ʔir       əfiʔir      'be ready'
        Derived:  at-fã̃ʔə̃r̃ə̃    jatfã̃ʔir̃      a:tfã̃ʔir̃    'help in making something ready'

The following conjugational pattern of triconsonantal roots shows this derivation:

                *Perfective*       *Imperfective*        *Jussive*
        Basic:    $C_1 \partial C_2 \partial C_3$      $-C_1 \partial C_2 i C_3$       $-C_1 i C_2 i C_3$
        Template:  at-$C_1 a C_2 \partial C_3$   -at-$C_1 a C_2 i C_3$   -at-$C_1 a C_2 i C_3$

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15.  Adjutative and reciprocal causative sometimes must be context sensitive in a given discourse.

16.  Also causative, 'made others fight one another'.

## 4.   Medio-passive and reflexive

In Inor, the medio-passive derivation expresses both a passive and a reflexive.[17] Usually, the passive derivation is applied to a simplex root-morpheme of transitive verbs. Semantically and syntactically, this derivational process involves the promotion of the object of a transitive clause into a subject, and the demotion of the former subject either to an oblique object marked by the case prefix *bə-* 'by' or it is deleted. In other words, the subject of a transitive verb is optional in the passive form.

The passivized form, in Inor, is derived by prefixing *tə-* to the template of the simplex root of corresponding verb types. This derivation is very infrequently used, but instead the conceptually passive constructions are expressed by impersonal passive (see Meyer 2006).

(16)   a.   *səβxunowa gərədxida tewĩmʷ.*
           səβ-xunowa        gərəd-xida      tə-aɱ-ʷowa-m
           people-DEF:3PLM girl-DEF:3SGF PASS-give:PFV-3PLM-PST
           'The people were given the girl (for engagement)'.

       b.   *Ɂokʷa bəβiskadjə deŋga tək'ənəx'u gəpax'u.*
           Ɂokʷa bə-biskad-jə        denga tə-k'ənəɱ-xu
           today ins-small-ADJVR boy:P PASS-insult:PFV-1SG:m_CVB
           gəpa-xu
           enter:PFV-1SG:PST
           'Today, I'm insulted by small children (unfairly)'.

Even the constructions given in (16) sound better as if it would be expressed by impersonal passive.

On the other hand, Inor possesses naturally reflexive verbs that are 'grooming verbs', such as shave, wash or dress and 'verbs of movement'. In reflexive construction, the verb involves a mono-valent verb whose argument serves as both agent and theme. Put differently, unlike passive construction, whose subject is only experiencer, in medio-passive or reflexive the subject is both agent and experiencer, thus, medio-passive is also called auto-benifactive. Reflexive derivation in Inor is formed in the same way in which the passive is formed, i.e., by attaching *tə-* to the verbal template of simplex roots of various types. Consider the verbs in medio-passive in (17) that also have a reflexive reading.

Medio-passive and/or reflexive derivations formed from trilateral roots of simplex stems of type A, B and C:

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17.  In the literature on Ethio-Semitic, reflexive verbs are also referred to as medio-passive or anti-causative verbs or impersonal passives.

(17)

|  |  | *Perfective* | *Imperfective* | *Jussive* |  |
|--|--|--|--|--|--|
| Type A | Basic: | dənəgə | jɨdərg | ədɨrg | 'hit' |
|  | Derived: | tə-dənəgə | jɨtdənəg | ətdərəg | 'be hit/hit oneself' |
| Type B | with palatalisation: |  |  |  |  |
|  | Basic: | ʒəʔərə | jiʒəʔir | əzəʔir | 'split' |
|  | Derived: | tə-ʒəʔərə | jɨtʒəʔər | ətzəʔər | 'be split/split oneself' |
| Type B | with *e*: |  |  |  |  |
|  | Basic: | metʼərə | jiɱetʼir | əɱətʼir | 'select' |
|  | Derived: | təɱetʼərə | jɨtɱetʼər | ətɱətʼər | 'be selected/separate oneself' |
| Type C | Basic: | kʼatʼərə | jikʼatʼir | əkʼatʼir | 'knot' |
|  | Derived: | təkʼatʼərə | jɨtʼkʼatʼər | ətkʼatʼər | 'be knotted/knot oneself' |

|  |  | *Perfective* | *Imperfective* | *Jussive* |  |
|--|--|--|--|--|--|
| Type A | Basic: | $C_1 \partial C_2 \partial C_3$ | $-C_1 \partial C_2 C_3$ | $-C_1 \mathrm{i} C_2(\mathrm{i}) C_3$ |  |
|  | Derived: | $\text{tə-}C_1 \partial C_2 \partial C_3$ | $\text{-t-}C_1 \partial C_2 \partial C_3$ | $\text{-t-}C_1 \partial C_2 \partial C_3$ |  |
| Type B | Basic: | $C_1 \partial C_2 \partial C_3$ | $-C_1 \partial C_2 C_3$ | $-C_1 \mathrm{i} C_2 \mathrm{i} C_3$ | (with palatalization) |
|  | Derived: | $\text{tə-}C_1 \partial C_2 \partial C_3$ | $\text{-t-}C_1 \partial C_2 \partial C_3$ | $\text{-t-}C_1 \partial C_2 \partial C_3$ |  |
|  | Basic: | $C_1 e C_2 \partial C_3$ | $-C_1 e C_2 \mathrm{i} C_3$ | $-C_1 \partial C_2 \mathrm{i} C_3$ | (with vowel *e*) |
|  | Derived: | $\text{tə-}C_1 e C_2 \partial C_3$ | $\text{-t-}C_1 e C_2 \partial C_3$ | $\text{-t-}C_1 \partial C_2 \partial C_3$ |  |
| Type C | Basic: | $C_1 a C_2 \partial C_3$ | $-C_1 a C_2 \mathrm{i} C_3$ | $-C_1 a C_2 \mathrm{i} C_3$ |  |
|  | Derived: | $\text{tə-}C_1 a C_2 \partial C_3$ | $\text{-t-}C_1 a C_2 \partial C_3$ | $\text{-t-}C_1 a C_2 \partial C_3$ |  |

It is important to point out that the imperfective and jussive vowels are not the same as the base in the passive/reflexive, so one finds CəCəC, as in (17). Furthermore, for verbs that show strong alternates in the perfective, the strong alternant is also found in the imperfective for type A verbs instead of the weak form, as can be compared to the conjugation of the base and the derived forms. One can also see the devoicing aspect with imperfective, as in *jɨtsəpər* (cf. base *jisəβɨr*) from the root /sbr/'break'. Type C verbs also show the same vowel change, as with the verb *tə-kʼatʼərə* in (17).

Moreover, when preceded by another prefix, *ə* of this derivative *tə-* is deleted. Instead, *ɨ* is inserted as an epenthetic where necessary, as in *təsəpərə/jɨtsəpər/ətsəβər* for the three conjugations of the root /sbr/'be broken/break oneself'.

However, not all root-morphemes whose simplex is transitive derive medio-passive/reflexive stems, but passive, i.e., there are a number of simplex root-morphemes of transitive verbs whose reflexive form is ungrammatical, as in the following examples of type A.

(18)  *Simplex verb root*      *passive/reflexive*
     sənəʔə  'steal'      təsənəʔə  'be stolen/*steal oneself'
     ʔətərə  'kill'      təʔətərə  'be killed/*kill oneself'

The derived stems in (18) render only a passive reading, but not a medio-passive or reflexive one, because the actions expressed by these forms are not performed by someone who is an experiencer. Even so, the semantics of the passive sounds more as if it would be expressed by impersonal passive.

## 5.  Frequentative

Frequentative derivation shows the intensity or frequency of the action expressed by the verb. This derivation is applicable for only transitive verbs. Reduplication of the penultimate radical of tri-consonantal root-morphemes, for example of type A with the template $C_1C_2əC_2əC_3$, derives a frequentative stem. However, this derivation is not as frequent as the derivations discussed in the previous sub-sections. Even within this derivation, bi-consonantal root-morphemes are less frequent than tri-consonantal root-morphemes of the corresponding types. Consider the following examples from triconsonantal roots of each verb type:

(19)

|  |  |  | *Perfective* | *Imperfective* | *Jussive* |  |
|---|---|---|---|---|---|---|
| Type A | Basic: | | kəfədə | jikəfd | əkɨfd | 'open' |
| | Derived: | | kɨfəfədə | jikfəfd | əkfəfd | 'open this and that' |
| | Basic: | | fənəβə | jifəniβ | əfiniβ | 'break off edge' |
| | Derived: | | fɨrənəβə | jifrəniβ | əfrəniβ | 'break into pieces' |
| Type B with *e*: | | | | | | |
| | Basic: | | met'ərə | jiɱet'ir | əɱət'ir | 'choose' |
| | Derived: | | mit'et'ərə | jiɱt'et'ir | əɱt'ət'ir | 'choose many things repeatedly' |
| Type B with palatalisation: | | | | | | |
| | Basic: | | ʒəʔərə | jiʒəʔir | əzəʔir | 'open' |
| | Derived: | | ʒiʔəʔərə | jiʒʔəʔir | əzʔəʔir | 'open this and that' |
| OR | Basic: | | ʒəʔərə | jiʒəʔir | əzəʔir | 'split wood' |
| | Derived: | | ʒiʔaʔərə | jiʒʔaʔir | əzʔaʔir | 'split wood repetitively (and lots of it)' |
| Type C | Basic: | | ʃakədə | jiʃagɨd | əʃagɨd | 'distribute' |
| | Derived: | | ʃikakɨdə | jiʃgagɨd | əʃgagɨd | 'divide something several places' |

The following conjugational patterns of triconsonantal roots of various types show this derivation:

|  |  | *Perfective* | *Imperfective* | *Jussive* |  |
|---|---|---|---|---|---|
| Type A | Basic: | $C_1\partial C_2\partial C_3$ | $-C_1\partial C_2(i)C_3$ | $-C_1iC_2(i)C_3$ |  |
|  | Derived: | $C_1C_2\partial C_2\partial C_3$ | $-C_1C_2\partial C_2(i)C_3$ | $-C_1C_2\partial C_2(i)C_3$ |  |
| Type B | Basic: | $C_1eC_2\partial C_3$ | $-C_1eC_2iC_3$ | $-C_1\partial C_2iC_3$ | (with vowel *e*) |
|  | Derived: | $C_1C_2eC_2\partial C_3$ | $-C_1C_2eC_2iC_3$ | $-C_1C_2\partial C_2iC_3$ |  |
|  | Basic: | $C_1\partial C_2\partial C_3$ | $-C_1\partial C_2iC_3$ | $-C_1\partial C_2iC_3$ | (with palatalization) |
|  | Derived: | $C_1C_2\partial/aC_2\partial C_3$ | $-C_1C_2\partial/aC_2iC_3$ | $-C_1C_2\partial/aC_2iC_3$ |  |
| Type C | Basic: | $C_1aC_2\partial C_3$ | $-C_1aC_2iC_3$ | $-C_1aC_2iC_3$ |  |
|  | Derived: | $C_1C_2aC_2\partial C_3$ | $-C_1C_2aC_2iC_3$ | $-C_1C_2aC_2iC_3$ |  |

Regarding the template vowel in this derivation, in triradical roots of type B (with vowel *e*) and C the vowels that occur between the two identical consonants are the same with the template vowel of the base following the first root consonant, i.e., *e* and *a*, respectively. Hence, reduplication of the corresponding root-consonants of the simplex stem of these types never affects the template vowel in the derivations. While concerning this vowel occurring in the same position of the derivation, type A verbs are categorized into two, i.e., the majority of verbs of this type have the vowel *ə* between the reduplicated radicals, which is similar to the template vowel occurring after the first root-consonant of the simplex stem of the same type, as in (19) above. Though they are few in number, in the second group of verbs of this type, the template vowel between the two identical consonants is *a* (also see Berhanu & Hetzron 2000: 39–41). This vowel change within the same type, however, is unpredictable. Hence, the derivational template (frequentative) of the latter groups is identical with the templates of the frequentative of root-morphemes of type C, as in (20).

(20)

|  | *Perfective* | *Imperfective* | *Jussive* |  |
|---|---|---|---|---|
| Basic: | nəsa | jiřəsa | ənsa | 'lift' |
| Derived: | nisasa | jinsasa | ənsasa | 'lift frequently' |
| Basic: | dəmədə | jidəmd | ədimd | 'mix' |
| Derived: | dimamədə | jidmamid | ədmamid | 'mix this and that' |

The triconsonantal root of type A with the vowel *a* between the reduplicated consonants of this derivation has the following template pattern:

|  | *Perfective* | *Imperfective* | *Jussive* |
|---|---|---|---|
| Basic: | $C_1\partial C_2\partial C_3$ | $-C_1\partial C_2iC_3$ | $-C_1C_2iC_3$ |
| Derived: | $C_1C_2aC_2\partial C_3$ | $-C_1C_2aC_2iC_3$ | $-C_1C_2aC_2iC_3$ |

There are also verbs with two surface consonants. These surface biliteral verbs fall into two different groups. In the first group, those verbs that lost the final weak consonant reduplicate the second consonant (= penult). In *nəsa*, for instance, the root

is /rsA/ 'pick', so *s* is the penultimate root segment, and thus is copied, as in *nɨsasa* 'pick up several things'. For *neʔə* 'shave', the root is likely /rʔj/, so the penultimate root consonant is *ʔ*. Thus, the derivation results in *niʔeʔə* 'shave this and that repeatedly'. In the second, the penultimate consonants are weak and cannot be copied, so the initial one is selected, however, this group of verbs have no plain frequentative forms but rather reciprocal *barə* 'say' /bAjr/, *xarə* 'know' /xAjr/ and *ʃamə* 'pul' with the reciprocal form *təβēβēr-*, *təxexer-*and *təʃaʃam̥-*, respectively, (also see 5). It is noted that *barə* and *xarə* have palatal elements that appear in various derivations.

In the process of formation of frequentative, the first occurrence of the repeated radical has the weak alternant, while the second has the strong one in the perfective and the imperfective, but in the jussive both occurrences are weak, if applicable.[18] The strong alternant is the former geminate, while the weak is the former singleton. The illustrative examples are as follows:

(21)

|  | Perfective | Imperfective | Jussive | |
|---|---|---|---|---|
| Basic: | səpərə | jɨsəβɨr | jɨsəβɨr | 'break' |
| Derived: | sɨβəpərə | jɨsβəpɨr | jɨsβəβɨr | 'break into small pieces' |

However, there are also a considerable number of verb stems of this derivation in which the first occurrence also remains strong in the perfective, though it is applicable for the alternation, as in (22).[19] Hence, the motivation for the difference in alternation of segments occurring in identical phonetic environment and applied on the same phoneme is not clear.

(22)

|  | Perfective | Imperfective | Jussive | |
|---|---|---|---|---|
| Basic: | t'əbət'ə | jit'ət' | ət'it' | 'seize' |
| Derived: | tɨbəbət'ə | jit'βəβɨt' | ət'βəβt' | 'seize repeatedly' |
| Basic: | dəpərə | jɨdəβɨr | ədiβɨr | 'add' |
| Derived: | dɨpəpərə | jɨdβəpɨr | ədβəpɨr | 'add again and again, add from different varieties' |

Frequentatives with bi-consonantal roots of type C were not attested. Frequentative of quadri-consonantal roots of any type is also impossible. This may be because of all the frequentative forms, as with those shown above, the quadri-lateral template and that most of quadri-consonantal root-morphemes are formed by reduplicating one of the roots. However, no frequentative form was recorded for those

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**18.** Hetzron (1977: 71) also notes that an expressive reduplicative form may be derived from a root through repetition of the mid radical, where the first occurrence has the weak alternate and the second has the strong alternate in the indicative and the weak in the jussive.

**19.** Leslau (1950a, cf. Hetzron 1977: 71) offers some example words for this occurrence. However, Hetzron (1977) does not offer an explanation.

that contain four different root-consonants. Not only frequentative derivations with quadri-consonantal roots, but also frequentative derivations with bi- and tri-consonantal roots that possess the quadri-lateral template do not occur. The following examples illustrate the latter fact:

(23) *Simplex verb root*          *Frequentative*
    sijə      'buy'          *sijijə[20]      'buy this and that'
    ʔijə      'wait, guard'    *ʔijijə      'wait, guard now and then'
    dɨroʔʷə  'be deaf'     *dɨroʔʷə   'be deaf seriously'

## 6. Reciprocal

Reciprocal actions express a symmetric relationship between two participants: each stands as both originator and receiver of some event of the type described. Reciprocals describe a plurality or reciprocity of events involving compound subjects. The passiviser *tə-* in combination with insertion of the vowel *a* following the first radical of bi- and tri-lateral roots of any type and the second radical of quadri-lateral roots and other roots having quadrilateral template, usually describes a reciprocal state of affairs. As a result, such verbs occur with plural subjects, as illustrated in the following examples:

(24)

| | | Perfective | Imperfective | Jussive | |
|---|---|---|---|---|---|
| Type A | Basic: | zəmədə | jɨzəmd | əzɨmd | 'pull' |
| | Derived: | tə-zamədə | jɨtzaməd | ətzaməd | 'pull each other' |
| | Basic: | tʃʼɨβatʃʼək'ə | jɨtʃʼβatʃʼɨk' | ətʃʼβatʃʼɨk' | 'argue' |
| | Derived: | tə-tʃʼβatʃʼək'ə | jɨttʃʼɨβatʃʼək' | əttʃʼɨβatʃʼək' | 'argue each other' |
| Type B with *e*: | | | | | |
| | Basic: | metʼərə | jɨɲetʼɨr | əɲətʼir | 'choose' |
| | Derived: | tə-ɲajtʼərə | jɨtɲajtʼər | ətɲajtʼər | 'choose one another' |
| Type B with palatalization: | | | | | |
| | Basic: | ʒəʔərə | jɨʒəʔɨr | əzəʔir | 'split' |
| | Derived: | tə-ʒaʔərə | jɨtʒaʔər | ətʒaʔər/ətzaʔər | 'split each other severely' |
| Type C | Basic: | tʃʼafərə | jɨtʃʼafɨr | əttʃʼafər | 'scratch' |
| | Derived: | tə-tʃʼafərə | jɨttʃʼafər | əttʃafər | 'scratch each other' |

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20. The Amharic cognate is *gəzazza*.

Reciprocal derivations of triconsonantal roots have the following conjugation pattern:

| | | *Perfective* | *Imperfective* | *Jussive* | |
|---|---|---|---|---|---|
| Type A | Basic: | $C_1əC_2əC_3$ | $-C_1əC_2ɨC_3$ | $-C_1ɨC_2ɨC_3$ | |
| | Derived: | $tə-C_1aC_2əC_3$ | $-t-C_1aC_2əC_3$ | $-t-C_1aC_2əC_3$ | |
| Type B | Basic: | $C_1eC_2əC_3$ | $-C_1eC_2ɨC_3$ | $-C_1əC_2ɨC_3$ | (with vowel *e*) |
| | Derived: | $tə-C_1ajC_2əC_3$ | $-t-C_1ajC_2əC_3$ | $-t-C_1ajC_2əC_3$ | |
| | Basic: | $C_1əC_2əC_3$ | $-C_1əC_2ɨC_3$ | $-C_1əC_2ɨC_3$ | (with palatalization) |
| | Derived: | $tə-C_1aC_2əC_3$ | $-t-C_1aC_2əC_3$ | $-t-C_1aC_2əC_3$ | |
| Type C | Basic: | $C_1aC_2əC_3$ | $-C_1aC_2ɨC_3$ | $-C_1aC_2ɨC_3$ | |
| | Derived: | $tə-C_1aC_2əC_3$ | $-t-C_1aC_2əC_3$ | $-t-C_1aC_2əC_3$ | |

As can be seen from the above examples, like that of frequentative construction (see 5), reciprocal derivational process is always applied to the transitive verbs, as they involve plural subjects that act both as agent and patient at the same time. This set of examples also shows that reciprocal derivations are formally the same with medio-passive and reflexive derivations (see 4) with the only difference in vowel quality, i.e., the former has the vowel *a* between the first two root-consonants of type A and C with bi- and tri-lateral roots and between the second and the third for those of quadrilateral (if applicable), while the latter have the vowel *ə* and *a*, respectively, in the corresponding vocalic positions of the corresponding types. However, the situation is a bit different in the case of type B. That is, *a*-insertion is followed by the palatal approximant *j*. The insertion of *j* following the template *a* seems the compensation of the palatal template vowel *e* of the simplex form of this type.[21]

It is important to note that the reciprocal derivation for the 3PLM has the same kind of labialization and palatalization that is found in the impersonal, as in *təgʲafʷərmʷ* 'They divorce/release each other' (< *gəfərə* 'divorce/release'). Note that the initial *g* of the root /gfr/ is realized as *gʲ*.

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21. According to the second reviewer, some analysts hypothesize that type B verbs are actually quadrilaterals with CjCC whereby [j] usually combines with [ə] to produce [e]. This would also account for palatalization in other type B forms. According to her, this analysis would certainly account for the appearance of [j] in reciprocals of type B. The present analysis also confirms this.

## 7.   Bound roots with lexicalised affixes

A certain number of root-morphemes in Inor occur only in derived stems but do not have a simplex form. In other words, these stems are bound and need to necessarily occur with a kind of prefix.[22] The reason for the absence of their corresponding simplex can be that these verb roots represent archaic lexicalized stems.[23]

One may find couples such as *a-βranəʔə* 'impress, satisfy (TR)'and *tə-βranəʔə* 'be impressed, be satisfied', but no plain stem *\*bɨranəʔə*, or triplets such as *a-t'awərə* 'prepare well', *tə-t'awərə* 'be prepared well' and *at-t'awərə [at't'ewərə]* 'order to prepare well', *\*t'awərə*. Thus, these stems may occur in passive reflexive and in direct causative and/or indirect causative stem form. This sub-section presents lists of the verb stems that occur in three (with *a-*, *at-* and *tə-*), two (with either two of the three) or even only in one derived form (with one of the three).

Verbal stems occurring in the derived form with the prefix *tə-*, but with or without derived meaning, that have causative correspondence in *a-* are given below:

(25)   *Derived forms occurring*               *Derived forms occurring*
       *in direct causative*                   *in passive/reflexive*
       a-rəʃə-      'make mattress, build, knit'   tə-rəʃə-      'be made (mattress), built'
       a-r̃ək'ət'-   'winnow'                       tə-r̃ək'ət'-   'be winnowed'
       a-xəbəd-     'honor, respect'               tə-xəbəd-     'be honored, respected'

Some verbs come in pairs with the same meaning. The verb *a-xetərə* and *tə-xetərə* both mean 'follow', as illustrated in the following sentential examples:

(26)   a.   *nora səβ axetərx'u maʔax'u.*
            nora    səβ     a-xetər-xu                    maʔa-xu
            several person D:CAUS-follow:PFV-1SGS:*m*_CVB come:PFV-1SG:PST
            'I came having made many people follow me.'
       b.   *nora səβ axetərəj'i maʔa.*
            nora    səβ     axetərə-i                     maʔa
            several people follow:PFV:3SGMS-1SGO-*m*_CVB come:PFV:3SGM:PST
            'Several people came following me.'

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**22.** Degif (1994) calls these stems 'prefix-necessitating stems'. According to him, these stems are bound stems that require prefixes to provide external arguments.

**23.** Meyer (2006: 103 for Wolane, spoken in at the north-eastern edge of the Gurage zone) states that several processes may have led to this situation. First, the function of a simplex could have been taken over by a derived stem, thus yielding the disappearance of the simplex. Second, loanwords from other Ethio-Semitic language may have entered Wolane only as a derived but not as a simplex stem. Third, this state of affairs may have already existed in Proto-Ethio-Semitic. Thus, similar situations may also occur in Inor.

c. *nora səβ təxetərji maʔʼa.*
  nora  səβ  təxetər-ə-i  maʔa
  several people follow:PFV-3SGMS-1SGO:*m*_CVB come:PFV-3SGMS:PST
  'Several people came following me.'

In (26a), the subject (agent) is the direct cause of the action performed by other people, while in (26b) and (26c) the verb stem can occur in two derivational forms with *a-* and *tə-*, respectively, as if they were in direct causative and passive reflexive, but with the simplex meaning.

There are bound roots in one context that can be free roots in another, as in direct causative and passive reflexive *a-xətər-* 'dress' and *tə-xətər-* 'dress oneself, get dressed', respectively. *xətər*, on the other hand, is a possible free verb, which means 'cover' and dress means 'cover'. Similarly, in *a-blaʃ-* 'blight, destroy' *tə-blaʃ-* 'blight, spoiled, be destroyed', *blaʃ* is possibly a free verbal adjective which means 'spoiled'.

There are also verbal stems occurring in the derived form (with the prefixes *tə-*) without a derived meaning.[24] Such verb stems have causative correspondence in *at-* as in the following examples:

(27) *Derived forms occurring*        *Derived forms occurring with tə-,*
   *in indirect causative*           *but with simplex meaning*
   at-ʃəkəβ-  'force to stand, erect'     tə-ʃəkəβ-  'stand up, erect (INTR)'
   at-kʼaw̃-   'make to drink hot drinks'  tə-kʼaw̃-   'drink hot drinks'
   at-saʔar-  'make to ask'              tə-saʔar-  'ask'

As can be seen in (27), however, all the derivational forms to which the indirect causative marker *at-* is attached do not have a causative in *a-*. Thus, these verbs may have the same form in both their direct causative and indirect causative readings (see 3). A few verbal roots of this type have also passive reflexive correspondent as the examples shown below:

(28) *Derived forms occurring*        *Derived forms occurring*
   *in causative*                    *in passive reflexive*
   at-r̃atəd-  'make angry'              tə-r̃atəd-  'get angry'
   at-r̃ekəβ-  'make to show up'         tə-r̃əkəβ-  'show up'
   at-βaʃər-  'offer in abundance'      tə-βaʃər-  'be abundant'

Further, there are root-morphemes that occur in all the three derived forms: passive reflexives with their direct causative and indirect causative counterparts as in the examples below:

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24. It is noted that a number of verbal roots occur in the derived forms without the derived meaning (cf. Hetzron 1977: 73). One of the examples he provided is *teʔepərə* 'accept, receive' (cf. *epərə* 'help').

(29)  *Derived forms occurring*  *Derived forms occurring in passive reflexive*
      *in direct causative*        *and indirect causative*

| a- r̃ək'ət'- | 'winnow (TR)' | tə-r̃ək'ət'- | 'be free from chaff, bran, husk' |
| | | at-r̃ek'ət'- | 'order to winnow/facilitate to winnow' |
| a-r̃əfəs- | 'winnow (TR)' | tə-r̃əfəs- | 'be clear from chaff, winnow (INTR)' |
| | | at-r̃efəs- | 'order to winnow/facilitate to winnow' |

A certain number of root-morphemes occurring in only one derived form: either in indirect causative or direct causative still or passive reflexive form (though the last two are very rarely) have no corresponding simplex root, but with simplex meaning, that is also meant in only one derived form without derived meaning. Some examples from are provided below:

(30)  *Derived forms occurring in only indirect causative:*
      at-kʷana-    'imitate in a mocking manner the speech of someone, imitate
                   the action of'
      at-xʲapər-   'talk back, respond (a rude child to his father)'
      at-w̃agəz-   'argue or compete with one another over to do or not to do
                   something'
      at-βakər-    'misdirect'(probably from *bəkərə* 'lack, miss, lose')

However, with the exception of *at-βakərə*, those that possess type C patterns from (30) also have reciprocal reading, as more than one participant is involved in the actions expressed by the derived verbal forms. For instance, in *at-xʲapərə* there is someone who speaks first, and to whose speech another speaker responds. A similar situation occurs in the cases of *at-w̃agəzə* and *at-kʷana*. Thus, these verbs contain two or more subjects, both of which can also act as an agent (see 4), though the way as well as the purpose for which they act may vary. For the verb *at-βakərə* 'misdirect', it can be noted that the 3sGM object marker *-n-* can be affixed to the verb stem showing a causative or a factive, which is used as subjectless impersonal as in *at-βakərə-n-ɨ* 'he misdirected' (lit.: 'it caused him to misdirect'). Another verb of this type is *at-ʒapərə-n-ɨ* 'he felt a bit better/recover' (probably from *ʒapərə* 'return' (lit.: 'it made him to feel better') and *at-fʷaɲə-n-ɨ* 'he felt a bit better' (probably from the simplex root of type A: *a-fʷaɲə* 'take rest').[25]

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25. Hetzron (1977: 73) also provided two typical examples with the causative in *a-* for the situation: *aβənəgə-nɨ* 'he escape' (lit.: 'it caused him to escape') and *aβænərə-nɨ* 'he yawned'(lit.: 'it made him yawn') by stating that in some cases a causative or a factive is used impersonally with no subject for what would be an intransitive verb in other languages. His first example, however, may occur with a noun phrase acting as a subject when it is used as a transitive verb, as in *wədərə-xuta aβənəgə-nɨ* 'he takes off the rope (may be from neck of a calf)'.

(31)  *Derived forms occurring in only passive reflexive:*
      tə-kaʃə-     'have digestion problem'
      tə-ʧʼəma-   'wait for a short while'
      tə-rmamətʼ- 'entice, coax'

Finally, it is a common morpho-phonemic rule in Inor that the alveolar stop *t* of the indirect causativiser *at-* is totally assimilated to the following consonant segment when attached to a stem starting with one of the alveolar fricatives *s* or *z*, alveolar stop *d* and alveo-palatals *ʃ, ʒ, ʧ, ʤ, c and gʲ* (see 3.2). Further, it is ejectivized when followed by the ejectives *tʼ* and *kʼ*.

## 8.   Conclusion

This paper aims to provide a description of the verbal derivation of Inor. It applies a qualitative research method. The study has examined a variety of ways of deriving Inor verbs. Three derivational prefixes, *tə-*, *a-*, *at-*, are identified as medio-passive/reflexive, direct causative and indirect causative markers, respectively. A verb can be formed from a stem by affixation process, showing the reflexivity of the action. In causative actions, which are derived by attaching the derivatives *a-* and *at-* to the simplex stems, the agent is involved in the action either by participating in action or by initiating it. It is attested that repetition of the penultimate root-consonant derives the frequentative actions, while the insertion of the vowel *a* shows the reciprocity of the action. There are, however, certain root-morphemes that are restricted to specific derivations. On the other hand, derived verbs without simplex form occur.

## Acknowledgements

## Symbols and abbreviations

| | | | |
|---|---|---|---|
| // | underlying or hypothetical form | INS | instrumental |
| [] | phonetic realisation | IPFV | imperfective |
| * | hypothetical or ungrammatical form | LOC | locative |
| ~ | Nasal diacritic | M | masculine |
| : | Long vowel | N | noun |
| ⸦/→ | Implication | O | object |
| ACC | accusative | PASS | passive |
| ADJVR | adjectiviser | PL | plural |
| C | consonant | POSS | possessive |
| CVB | converb | PFV | perfective |
| DEF | definite | PST | past |
| D:CAUS | direct causative | TR | transitive |
| F | feminine | V | vowel |
| ID:CAUS | indirect causative | 1, 2, 3 | first, second and third persons |
| IMPR | impersonal | SG, PL | singular, plural |
| INTR | intransitive | | |

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## Appendix

Direct causative derivatives of type A of intransitive:

(1) *Simplex verb root*　　　　　　　*Direct causative*
　　nəpərə　　'live'　　　　　　　a-řəpərə　　'allow to live'
　　bəsərə　　'ripe, cook (INTR)'　　a-βəsərə　　'ripen, cook something'
　　tənəfə　　'be saved'　　　　　a-tənəfə　　'save'
　　birək'ət'ə　'spoiled (child)'　　　a-βrək'ət'ə　'make (a child) spoiled'

Direct causative derivatives in bi- and tri-radical roots of type C of intransitive:

(2) *Simplex verb root*　　　　　　*Direct causative*
　　kaka　　　'dry (INTR)'　　　a-kaka　　'make dry'
　　sasa　　　'be thin'　　　　a-sasa　　'make thin'
　　zak'ʷərə　'talk nonsense'　　a-zak'ʷərə　'cause to talk nonsense, talk more'
　　zapətə　　'go astray'　　　a-zapətə　'make miss one's way'

Direct causative derivatives of A of transitive verbs:

(3) *Simplex verb root*　　　　　　*Direct causative*
　　zəkədə　　'remember, recall'　　a-zəkədə　'make someone remember, recall'
　　t'əbət'ə　'hold, grasp, catch'　　a-t'əbət'ə　'make someone hold, grasp, catch'
　　sirəsərə　'level the floor　　　a-srəsərə　'make someone level the floor of a
　　　　　　　of a house'　　　　　　　　　house by scraping off the uneven
　　　　　　　　　　　　　　　　　　　　　place'

Direct causative derivatives bi- and tri-radical roots of type B of transitive verbs:

(4) *Simplex verb root*　　　　　　*Direct causative*
　　nekʲəβə　'ride'　　　　　a-řekʲəβə　　'help to mount, ride (on a horse)'
　　fenəgə　'carry, load'　　a-fenəgə　　'make someone to carry, load'

Unaccusative verbs lacking causatives with *a-*:

(5) *Simplex verb root*　　　　　　*Direct causative*
　　fənəβə　'break off (bread)'　　*a-fənəβə　'make break off'
　　səpərə　'break'　　　　　　*a-səpərə　'cause to break'
　　k'ənəβə　'insult'　　　　　*a-k'ənəβə　'make to insult'
　　dənəgə　'hit'　　　　　　*a-dənəgə　'make to hit'

Simplex root-morphemes whose meaning is totally changed when the direct causative a- is attached to them:

(6) *Simplex verb root*　　　　　　　*Direct causative*
　　xəna　　　　'call up'　　　　a-xəna　　　　'shout, be noisy'
　　bəta　　　　'inherit, take'　　a-βəta　　　　'marry off'
　　xʷəʔə [xoʔə]　'spill (TR)　　　a-xʷəʔə [axoʔə]　'spill (INTR)'
　　bənt'ə　　　'deceive, cheat'　　a-βənt'ə　　　'bias'
　　ʃəgərə　　　'change'　　　　a-ʃəgərə　　　'exchange'

Indirect causative derivations formed from bi- and tri-radical roots of simplex stems of type A:

(7)  *Simplex verb root*        *Indirect causative*
    bəta     'inherit'     atβeta    'order to inherit'
    fənəxə  'tolerate'   atfenəxə  'make to tolerate'
    ʔətərə  'kill'       ateʔetərə  'order to kill'
    səpərə  'break'     assepərə  'cause to be broken'
    dənəgə  'break'     addenəgə  'cause to be hit'

Indirect causative derivations formed from tri-radical roots of simplex stems of type B (both with palatalisation and with vowel *e*):

(8)  *Simplex verb root*        *Indirect causative*
    dʒəpərə    'finish'     at-dʒəpərə [adʒdʒepərə]    'order to finish'
    gʲekʲədə   'accompany'  at-gʲekʲədə [adɟekʲədə]    'order to accompany'
    metʼərə   'choose'    at-ɱetʼərə[atɱetʼərə]    'order to choose, select'

Indirect causative derivations formed from bi- and tri-lateral roots of simplex stems of type C:

(9)  *Simplex verb root*        *Indirect causative*
    banərə  'demolish'    at-banərə [atβanərə]    'order to demolish'
    kʼatʼərə  'knot'       at-kʼatʼərə [atʼkʼatʼərə]   'order to spend the day'

Set of examples showing the influence of the causative prefix on the first root:

(10)  *Simplex verb root*        *Indirect causative*
    dənəgə  'hit'       *at-dənəgə ˃ addenəgə    'order to hit'
    zəmədə  'pull'     *at-zəmədə˃ azzemədə    'order to pull'
    səpərə  'break'     *at-səpərə ˃ assepərə    'order to break'
    ʒəpərə  'return'    *at-ʒəpərə ˃ aʒʒepərə    'make to return'
    tʃəkərə  'cook'     *at-tʃəkərə ˃ atʃtʃekərə    'make to cook'
    dʒəkəβə  'bump'    *at-dʒəkəɱ˃ adʒdʒekəβ    'force to bump'
    tʼəna  'hate'      *at-tʼəna ˃ atʼtʼena    'make to hate'
    tʃʼarə  'load (v)'   *at-tʃʼarə ˃ atʃtʃʼerə    'order to load'

(11)  *Simplex verb root*        *adjutative*
    nəsa     'lift up'     at-ɾ̃asa    'help in lifting up'
    wəka    'pound'    at-waka    'give help in pounding'
    fəʔə̃ɾ̃ə  'be ready'  at-fã̃ʔəˈɾ̃ə̃    'help in making something ready'
    səpərə  'break'     at-sapərə[26]    'help in making breaking'

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26. This also has a simplex meaning: it means 'feel sick', but always occurs with object agreement markers.

Medio-passive and/or reflexive derivations formed from trilateral roots of simplex stems of type A, B and C:

(12)      *Simplex verb root*          *Medio-passive/Reflexive*

Type A:  k'əpa      'smear'       tək'əpa      'be smeared/smear oneself'

səpərə      'break'       təsəpərə      'be broken/break oneself'

dənəgə      'hit'       tə-dənəgə      'be hit/hit oneself'

sətəβə      'curse'       tə-sətəβə      'be cursed/curse oneself'

dəbər      'add'       tədəbərə      'join oneself in communal self-help organization'

Type B:  met'ərə      'select'       təmet'ərə      'be selected/separate oneself'

mekərə      'curse'       təmekərə      'be burnt/burn oneself'

Type C:  manəxə      'captured'       təmanəxə      'be captured in war'

banərə      'demolish'       təβanərə      'demolish oneself'

k'at'ərə      'knot'       tək'at'ərə      'be knotted/knot oneself'

ʔiraʔərə      'mix'       təʔraʔərə      'be mixed/mix oneself'

(13)      *Simplex verb root*          *Frequentative*

Type A   with *ə* between the reduplicated consonants:

kəfədə      'open'       kifəfədə      'open this and that'

fənəβə      'break off edge'       firənəβə      'break into pieces'

səpərə      'break'       siβəpərə      'break into several pieces'

kətəfə      'chop'       kitətəfə      'chop this and that'

Type A   with *a* between the reduplicated consonants:

*Simplex verb root*          *Frequentative*

nəsa      'lift'       nisasa      'lifted frequently'

nəkədə      'touch'       nikakədə      'be touched this and that'

dəmədə      'mix'       dimamədə      'be mixed this and that'

Type B   with *e*:

met'ərə      'choose'       mit'et'ərə      'choose many things repeatedly'

mezərə      'choose'       mizezərə      'count this and that repeatedly'

Type B   with palatalisation:

ʒəʔərə      'split wood'       ʒiʔəʔərə      'split wood into several pieces'

Type C   ʃakədə      'distribute'       ʃikakədə      'divide something several places'

k'at'ərə      'knot'       k'it'at'ərə      'knot this and that'

In the process of formation of frequentative or reduplicative, the set of examples shows that the first occurrence of the repeated radical has the weak alternant, while the second has the strong one in the perfective:

(14)  *Simplex verb root*                *Frequentative*

fəndə      'cut in half'       firənədə      'cut into small pieces'

tənəxə      'make incisions'       tirənəxə      'make incisions seriously'

səpərə      'break'       siβəpərə      'break into small pieces'

fənəmjə      'break off edge'       firənəmjə      'break into pieces'

Examples of the verb stems exceptional to consonant alternation in frequentative derivation in the perfective:

(15)   *Simplex verb root*          *Frequentative*
    t'əbət'ə   'seize'          tibəbət'ə   'seize repeatedly'
    dəpərə   'add'          dɨpəpərə   'add again and again, add from different varieties'
    dənəgə   'hit'          dɨnənəgə   'hit seriously'
    dənəsə   'break off edge'   dɨnənəsə   'break off edge repeatedly, here and there'
    k'ənəfə   'hit'          k'inənəfə   'cut several branches at a time, break off something repeatedly'
    ʔepərə   'help'          ʔipepərə   'help someone frequently'

The surface biliteral verbs which diachronically lost either medial or final weak consonant.

(16)          *Simplex verb root*          *Frequentative*
    Type A   nəsa /nsA/   'pick'          nɨsasa   'pick up several things'
            gəfa /gfA/   'push'          gifəfa   'push this and that'
            k'əpa /k'βA/   'fold'          k'ɨpəpa   'fold repeatedly'
            nətʃə /nt'j/   'tear'          nitʃətʃə   'take a bit of meat, pluck out repeatedly'
    Type B   bet'a /bt'A/   'dilute milk with water'   bɨt'et'a   'dilute milk with high amount water repeatedly'

(17)          *Simplex verb root*          *Reciprocals*
    Type A:   gəpa-   'enter'          tə-gapa-   'marry one another'
           zəmədə   'pull'          tə-zaməd-   'pull each other'
           nəmədə   'love'          tə-r̃ãməd-   'love each other'
           tʃʼiβətʃʼək'ə   'argue'          tə-tʃʼβatʃʼək'-   'argue each other'
    Type B   met'ərə   'choose'          təɱajt'ər-   'choose one another'
    with *e*:
           mezərə   'count'          təɱajzər-   'count each other'
    Type B with palatalization:
           ʒəʔərə   'split'          təʒaʔərə   'split each other severely'
    Type C:   tʃʼafərə   'scratch'          tə-tʃʼafər-   'scratch each other'

Bound roots with lexicalized affixes:

(18)   *Derived forms occurring*          *Derived forms occurring*
    *in direct causative*          *in passive reflexive*
    a-rəʃə   'make mattress, build, knit'   tə-rəʃə-   'be made (mattress), built'
    a-r̃ək'ət'-   'winnow'          tə-r̃ək'ət'-   'be winnowed'
    a-xəbəd-   'honor, respect'     tə-xəbəd-   'be honored, respected'
    a-k'ʲamət'ə   'beautify'          tə-k'ʲamət'-   'beautify oneself'
    a-t'awər-   'decorate, prepare well'   tə-t'awər-   'be prepared well'
    a-βranəʔ-   'impress, satisfy (TR)'   tə-βranəʔ-   'be impressed, be satisfied'

(19)  *Derived forms occurring*       *Derived forms occurring tə-,*
      *in indirect causative*         *but with simplex meaning*

at-ʃəkəβə  'force to stand, erect'   tə-ʃəkəβ-  'stand up, erect (INTR)'
at-kʼaw̃-   'make to drink hot drinks' tə-kʼaw̃-  'drink hot drinks'
at-saʔar-  'make to ask'             tə-saʔar-  'ask'
at-řakəs-  'make quarrel'            tə-řakəs-  'quarrel'
at-řawəʔ-  'make to run'             tə-řawəʔ-  'run'
at-ʒenər-  'throw across'            tə-ʒənər-  'cross over'

(20)  *Derived forms occurring*       *Derived forms occurring in passive reflexive*
      *in direct causative*           *and indirect causative*

a-řəkʼətʼə  'winnow (TR)'            tə-řəkʼətʼə  'be free from chaff, bran, husk'
                                     at-řekʼətʼə  'order to winnow/facilitate to winnow'
a-řəfəsə   'winnow (TR)'            tə-řəfəsə   'be clear from chaff, winnow (intr.)'
                                     at-refəsə   'order to winnow/facilitate to winnow'
a-zrabətʼ-  'make eager'            tə-zrabətʼ-  'be eager'
                                     at-zrabətʼ-  'cause to make eager'
a-rbabətʼ-  'bake thinly            tə-rbabətʼ-  'be very thin (for wusa-bread)'
           (for wusa-bread)'         at-rbabətʼ-  'order to make very thin'

(21)  *Derived forms occurring in only indirect causative:*

at-kʷana:-          'imitate in a mocking manner the speech of someone,
                    imitate the action of'
at-xʲapər-          'talk back, respond (a rude child to his father)'
at-w̃agəz-          'argue or compete with one another over to do or not to do
                    something'
at-βakʼər-          'make great effort, succeed, endeavor to do something'
at-βakər-           'misdirect'(probably from *bəkərə* 'lack, miss, lose')
at-ranəs-           'lose (interest to eat or drink due to undeliciousness of it)'
at-βad-             'counsel each other, discuss a matter and take advice'
atʃtʃʼəma- (< at-tʃʼəma) 'not answer having been called, eavesdrop, overhear'
assepər-[27](< at-sepərə) 'miscarriage'
atʃəpərə- (< a-tʃəpərə) 'send someone to market to buy something'

(22)  *Derived forms occurring in only passive reflexive:*

tə-kaʃə-           'have digestion problem'
tə-tʃʼəma-         'wait for a short while'
tə-rmamətʼ-        'entice, coax'
tə-rmʷamʷətʼ-      'go around unsavory places'
tə-frəkʼək-        'be proud and disrespectful, feel superior, be arrogant'

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**27.** This form has the same form as the indirect causative form of the simplex verb stem of type A: *səpərə* 'break'. (See 3.2).

# Phonetics

# An acoustic analysis of Amharic fricatives

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This study presents an acoustic analysis of Amharic fricatives, an Ethio-Semitic language spoken in Ethiopia. The study aimed to identify acoustic correlates for place of articulation and airstream mechanism, and investigate the effects of position within a word and window location on acoustic measurements. Duration of the fricative noise, spectral moments, zero-crossing rate, intensity and voice measurements were taken in cv and vcv contexts in real Amharic words. The results showed that frequency of peak intensity, maximum intensity, mean intensity, normalised intensity and spectral cog were found to be robust acoustic correlates of place of articulation. The effect of airstream was seen clearly with the ejective fricative /s'/ having higher intensity values, spectral peak location, spectral mean and zero-crossing values than the alveolar fricative /s/ for both male and female speakers. Voice measurements (H1-H2, H1-A1, H1-A2, and H1-A3) were affected significantly by airstream, with the values indicating a creaky phonation of the vowel following the ejective fricative. Position also contributed in differences in durational and spectral measures with fricatives in the cv position having higher values than fricatives in the vcv position. The results showed that duration was not an important acoustic correlate for place of articulation.

**Keywords**: Amharic, fricative, acoustic analysis, pulmonic, ejective

## 1. Introduction

A South Ethio-Semitic language, Amharic is spoken in the central and northern parts of Ethiopia and in all towns of the country (Girma 2009; Meyer & Richter 2003). The 2007 census put the number of Amharic native speakers more than 21 million (FDRE Population Census Commission, 2010). Amharic is also spoken as a second language by more than 4 million speakers (Hudson 1999). Functionally, Amharic is the official working language of Ethiopia, as well as the official language of four of the ten regional states (Amhara, the South Nations, Nationalities and Peoples, the Gambela and the Benishangual Gumuz regional states) and the two chartered cities, namely Addis Ababa and Dire Dawa.

Amharic has 7 vowels and 30 consonant phonemes (Baye 2008, 2010; Derib 2011), which include five ejectives /p', t', k', s' and tʃ'/ and labialised consonants /kʷ, gʷ and k'ʷ/.[1] Gemination is phonemic in the language, and all phonemes except /h/ and /ʔ/ can occur as geminates in word medial and final positions. The language has seven fricative phonemes: /f/, /s/, /s'/, /z/, /ʃ/, /ʒ/ and /h/.

Acoustic studies of fricatives examined include duration of frication noise and normalised duration, spectral peak location, spectral moments (spectral mean, spectral standard deviation, skewness, and kurtosis) and zero-crossings. In the following section, a review of previous works that aimed at identifying acoustic features related to pulmonic and ejective fricatives is discussed.

This study investigated the effects of place of articulation, position within a word, gender, voice, window location, airstream and voice on different acoustic measures, mainly durational, intensity, spectral moments, zero-crossing points and voice measurements. The study aimed to answer the following specific questions:

a.   What are the acoustic correlates of place of articulation?
b.   What are the acoustic correlates of airstream that differentiate between /s/ and /s'/?
c.   Which acoustic measures are affected by position within a word, gender, window location and voice?

Amharic has seven fricative consonants, which can be singleton or geminate. This study considered only singleton fricatives. The study presents previous works on acoustics of fricatives (Section 2), previous studies on Amharic fricatives (Section 3), methods (Section 4), results (Section 5), discussion (Section 6) and conclusions (Section 7).

## 2.   Previous studies on acoustics of fricatives

### 2.1   Durational measurements

The research on duration of the fricative noise has been inconclusive in whether it is a robust acoustic correlate of voicing for fricatives. Several studies showed that there is a significant difference in fricative duration between voiceless and voiced fricatives, the former being longer than the latter. Cole & Cooper (1975) conducted perceptual experiments by shortening the fricative duration and reported that re-ducing the frication duration resulted in the perception of English syllables /fa/ as

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1.   The number of labialised phonemes in Amharic is now open for debate with the latest pro-posal to be as much as 19 (Derib 2020).

/va/, /sa/ as /za/ and /tʃa/ as /dʒa/. Acoustic studies on English (Crystal & House 1988a, b; Pirello, Blumstein & Kurowski 1997; Stevens et al. 1992) and Argentine Spanish (de Manrique & Massone 1981) showed that there is a significant difference in fricative duration between voiceless and voiced fricatives, the former being longer than the latter. However, the classification of voiced versus voiceless based only on frication duration has not been achieved specifically for fricatives produced in initial position in English (Baum & Blumstein 1987).

Frication duration has also been found to be an important acoustic correlate in distinguishing sibilant fricatives from non-sibilant ones (in English: Jongman 1989; Jongman, Wayland & Wong 2000; Nissen & Fox 2005; in Oromo: Dejene 2019). In these studies, sibilants were found to have longer duration than non-sibilants. Duration of the frication noise has been contested in its role as a robust acoustic correlate in classifying fricatives. While studies such as that of Jongman (1989) and Shobha (2012) reported that it is not an important cue in classifying fricatives into sibilant and non-sibilant, as well as between the sibilant fricatives, the entire fricative noise duration has been reported as a robust cue in the perception of sibilants (Whalen 1981). The lesser contribution of frication duration in the differentiation of sibilants was reported by Gordon et al. (2002) in a study on seven languages.

In addition to noise duration and normalised duration, duration of the vowel following fricatives has been investigated but was not found to be a robust cue in identifying place of articulation (Dejene 2019).

## 2.2    Amplitude

Amplitude of the fricative noise was found to be an important cue in identifying sibilant fricatives from non-sibilant fricatives. Heinz and Stevens (1961) conducted an experiment by synthesising fricative signals and reported that the relative amplitude of fricative noise to the following vowel at −15 and −25 dB contributed to the better identification of /f/ and /θ/. Gurlekian (1981) presented synthetic /fa/ and /sa/ syllables to speakers of Spanish and American English and found that listeners identified syllables with low fricative noise amplitude to be /fa/ and syllables with high fricative noise amplitude to be /sa/. Jongman, Wayland and Wong (2000) reported a significant effect of normalised amplitude in differentiating place of articulation of fricatives in English. Nissen (2003) on English, and Dejene (2019) on Oromo, however, reported a significant effect of normalised amplitude only for the categorisation of fricatives into sibilants and non-sibilants. The contribution of amplitude has been described not to be robust in perceptual studies. Behrens and Blumstein (1988) reported that the manipulation of amplitude has little effect in the differentiation of fricatives, provided that spectral properties and formant transitions remain the same.

## 2.3 Spectral properties

The shape of the spectrum of a fricative is determined by the size and shape of the oral cavity before the point of constriction (Jongman, Wayland & Wong 2000: 1253). The length and volume of the vocal tract before the point of constriction affect the spectral shape of a fricative: labial fricatives have flat spectral shapes because the vocal tract filter has a shorter length and smaller area, whereas alveolar and palatal fricatives have 'well-defined, distinct spectral shapes' (Jongman, Wayland & Wong 2000: 1253).

Spectral peak location and spectral moments (spectral mean, spectral standard deviation, spectral skewness, spectral kurtosis) have been explored in search of correlates for place categorisation of fricatives. Spectral peak location was identified as a prominent feature of fricatives in earlier acoustic studies. Sibilant fricatives had been reported to have higher frequency for their spectral peak location, whereas non-sibilant had lower frequency as a location of their spectral peak (Jongman, Wayland & Wong 2000; Jongman, Wayland & Sereno 2000). Differences in spectral peak location as a function of place of articulation were reported for English (Jongman, Wayland & Wong 2000; Jongman, Wayland & Sereno 2000) and Spanish (de Manrique & Massone 1981; Gurlekian 1981). The spectral peak location was found to differ by gender: male subjects having lower spectral peak location frequencies than female subjects (Jongman 1989; Jongman, Wayland & Wong 2000; Fox & Nissen 2005).

The size and configuration of the vocal tract in the production of fricatives is mainly reflected in the four spectral moments (spectral mean, spectral standard deviation (SD), spectral skewness, and spectral kurtosis). Spectral mean, which is also referred to as centre of gravity, and spectral skewness are associated negatively with the length of the vocal tract filter before the point of constriction (Stevens 1998; Li, Edwards & Beckman 2009). Spectral standard deviation and spectral kurtosis are associated with the body of the tongue (apical or laminal) that is involved in the making of constriction (Li, Edwards & Beckman 2009).

Spectral moments have been studied using various methods and were found to be major acoustic correlates in the identification of place of articulation of fricatives. Forrest et al. (1988) reported the result of a discriminant analysis using the four spectral moments (spectral mean, skewness, kurtosis and variance). The postalveolar fricative /ʃ/ was discriminated with higher score (95%), followed by /s/ (85%) and /f/ (75%). A very low identification was scored for /θ/ (58%).

Spectral mean was found to be higher for females than males for adults; children had higher spectral mean than adults (Nissen 2003; Fox & Nissen 2005). Males also had lower spectral kurtosis values than females (Fox & Nissen 2005).

In addition to spectral mean and kurtosis, Jongman, Wayland and Wong (2000) reported males had lower values of spectral variance than females. In terms of place of articulation, the spectral mean for /s/ was found to be higher than the values for other fricatives (Jongman, Wayland & Wong 2000).

## 2.4    Zero-crossing rate

Zero-crossing measurements have been studied as a measure of periodicity of speech signal. Gurlekian, Franco and Santagada (1989) reported different zero-crossing rate range values for groups of consonants. Santagada and Gurlekian (1989) examined the allophones of /b/, /d/ and /g/ in Spanish to see whether they are fricatives or approximants and concluded that the allophones are approximants because they had lower zero-crossing rates compared to the fricatives. Weigelt, Sadoff and Miller (1990) reported that using an algorithm employing zero-crossing rate, the logarithm of the root mean-square (RMS) energy and the derivative of the log RMS energy with respect to time [termed rate of rise(ROR)], they were able to discriminate between voiceless fricatives from voiceless stops and affricates. Zero-crossing rate was identified as an acoustic correlate that differentiates between voiced and voiceless fricatives, as voiced fricatives have lower values than the voiceless ones (Fernández 2010). Zero-crossing points have not been investigated as a potential acoustic correlate of place, airstream or gender for fricatives or other consonants, as far as the author knows.

## 2.5    Voice measurements

The difference between ejective and plain obstruents has been explained in the voice quality of the following vowel: the vowel following ejectives had a creaky phonation (Robins & Waterson 1952; Wysocki 2004; Vicenik 2010). The measurements used to see the phonation differences include H1-H2 (relative amplitude of the first two harmonics, H1-A1 (relative amplitude of the first harmonic and the most robust harmonic in the region of first formant frequency); H1-A2 (relative amplitude of the first harmonic and the most robust harmonic in the region of second formant frequency) and H1-A3 (relative amplitude of the first harmonic and the most robust harmonic in the region of third formant frequency).

## 3.   Previous studies on Amharic fricatives

The earliest acoustic study on Amharic was done by Sumner (1957). Using an electrokymograph, he collected data from a single male speaker. Nevertheless, the analysis was made for a group of consonants such as ejectives (including the ejective stops /p'/, /t'/, /k'/; the ejective affricate /tʃ'/ and the ejective fricative /s'/. The only fricative that was investigated by itself was the glottal fricative /h/, which was reported to have 16 cycles (7cs).

Among the fricative phonemes in Amharic, the ejective fricative /s'/ had got attention because of the acoustic and aerodynamic properties involved in its production. The ejective fricative /s'/ has been reported to have shorter duration than the pulmonic fricative /s/ (Demolin 2004). This result, however, was not confirmed by Derib (2017), as he reported /s'/ had longer duration than /s/. Both studies used three native speakers and recorded real words at normal speaking rate, putting the fricatives in vcv context both as singleton and geminate. However, there were differences in the vowels preceding and following the fricatives: in Demolin (2004) they were either /ɨ/, /ə/ or /a/ but Derib (2017) used /a/ only preceding and following the fricatives. The difference could also be attributed to the number of participants in both studies.

Demolin (2002) characterised /s'/ to have constant amplitude and the intraoral pressure to show high and short pressure peak and rapid rise. The electropalatography results for the ejective fricative showed a wider area of contact than for the pulmonic fricative (Demolin 2002).

## 4.   Methods

### 4.1   Subjects

Five male and five female subjects were recorded in a quiet room saying words aloud. The subjects were between the ages of 20 and 32 and were all born and raised in Addis Ababa with no history of speech or hearing disorders.

### 4.2   Recording

All the recordings were made using Sennheiser e-815 dynamic microphone attached to csl 4400 by Kay Elemetrics. The microphone was placed approximately 10 cm from the mouth of the speaker to avoid clipping of the amplitude. The audio recording was sampled a 44100 Hz and quantised at 16 bits. The word lists were presented in the Amharic writing system (in the Ethiopic script). The subjects

were given time to practice reading the words and test recorded before the actual recording took place. The words were put in randomised lists, and five randomised repetitions were recorded, of which the middle three repetitions were annotated and analysed. A total of 420 tokens (10 subjects * 7 fricatives * 2 positions * 3 repetitions) were used for this study.

## 4.3    Stimuli

All the words were real Amharic words that contain the target fricatives in a cv and vcv contexts in which the vowel is the low central vowel /a/. All the fricatives appeared only as singleton in the words. They are presented in the table below.

**Table 1.**  List of Amharic words used for recording

| Words containing the target fricative in cv context | Words containing the target fricative in vcv context |
| --- | --- |
| /s'adək'/ 'righteous' | /nas'af/ '[you, M) come and write |
| /safa/ 'bucket made of aluminium' | /asama/ 'pig' |
| /ʃata/ 'container used to catch fish' | /aʃara/ 'finger print, mark' |
| /ʒagre/ 'one who carries the spear, and sword of a royalty' | /aʒara/ 'gravel found near rivers and cliffs' |
| /zagol/ 'bead' | /azaba/ 'cow dung' |
| /fata/ 'a moment of relief' | /afaʃ/ 'one who gathers up crops or flour' |
| /hagɜr/ 'country' | /ahad/ 'item' |

## 4.4    Measurements

The following measurements were taken for the fricatives in both cv and vcv contexts: fricative noise duration, normalised duration, following vowel duration, spectral peak location, maximum and mean intensity, normalised intensity, spectral centre of gravity, spectral standard deviation, spectral skewness, spectral kurtosis, zero-crossing, normalised zero-crossing and voice measurements (H1-H2, H1-A1, H1-A2, H1-A3).

Fricative duration was measured from the beginning to the end of the fricative noise, and vowel duration from the beginning to the end of the vowel, following the fricatives aided by wave and spectrographic displays on Praat (version 6.0.3.7) (Boersma & Weenink 2018). Intensity measurements were made for the entire fricative duration, for the first 30 ms of the vowel and for the entire vowel duration. Normalised intensity was calculated as the difference between the maximum intensity of the fricative and the first 30 ms.
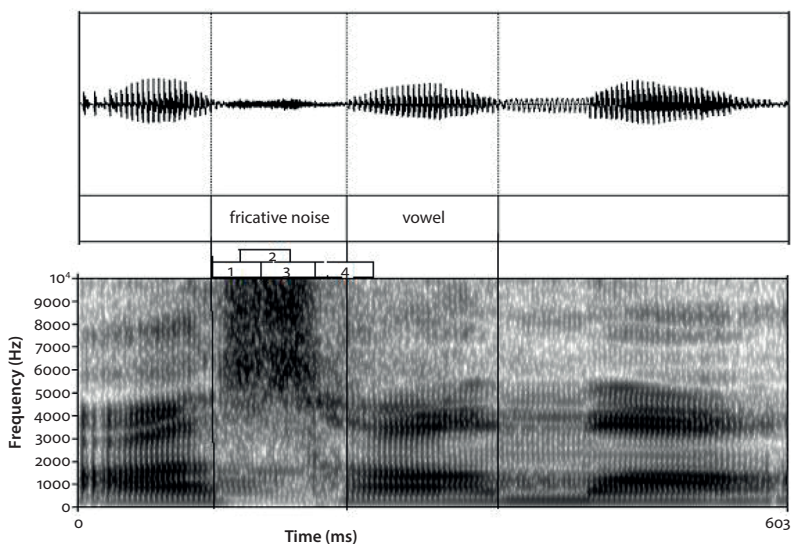
**Figure 1.** Increments in the measurement of fricative and vowel duration in the word /
asama/ 'pig' produced by female speaker F1. W1-W4 represent the four windows used in
the measurement of spectral moments

Measurements of spectral moments were made using a 40 ms Gaussian window
at the beginning, mid and end of the fricative noise, and at the boundary of the
fricative-vowel transition using Praat and a script by Elvira-García (2014), following
similar procedures outlined by Jongman, Waylan & Wong (2000). The first three
windows had a 20 ms overlap. The audio recording was hann band-pass filtered
at 1000 and 11000 Hz prior to the spectral and intensity measurements. The FFT
power spectral analysis, which uses calculations to the power of 2, was employed
in the spectral analysis.

Zero-crossing was measured for the first 30 ms of the fricative duration as well
as for the entire duration. The zero-crossings for the whole interval were multiplied
by 10 and divided by the interval duration as a means of normalisation, which is
referred to as normalised zero-crossing in this study.

Voice measurements were made using the script by Chad Vicenik, which makes
a similar analysis with VoiceSauce (Shue, Keating & Vicenik 2009). The measure-
ments were made first by dividing the duration of the vowel into three parts and
calculating the voice measurements (H1-H2, H1-A1, H1-A2, H1-A3) for the first
one-third section of the vowel following each of the fricatives.

## 4.5   Statistical analysis

A four-way, three-way and univariate analysis of variance were made on the values of the measurements of the three repetitions using R version 3.6.1. Place of articulation, gender, position within a word, window location, airstream and voice were taken as independent variables, whenever appropriate. In order to see where the significant effects of variables lie, Bonferroni post hoc test was used whenever a significant result was found on the analysis of variance.

## 5.   Results

Before the analysis on different measurements was made, the spectrograms were inspected to see if there were differences within the instances of the fricative ejective, as there were reports that stated that the first part of the fricative ejective may have a closure component, such as the one reported for Tigrinya by Shosted and Rose (2011). The results of this study showed that there is no affrication of the ejective fricative in Amharic. In this study, a post frication lag until the glottal opening (mean duration = 39 ms) in cv and (mean duration = 34 ms) in vcv position was found, which is similar to the finding for Arabic (Al-Khairy 2005).

## 5.1   Durational measurements

Mean noise duration of each of the fricatives averaged across gender and position within word are presented in Table 2.

**Table 2.**  Mean and sᴅ values of fricative duration of vowel following the fricatives and normalised duration averaged across genders and position in a word

| Fricative | Noise duration | | Vowel duration | | Normalised duration | |
|---|---|---|---|---|---|---|
| | Mean | sᴅ | Mean | sᴅ | Mean | sᴅ |
| z | 79.05 | 20.83 | 154.77 | 18.07 | 0.335 | 0.060 |
| ʒ | 79.95 | 24.99 | 156.72 | 19.82 | 0.334 | 0.071 |
| h | 88.33 | 24.29 | 146.65 | 28.12 | 0.374 | 0.072 |
| f | 98.25 | 25.12 | 150.17 | 21.39 | 0.392 | 0.068 |
| s' | 99.58 | 26.98 | 158.35 | 22.58 | 0.383 | 0.069 |
| s | 105.90 | 21.70 | 139.48 | 25.52 | 0.432 | 0.064 |
| ʃ | 112.97 | 23.57 | 157.38 | 21.74 | 0.416 | 0.054 |

The overall mean of fricative noise in Amharic shows the postalveolar fricative /ʃ/ had the longest duration, followed by alveolar fricatives /s/ and /s'/. The glottal fricative /h/ had the shortest duration among the voiceless fricatives.

Duration of the fricative noise and normalised duration did not show statistically significant differences due to place of articulation. Place had a significant effect on the duration of the vowel following the fricatives, but the effect was seen mainly due to the significant differences between /s/ and /ʒ/, which differ in voice. Neither was the difference between sibilant and non-sibilant fricative significant for all durational measurements, though for voiceless pulmonic fricatives, sibilant fricatives had higher values for fricative noise duration and normalised duration.

Gender had a significant effect on the duration of the fricative noise and the duration of the vowel following the fricative: female values were higher than male values, which were statistically significant, as presented in Table 3 below. In the case of frication duration for all the fricatives, female values were higher than male values by 11 ms, on average.
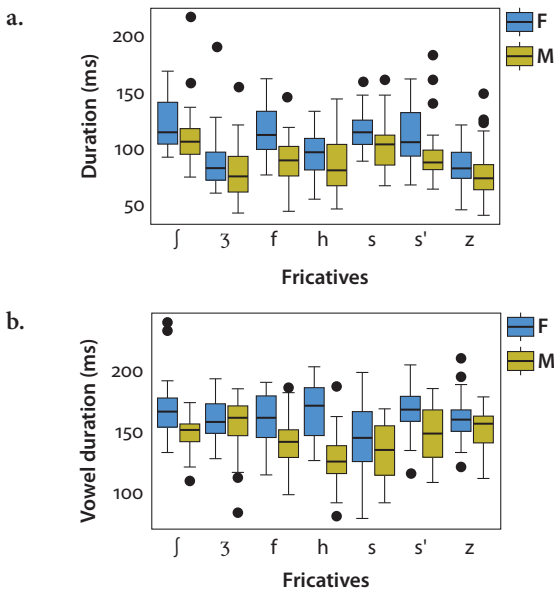


**Figure 2.** Box plot of fricative noise duration and vowel duration:
(a) Fricative duration and (b) duration of the vowel following the fricatives for male and female speakers of Amharic

The effect of position was significant only on the duration of the vowel following the fricatives (Cf. Table 3). Fricatives in the CV position were followed by longer vowels than fricatives in the VCV position, except for /h/ and /ʒ/.

**Table 3.** Results of a three-way analysis of variance on the effects of place, gender and position within a word on durational measurements: (a) frication duration, (b) duration of the vowel following the fricatives and (c) normalised duration

**a.** Frication duration

|  | Sum Sq | DF | F value | Pr(>F) | Part. eta sq |
|---|---|---|---|---|---|
| Place | 3552 | 3 | 27.352 | 0.14003 | 0.0119 |
| Gender | 17641 | 1 | 26.31 | 0.0000002728 *** | 0.0592 |
| Position | 1478 | 1 | 2.2923 | 0.13080 | 0.0050 |
| Gender:Position | 3661 | 1 | 5.676 | 0.01766 * | 0.0123 |
| Residuals | 296414 | 418 |  |  | 0.9950 |

**b.** Vowel duration

|  | Sum Sq | Df | F value | Pr(>F) | Part. eta sq |
|---|---|---|---|---|---|
| Place | 5209 | 3 | 4.407 | 0.0045781 ** | 0.0227 |
| Gender | 29854 | 1 | 75.791 | 2.48e-14 **** | 0.1299 |
| Position | 9007 | 1 | 22.866 | 0.000439 *** | 0.0392 |
| Gender:Place | 7544 | 3 | 6.383 | 0.0003103 *** | 0.0328 |
| Gender:Position | 5180 | 1 | 13.15 | 0.0003242 *** | 0.0225 |
| Place:Position | 13063 | 3 | 11.054 | 0.0000005463 *** | 0.0569 |
| Residuals | 159135 | 404 |  |  | 0.9608 |

* For all p values henceforth, * represents statistically significant at $p < 0.005$, ** represents statistically significant at $p < 0.05$, and *** represents statistically significant at $p < 0.001$. The p value <2e-16 *** represents the smallest larger than zero. The p value 2.48e-14 is the same as $2.48 \times 10^{-14}$, which is 0.0000000000000248.

**c.** Normalised duration

|  | Sum Sq | Df | F value | Pr(>F) | Part. eta sq |
|---|---|---|---|---|---|
| Place | 0.01541 | 3 | 1.1951 | 0.4016692 | 0.0067 |
| Gender | 0.00626 | 1 | 1.1951 | 0.2749461 | 0.0027 |
| Position | 0.00842 | 1 | 1.6086 | 0.2054202 | 0.0037 |
| Gender:Position | 0.06361 | 1 | 12.145 | 0.0005461 *** | 0.0277 |
| Residuals | 2.11586 | 404 |  |  | 0.9608 |

Voice had a significant effect on the duration of fricatives and the normalised duration, but not on the duration of the vowel following the fricatives (Cf. Table 4): voiced fricatives had shorter duration than their voiceless counterparts.

**Table 4.** Results of a univariate analysis of variance of the effects of voice and airstream on (a) fricative duration, (b) duration of the vowel following the fricatives and (c) normalised duration

**a.** Duration of the fricatives

|  | Df | Sum Sq | Mean Sq | F value | Pr(>F) | Part. eta sq |
|---|---|---|---|---|---|---|
| Voice | 1 | 51136 | 51136 | 88.93 | <2e-16 *** | 0.2298 |
| Residuals | 298 | 171347 | 575 |  |  | 0.7702 |
| Airstream | 1 | 1197 | 1197 | 1.997 | 0.16 | 0.0166 |
| Residuals | 118 | 70734 | 599.4 |  |  | 0.9834 |

**b.** Vowel duration

|  | Df | Sum Sq | Mean Sq | F value | Pr(>F) | Part. eta sq |
|---|---|---|---|---|---|---|
| Voice | 1 | 1154 | 1153.6 | 2.254 | 0.134 | 0.0075 |
| Residuals | 298 | 152518 | 511.8 |  |  | 0.9925 |
| Airstream | 1 | 10679 | 10679 | 18.39 | 0.000037 | 0.1348 |
| Residuals | 118 | 68523 | 581 |  |  | 0.8652 |

**c.** Normalised duration

|  | Df | Sum Sq | Mean Sq | F value | Pr(>F) | Part. eta sq |
|---|---|---|---|---|---|---|
| Voice | 1 | 0.415 | 0.415 | 96.1 | <2e-16 *** | 0.2438 |
| Residuals | 298 | 1.287 | 0.0043 |  |  | 0.7562 |
| Airstream | 1 | 0.0721 | 0.0721 | 16.23 | 0.0000996 *** | 0.1209 |
| Residuals | 118 | 0.5241 | 0.00444 |  |  | 0.8791 |

As Table 4 shows, the effect of airstream was significant for the duration of the vowel following the fricatives and the normalised duration, but not the duration of the fricatives themselves. The vowel following /s'/ was longer than the vowel following /s/.

## 5.2   Spectral peak location

Mean and sᴅ of spectral peak location values for Amharic fricatives are presented in Appendix 1. Place of articulation had a statistically significant effect on the spectral peak location of Amharic fricatives (Cf. Table 5.) Alveolars had the highest value of frequency of spectral peak location, followed by postalveolars. The glottal fricative /h/ had the lowest value of frequency of spectral peak location. Bonferroni post hoc test revealed that alveolar versus the rest of the three places, and the postalveolar versus the labiodental were significantly different at $p < 0.0001$. The difference between postalveolar and glottal place was slightly significant, at $p < 0.05$.

The only non-significant difference in the frequency of peak intensity was between the non-sibilants /f/ and /h/. Thus, the difference between sibilant and non-sibilant fricatives was statistically significant at $p < 0.0001$.
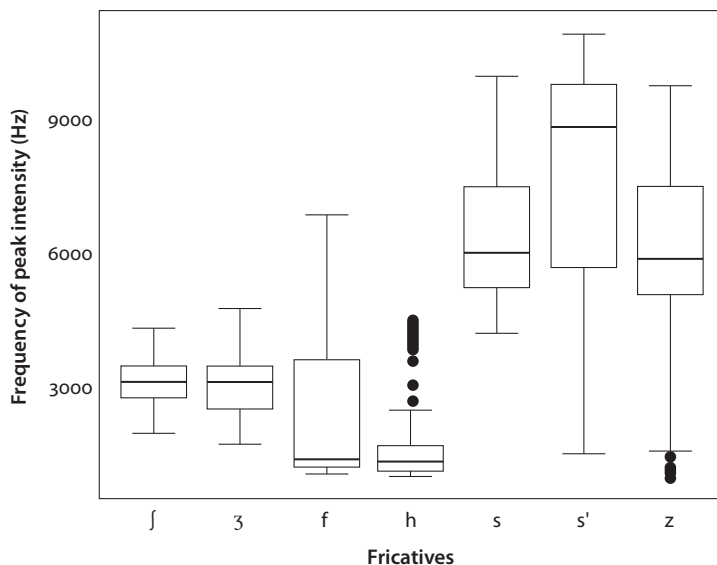


**Figure 3.** Box plot of frequency of peak intensity

Sibilants had maximum intensity at higher values than non-sibilants, as can be seen in Figure 3, and the differences were statistically significant (Cf. Table 5). /s'/ had higher values than /s/, which was statistically significant (Cf. Table 5).

**Table 5.**

**a.** Results on the three-way analysis of variance of the effects of place of articulation, gender and position within a word on spectral peak location

|  | Sum Sq | Df | F value | Pr(>F) | Part. eta sq |
|---|---|---|---|---|---|
| Place | 1923783065 | 3 | 300.089 | < 2.2e-16 *** | 0.6423 |
| Gender | 70594620 | 1 | 33.036 | 1.785e-08 *** | 0.0236 |
| Position | 20586215 | 1 | 9.633 | 0.002045 ** | 0.0069 |
| Residuals | 863307991 | 404 |  |  | 0.2882 |

**b.** Results on analysis of variance of airstream on spectral peak location of Amharic fricatives

|  | Df | Sum Sq | Mean Sq | F value | Pr(>F) | Part eta sq. |
|---|---|---|---|---|---|---|
| Airstream | 1 | 75595163 | 75595163 | 21.08 | 0.0000111 *** | 0.1516 |
| Residuals | 118 | 423096005 | 3585559 |  |  | 0.8484 |

The effect of gender on the frequency of peak intensity was significant (Cf. Table 5). The difference in the frequency of peak intensity of Amharic fricatives had different patterns for sibilants and non-sibilants. For sibilant fricatives, the values for females were lower than the values for males. The result was the opposite for sibilant fricatives: the values for females were higher than the values for males, as can be seen in Figure 4a, b.
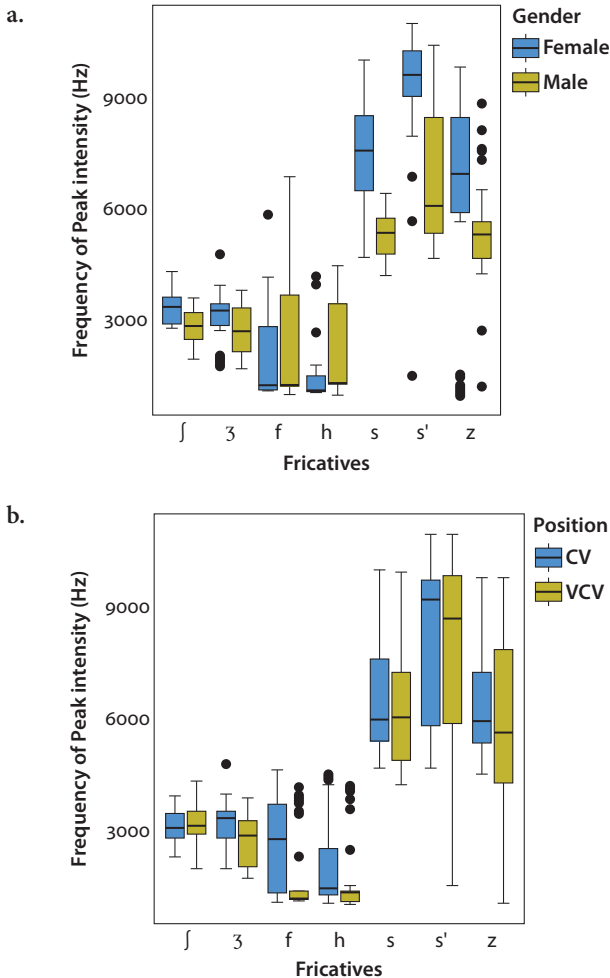


**Figure 4.** Box plot of frequency of peak intensity for Amharic fricatives (a) by gender and (b) by position within a word

Position also had a statistically significant effect on the frequency of peak intensity: the values in the cv position were higher than those in the vcv position, except for /ʃ/.

The effect of airstream on spectral peak location was statistically significant: /s'/ had higher values than /s/ and the rest of the fricatives.

## 5.3    Intensity

Mean and sd of intensity measurements for Amharic fricatives are presented in Appendix 1. Figure 5 presents the boxplot of the three types of measurements of intensity: maximum intensity, mean intensity, and normalised intensity (the maximum intensity of the frication relative to the intensity of the first 30 ms of the vowel). In all of the three measurements, the postalveolar fricatives had the highest values, followed by the alveolars and the glottal fricative. The labiodental fricative had the lowest values on the intensity measurements.
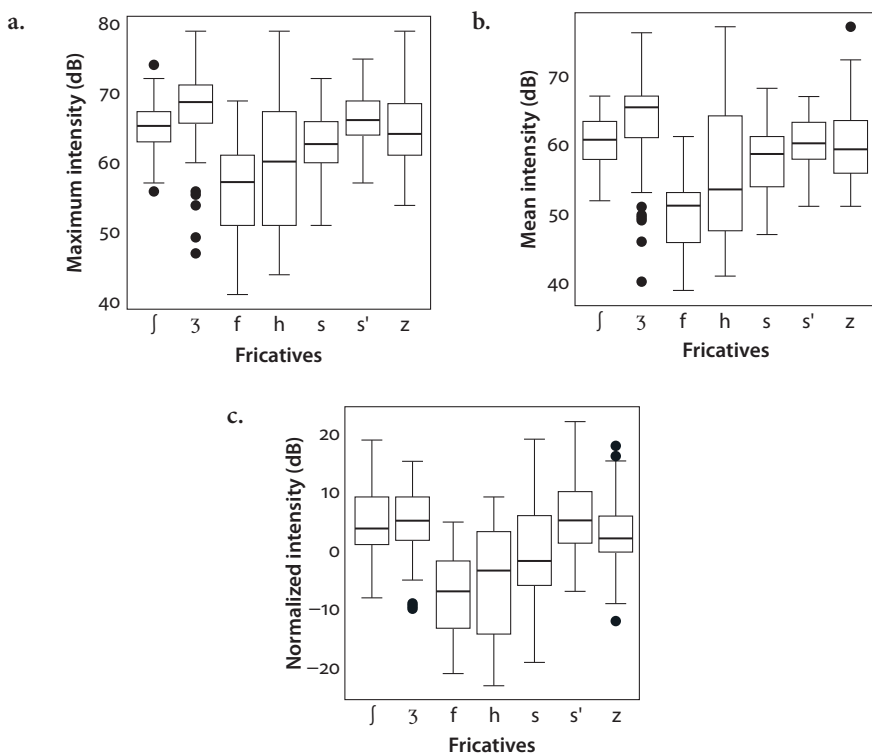


**Figure 5.** Box plot of intensity measurements for Amharic fricatives: (a) maximum intensity, (b) mean intensity and (c) normalised intensity

The effect of place of articulation on all three intensity measurements was statistically significant. Sibilant fricatives had higher values on all intensity measurements than the non-sibilant fricatives, and the differences were statistically significant on Bonferroni post hoc test at $p < 0.0001$. The post hoc test showed the differences in place of articulation within the sibilants and within the non-sibilants were also statistically significant at $p < 0.05$. Thus, intensity measurements were able to differentiate the four places of articulation.

**Table 6.** Results on the univariate analysis of variance on the effect sibilance on different intensity measurements: (a) maximum intensity, (b) mean intensity, (c) overall normalised intensity and (d) normalised intensity

a.  Maximum intensity

|  | Sum Sq | Df | F value | Pr(>F) | Part eta sq |
|---|---|---|---|---|---|
| Place | 5463.0 | 3 | 83.6156 | <2e-16 *** | 0.2755 |
| Gender | 107.3 | 1 | 4.9270 | 0.0270* | 0.0054 |
| Position | 3181.8 | 1 | 146.0966 | <2e-16 *** | 0.1605 |
| Gender:Place | 54.0 | 3 | 0.8265 | 0.4798 | 0.0027 |
| Gender:Position | 3.1 | 1 | 0.1411 | 0.7074 | 0.0002 |
| Place:Position | 2198.2 | 3 | 33.6450 | <2e-16 *** | 0.1109 |
| Gender:Place:Position | 22.0 | 3 | 0.3367 | 0.7988 | 0.0011 |
| Residuals | 8798.5 | 404 |  |  | 0.4437 |

b.  Mean Intensity

|  | Sum Sq | Df | F value | Pr(>F) | Part eta sq |
|---|---|---|---|---|---|
| Place | 6211.1 | 3 | 102.98 | <2.2e-16 *** | 0.0076 |
| Gender | 156 | 1 | 7.759 | 0.005594 ** | 0.3026 |
| Position | 3828.2 | 1 | 190.414 | <2.2e-16 *** | 0.1865 |
| Gender:Place | 65.8 | 3 | 1.091 | 0.352552 | 0.0032 |
| Gender:Position | 11.6 | 1 | 0.5772 | 0.447868 | 0.0006 |
| Place:Position | 2090.2 | 3 | 34.654 | <2e-16 *** | 0.1018 |
| Gender:Place:Position | 44 | 3 | 0.728 | 0.535 | 0.0021 |
| Residuals | 8798.5 | 404 |  |  | 0.3956 |

c.  Normalised Intensity

|  | Sum Sq | Df | F value | Pr(>F) | Part. eta sq |
|---|---|---|---|---|---|
| Place | 8639 | 3 | 78.986 | 0.004406 ** | 0.3027 |
| Gender | 299 | 1 | 8.2 | < 2.2e-16 *** | 0.0105 |
| Position | 2166.9 | 1 | 59.437 | 9.916e-14 *** | 0.0759 |
| Gender:Place | 118.3 | 3 | 1.081 | 0.356479 | 0.0041 |
| Gender:Position | 0 | 1 | 0 | 0.994739 | 0 |
| Place:Position | 2561.3 | 3 | 23.418 | 5.393e-14 *** | 0.0898 |
| Gender:Place:Position | 21.7 | 3 | 0.198 | 0.897505 | 0.0008 |
| Residuals | 14728.9 | 404 |  |  | 0.5162 |

The effect of gender was significant for all intensity measurements, but it was consistent only for mean intensity, which showed that the values for males were higher than the values for females.

Position had significant and consistent effect only on maximum intensity. The fricatives in vcv position had higher maximum intensity than those in the cv position, as can be seen in Figure 6, and the differences were statistically significant.



a.                                        b.
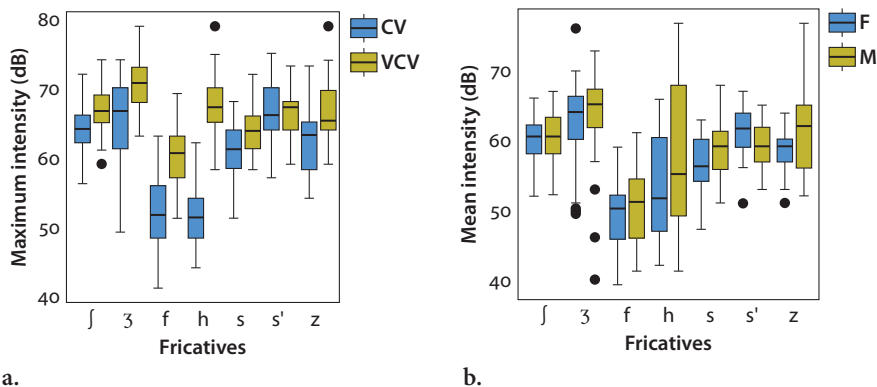
**Figure 6.** Boxplot of (a) maximum intensity of Amharic fricatives by position and (b) mean intensity of Amharic fricatives by gender

**Table 7.** Results on the univariate analysis of variance on the effect airstream and voice on different intensity measurements: (a) maximum intensity, (b) mean intensity and (c) normalised intensity

**a.** Maximum intensity

|  | Df | Sum Sq | Mean Sq | F value | Pr(>F) | Part. eta sq |
|---|---|---|---|---|---|---|
| Airstream | 1 | 476 | 476 | 30.84 | 0.000000176 *** | 0.2072 |
| Residuals | 118 | 1822 | 15.4 |  |  | 0.7928 |
| Voice | 1 | 126 | 126.41 | 5.147 | 0.024 * | 0.0170 |
| Residuals | 298 | 7318 | 24.56 |  |  | 0.9830 |

**b.** Mean intensity

|  | Df | Sum Sq | Mean Sq | F value | Pr(>F) | Part. eta sq |
|---|---|---|---|---|---|---|
| Airstream | 1 | 165.7 | 165.68 | 10.79 | 0.00134 ** | 0.0838 |
| Residuals | 118 | 1810.9 | 15.35 |  |  | 0.9162 |
| Voice | 1 | 308 | 308.35 | 12.36 | 0.000508 *** | 0.0398 |
| Residuals | 298 | 7436 | 24.95 |  |  | 0.9602 |

**c.** Normalised intensity

|            | Df  | Sum Sq | Mean Sq | F value | Pr(>F)          | Part. eta sq. |
|------------|-----|--------|---------|---------|-----------------|---------------|
| Airstream  | 1   | 935    | 935.2   | 19.53   | 0.0000221 ***   | 0.1420        |
| Residuals  | 118 | 5650   | 47.9    |         |                 | 0.8580        |
| Voice      | 1   | 16     | 16.06   | 0.382   | 0.537           | 0.0013        |
| Residuals  | 298 | 12522  | 42.02   |         |                 | 0.9987        |

As presented in Table 7, airstream had a statistically significant effect on all meas-
urements: the ejective fricative /s'/ had higher values on all of the intensity meas-
urements than pulmonic alveolar voiceless fricative /s/ (Cf. Figure 5).

The effect of voice was more visibly significant on mean intensity than on maxi-
mum intensity. Relative intensity values were not affected by voice. Nevertheless, in
all three intensity measurements, /z/ had higher values than /s/ and /ʒ/ had higher
values than /ʃ/.

## 5.4   Spectral moments

Mean and sᴅ of the four spectral measurements for Amharic fricatives are pre-
sented in Appendix 2.

### 5.4.1   *Spectral centre of gravity (ᴄᴏɢ)*
Box plot of ᴄᴏɢ values for Amharic fricatives averaged across genders, position and
windows are presented in Figure 7. The results show that the alveolar fricatives had
the highest mean ᴄᴏɢ values followed by the postalveolars and then the labiodental
fricative. The glottal fricative had the smallest value of mean ᴄᴏɢ.
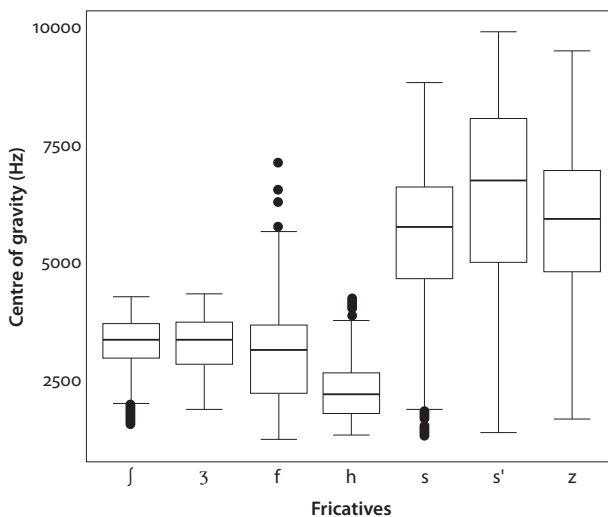


**Figure 7.** Box plot of ᴄᴏɢ values for Amharic fricatives averaged across genders, position
within a word and window location

Place of articulation had a statistically significant effect on spectral COG values as presented in Table 8. A post-hoc test showed that all place contrasts, except the postalveolar vs labiodental, were significant at $p < 0.0001$. Sibilants had higher values of spectral COG than non-sibilants, but the differences between sibilant and non-sibilant fricatives were not statistically significant, just as the difference between postalveolars and the labiodental were not statistically significant.

**Table 8.**

**a.**  Results of a four-way analysis of variance of the effects of place of articulation, gender, position and window location on spectral COG

| Response= Spectral COG | Sum Sq | Df | F value | Pr(>F) | Part. eta sq. |
|---|---|---|---|---|---|
| Place | 3468386152 | 3 | 1228.9974 | < 2.2e-16 *** | 0.5087 |
| Gender | 28759416 | 1 | 30.5721 | 3.745e-08 *** | 0.0042 |
| Position | 74004328 | 1 | 78.6687 | < 2.2e-16 *** | 0.0109 |
| Window | 1031674633 | 3 | 365.5664 | < 2.2e-16 *** | 0.1513 |
| Gender:Place | 97937393 | 3 | 34.7034 | < 2.2e-16 *** | 0.0144 |
| Gender:Position | 9933487 | 1 | 10.5596 | 0.001180 ** | 0.0015 |
| Place: Position | 13101135 | 3 | 4.6423 | 0.003085 ** | 0.0019 |
| Gender:Window | 59088926 | 3 | 20.9377 | 2.620e-13 *** | 0.0087 |
| Place:Window | 409744125 | 9 | 48.3966 | < 2.2e-16 *** | 0.0601 |
| Position:Window | 10143390 | 3 | 3.5942 | 0.013156 * | 0.0015 |
| Gender:Place:Position | 995286 | 3 | 0.3527 | 0.787222 | 0.0001 |
| Gender:Place:Window | 74053500 | 9 | 8.7468 | 6.274e-13 *** | 0.0109 |
| Gender:Position:Window | 4452534 | 3 | 1.5777 | 0.192856 | 0.0007 |
| Place:Position:Window | 10583971 | 9 | 1.2501 | 0.259857 | 0.0016 |
| Gender:Place:Position:Window | 4882695 | 9 | 0.5767 | 0.817139 | 0.0007 |
| Residuals | 1520185540 | 1616 | | | 0.2230 |

**b.**  Results of analysis of variance of the effects of airstream on spectral COG

| | Df | Sum Sq | Mean Sq | F value | Pr(>F) | Part. eta sq. |
|---|---|---|---|---|---|---|
| Airstream | 1 | 80002447 | 80002447 | 18.31 | 0.0000227 *** | 0.0369 |
| Residuals | 478 | 2088368709 | 4368972 | | | 0.9631 |

Window location had a significant effect on COG values. However, the differences were significant only between the fourth window against the rest of the three windows at $p < 0.001$, as revealed by Bonferroni post hoc test. Amharic fricatives had lower spectral COG values in the fourth window than in the rest of the three windows, as shown in Figure 8.
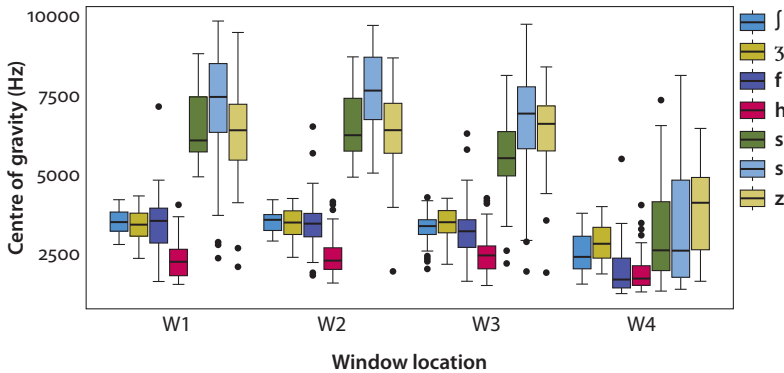
**Figure 8.** Box plot of COG values for Amharic fricatives plotted against window location

The effect of gender was slightly significant, as can be seen in Table 8. The mean spectral COG values for females were higher than the values for males, except for the glottal fricative, as can be seen in Figure 9.

The effect of position was significant. Fricatives in the CV position had higher spectral COG values than fricatives in the VCV position.



a.                                                b.
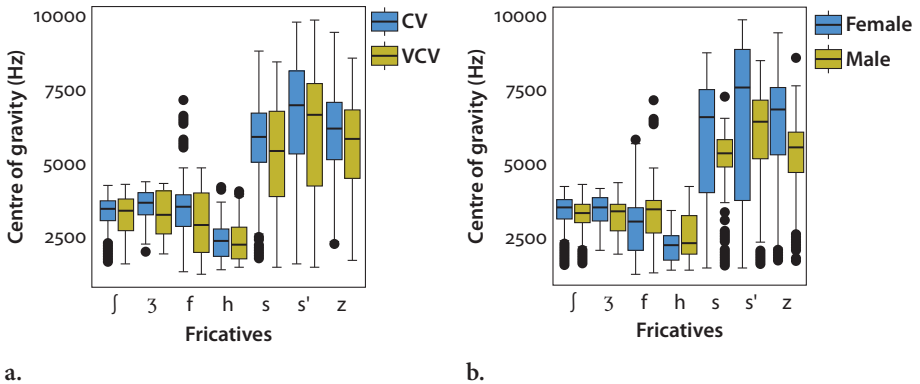
**Figure 9.** Box plot COG values of Amharic fricatives (a) by position in a word and (b) by gender

The interactions of the place with gender, place with position and place with window location were all statistically significant. The interactions of position with gender and position with window location yielded statistically significant differences, though the level of significance was much lower for the latter one. The only statistically significant three-way interaction was between place, gender and window location.

The effect of airstream was statistically significant: /s'/ had higher spectral COG values than /s/.

### 5.4.2    *Spectral standard deviation*

Spectral standard deviation (sᴅ) shows that the postalveolar and glottal fricatives had lower values than the alveolar and labiodental fricatives, as can be seen in Figure 10.
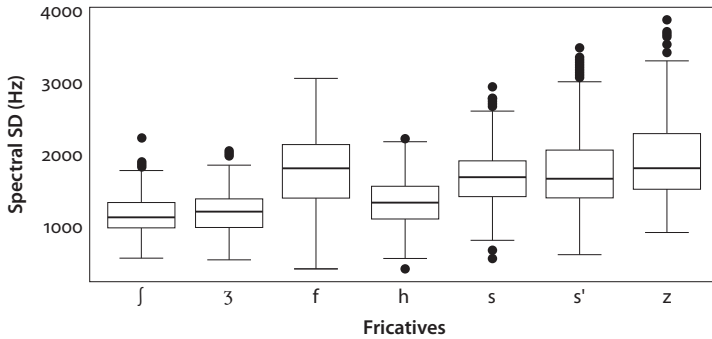


**Figure 10.**  Box plot of spectral sᴅ of Amharic fricatives

A four-way analysis of variance (place X gender X position X window location) showed that place of articulation had a statistically significant effect on spectral sᴅ values of Amharic fricatives as presented in Table 9. Bonferroni post hoc test for the spectral sᴅ values of the four places of articulation revealed that the glottal fricative and the postalveolar fricatives had significant differences with the alveolar and labiodental fricatives at $p < 0.001$. Though position and window location had slightly significant p values, spectral sᴅ values were not affected by them as the results were not consistent across the fricatives.

**Table 9.**

**a.**  Results of a four-way analysis of variance of the effects of place, gender, position within a word and window location on spectral sᴅ values

| Response= Spectral sᴅ | Sum Sq | Df | F value | Pr(>F) | Part. eta sq |
|---|---|---|---|---|---|
| Place | 133480436 | 3 | 265.7612 | < 2.2e-16 *** | 0.2760 |
| Gender | 102566 | 1 | 0.6126 | 0.4339141 | 0.0002 |
| Position | 751153 | 1 | 4.4867 | 0.0343126 * | 0.0016 |
| Window | 2075139 | 3 | 4.1316 | 0.0062714 ** | 0.0043 |
| Residuals | 270549166 | 1616 | | | 0.5595 |

**b.**  Results of a univariate analysis of variance of the effects of airstream on spectral sᴅ values

| Response= Spectral sᴅ | Df | Sum Sq | Mean Sq | F value | Pr(>F) | Part. eta sq |
|---|---|---|---|---|---|---|
| Airstream | 1 | 566287 | 566287 | 2.251 | 0.134 | 0.0047 |
| Residuals | 478 | 120274246 | 251620 | | | 0.9953 |

The effect of airstream was not statistically significant: /s'/ and /s/ had very close values, as can be seen in Figure 10.

### 5.4.3   *Spectral skewness*

Spectral skewness values for Amharic fricatives averaged across window location, position in a word and gender are presented in Figure 11. Alveolars had the lowest skewness values than the rest of the fricatives produced at the other places of articulation.

The effect of place of articulation was statistically significant but this was mainly caused by the alveolars, which had lower spectral skewness values than the rest of the fricatives, and which showed significant differences with the rest of places of articulation at $p < 0.0001$ in Bonferroni post hoc test. The difference between sibilant and non-sibilant fricatives was also significant, which was caused by the lower values for alveolar fricatives.
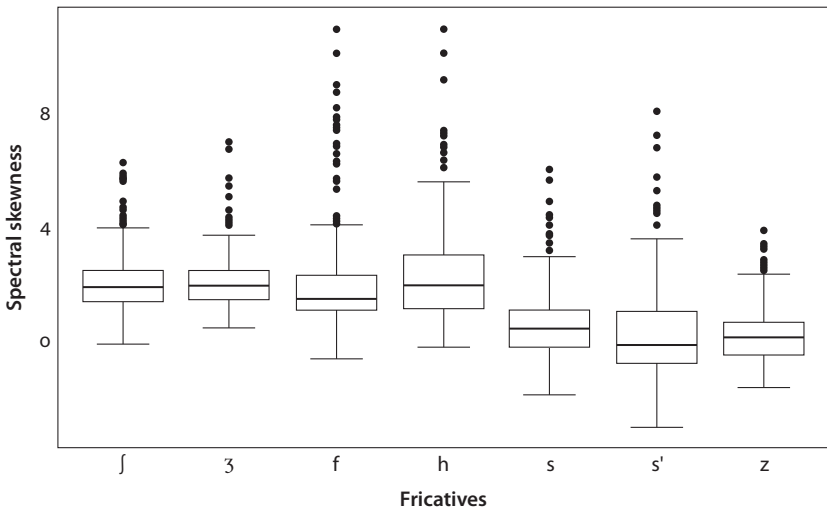


**Figure 11.** Box plot of spectral skewness values of Amharic fricatives averaged across genders, position within a word and window location. Note the outliers due to the effect of the fourth window (Cf. Figure 12).

Though position within a word had a slightly significant p value, the results were not consistent across all fricatives.

**Table 10.**

**a.** Results of a four-way univariate analysis of variance of the effects of place, gender, position within a word and window location on spectral skewness

| Response= Spectral Skewness | Sum Sq | Df | F value | Pr(>F) | Part. eta sq |
|---|---|---|---|---|---|
| Place | 1276.28 | 3 | 292.2227 | <2.2e-16 *** | 0.2568 |
| Gender | 1.14 | 1 | 0.7843 | 0.375976 | 0.0002 |
| Position | 7.23 | 1 | 4.9634 | 0.026026 * | 0.0015 |
| Window | 713.92 | 3 | 163.4616 | < 2.2e-16 *** | 0.1436 |
| Place: Window | 172.64 | 9 | 13.1760 | <2.2e-16 *** | 0.0347 |
| Residuals | 2352.6 | 1616 | | | 0.4733 |

**b.** Results of a univariate analysis of variance of the effects of airstream on spectral skewness

| Response= Spectral skewness | Df | Sum Sq | Mean Sq | F value | Pr(>F) | Part. eta sq |
|---|---|---|---|---|---|---|
| Airstream | 1 | 24.4 | 24.387 | 8.77 | 0.00327 | 0.0179 |
| Residuals | 478 | 1334.2 | 2.791 | | | 0.9821 |

Window location had a significant effect on skewness values. Nevertheless, Bonferonni post hoc test revealed that the difference due to window location was significant only for the fourth window against the rest of the windows at $p < 0.001$. The skewness values for the fourth window were significantly higher than the values for the rest of the windows.

The interaction of place and window location was statistically significant, and this is true specifically for three of the four places of articulation (except the post-alveolars) that showed higher values for the fourth window.
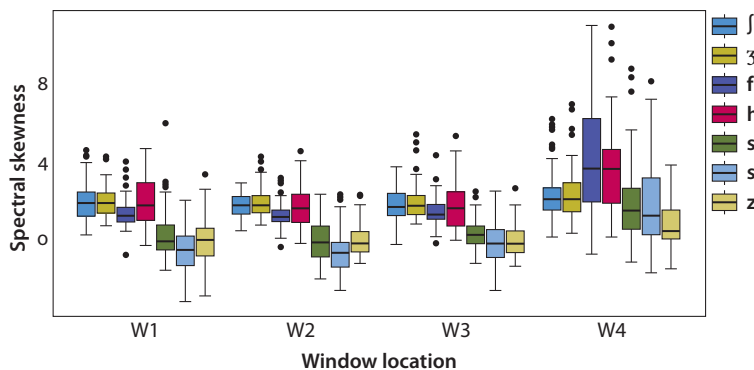


**Figure 12.** Box plot of skewness values of Amharic fricatives by window location

Gender and airstream had no effect on spectral skewness values of Amharic fricatives.

### 5.4.4 *Kurtosis*

Spectral kurtosis values for Amharic fricatives collapsed across genders, window location and position within a word showed that alveolar fricatives had the lowest kurtosis values compared to the rest of the fricatives, as can be seen in Figure 13. The difference between the values for kurtosis of Amharic fricatives was significant for place of articulation. However, Bonferroni post hoc test showed that the differences were significant only for the alveolars against the rest of the fricatives at $p < 0.001$, showing that there were no sibilant versus non-sibilant differences.
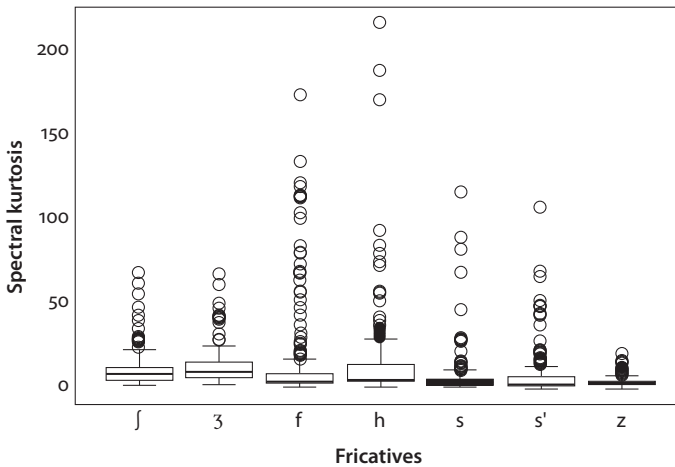


**Figure 13.** Box plot of spectral kurtosis values of Amharic fricatives. Note the outliers due to the fourth window (Cf. Figure 14 and Figure 15)

Though gender and position had significant p values, the results were consistent only for the fourth window across all fricatives: values for females were higher than for males, and values for fricatives in vcv position had higher values than fricatives in the cv position, as presented in Figure 14. a, b.

The differences in value of spectral kurtosis due to gender and position in the fourth window were prominent mainly for the non-sibilant fricatives rather than the sibilant fricatives, as can be seen in Figure 14a, b.
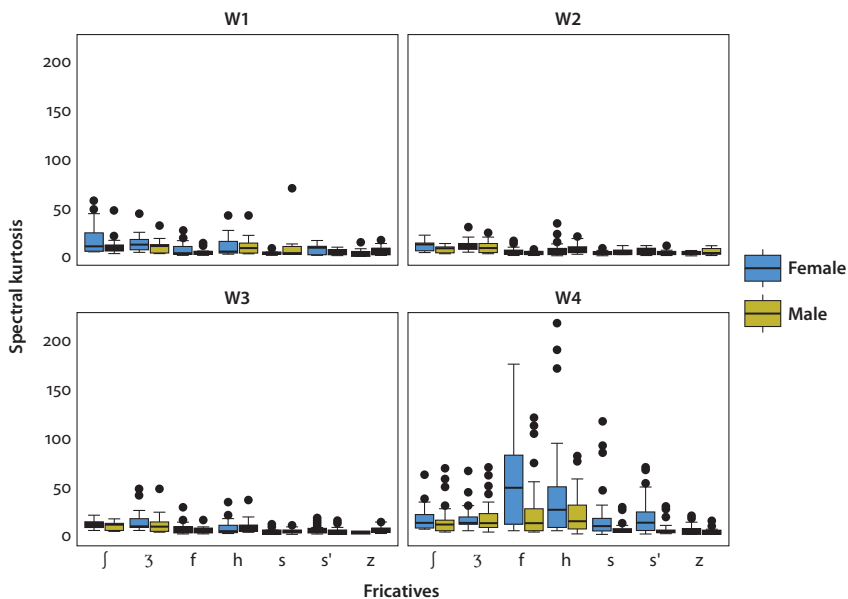
**Figure 14a.** Box plot of spectral kurtosis values for Amharic fricatives by gender and window location
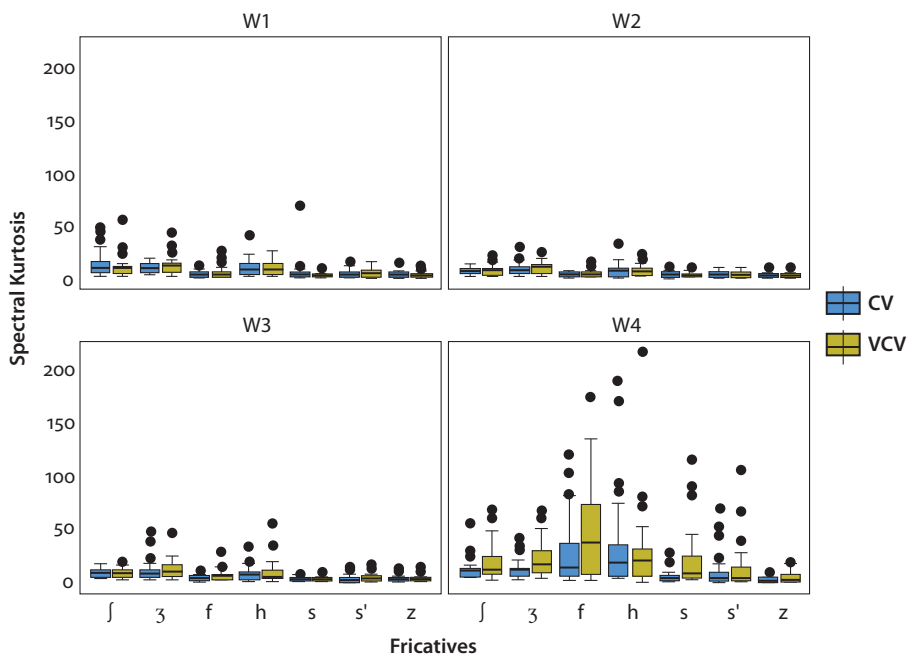


**Figure 14b.** Box plot of spectral kurtosis values for Amharic fricatives by context and window location

**Table 11.**

**a.** Results of a four-way analysis of variance of the effects of place, gender, position within a word and window location on spectral kurtosis

|  | Sum Sq | Df | F value | Pr(>F) | Part. eta sq |
|---|---|---|---|---|---|
| Place | 24191 | 3 | 43.0204 | < 2.2e-16 *** | 0.0530 |
| Gender | 5174 | 1 | 27.6037 | 0.000000168702 *** | 0.0113 |
| Position | 1352 | 1 | 7.2129 | 0.007312 ** | 0.0030 |
| Window | 50914 | 3 | 90.5448 | < 2.2e-16 *** | 0.1115 |
| Gender:Window | 8694 | 3 | 15.4609 | 0.000000000643 *** | 0.0190 |
| Place:Window | 37576 | 9 | 22.2749 | < 2.2e-16 *** | 0.0823 |
| Position:Window | 3734 | 3 | 6.6412 | 0.000186 *** | 0.0082 |
| Gender:Place:Window | 8908 | 9 | 5.2806 | 0.000000402479 *** | 0.0195 |
| Place:Position:Window | 2668 | 9 | 1.5817 | 0.115268 | 0.0058 |
| Residuals | 302898 | 1616 |  |  | 0.6632 |

**b.** Results of a univariate analysis of variance of the effects of airstream on spectral kurtosis

|  | Df | Sum Sq | Mean Sq | F value | Pr(>F) | Part. eta sq |
|---|---|---|---|---|---|---|
| Airstream | 1 | 5 | 4.51 | 0.033 | 0.856 | 0.0001 |
| Residuals | 478 | 65753 | 137.56 |  |  | 0.9999 |

Window location had a significant effect on kurtosis values. The effect of window, however, was seen between the fourth window and the rest of the windows, which was significant at $p < 0.001$ in Bonferroni post hoc test.
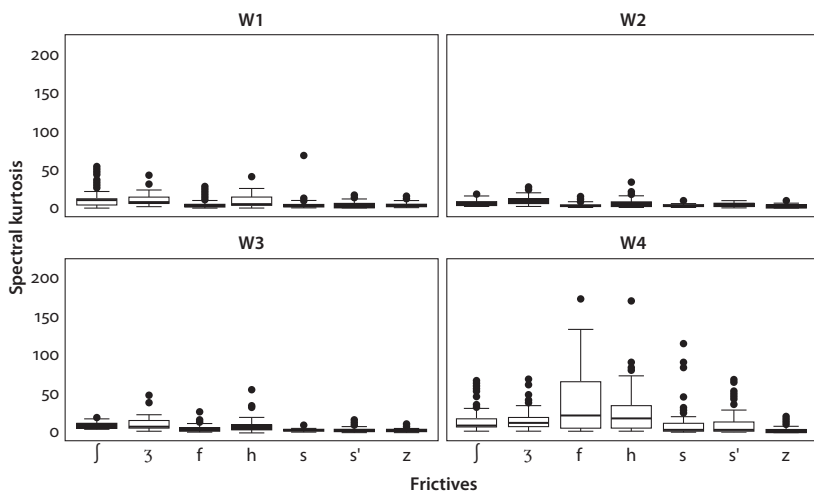


**Figure 15.**  Box plot of spectral kurtosis values of Amharic fricatives by window location

Airstream had no significant effect on spectral kurtosis values.

## 5.5 Zero-crossing points

Mean and sᴅ of zero-crossing measurements for Amharic fricatives are presented in Appendix 2. The results show that alveolars had the highest values, whereas the glottal fricative had the lowest values among the voiceless group. Though the effect of place of articulation on zero-crossing values was statistically significant, Bonferroni post hoc test results showed that place differences were significant between the alveolars and the rest at $p < 0.001$. As a result, there were no significant differences between the sibilants and the non-sibilants. The box plot of zero-crossing points (for the first 30 ms) for Amharic fricatives is presented in Figure 16.
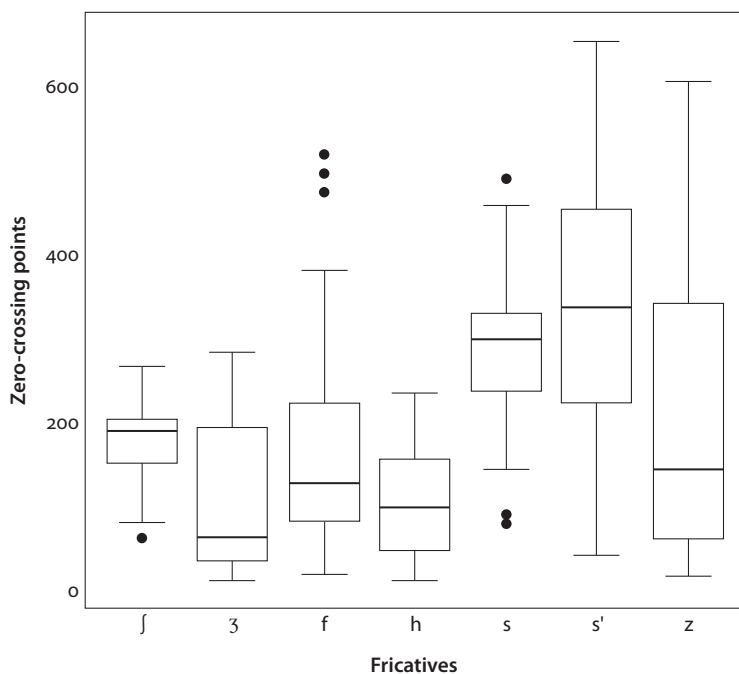


**Figure 16.** Box plot of zero-crossing points of Amharic fricatives averaged across genders and positions in a word

The effect of gender on zero-crossing points was slightly significant, but not consistent across all fricatives.
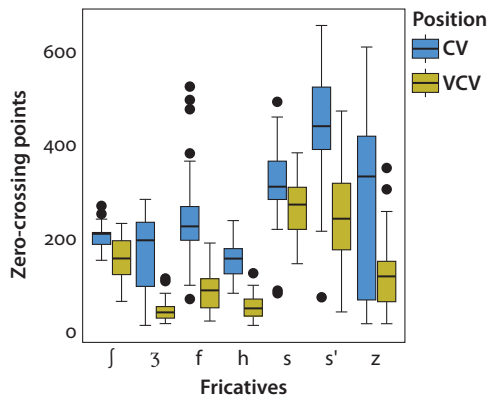
**Figure 17.** Box plot of zero-crossing points of Amharic fricatives by position

The effect of position within a word was significant. The zero-crossing values for those in cv position were consistently higher than the values in the vcv position for all the fricatives, as presented in Figure 17.

**Table 12.**

**a.** Results of a three-way analysis of variance of the effects of place, gender and position on zero-crossing points

|  | Sum Sq | Df | F value | Pr(>F) | Part. et sq |
|---|---|---|---|---|---|
| Gender | 53901 | 1 | 5.5594 | 0.01886 * | 0.0069 |
| Place | 2198779 | 3 | 75.5941 | < 2e-16 *** | 0.2806 |
| Position | 1482386 | 1 | 152.8935 | < 2e-16 *** | 0.1892 |
| Gender:Place | 80849 | 3 | 2.7796 | 0.04086 * | 0.0103 |
| Gender:Position | 1656 | 1 | 0.1708 | 0.67961 | 0.0002 |
| Place:Position | 92688 | 3 | 3.1866 | 0.02376 * | 0.0118 |
| Gender:Place:Position | 9727 | 3 | 0.3344 | 0.80048 | 0.0012 |
| Residuals | 3917002 | 404 |  |  | 0.4998 |

**b.** Results of a univariate analysis of variance of the effects of airstream and voice on zero-crossing points

|  | Df | Sum Sq | Mean Sq | F value | Pr(>F) | Part. eta sq |
|---|---|---|---|---|---|---|
| Airstream | 1 | 82635 | 82635 | 5.4 | 0.0218 * | 0.0438 |
| Residuals | 118 | 1805705 | 15303 |  |  | 0.9562 |
| Voice | 1 | 988840 | 988840 | 58.47 | 2.87e-13 *** | 0.1640 |
| Residuals | 298 | 5440101 | 16913 |  |  | 0.8360 |

The effect of voice on zero-crossing values was significant, and this was seen for fricatives in the vcv position. The voiced fricatives/z/ and /ʒ/ had lower zero-crossing points than /ʃ/ and /ʒ/ respectively (Cf. Figure 15).

Airstream had a significant effect on zero-crossing points: /s'/ had higher zero-crossing points than /s/.
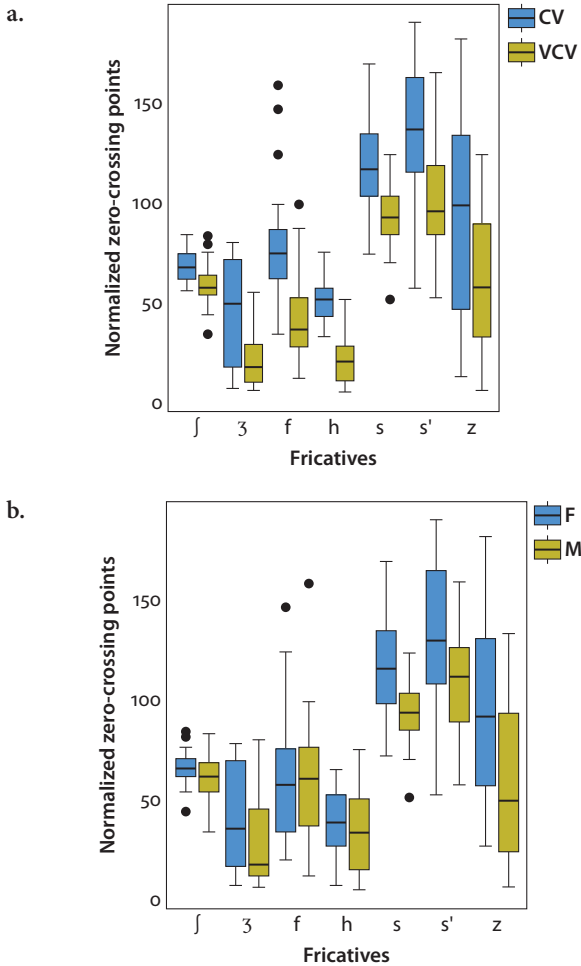


**Figure 18.** Box plot of normalised zero-crossing (a) by position within a word and (b) by gender

Normalised zero-crossing values were significantly different among the places of articulation. Bonferroni post hoc test showed that differences between the alveolars and the rest of the three places were significant at $p < 0.001$, and the glottal versus the labiodental fricative at $p < 0.001$. Because the postalveolars did not have significant differences with the non-sibilants, there was no significant differences in zero-crossing points of sibilants and non-sibilants.

Gender had a significant effect on normalised zero-crossing values. For all the fricatives, female values were higher than male values.

As presented in Figure 18, position had a significant effect on the normalised zero-crossing values: fricatives in cv position had higher values than fricatives in vcv position, which was statistically significant.

**Table 13.**

**a.** Results of a three-way analysis of variance of the effects of gender, place and position within a word on normalised zero-crossing points

|  | Sum Sq | Df | F value | Pr(>F) | Part. eta sq |
|---|---|---|---|---|---|
| Gender | 21530 | 1 | 29.3800 | 0.0000001025 *** | 0.0299 |
| Place | 296427 | 3 | 134.8366 | < 2.2e-16 *** | 0.4116 |
| Position | 84375 | 1 | 115.1397 | < 2.2e-16 *** | 0.1172 |
| Gender:Place | 14224 | 3 | 6.4702 | 0.0002757 *** | 0.0198 |
| Gender:Position | 700 | 1 | 0.9551 | 0.3290093 | 0.0010 |
| Place:Position | 5860 | 3 | 2.6655 | 0.0475176 * | 0.0081 |
| Gender:Place:Position | 1023 | 3 | 0.4653 | 0.7066907 | 0.0014 |
| Residuals | 296053 | 404 |  |  | 0.4111 |

**b.** Results of a univariate analysis of variance of the effects of airstream and gender on normalised zero-crossing points

|  | Df | Sum Sq | Mean Sq | F value | Pr(>F) | Part. eta sq |
|---|---|---|---|---|---|---|
| Airstream | 1 | 5925 | 5925 | 6.988 | 0.00932 ** | 0.0559 |
| Residuals | 118 | 100044 | 848 |  |  | 0.9441 |
| Voice | 1 | 121608 | 8121608 | 86.8 | <2e-16 *** | 0.2256 |
| Residuals | 298 | 417511 | 1401 |  |  | 0.7714 |

The effect of airstream on normalised zero-crossing values was also significant: /s'/ had higher normalised zero-crossing points than /s/.

The effect of voice on normalised zero-crossing values was also significant: voiceless fricatives had higher normalised zero-crossing points than voiced fricatives did, and this was clearly seen for the fricatives in the vcv position.

## 5.6    Voice measurements

The differences in voice quality between the vowels following /s/ and /s'/ were measured in terms of four voice measurements: H1-H2, H1-A1, H1-A2, H1-A3. Box plot of values of these voice measurements are presented in Figure 19. All the voice measurements showed significant differences due to airstream.
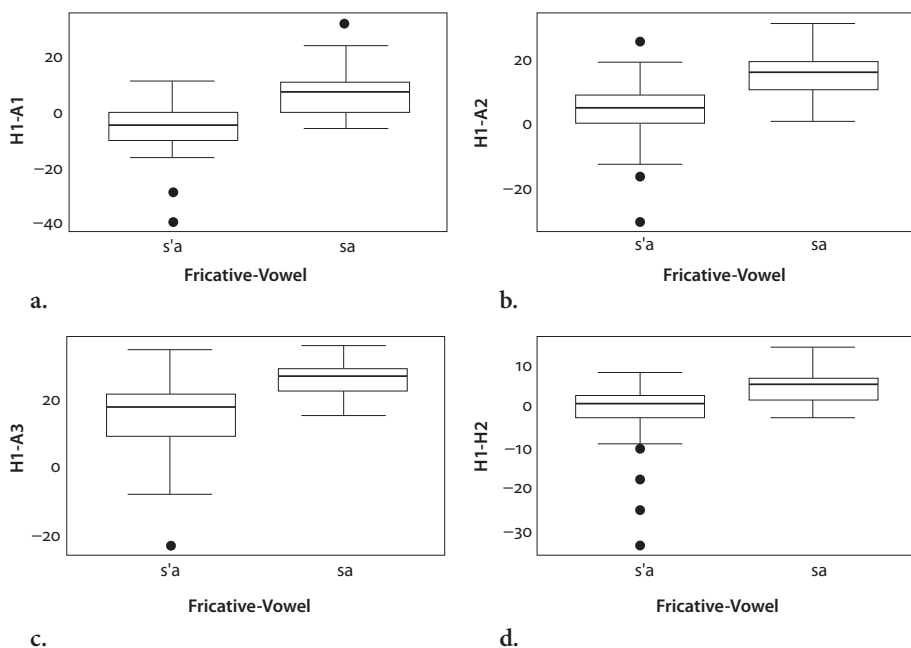


**Figure 19.** Box plot of voice measurements of Amharic fricatives: H1-A1 (a), H1-A2 (b), H1-A3 (c), H1-H2 (d)

Airstream had a significant effect on the voice quality of the following vowel (Cf. Table 14). The ejective /s'/ was followed by vowels that had lower values on the voice measurements, showing creaky phonation at the beginning of the vowel. The creaky phonation in the vowels following the ejective fricative can be clearly seen in the spectrographic displays, as can be seen in the middle of Figure 20.

**Table 14.** Results of a two-way analysis of variance of effects of position and airstream on voice results: (a) H1-A1, (b) H1-A2, (c) H1-A3, and (d) H1-H2

**a.  H1-A1**

|  | Sum Sq | Df | F value | Pr(>F) | Part. eta sq |
|---|---|---|---|---|---|
| Airstream | 3763 | 1 | 68.037 | 2.837e-13 *** | 0.3443 |
| Position | 418 | 1 | 7.556 | 0.006936 ** | 0.0382 |
| Position:Airstream | 332.6 | 1 | 6.012 | 0.015695 * | 0.0304 |
| Residuals | 6416.9 | 116 |  |  | 0.5870 |

**b.  H1-A2**

|  | Sum Sq | Df | F value | Pr(>F) | part. eta sq |
|---|---|---|---|---|---|
| Airstream | 3411.2 | 1 | 58.751 | 0.001085 ** | 0.3083 |
| Position | 652.2 | 1 | 11.233 | 0.001085** | 0.0590 |
| Position:Airstream | 264.3 | 1 | 4.552 | 0.034972 * | 0.0239 |
| Residuals | 6735.1 | 116 |  |  | 0.6088 |

**c.  H1-A3**

|  | Sum Sq | Df | F value | Pr(>F) | Part. eta sq |
|---|---|---|---|---|---|
| Airstream | 3227.8 | 1 | 51.985 | 6.142e-11 *** | 0.2992 |
| Position | 84.7 | 1 | 1.363 | 0.24526 | 0.0079 |
| Position:Airstream | 273.0 | 1 | 4.392 | 0.03819 * | 0.0253 |
| Residuals | 7202.4 | 116 |  |  | 0.6676 |

**d.  H1-H2**

|  | Sum Sq | Df | F value | Pr(>F) | Part. eta sq |
|---|---|---|---|---|---|
| Airstream | 950.7 | 1 | 33.767 | 0.00004580981 *** | 0.1937 |
| Position | 505.2 | 1 | 17.945 | 0.00000005557 *** | 0.1030 |
| Position:Airstream | 185.4 | 1 | 6.584 | 0.01156 * | 0.0378 |
| Residuals | 3265.9 | 116 |  |  | 0.6655 |
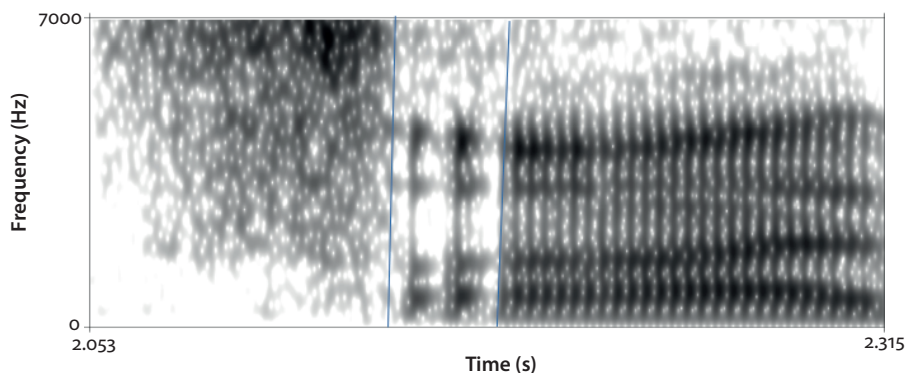
**Figure 20.** Creaky voice at the beginning of the vowel following the ejective fricative /s'/
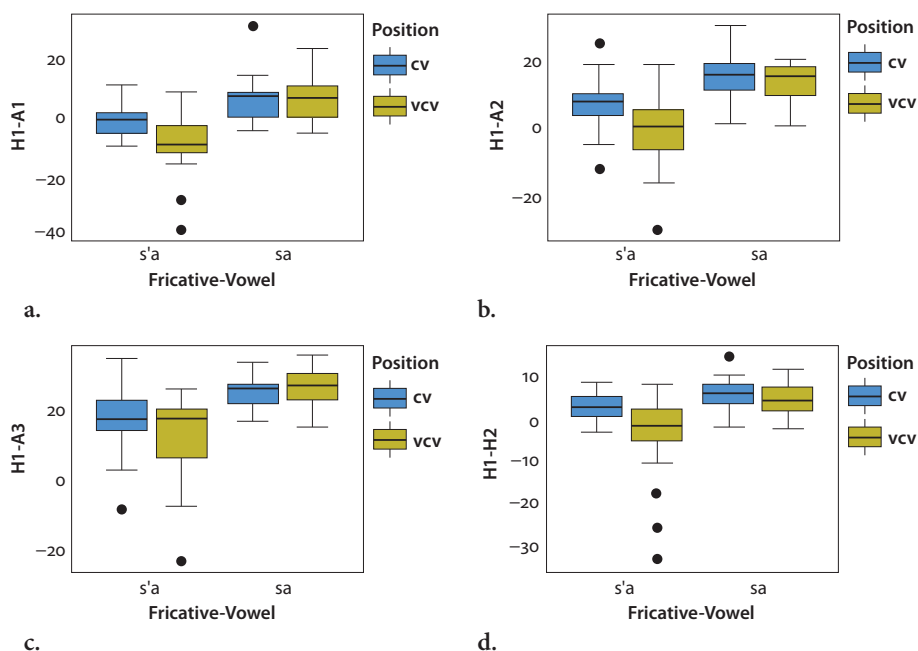


**Figure 21.** Mean voice measurement values for the vowel following Amharic fricatives by position within a word: H1-A1(a), H1-A2(b), H1-A3(c) and H1-H2(d)

Position had no significant effect on three of the four voice measurements (except H1-A3). Both fricatives were followed by vowels that had higher values in H1-A1, H1-A2 and H1-H2 values in the cv context than in the vcv context.

## 6.  Discussion

The results on durational measurements showed that only gender, position within a word and voice had effects on some of the durational measurements. Gender had effects on the frication duration and the duration of the vowel following the fricatives, position had effects on vowel duration and voice had effects on frication duration and normalised duration. Place of articulation and airstream had no effects on any of the durational measurements, though sibilants were longer than non-sibilant voiceless fricatives. These results do not agree with that of Jongman, Wayland & Wong (2000) on English fricatives, or with that of Dejene (2019), who reported significant differences of fricative noise duration and normalised duration between sibilants and non-sibilants. The duration of the vowel following the fricatives was not affected by place of articulation or airstream, a finding that contradicts that of Dejene (2019). The effect of voice on the duration of the fricatives and normalised duration was in agreement with previous studies on Arabic (Al-Khairy 2005), Argentine Spanish (de Manrique & Massone 1981) and English (Cole & Cooper 1975).

Spectral peak location values were significantly affected by place of articulation. Sibilant fricatives had higher values than non-sibilant values, and the differences were also statistically significant. These results agree with previous studies on English (Jongman, Wayland & Wong 2000; Fox & Nissen 2005), Arabic (Al-Khairy 2005) and Oromo (Dejene, 2019). Nevertheless, the results of this study did not show a decreasing spectral peak location from the front to the back of the oral cavity (labiodental > alveolar > postalveolar > glottal), as reported for English (Jongman, Wayland & Wong, 2000), Arabic (Al-Khairy, 2005) and Oromo (Dejene 2019). The spectral peak location for Amharic had the pattern alveolar > postalveolar > labiodental > glottal. The effect of gender of the speaker partially confirmed to that of Fox & Nissen (2005), as the sibilants (but not the non-sibilants) had higher values for females than for males. The spectral peak location was also an important acoustic correlate of airstream: the ejective fricative /s'/ had the highest value of all the fricatives.

Results of all intensity measurements – namely maximum intensity, mean intensity and relative intensity – showed that they were important acoustic correlates of place of articulation. The findings were similar to the findings in English (Jongman, Wayland & Wong 2000) who reported a significant effect of place of articulation on mean amplitude and normalised amplitude. The differences in intensity values between the sibilants and between the non-sibilants were not as significant as reported for English, but the differences between sibilants and non-sibilants were highly significant, in agreement with results reported for English and Oromo (Jongman, Wayland & Wong 2000; Dejene 2019). The effect of voice on intensity values also agrees with the results reported for Argentine Spanish (de

Manrique & Massone 1981), English (Jongman, Wayland & Wong 2000). There was also a significant difference in maximum, mean and normalised intensity values between /s/ and /s'/ demonstrating that intensity is an important acoustic correlate of airstream in Amharic.

Spectral COG, the first spectral moment, results were able to distinguish between three of the four places of articulation: the differences between the postalveolars and the labiodental fricative were not significant. As a result, there were not significant differences between sibilants and non-sibilants in spectral COG values, a finding that confirms results reported by Fox & Nissen (2005). These results do not agree with previous studies on English (Jongman, Wayland & Wong 2000; Dejene 2019). The highest spectral COG values of alveolar fricatives confirms earlier results (Nissen 2003; Jongman, Wayland & Wong 2000; Al-Khairy 2005; Dejene 2019). The effect of window was attributed to the fourth window only, which agrees with results in previous studies (Jongman, Wayland & Wong 2000; Dejene 2019). Gender had a significant effect on spectral COG values, specifically for sibilants. Spectral COG values for females were higher than values for males, which confirms the study on the effects of gender on spectral properties for English (Fox & Nissen 2005) and the study on Arabic fricatives (Al-Khairy 2005). The ejective fricative /s'/ had the highest value, which was significantly different at $p < 0.0001$ with all the rest of the fricatives, making it an important acoustic correlate of airstream. This is in agreement with the results on Mehri ejective fricative (Ridouane, Gendrot & Khatiwada 2015).

The second spectral moment, spectral SD results showed that the effect of place of articulation was significant, but the differences were between the postalveolar plus the glottal fricatives in one group and the labiodental and alveolar fricatives in another group, which is a front-back distinction. The labiodental and alveolar fricatives had higher spectral SD values than the postalveolar and glottal fricatives. The sibilant-non-sibilant differences in spectral SD values were not attested for Amharic, unlike the results for English (Jongman, Wayland & Wong 2000), and Oromo (Dejene 2019).

The third spectral moment, spectral skewness, and the fourth spectral moment, spectral kurtosis, separated alveolars from the rest of the fricatives, as reported in earlier studies (Jongman, Wayland & Wong 2000; Al-Khairy 2005). The effect of window location was significant mainly due to the transition window (the fourth window) having significantly lower values on the third and the fourth spectral moments (Jongman, Wayland & Wong 2000; Al-Khairy 2005; Dejene 2019). No differences were seen between sibilant and non-sibilant fricatives, nor were voice effects on these moments significant. These results do not agree with results in previous studies (Jongman, Wayland & Wong 2000; Fox & Nissen 2005), and Oromo (Dejene 2019).

The results on zero-crossing points and normalised zero-crossing points showed that they distinguish alveolars from the rest of the fricatives. Position

and voice had significant effects on both zero-crossing points and normalised zero-crossing points: Fricatives in cv position had higher values than those in vcv position, and voiceless fricatives had higher values than voiced ones, all effects being significant at p < 0.001. Airstream had a slightly significant effect on both zero-crossing points and normalised zero-crossing points at $p < 0.05$. Gender has a consistent and significant effect on normalised zero-crossing points only. So far zero-crossing measurements were considered as acoustic correlate of periodicity, to differentiate voiceless from voiced consonants (Gurlekian, Franco & Santagada 1989; Santagada & Gurlekian 1989; Weigelt, Sadoff & Miller 1990; Fernández 2010). In this study, however, zero-crossing points and normalised zero-crossing points were investigated for fricatives and were found to be important acoustic correlates of position within a word, gender, airstream and voicing.

The voice measurements showed consistent and significant values, showing their being robust correlates for airstream differences. All the four voice measures showed the effect of the ejective on the voice quality of the vowel following them. This study confirms earlier results by Vicenik (2010), and Derib (2011) who reported creaky phonation following ejective stops.

The effect of gender was seen in durational and spectral measurements. Females generally had higher values than males. The cog values for Amharic fricatives is no exception, given females produce consonants with higher cog values (Schwartz 1968; Pépiot 2012), which can be attributed to anatomical differences between males and females.

## 7.   Conclusions

This study aimed at investigating the acoustic correlates of place or articulation and airstream for Amharic fricatives, and the effects of position within a word, voice, window location and gender on durational, spectral, zero-crossing and voice measurements. Durational, spectral, zero-crossing and voice measurements were conducted on a total of 420 tokens, which were recorded from five male and five female native speakers of Amharic. The results showed that spectral peak location, intensity (mean, maximum and relative intensity) and spectral cog were robust acoustic correlates of place of articulation for Amharic fricatives. Airstream was found to have significant effects on spectral peak location, intensity and spectral cog values. Voice measurements also proved to be very important correlates for airstream. The differences in gender were significant on spectral peak location, mean intensity, spectral cog and normalised zero-crossing points. The effect of window on spectral measures was not important within the fricative duration. This study showed the role of zero-crossing points and normalised zero-crossing points to distinguish fricatives based on voice, gender and airstream.

## Acknowledgements

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**Appendix 1.** Mean and SD values of intensity measurements and spectral peak location for Amharic fricatives by gender and position

| Fricatives | Gender | Position | Maximum intensity | | Mean intensity | | Relative intensity | | Spectral Peak Location (Hz) | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | Mean | SD | Mean | SD | Mean | SD | Mean | SD |
| f | F | CV | 51.33 | 5.98 | 46.00 | 4.78 | 22.33 | 5.07 | 2900.27 | 1238.74 |
| | | VCV | 58.40 | 4.67 | 51.60 | 4.12 | 14.07 | 3.10 | 1410.53 | 768.76 |
| | M | CV | 52.73 | 4.59 | 47.47 | 3.98 | 25.47 | 5.30 | 2620.80 | 1686.03 |
| | | VCV | 61.67 | 3.54 | 54.80 | 3.00 | 14.80 | 3.10 | 2126.87 | 1212.87 |
| h | F | CV | 49.60 | 3.52 | 45.73 | 2.91 | 23.40 | 4.56 | 1840.27 | 1010.02 |
| | | VCV | 64.93 | 2.87 | 60.80 | 4.02 | 7.67 | 3.42 | 1175.00 | 127.45 |
| | M | CV | 53.53 | 4.90 | 49.07 | 4.33 | 23.67 | 5.27 | 2221.00 | 1301.76 |
| | | VCV | 69.53 | 4.73 | 66.60 | 5.88 | 6.40 | 3.42 | 2081.93 | 1230.14 |
| s | F | CV | 59.00 | 4.64 | 54.27 | 4.33 | 12.73 | 4.65 | 7609.40 | 1464.29 |
| | | VCV | 62.47 | 3.27 | 57.67 | 3.29 | 7.60 | 3.27 | 7478.07 | 1363.37 |
| | M | CV | 62.73 | 2.74 | 57.73 | 2.69 | 12.93 | 3.58 | 5505.80 | 465.59 |
| | | VCV | 65.27 | 2.91 | 61.40 | 2.90 | 9.47 | 3.52 | 5094.00 | 670.42 |
| s’ | F | CV | 66.20 | 4.87 | 59.73 | 5.01 | 5.47 | 4.82 | 9333.60 | 1258.86 |
| | | VCV | 67.00 | 3.78 | 60.13 | 3.93 | 6.20 | 4.84 | 9093.20 | 2313.53 |
| | M | CV | 67.13 | 3.16 | 61.20 | 2.73 | 9.53 | 4.41 | 6950.13 | 2166.71 |
| | | VCV | 65.07 | 3.10 | 59.40 | 2.64 | 11.40 | 3.79 | 6659.93 | 1461.19 |
| ʃ | F | CV | 65.67 | 3.35 | 59.87 | 3.20 | 7.33 | 4.40 | 3320.73 | 361.24 |
| | | VCV | 67.07 | 3.47 | 61.93 | 3.73 | 3.67 | 5.09 | 3409.60 | 485.35 |
| | M | CV | 62.40 | 3.40 | 57.47 | 3.14 | 14.13 | 3.46 | 2809.60 | 377.60 |
| | | VCV | 66.20 | 2.81 | 62.27 | 2.87 | 8.73 | 2.91 | 2920.53 | 483.81 |
| z | F | CV | 61.07 | 4.17 | 56.40 | 3.46 | 13.80 | 4.30 | 7108.53 | 1352.73 |
| | | VCV | 63.67 | 2.55 | 58.73 | 2.74 | 9.73 | 2.31 | 5865.73 | 3490.45 |
| | M | CV | 63.73 | 5.40 | 58.00 | 4.02 | 15.27 | 4.50 | 5602.53 | 1142.84 |
| | | VCV | 69.33 | 3.90 | 66.13 | 3.94 | 7.40 | 2.75 | 5259.73 | 1812.05 |
| ʒ | F | CV | 62.87 | 5.67 | 58.07 | 5.43 | 12.07 | 5.73 | 3461.53 | 477.43 |
| | | VCV | 69.33 | 3.92 | 66.13 | 3.78 | 4.07 | 2.69 | 2883.13 | 647.67 |
| | M | CV | 66.47 | 8.33 | 60.27 | 8.05 | 11.40 | 6.78 | 2965.20 | 614.67 |
| | | VCV | 71.60 | 3.00 | 68.20 | 2.96 | 4.53 | 2.47 | 2592.13 | 679.98 |

**Appendix 2.** Mean and sd values of Spectral moments and zero-crossing points for Amharic fricatives

| Fricatives | Gender | Position | Spectral centre of gravity (Hz) | | Spectral standard deviation (Hz) | | Spectral skewness | | Spectral kurtosis | | Zero-crossing points | | Normalised zero-crossing points | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Mean | sd | Mean | sd | Mean | sd | Mean | sd | Mean | sd | Mean | sd |
| f | Female | cv | 3272.11 | 1043.71 | 1665.37 | 454.24 | 1.89 | 1.78 | 10.36 | 22.70 | 225.27 | 118.70 | 79.37 | 26.69 |
| | | vcv | 2382.58 | 769.56 | 1507.45 | 489.42 | 2.84 | 2.29 | 21.50 | 35.86 | 79.67 | 24.83 | 38.18 | 14.11 |
| | Male | cv | 3395.39 | 1133.58 | 1933.00 | 613.02 | 1.52 | 1.63 | 7.03 | 20.68 | 267.60 | 95.25 | 75.52 | 28.25 |
| | | vcv | 2993.29 | 912.72 | 1915.55 | 527.09 | 1.86 | 1.67 | 7.56 | 18.48 | 87.07 | 46.43 | 43.51 | 26.05 |
| h | Female | cv | 2202.06 | 516.74 | 1271.61 | 326.60 | 2.44 | 2.03 | 16.52 | 35.13 | 152.33 | 34.72 | 50.69 | 7.79 |
| | | vcv | 2003.68 | 412.90 | 1186.18 | 281.93 | 2.42 | 1.84 | 15.14 | 30.58 | 53.47 | 20.64 | 24.08 | 9.75 |
| | Male | cv | 2520.56 | 805.92 | 1405.79 | 414.80 | 2.19 | 1.57 | 10.37 | 14.19 | 147.67 | 37.39 | 51.95 | 14.69 |
| | | vcv | 2451.19 | 704.58 | 1381.65 | 243.98 | 1.97 | 1.42 | 8.43 | 11.86 | 49.67 | 29.79 | 17.13 | 11.97 |
| s | Female | cv | 6278.73 | 1849.21 | 1894.76 | 402.52 | −.08 | .97 | 1.09 | 2.53 | 350.07 | 109.35 | 134.56 | 21.18 |
| | | vcv | 5345.87 | 2453.89 | 1811.15 | 514.02 | .65 | 2.38 | 8.52 | 21.57 | 296.20 | 58.40 | 100.31 | 14.47 |
| | Male | cv | 5158.96 | 1040.83 | 1447.60 | 320.09 | .89 | 1.10 | 4.25 | 9.10 | 284.07 | 68.11 | 102.46 | 13.81 |
| | | vcv | 4864.00 | 1299.19 | 1599.12 | 298.34 | .90 | 1.06 | 3.44 | 5.85 | 234.13 | 42.36 | 84.81 | 12.42 |
| s' | Female | cv | 6782.23 | 2603.39 | 1637.31 | 545.52 | −.22 | 2.11 | 6.52 | 13.22 | 487.07 | 138.29 | 150.46 | 28.85 |
| | | vcv | 6171.98 | 3054.63 | 1883.75 | 720.98 | .07 | 2.39 | 7.43 | 16.17 | 247.47 | 146.21 | 112.81 | 32.83 |
| | Male | cv | 6156.69 | 1696.10 | 1708.45 | 422.45 | .47 | .99 | 1.66 | 3.36 | 399.47 | 93.25 | 123.05 | 24.45 |
| | | vcv | 5802.70 | 1598.40 | 1797.91 | 514.08 | .24 | 1.27 | 2.47 | 4.84 | 240.40 | 63.16 | 92.03 | 18.34 |
| ʃ | Female | cv | 3408.69 | 459.99 | 1045.29 | 196.09 | 2.04 | .79 | 10.17 | 8.78 | 204.73 | 26.20 | 71.07 | 6.87 |
| | | vcv | 3136.87 | 762.15 | 1057.26 | 230.53 | 2.00 | 1.11 | 11.87 | 11.71 | 159.13 | 46.40 | 59.65 | 6.01 |
| | Male | cv | 3148.82 | 465.43 | 1266.13 | 297.40 | 1.87 | .89 | 7.72 | 9.58 | 195.73 | 19.70 | 65.46 | 7.22 |
| | | vcv | 3197.74 | 651.29 | 1246.32 | 198.93 | 1.81 | 1.10 | 7.48 | 10.30 | 149.13 | 36.93 | 58.71 | 12.40 |

| Fricatives | Gender | Position | Spectral centre of gravity (Hz) | | Spectral standard deviation (Hz) | | Spectral skewness | | Spectral kurtosis | | Zero-crossing points | | Normalised zero-crossing points | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Mean | SD | Mean | SD | Mean | SD | Mean | SD | Mean | SD | Mean | SD |
| z | Female | CV | 6524.16 | 1550.40 | 1932.55 | 552.19 | −.03 | .83 | .72 | 2.15 | 299.00 | 220.88 | 109.23 | 54.26 |
| | | VCV | 5966.87 | 1968.25 | 2355.33 | 713.17 | −.08 | 1.32 | 1.65 | 4.18 | 149.00 | 90.95 | 77.37 | 27.67 |
| | Male | CV | 5461.84 | 1248.10 | 1681.22 | 492.90 | .62 | .97 | 2.88 | 4.00 | 262.27 | 154.15 | 80.35 | 42.13 |
| | | VCV | 4982.79 | 1339.53 | 1728.69 | 400.58 | .23 | .93 | 2.29 | 3.29 | 97.33 | 50.75 | 37.87 | 23.80 |
| ʒ | Female | CV | 3629.10 | 402.83 | 1051.67 | 262.97 | 1.84 | .82 | 10.28 | 8.62 | 175.07 | 80.98 | 57.31 | 23.24 |
| | | VCV | 3074.38 | 507.21 | 1152.72 | 245.52 | 2.13 | .87 | 12.65 | 10.57 | 49.07 | 28.27 | 23.79 | 15.48 |
| | Male | CV | 3346.56 | 573.23 | 1325.01 | 314.59 | 1.92 | .76 | 7.74 | 7.26 | 150.33 | 84.25 | 35.59 | 23.07 |
| | | VCV | 3035.29 | 622.30 | 1234.74 | 239.22 | 2.17 | 1.40 | 11.98 | 14.11 | 45.47 | 26.65 | 19.98 | 14.93 |

# Durational variations in Oromo vowels

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An acoustic study of vowels of Cushitic languages has not been undertaken, though their vowels seem to exhibit durational variations. We wanted to identify factors that would affect vowel length in Oromo, a Cushitic language widely spoken in the Horn of Africa. Sixty-four speakers ($F = 32$, $M = 32$) from four dialect areas of the language in Ethiopia produced vowel data in different environments. An acoustic analysis of the data showed that duration of the vowels varies significantly across dialects, with the longest duration in the Eastern dialect and the shortest duration in the Western dialect. Gender has no significant effect on duration of the vowels, but the vowels have significantly longer duration when followed by voiced singletons than voiceless, and when followed by voiced singletons than by voiced geminates. Collectively, phonologically long vowels are two times longer than short ones, and this difference is significantly affected by dialect and environment, but not by gender. A significant variation was also observed among the vowels with regard to their intrinsic duration. It is concluded that, besides phonological length, the regional background of speakers and phonetic environment are key factors determining duration of Oromo vowels.

**Keywords**: Oromo, vowel, dialect, duration, environment, Cushitic

## 1. Introduction

We undertake an acoustic study of Oromo vowels to identify factors that will cause a durational variation in the sounds. Oromo is one of the Cushitic languages that has five vowels with a contrastive length. The language is spoken over a wide geographic area in the Horn of Africa and, consequently, we suspect that we will find not only durational variation due to phonological length, but also due to sociolinguistic factors. We also suspect that duration of the vowels could vary as a function of consonantal environments, as previous studies have reported durational variation of vowels in these environments.

In addition to a qualitative variation, a qualitative variation has been attested in the vowels of different languages (Gordon 2016). Japanese and Arabic are examples of those languages that have short and long vowels and that productively use them to make a pair of contrastive words. Two Arabic verbs which mean 'to leave' and 'to swear' are distinguished based on vowel length: the former contains the short /i/while the latter the long /i:/. Japanese speakers would say the same word twice if they did not use the short /i/ and the long /i:/ to say the words 'listened' and 'came', respectively. Similarly, in Cushitic, Nilo-Saharan and Eastern Omotic languages, length is phonemic, producing a pair of short and long vowels (Bender, Mulugeta, & Stinson 1976). Nilo-Saharan languages such as Dink, Shilluk and Nuer are char-acterised by a three-way length contrasts in their vowels (Wedekind 1989). Such a contrast is not common in world languages and the contrast is arguably prosodi-cally and/or morphologically determined (Gordon and Peter, 2001; Lippus, Asu, Teras, & Tuisk 2013).

Vowels have intrinsic duration, in which open vowels are longer than close vow-els as a general phonetic tendency attested to in several languages (Holt, Jacewicz, & Fox 2015). This difference is attributed to the fact that the tongue and the jaw should move a longer distance toward the target for an open vowel than for a close vowel (Catford 1977). However, this durational difference is not observed in the acoustic study of vowels of Standard Austrian German, Modern Standard Albanian, and Creek (Johnson & Martin 2001). A large durational value has been reported for a phonologically long vowel because the time required to produce it is nearly twice that of its counterpart in languages such as Japanese, Thai, Arabic, Norwegian and Swiss French (Hirata 2004; Kukkonen 1990; Tsukada 2009; Dommergues 2007; Behne, Moxness, & Nyland 1996). It seems that a durational difference between short and long vowels of these languages is generally predictable, but the ratio of long to short vowels in different contexts can be language-specific (Purnell et al. 2005).

The variation of vowel duration by gender is well-studied, but contradict-ing results are often reported. Hillenbrand et al. (1995) demonstrated a signifi-cant difference between vowel duration in women and men, with men producing a shorter vowel. Similarly, an acoustic study of vowels produced by speakers of African American English and White American English showed that women have a longer vowel than men irrespective of their social background (Holt, Jacewicz, & Fox 2015). It is also known that Swedish female speakers tend to use longer vowels than male speakers (Ericsdotter & Ericsson 2001). A similar finding was reported in a study on two Portuguese dialects in which women produced longer vowels than men (Escudero et al. 2008). Such an effect of gender was not found in acoustic studies of American English (Clopper, Pisoni, & de Jong, 2005; Jacewicz, Fox, & Salmons 2007) and British English (Williams & Escudero 2014). Clearly, the

findings of past studies on the effect of gender are not conclusive, and thus more study is needed to investigate the effect of gender.

The other insight obtained from past acoustic studies is that speakers of different dialects may produce vowels with different duration. In this regard, more data seem to be available on the vowels of the English language (Williams & Escudero 2014). Clopper, Pisoni, and de Jong (2005) found a significant main effect of dialect in the acoustic study of six American English dialects, with the Southern speakers generally having significantly longer vowels than speakers from the New England, the Mid-Atlantic, and the West. They also indicated a significant dialect and vowel category interaction in vowel duration. Another study on three American English dialects (Mid-Atlantic, Southern and Midland) revealed that Midland speakers produced the longest vowel duration in all vowel groups, but the Mid-Atlantic and Southern speakers did not differ in mean duration (Oder, Clopper, & Ferguson, 2013). A similar finding was reported in a study on two Portuguese dialects in which the European Portuguese produced longer vowels than the Brazilian Portuguese (Escudero, Boersma, Rauber, & Bion 2008). Speakers of Welsh dialects also significantly differ in duration of their vowels (Mayr & Davies 2011). Apparently, speakers of different dialects seem to develop some articulatory timing for their vowels, which serves as a sociolinguistic identifier.

Phonetic environments such as consonantal and suprasegmental environments can also influence vowel duration. In this regard, the most common finding is the effect of the voicing characteristics of the following consonants. Vowels become longer before voiced consonants than before voiceless consonants in English, Dutch, Japanese and several other world languages (Begus 2017; Luce & Charles-Luce 1985). Vowel duration is significantly influenced by consonantal length in languages where consonantal length is contrastive. Vowel duration is shorter when followed by geminate than by singleton in German and Italian. However, in languages such as Japanese, the opposite pattern exists: vowels become longer when they precede a voiced or a voiceless geminate (Idemaru & Guion 2008). In addition, a vowel in an open syllable and a stressed syllable is longer than one in a closed syllable and an unstressed syllable, for instance in Scottish, English and Italian (McClure 1977; de Jong 2004; Hajek & Stevens 2008). A suprasegmental context is also known to influence vowel duration. A vowel with a high rising tone is longer than one with a falling tone, and a vowel with low level tone is longer than one with a high-level tone (Kong 1987; Wayland 1997). In pitch-accent languages, acoustic studies yielded inconclusive results regarding the effect of pitch on vowel duration. For instance, Hoequist (1983) found a significant effect of pitch on vowel duration, but other researchers could not find such an effect on vowel duration (Beckman 1982; Homma 1981).

## 2.   Oromo language

Oromo is one of the Cushitic languages spoken in Ethiopia and Kenya (Blažek 2010; Stroomer 1995). The number of dialects of the language is not clearly known, as the number ranges between three and five in Oromo studies. The language is classified into three dialect areas in Heine (1981), into four dialect areas in Gragg (1976), and into five dialect areas in Bender, Mulugeta and Stinson (1976), Lloret (1988) and Kebede (2009). For instance, in Kebede (2009), the language is genetically classified into Western, Eastern, Northern, Central and Waata. Lack of reliability in determining the number of dialects can be attributed to the large area over which the language is spoken, as well as methods of classification (Blažek 2010; Feda 2015). No study has been conducted to investigate mutual intelligibility among the dialects. However, speakers of the language seem to understand one another with little loss of comprehension because, as Owens (1985) observed, their dialects are largely more silmilar than different. Consistent with this observation, Bender (1971) and Blažek (2010) reported significant overlap among Oromo dialects with respect to their basic vocabulary. The current study is based on Kebede (2009), because it is more comprehensive, including all dialects of the language, although speakers of the language in Kenya are not included (See 3.1 below).

**Table 1.**  The five basic vowels of Oromo (Lloret 1988)

|        | Front | Central | Back |
|--------|-------|---------|------|
| Close  | i     |         | u    |
| Mid    | e     |         | o    |
| Open   |       | a       |      |

Oromo, like many other Cushitic languages, has five distinct vowels (Table 1), which contrast in length (Owens 1985; Lloret 1988). Many minimal pairs can be found in the language, and one such pair is /ra:fu:/ 'cabbage' vs. rafu: 'to sleep', or /du:te/ 'died' vs dute, 'barked'. In the literature, vowel length is interpreted as an extension of articulation timing of a single phonemic unit (Behne, Moxness, & Nyland 1996), or as a linear concatenation of two identical vowels. The interpretations seem to be based on different theories of phonology. According to one of the theories, long vowels in Oromo are interpreted as a single unit, not as a sequence of two identical short vowels (Lloret 1988).

Oromo also distinguishes consonant phonemes based on length (Dissassa 1980; Owens 1985) but the phonemes, /h/ and /ʔ/ are not geminated. Geminated consonants do not occur in a word-initial position in the language. In many languages, geminated consonants tend to be two or more times longer than short ones, and

this difference varies as a function of consonant type, phonetic environment and emphasis (Payne 2005; Kawahara & Braver 2014). On the whole, nasals and stops are known to have the biggest difference while fricative and affricate have the least difference (Aoyama & Reid, 2006). Apart from qualitative data, no published acoustic data are available on the duration of Oromo consonants. As discussed above, a consonantal length can affect the duration of the preceding vowel, and we want to determine if this holds true for Oromo.

The studies reviewed above suggest that there are different factors that will affect duration of vowels, and such factors evidently may have effects on duration of Oromo vowels, as well. Previous studies on the language have focused on the qualitative description of its vowels (Owens 1985; Lloret 1988; Stroomer 1995). To the best of our knowledge, no acoustic study has been conducted to investigate to what extent such factors influence vowel duration in the language. Therefore, we want to examine the intrinsic duration and durational correlates of phonemic length of vowels of the language. In addition, we want to investigate to what extent gender, dialect and consonantal contexts influence duration of vowels of the language. This study can contribute to the production of acoustic data for language teaching, speech therapy and speech technology.

## 3.  Methods

### 3.1  Speakers

Oromo varieties spoken in Kenya were not included for a security reason. Speakers from the Raya variety of Oromo were also excluded from the study, as the variety is shifting to neighboring Semitic languages (Kebede 2009). Using a simple random sampling, Macha from the Western dialect, Arsi Highland from the Eastern dialect, Arsi Lowland from the Central dialect and Wollo from the Northern dialect were selected. Ayira, Jarra, Karsa and Bati are small which were chosen to collect vowel data from the speakers of Macha, Arsi Highland, Arsi Lowland and Wollo, respectively. These areas were purposively sampled in order to find speakers who do not much have much contact with other dialects and languages. Sixty-four native speakers (16 speakers for each town) who were willing to participate in the study were selected. The number of female and male speakers was balanced (across dialects) to examine the effect of gender on vowel duration. The speakers have lived all their lives in their respective areas, though they might have been exposed to other dialects via mass media and formal education. The range, average and standard deviation of age of the speakers were 7 years, 25 years and 2.6 respectively.

## 3.2   Stimuli and procedures

The participants were presented with ten (five short and five long) vowels embedded in real words in isolation (Table 2). They were instructed to produce the words five times (using their normal rate of speech) while being recorded. The real words were a list of words containing short and long vowels between three stop consonants (/d/, /k/, and /t/) and the geminate /d:/. The consonants were used for their clear closure of air, which allows for a distinctive identification of boundaries of the vowels. In addition, the sounds were used to manipulate the voicing characteristics and duration of the following consonants, because the study aimed at investigating the effects of these two features on the duration of vowels. The words have two to three open syllables (See Wako 1981 for Oromo syllabic structures), but the duration data were extracted from the first or the second syllable (Table 2). In the selection of the words, accent was not considered, because there are contradicting views as to whether the language has a tone system, or a pitch-accent system (Heine 1981; Wako 1981; Owens 1985; Lloret 1988).

**Table 2.**  List of Oromo vowels in different phonetic environments for duration measurement

| Vowel | Before a voiced singleton, /d/ | | Before voiceless singletons, / k, t / | | Before a voiced geminate, /d:/ | |
|---|---|---|---|---|---|---|
| | Word | Gloss | Word | Gloss | Word | Gloss |
| /a/ | /dadar/ | Name of a town | /kaku:/ | Covenant | /bad:a:/ | Highland |
| /i/ | /dide/ | He refused | /titisa/ | Fly | /ʔabid:a/ | Fire |
| /e/ | /hededa/ | Edge | /buteka:/ | Here, he snatched… | /ded:e:bi:/ | Returning repeatedly |
| /o/ | /dodola/ | Name of a town | /ta:tota/ | Actors | /bod:ose:/ | Attractive |
| /u/ | /duduʔa:/ | Dead | /kuta:/ | Class | /dud:a/ | Back of a body |
| /a:/ | /ada:da:/ | Aunt | /ʔaka:ku:/ | Type | /barba:d:e/ | She searched. |
| /i:/ | /di:da/ | Outside | /gati:ti:/ | Throw away and … | /di:d:e/ | She destroyed. |
| /e:/ | /ge:do:/ | Name of a town | /ʔate:te:/ | Religious ritual | /de:d:e/ | She became poor. |
| /o:/ | /gado:de/ | He screamed | /hat:o:ta/ | Thieves | /bo:d:e:/ | At the back |
| /u:/ | /du:da:/ | Deaf | /tu:ta/ | Group | /du:d:a:/ | Become deaf! |

The words were recorded in an open quiet space using Maritz Professional (Solid State Recorder MPD 661MKll) equipped with a Sennheiser 865 condenser microphone. The words were written in Oromo orthography so that speakers could read them by identifying the short and long sounds. Before the actual recording, the

speakers were familiarised with the words on the list. The recording yielded (3 repetitions x 10 vowels x 64 speakers x 3 environments) 5,760 tokens. The tokens were pre-amplified, low-pass filtered at 4.3 kHz, and directly digitised at 16-kHz sample rates and quantised at 16 bits.

The duration of each vowel was measured from the first positive peak in the digitised waveform up to the portion of acoustic silence that signals the constriction of the postvocalic stop. Vowel onset and offset were manually located in PRAAT (Boersma & Weenink 2013) in textgrids based on the waveform and the spectrogram. The onset and offset locations in the textgrids served as input to PRAAT script, which automatically extracted the duration of each vowel in each token. The script was written by (Lennes 2017) and can be found at <http://www.helsinki.fi/~lennes/praat-scripts/>. The Cronbach's Alpha showed that the internal consistency for vowel duration was 0.917, which indicates that the reliability of the duration measurement was very good.

### 3.3 Statistical analysis

From the five repetitions of the words, the first and the fifth were excluded (rendering three tokens per speaker) to avoid the impact of beginning and ending effects of speech on duration of vowels. The vowel duration was normalised by converting the raw data into z-scores (Wang & Chen 2012). Normalization was needed to reduce vowel durational variances due to articulation rates, positions of vowels in words, and length of words in which the vowels were embedded. A normalised duration value of zero shows duration equivalent to overall mean duration across all vowels. A normalised duration below zero indicates duration shorter than overall mean and a normalised duration above zero indicates longer than the mean duration.

## 4. Results

### 4.1 Intrinsic duration

The intrinsic vowel duration was only computed for the five short vowels, as they are considered basic vowels for the language, but it was averaged across dialects and gender in the contexts of singleton and voiceless stops. There was a statistically significant difference among the basic vowels with respect to their intrinsic duration $[F(4, 56) = 27.94, p < 0.001]$. The vowels are clearly differentiated, but the difference between the open and close vowels is more pronounced (Figure 2). As reported for many languages, in Oromo the open vowel /a/ (80 ms) had the highest mean duration while the close vowel /u/ (63.44 ms) had the lowest mean duration,
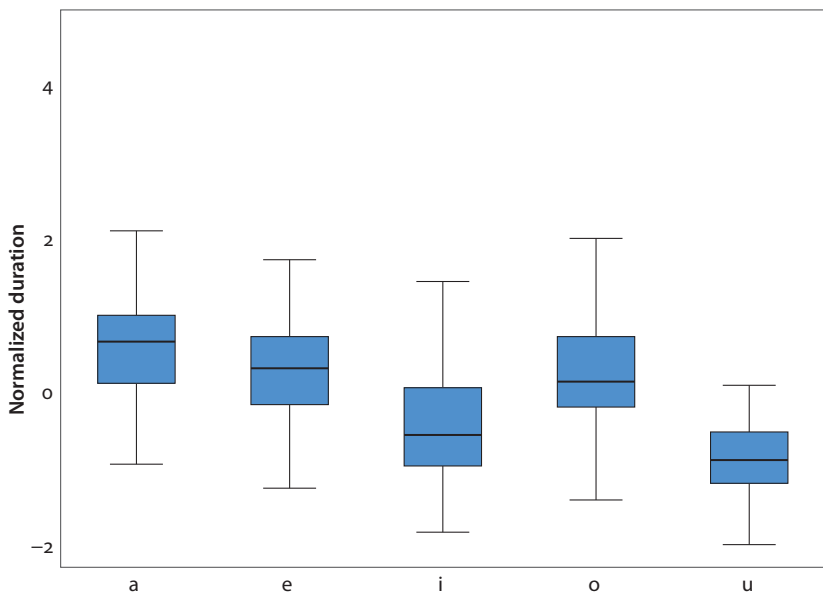
**Figure 1.** Mean values of normalised intrinsic duration of the five basic vowels

as compared to others. The ratio of an open vowel to a close vowel is 1.26, which suggests that the open vowel is about 1.3 times longer than the close one, and this relative length should be a language-specific acoustic feature.

A significant interaction was not found for intrinsic vowel duration x gender [$F (4, 56) = 0.86$, $p = 0.48$], vowel duration x dialect [$F (13, 56) = 1.71$, $p = 0.06$] and vowel duration x gender x dialect [$F (12, 56) = 0.66$, $p = 0.78$]. This suggests that intrinsic vowel duration seems to be preserved and does not vary with dialect and gender, and thus regardless of their gender and dialectal background, speakers of the language seem to produce open and close vowels with a similar durational difference.

## 4.2 Phonological vowel length

Of central interest to us is the investigation of a durational correlate of phonological vowel length in Oromo, and durational difference between the long and short vowels is clear, as indicated in Figure 3. The mean durations for the short and long vowels were 74.34 ms and 156.54 ms respectively, showing a big durational contrast between the two groups. This difference is significant [$F (1, 56) = 1330$, $p < 0.001$], with long vowels, on average, twice longer than short vowels. The result indicates that speakers of a language with phonologically short and long vowels may need a large durational difference to produce a phonemic contrast, which helps to distinguish the corresponding sounds.
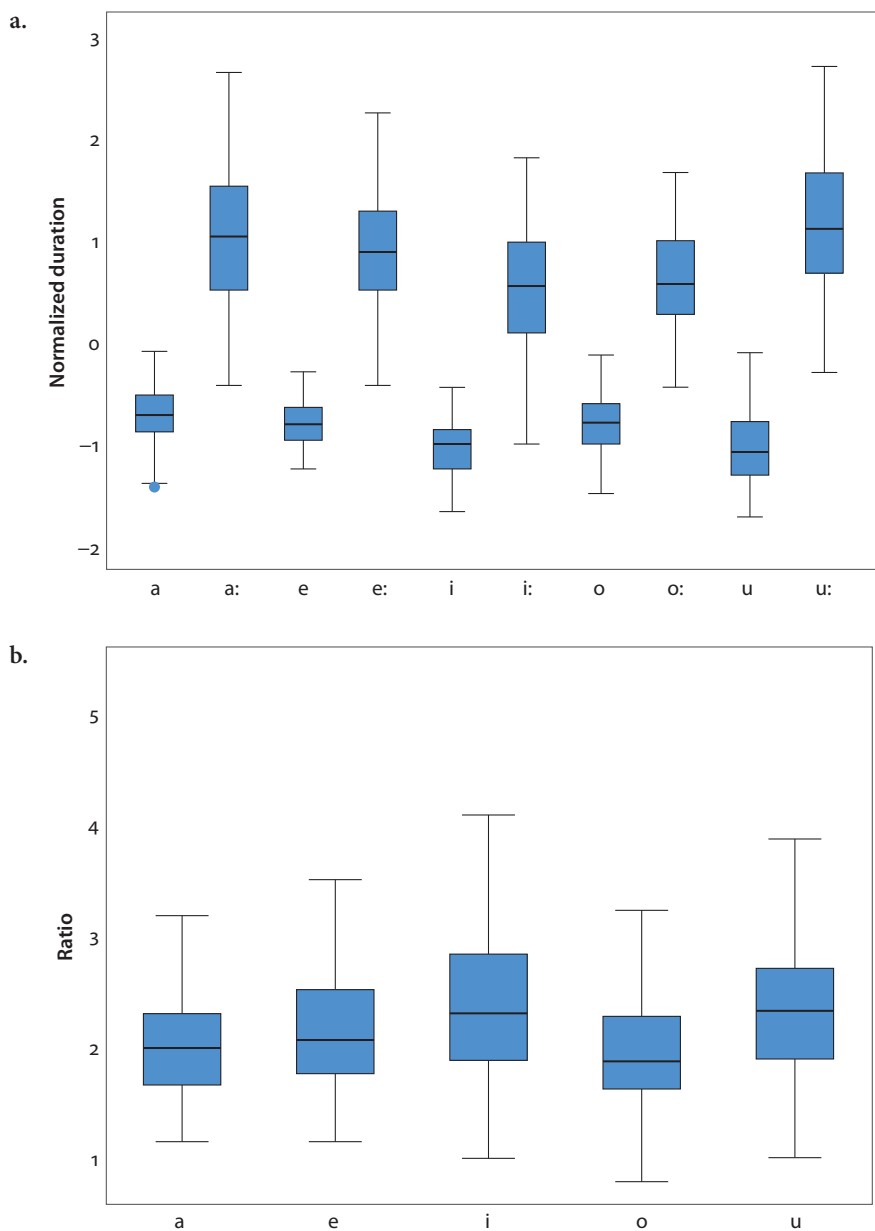
**Figure 2.** Mean values of normalised duration of short and long vowels, and their ratios

A significant interaction was found for phonological vowel length and dialect, [$F$ (3, 56) = 7.93, $p$ < 0.001] but the interactions of phonological length and gender [$F$ (12, 56) = 0.66, $p$ = 0.78] and phonological length, gender and dialect [$F$ (12, 56) = 0.66, $p$ = 0.78] were not significant. This suggests that the durational contrast between short and long vowels does not significantly vary with gender but differs based on only the dialectal background of speakers. The Central (80.6 ms) and Eastern (176.49 ms) dialects had the greatest mean duration, while the Western (66 ms) and the Wollo (139.57 ms) dialects had the lowest mean duration for short and long vowels, respectively. Another interesting finding is that significant interaction of phonological length with the voicing characteristics of the following consonants (stops in this case) was observed, [$F$ (1, 56) = 37.87, $p$ < 0.001]. The mean values of short vowels before voiceless and voiced stops are 68.33 ms and 76.87 ms, respectively, and thus the variance in the duration of short vowels seems to greatly contribute to such a significant interaction. The contextual difference for the long vowels is small; the mean values are 159.51 ms and 160.42 ms when the sounds are produced before voiceless and voiced stops.

The mean ratio of duration of short to long vowels was computed to see if vowel category, consonantal environment, dialect, and gender affect it. The vowel open /a/, has the lowest mean ratio (2.034) while the close vowel /i/, the highest mean ratio (2.412), which suggests that the ratio is inversely related to a vowel height. The statistical analysis shows that the mean ratios significantly vary with a vowel category [$F$ (4, 56) = 14.36, $p$ < 0.00], and with dialect [$F$ (3, 56) = 7.61, $p$ < 0.001] but not with voicing status of the following stop [$F$ (1, 56) = 1.79, $p$ = 0.19] and with gender [$F$ (1, 56) = 3.16, $p$ = 0.081]. Post hoc analysis using Bonferroni shows that, with the exception of the Western and Central dialects and the Eastern and Northern dialects, the other pairs compared differ in their mean ratios of short to long vowels, [$F$ (1, 56) = 1.79, $p$ = 0.19], indicating that speakers of different dialects of the language do not use similar durational contrasts to differentiate between short and long vowels.

## 4.3   Consonantal environments

In this study (See Table 2), consonantal environments include voicing characteristics (voiced vs voiceless in the contexts of /d/ vs/ t, k/) and length (geminate vs singleton in the context of /d/ vs /d:/) of the following stop consonants.

Vowels preceding voiced and singleton consonants were significantly longer than those before voiceless ($F$ (1, 56) = 20.7, $p$ < 0.001) and geminated consonants ($F$ (1, 56) = 18.55, $p$ < 0.001). The mean duration of vowels before voiced and voiceless consonants (in this case stop) were 76.22 ms and 68.32 ms respectively, while the mean duration of vowels before geminate and singleton were 72.44 ms and
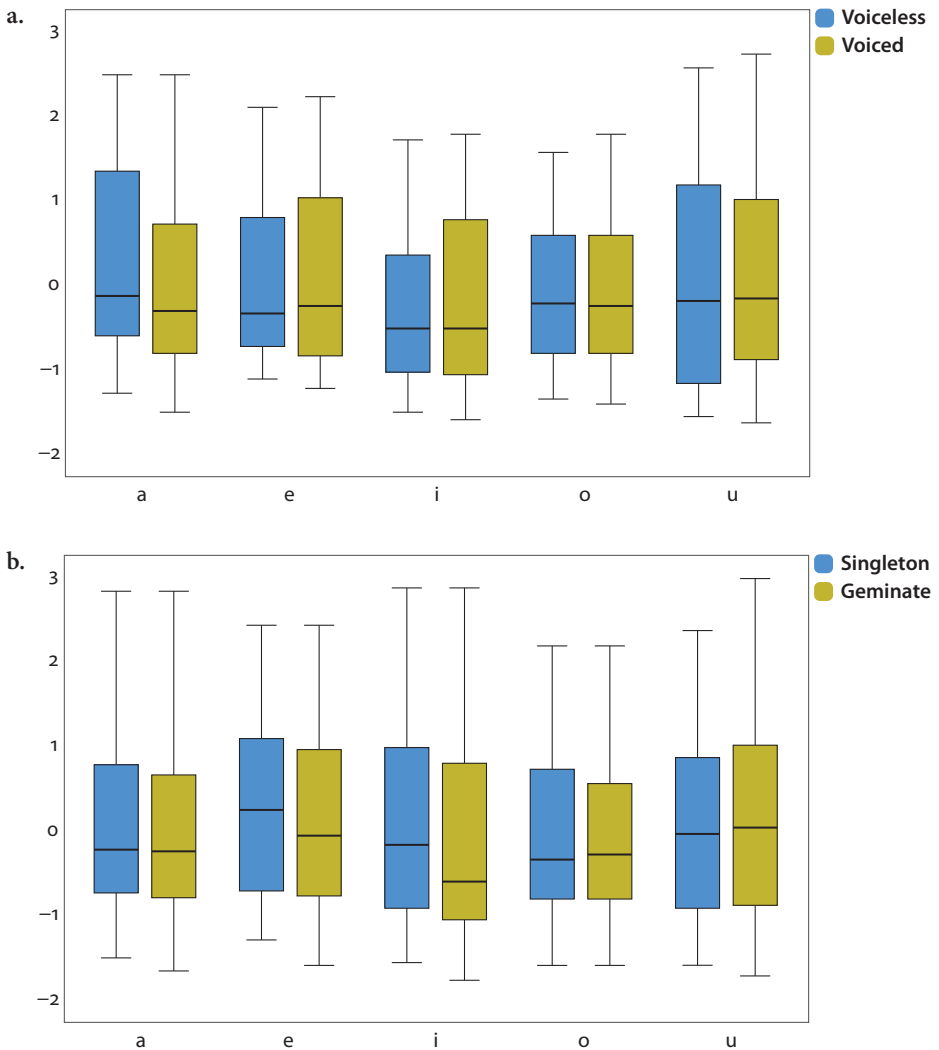
**Figure 3.** Mean values of duration of vowels preceding geminate vs singleton and voiced vs voiceless singletons

76.21 ms, respectively. The anticipatory lengthening of a vowel preceding voiced consonant was confirmed once more in the present study. There was also a significant interaction of consonantal length and vowel category ($F_{(4, 53)} = 26.35$, $p < 0.001$). The significant interaction between consonantal length and vowel category arose from the fact that the mean difference produced by consonantal length was greater for the vowel /u/ in a geminate environment and for the vowel /e/ in a singleton environment than for any other.

## 4.4   Gender

Gender is one of the between-subject factors and, based on research which reported a significant effect of the factor, we expected that gender would influence vowel duration in Oromo, but the effect of gender on vowel duration was not significant ($F$ (1, 56) = 0.19, $p$ = 0.66). The mean duration for female and male were 73.86 ms and 70.76 ms, respectively, and their difference was too small to reach a statistical significance, which suggests that speakers of the language may not differentiate gender based on duration of vowels. The interaction of gender and dialect is not significant, ($F$ (3, 56) = 1.49, $p$ = 0.34), implying that vowel duration in the language does not vary as a function of gender across dialects.
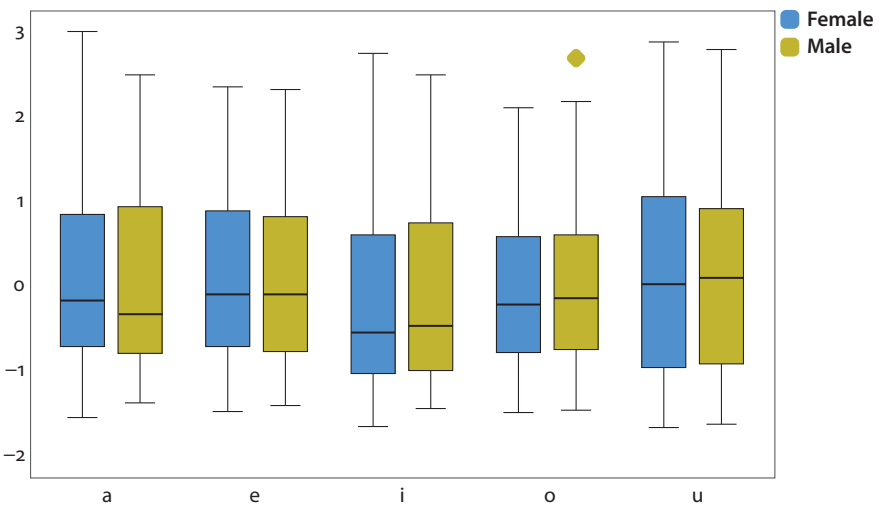


**Figure 4.** Mean values of normalised duration of vowels produced by female and male speakers

## 4.5   Dialect

Finally, an acoustic analysis of the data showed that duration of the vowels varies significantly across dialects, with the longest duration in the Eastern dialect (76 ms), and the shortest duration in the Western dialect (66 ms), ($F$ (3, 56) = 8.78, $p$ < 0.001). Post-hoc analysis of pair wise group comparisons using Bonferroni indicated that mean differences between Eastern ($M$ = 169.67 ms, $SE$ = 4.83 ms) and Western dialects ($M$ = 18.89 ms, $SE$ = 4.38 ms), Eastern and Northern ($M$ = 22.15 ms, $SE$ = 4.83 ms), and Central and Northern ($M$ = 13.67 ms. $SE$ = 4.83 ms) dialects
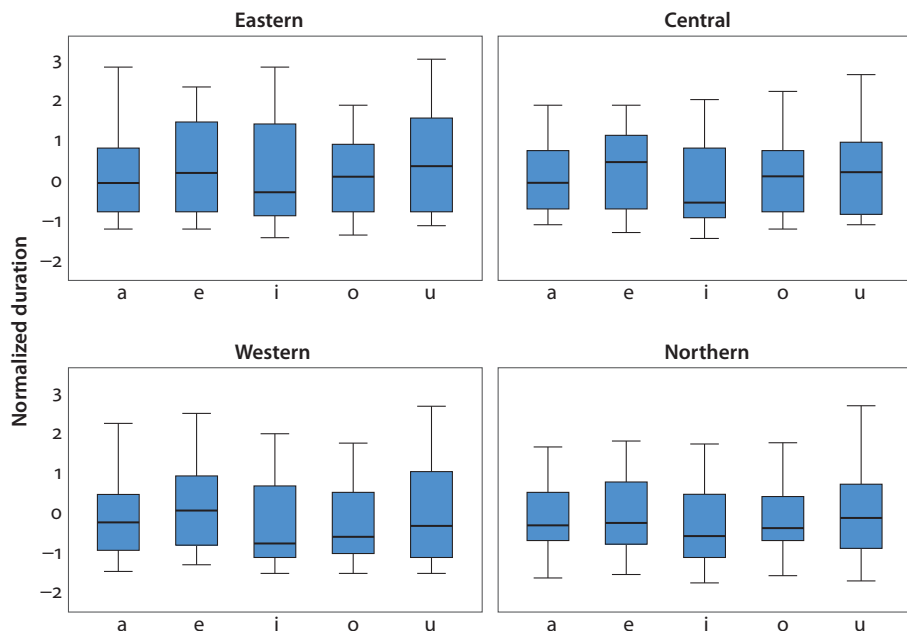
**Figure 5.** Mean values of normalised duration of vowels produced
by talkers from different dialects

were significant, $p < 0.01$. The result reveals that dialect is an important sociolinguistic factor affecting vowel duration in Oromo and, conversely, duration of vowels is an acoustic indicator of a dialectal variation in the language.

## 5.  Discussion

In this study of durational variation in Oromo vowels, we examined various factors that might cause durational differences in the sounds. Consistent with Hillenbrand, Getty et al. (1995), we found that Oromo vowels differ significantly in terms of their absolute duration. The phonemes /u/ and /a/ had the lowest and highest mean durations, and this difference is attributed to the way they are articulated. The opening of the lower jaw requires longer time for the open vowel /a/ than for the close vowel /u/ (Hertricha & Ackermann 1997). The phonetic general tendency that intrinsic vowel duration is inversely related to vowel height is also confirmed in the current study. In addition, phonological length led to a large durational difference between short vowels and their long counterparts. On average, the long vowels are two times longer than their corresponding short vowels, and similar findings were

reported for German by Braunschweiler (1997), and for Malayam by Velayudhan and Howie (1974). Oromo vowels significantly differ in their mean duration ratio of short vowel to long vowel. Duration provides a robust perceptual cue for differentiating long and short vowels, and thus the large durational difference should not be not surprising (Hillenbrand, Clark, & Houde 2000; Rosner & Pickering 1995).

There is a general tendency in the world's languages for a vowel preceding a voiced stop to lengthen. This tendency holds true for Oromo, as its vowels have significantly longer duration before a voiced stop than a voiceless stop, in agreement with previous studies (Braunschweiler 1997). The durational difference due to a voicing characteristic of the following consonant is attributed mainly to a motor control of articulators. An anticipatory use of greater articulatory energy for a voiceless stop, greater intraoral pressure during the articulation of a voiceless stop, a swift setting of focal folds for maintaining voicing and compensating for a reduced closure duration after a longer vowel are hypothesised to result in a longer vowel before voiced stops (Begus 2017). Similarly, Raphael (1975) examined activity of muscles of articulators using EMG, and observed that vowels preceding voiced consonants needed more muscular activity, which might mean longer articulation time.

One of the findings of the current study is that a vowel is shorter before a geminated stop than before a singleton stop. In some previous studies, a vowel preceding the geminate consonant was reported to be shorter (Esposito & di Benedetto 1999; Ridouane 2007; Aldubai 2015; Kaye 2005), while in others, an opposite result was found (Hansen 2004; Idemaru & Guion 2008; Tserdanelis & Arvaniti 2001). The contradicting results are attributed to language-specific rules for weight, stress patterns and syllable structure. For instance, the effect of consonant length is observed in only stressed syllables in Italian (Payne 2005). The articulatory system seems to compensate for the time required for producing a long consonant by decreasing the duration of the preceding vowel. In the current study, the target vowels were followed by the stop geminate /d:/ and its singleton counterpart. Geminates require a greater constriction of the vocal tract, which in turn requires longer time, and thus the duration of the preceding vowel is shortened in anticipation (Al-Tamimi & Khattab 2015). Apart from providing a perceptual cue for the following segment (Hillenbrand, Clark, & Houde 2000), a compensatory shortening of vowels may be used to facilitate articulation.

Past acoustic studies investigating the effect of gender on vowel duration have reported contradicting findings. In agreement with some of these studies (e.g., Most, Amir, & Tobib 2000), the current study could not find a significant difference in duration of vowels as a function of gender. It was also observed that gender did not interact with other factors such dialect, length, and phonetic environments to affect vowel duration in Oromo. However, previous studies reported that English,

Portuguese and Swedish speakers exhibited a significant durational difference in their vowels because of gender (Hillenbrand et al. 1995; Clopper, Pisoni & de Jong 2005). In such studies, women had significantly longer vowels than men, and in the current study, women also had longer vowels, though not significantly. The tendency of female talkers to produce longer vowels may be related to their attempt to make clear vowels, as clearly spoken vowels are known to have longer durations (Durisala, Nambi, & Batra 2011; Tjaden et al. 2014). This view is in discord with the finding that women's speech is more intelligible than men's (Bradlow, Torretta, & Pisoni 1996). More work remains to be done to investigate the effect of gender on duration of vowels in different languages.

There are clear dialectal differences with respect to the duration of vowels in Oromo. Mean durations of the vowels vary significantly across dialects, with the longest duration in the Eastern dialect and the shortest duration in the Western dialect. According to Kebede (2009), the Eastern dialect includes Oromo speakers living in Bale, a large part of Arsi, Hararghe, while the Western dialect includes most parts of Showa, Wollega, Jimma and Ilubabor. Unlike speakers from the Western dialect, speakers from the Eastern dialect tend to reduce vowels at a word boundary in a phrase (Owens 1985) and listeners of the other dialects often complain that they speak fast. As a result, we expected that speakers from this dialect would have a shorter vowel duration, but our expectation was not confirmed. Post Hoc multiple comparisons indicated that mean differences between the Eastern and Western dialects, and the Central and Northern dialects were significant. Many previous studies also reported a significant effect of dialect on vowel duration in American English, British English, Portuguese, Welsh and Dutch (Fox & Jacewicz 2009; Clopper, Pisoni, & de Jong 2005; Williams & Escudero 2014; Escudero et al. 2008; Mayr & Davies 2011) while some other studies found no such significant durational difference among dialects (Schoormann, Heeringa, & Peters 2017).

## 6. Conclusions

The current study has revealed that regional dialect is an important source of systematic variation in vowel duration in Oromo, with the longest duration in the Eastern dialect and the shortest duration in the Western dialect. Vowel duration does not vary with gender, but vowels have significantly longer duration when followed by voiced singletons than voiceless ones, and when followed by voiced singletons than by voiced geminates. Phonologically long vowels are, on average, two times longer than short ones. This difference is significantly affected by dialect and consonantal environments. A significant durational variation was observed among different vowel categories of the language. It is concluded that vowel duration in

Oromo is influenced by vowel categories, dialectal background of speakers and consonantal environments. Besides a quantitative variation, Oromo vowels are expected to exhibit a qualitative variation, and this phonetic aspect is worth considering in the future study.

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# Sign language

# The linguistic nature of expression of aspect in Ethiopian sign language

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Research findings on the aspectual marking system in sign languages points towards diverse thinking. At first it was claimed that aspect marking is inflectional morphology. This, however, has been questioned on the grounds that it does not meet the basic criteria for inflectional status, and is in fact derivational or belonging to a highly iconic class of ideophonic morphology. It also has been argued that the system is neither inflectional nor derivational, but gestural. These different analytical perspectives are still a subject of discussion. This paper is a part of wider research on forms, meanings of the aspect marking system in Ethiopian Sign Language (EthSL) and examines the nature of the aspect marking system observed in EthSL in light of the ongoing discussions. Seven deaf language consultants of differing ages and genders were involved. McCarthy's prosodic theory of nonconcatenative morphology was used as a theoretical framework for the analysis of the data. The analysed data refutes the gestural nature of the aspect marking system and points to the direction of inflectional morphology.

**Keywords**: aspect, sign language, Ethiopian Sign Language, EthSL, inflectional morphology

## 1. Introduction

The Latin word from which the English word aspect derives denotes 'how [something] looks'. Aspect is a verb form that indicates time-related characteristics, such as the completion, duration, or repetition of an action. It is concerned with the way events relate to time and refers to the 'how' against the 'when', by tense. Aspect, therefore, simply refers to the description of the event itself, whether it is completed or not, whether it is punctual or continuous, etc. Traditionally, aspect refers to grammaticised viewpoints such as the perfective and imperfective. However, with the realisation of the relationship between view point and situation structure, the

range of the term aspect has broadened. The term now includes temporal properties and situations, or view point aspect and situational aspect (Smith 1997).

This paper is a part of wider research on forms and meanings of the aspect marking system in Ethiopian Sign Language (EthSL), a language used by over three million users in Ethiopia. The motivation for this part of the research is twofold. First, there is an ongoing argument on the linguistic nature of the aspect marking system in sign languages, which calls for more research on diverse sign languages. Second, almost all of the evidence used in the argument on the nature of aspect marking in sign languages come from sign languages used in Europe and America. This calls for investigating the aspect marking system in African sign languages, such as EthSL. The specific objective of this research, therefore, was to examine the nature of the aspect marking system observed in EthSL, in light of the ongoing debate, with the aim of providing more information on the nature of aspect marking in sign languages and contributing towards the international debate on the issue.

The paper is organised in six sections. Section 1 introduces the topic, motivation and structure of the paper. Section 2 is devoted to a review of the literature on the ongoing debate around aspectual marking systems. A brief introduction of the theoretical framework and methodologies is given in Section 3. In Section 4, I will discuss the morphological versus gestural debate and argue that aspectual expressions in EthSL display major hallmarks of a morphological operation. Based on this, I will then discuss the inflectional versus derivational debate in Section 5, in which I will argue that, even though the inflectional versus derivational categorisation of morphology is vague, the EthSL data indicates towards the inflectional nature of the morphology. Section 6 contains the concluding part of the research.

## 2.   The linguistic nature of aspect marking in the literature

Prior to Stoke's (1960) groundbreaking work on sign language linguistics, signs were assumed to be simple unanalysable gestures with no internal organisation. Since the realisation that signs have analysable internal structures, research in sign language has rapidly passed from analysing the internal structures of signs to identifying and analysing linguistic operations on signs, such as the morphology of sign languages. Research in sign language morphology has shown that, just as is the case with spoken languages, sign language morphology is complex and has a wide range of morphological processes, some fully productive, some idiosyncratic, all influenced by general linguistic organising principles and most modelled by modality-specific factors, as well (Sandler & Lillo-Martin 2005: 21). One significant difference in the morphology of oral and signed languages observed so far is that, while morphological processes in spoken languages are typically linear, involving

the sequential lining up of bases and affixes, the morphological process in sign languages is not sequential and is often described as simultaneous, largely because this linear sequential affixation so common in oral languages is relatively rare in sign languages. This observation on the special nature of sign language morphology has created differing views on whether to name this simultaneous operation inflectional or derivational morphology or something else, such as gestural, which is non-morphological.

One of the morphological operations in sign languages that have been controversial is the aspectual marking system. In the early days of research in aspect marking in sign languages, it was claimed that aspect marking is morphological in nature and falls into the category of inflectional morphology. Klima and Bellugi (1979) described a large number of aspectual inflections in ASL using the verb sign LOOK-AT, and concluded that the aspect marking system in ASL is morphological in nature and the morphological system falls into the category of inflectional morphology. To strengthen their points, they offered two further arguments for the morphemic status of their modulations. First, the modulations have a specific linguistic distribution, i.e., they appear only with certain predicates, and they appear in certain syntactic contexts. Second, they can be analysed in terms of smaller phonological features that combine with one another: reduplication, even movement, tense movement, end-marking, fast movement and expanded movement. The findings of this rich and ground-breaking analysis of aspect marking forms were later supported in the analysis of other sign languages, such as British Sign Language (BSL) (Brennan 1983; Sutton-Spence & Woll 1999), Swedish Sign Language (Bergman 1983), Danish Sign Language (Engberg-Pedersen 1993), and Israeli Sign Language (ISL) (Sandler 1996). Aspect marking with similar form and meaning have also been described by other researchers, such as Metlay & Supalla (1995) and Rathmann (2005), to mention a few. The inflectional view of aspect marking was widely accepted for almost for a decade. Later on, after more than a decade, while the morphological nature was still upheld, the claimed inflectional nature of the morphology was questioned on the ground that aspect marking does not meet the basic criteria for inflectional status, and in fact best suites the category of derivational morphology (Bergman & Dahl 1994; Maroney 2004; Liddell 2003, to mention a few) or belong to a highly iconic class of 'ideophonic' morphology (Bergman & Dahl 1994). Liddell (2003) suggested that the aspectual modulations in American Sign Language (ASL), such as those described by Klima and Bellugi, represent a kind of morphology that is different from inflection and derivation. Liddell (2003: 52) goes further and questions the possibility of finding any true inflectional process in ASL grammar. The gestural view was motivated by recent research findings that indicated that natural sign languages may share some properties with gesture, especially in the use of space (Casey 2003; Kendon 2004). The said

shared properties, however, were rarely identified in clearer terms. Liddel (2003) for instance, argued that a particular subset of verbs of motion and location in signed languages, sometimes referred to as classifier constructions, represent blends of gestural elements and sign. This stance was later supported by Schembri et al. (2005) who compared Australian and Taiwan sign languages with nonsigners gestures. Although these findings were general conclusions pointing to the existence of shared properties between sign languages and gestures, they have, however, led to a new argument that debunked the morphological nature of the aspect marking operation altogether and claims that the aspect marking system doesn't meet the criteria for either inflectional morphology or derivational morphology (Gray 2012). Gray argued that the process of verb modifications in representing aspectual information – which he termed Aspectual Verb Modification (AVM) in Australian Sign Language (Auslan) – is not a morphological system but is best analysed as gestural representation. Going further, Gray claimed that aspect marking is gestural in nature. However, this perspective is yet to receive support in other sign languages. These different analytical perspectives on the expression of aspect are still a subject of discussion. Each of the perspectives has their own merits and demerits, making outright rejection or support a problematic decision. This calls for expanding the investigation to diverse sign languages such as EthSL, which is a not-yet fully investigated sign language. Most of the arguments around the linguistic nature of the aspect marking system are based on sign languages that are considered to be relatively developed, such as ASL, BSL and Auslan. There is no evidence to show that the same is true of sign languages in Africa, such as EthSL. Wilcox, (2004: 48) noted that 'A gesture can have a specific form and (localised) meaning, and thus function lexically, or an abstract form and a non-specific, generalised meaning'. This also could apply to the morphology of a sign language, whereby certain linguistic operations, such as aspect marking, could have a linguistic status in certain languages, while in other languages could fit into the definition of a gesture. This makes the investigation of aspect marking in diverse sign languages an important step towards understanding the linguistic nature of aspect marking in sign languages. The main motivation for this investigation, therefore, was to assess the linguistic nature of aspect marking in EthSL and make a contribution towards the current debate around the subject matter.

## 3.   Theoretical framework and methodology

### 3.1    Theoretical framework

The theoretical foundation of the analysis presented in this paper is McCarthy's (1979, 1981) prosodic theory of nonconcatenative morphology. The foundation of the prosodic theory is the Morphological Rule Constraint (MRC) which states that 'All morphological rules are of the form A-B / X, where A is a single element or zero and B and X are (possibly null) strings of elements'. It is a theory of how morphological and phonological determinants of linguistic form interact with one another in a grammatical system. More specifically, it is a theory of how prosodic structure impinges on templatic and circumscriptional morphology, such as reduplication and infixation.

There are three essential claims of the theory: The first is the principles of prosodic morphology that defined prosodic morphology hypothesis templates in terms of the authentic units of prosody: mora (μ), syllable (σ), foot (F), prosodic word (PrWd). The second claim is in template satisfaction condition, which states that satisfaction of templatic constraints is obligatory and is determined by the principles of prosody, both universal and language specific. The third claim is prosodic circumscription, which states that the domain to which morphological operations apply may be circumscribed by prosodic criteria as well as by the more familiar morphological ones. In short, the theory of prosodic morphology says that templates and circumscription must be formulated in terms of the vocabulary of prosody and must respect the well-formedness requirements of prosody.

The theory, which was originally justified on the basis of Arabic morphology, was later extended to typologically diverse languages such as Spanish Harris (1980) and Hausa (Halle & Vergnaud 1980) languages, in which it yielded rich insights into a wide variety of morphological phenomena.

### 3.2    Application of the theory in sign languages analysis

The theory has been applied in the analysis of sign languages since 1989. Among others, Sandler (1989, 1990) and Sandler & Lillo-Martin (2005) applied McCarthy's templatic morphology theory in the analysis of ASL verb morphology, and the result pointed to the applicability of the theory in the analysis of sign language verbs, especially aspectual operations. In fact, it shows that aspect markers are best analysed as the association of the base sequence to a prosodic template in which the first and last locations are lengthened. For instance in the analysis for the ASL sign SICK, the base consists of a location near the forehead (represented as X), following by

a straight Movement (represented by Y) and another Location in contact with the forehead (represented by Z): together x,y,z played the role of the base consonants (equivalent to McCarthy's Arabic example of *kataba*, k,t,b). The intensive template, represented as sequences of L (Location) and M (Movement) segments is LLMLL, to which the x,y,z base is associated. The intensive form is then the same as the base LML signs, but with longer duration (the hand is held in its position) on the first and last locations: xxyzz. The Durational form adds an arc feature to the movement of the base sign.

## 3.3    The reason for choosing this theory

The first reason for choosing this theory is the nature of sign languages' morphology. It has been said that while concatenative patterns are more common in the world's languages than nonconcatenative patterns (Haspelmath & Sims 2010), it is the templatic type of nonconcatenative morphology that is abundant in sign languages (Sandler & Lilo-Martin 2005: 51). The second reason is that, unlike concatenative morphology, which is morpheme based and restrictive, nonconcative morphology is word based/sign based, and is not restrictive. It allows morphological rules of virtually any type, even those that do not exist in any language, thereby allowing analysis of a language like EthSL on its own terms.

In most cases, the expression of aspectual information is made possible by modifying the base sign. Here, the base of a morphologically complex sign refers to the element to which a morphological operation applies. In base modification, the shape of the base is changed without adding segmentable material on the sign, and this base modification, which is the main route to adding aspectual information on the base sign, falls under the category of nonconcatenative morphology.

In oral languages, linguistics base modifications such as fronting of the stem vowel, palatalisation of the last consonant, weakening of word-initial obstruent consonants, germination, lengthening of the final stem vowel, shortening of the stem vowel, tonal change, voicing of the last consonant and subtraction metathesis belong to the nonconcatenative morphology (Haspelmath & Sims 2010). In different forms, though, these same characteristics are abundant in sign language morphology, making nonconcatenative morphology better suited for the analysis of signs, especially aspect markers, because morphological operations on sign language verbs, particularly aspect markers, may pose difficulty to accommodate in concatenative morphology due to their non-linear formation. McCarthy's theory stands apart among in nonconcatenative morphology, making it the choice for the analysis of aspect markers in EthSL.

## 3.4    Sampling

The purposive sampling method was used to select seven near-native speaker language consultants for the study. In sign language research, the term native speaker refers to deaf children born to deaf parents and started speaking EthSL at home before entering school. It was hard to find such consultants therefore the following criteria were used to select near-native speaker language consultants:

–   They must have learned to sign before the age of five or joined schools for the deaf at as early an age as possible.
–   They use sign language daily.
–   Are regular members of the Ethiopian Deaf Community.
–   Other members of the community testify to their signing skill.

Out of the seven consultants selected based on these criteria, three were female while the other four were male. Three of the consultants were in primary classes in a residential school for the deaf, aged 9, 10 and 11. The other four were teachers in a residential school for the deaf and were between the ages of 21 and 25. All of the consultants were educated in a residential school for the deaf.

## 3.5    Data collection tools and techniques

Various means of collecting data were employed to collect appropriate data from the language consultants. The following data elicitation techniques were applied:

–   Recording natural language use in its context: the consultants were asked to narrate their own life story and their experience at their school.
–   Storytelling: language consultants were asked to view a wordless cartoon on videotape, entitled 'Tom and Jerry', after which they were asked to narrate the story in EthSL.

Among others, the following measures were taken to ensure the data extracted was more reliable:

–   Consultants were aided in doing a particular kind of task so that they knew what was expected of them, until the researcher and the consultants were satisfied that they agreed on what the task involved.
–   As much as possible, data extraction was done in natural settings.
–   The researcher verified the consultant's judgments on videotaped material with other native users.
–   Different elicitation tasks were used to replicate data to increase reliability.
–   Repeated elicitation tasks were used at spaced intervals as a check on the internal consistency of the data.

An HD camera was used to record data. The researcher, being deaf, led the entire data-gathering process in person, which included giving necessary training to the consultants, arranging and organising the places where video recordings were made, giving necessary instructions before and during recordings, etc. The consultants' role was providing language input through various tasks designed for this purpose. Data collection was done in places familiar to consultants, and recording was done in appropriate clothing, suitable to create enough contrast between hands and the background, with a simple unpatterned background and proper lighting, in both sitting and standing posture, depending on the task.

## 3.6    Data analysis procedure

After collecting the data on videotape, the researcher watched the videotape carefully, shared it with his supervisors, another researcher and another native signer before interpreting them to ensure that what he saw was what others saw. Once this was done, the data was transcribed and annotated using ELAN 4.9.1 annotation software and the transcription was reviewed with the consultants and other skilled deaf signers to check that what was transcribed was agreed upon. After that, the transcribed data were interpreted and analysed accordingly.

## 4.   Morphological vis-à-vis gestural

Before going deeper into presenting data and a detailed discussion of the observations in the EthSL data, it is necessary here to discuss briefly the determining factors in differentiating the morphological from the gestural.

To make it clear from the beginning, this researcher regards both words and signs as coordinated patterns of articulatory gestures produced appropriately in time and space (Wilcox 2004: 45). The question, therefore, is not whether a gestural aspect is involved in the marking of aspect in sign languages, or not. The question is what characteristics of a linguistic operation on a sign qualify its being termed morphological or gestural. Morphology, as it is commonly known, is the arrangement and relationships of the smallest meaningful units, known as morphemes, in a language. When the arrangement and relationship of the morphemes is morphological in nature, among others, it appears in a similar fashion in the use of the language by proficient speakers of a particular language. This is because the arrangement of the morphemes exists in the minds of the speakers and is utilised the same way as situations arise, regardless of the individual and thus results in uniformity. One of the determining factors between morphological and gestural expressions, therefore,

is that morphological operations exhibit uniformity because they are selected from a pre-existing lexicon in the speakers' mind. Of course, the fact that two or more usages are uniform alone can't justify labelling a linguistic operation morphological. While being uniform may serve as a starting point, in addition to the issue of uniformity, for a linguistic operation to be referred to as morphological, it needs to display at least the following main characteristics: it should be composed of morphemes that can be identified and decomposed into smaller units, it should be guided by all-agreed rules and be uniform and conventionalised. This means that the internal structures of the sign as well as their semantics needed to meet these criteria.

Broadly defined, a gesture is 'a functional unit, an equivalence class of coordinated movements that achieve some end'. (Armstrong et al. 1995: 43). Gestures are holistic, imagistic productions that directly represent mental images (Gray 2012). The main characteristic of a gesture is that it is 'widely variable in its manifestation' (Wilcox 2004: 69). Therefore, a linguistic operation is said to be gestural if the marking operation is composed of structures that are spontaneous, created on-line, and are directly shaped by their semantics, lack an internal structure, and cannot be decomposed into reoccurring parts. Furthermore, they differ from individual to individual because they are not selected from a pre-existing lexicon and the forms observed are holistic, imagistic productions that directly represent mental images, among others. Being imagistic deprives gestural operations of the quality of uniformity.

Having said this, I will now try to show the observations in the EthSL data in light of the above characteristics of morphology and gesture. I will start by examining the degree of uniformity in the marking of aspect in the data through quantitative results. Then I will examine the internal structure and decomposability of the morphemes.

## 4.1 Degree of uniformity in the marking of aspect in ETHSL

As can be observed from quantitative results presented in Table 1, a total of 208 instances of sign verb usages were observed in the data provided by seven consultants. Of the 208 instances, 186 (89.4%) of the verb signs were marked for aspect, while the remaining 22 (10.6%) were either not marked for aspect, the marking was unclear, or the type of the marking was uncertain. Out of 186 verb signs observed in the data, 81 (43.55%) were marked for continuative, 31 (16.7%) for iterative, 16 (8.6%) for intensive, 11 (5.9%) for the durative, 34 (18.28%) for the habitual and 13 (6.99%) for the inceptive, in the same manner.

**Table 1.** Summary of instances and manner of morphological operations in the data

| S/N | Description | Frequency | | Remarks |
|---|---|---|---|---|
| | | # | Percentage | |
| 1 | Observed verb signs in the data | 208 | 100 | Other classes of sign were not counted |
| 2 | Verbs signs marked for aspect | 186 | 89.4 | Out of the 208 |
| 3 | Unmarked verb signs/unclear/uncertain marking | 22 | 10.6 | Out of the 208 |
| 4 | Verb signs marked for continuative | 81 | 43.55 | Uniform marking |
| 5 | Verb signs marked for iterative | 31 | 16.7 | Uniform marking |
| 6 | Verb signs marked for intensive | 16 | 8.6 | Uniform marking |
| 7 | Verb signs marked for durative | 11 | 5.9 | Uniform marking |
| 8 | Verb signs marked for habitual | 34 | 18.28 | Uniform marking |
| 9 | Verb signs marked for inceptive | 13 | 6.99 | Uniform marking |

The quantitative result points to a high degree of uniformity in the marking of aspect in EthSL. From all indications, the manner of the marking doesn't look spontaneous. Except for small individual differences, for instance in the number of reduplications, the length of duration and the accompanying non manual features, there is a uniform marking system in display. Uniformity, as explained earlier, is the characteristics of morphology. The morphological nature of aspect marking has a lot of support from both those who argue in favor of derivational and those who argue in favor of inflectional morphology (Klima & Bellugi 1979; Liddell 2003, for instance).

## 4.2   Internal structure and decomposability of the morphemes

Since Klima & Bellugi's (1979) first attempt at analysing aspectual marking mechanism in ASL, one of the facts that has been repeatedly proved in diverse sign languages is the fact that the aspect marking mechanism in sign languages has internal structure that could be decomposed into units. The same has been proved in this data. Having attempted to show the degree of uniformity, as observed in the data under investigation, in the marking of aspect through quantitative data, I will now attempt to show if the morphemes observed and labeled in EthSL are decomposable, and whether the internal parts of the verbs' signs marked for aspect could be analysed. I will use one example each from the continuative, iterative and the inceptive for the purpose of showing decomposability of the morphemes.

### 4.2.1   *Continuative*

As can be observed in Table 1, the continuative is the most visibly marked aspectual form in the studied data. Three different forms in marking the continuative on sign verbs were observed, namely slow reduplication, hold and extended production. However, signers didn't use the three forms of marking aspectual meanings arbitrarily. While signers reduplicated durative verbs slowly with an elliptical path movement and a tense or emphatic production to show continuity, they held non-durative verbs stable in a place without any movement to express continuative meaning.

One of the verb signs frequently marked for the continuative is the sign FOLLOW, shown below:



FOLLOW-dictionary form          FOLLOW-unmarked          FOLLOW-marked for continuative
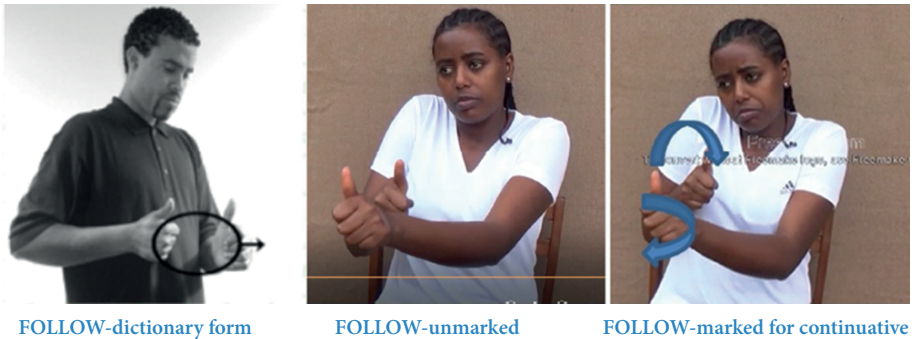
**Figure 1.** FOLLOW dictionary form, unmarked and marked for continuative

In the citation form of FOLLOW, there is no visible reduplication; the 'A shaped' hands move a little forward together in a uniform manner. However, in the videotaped data studied and analysed, the following observations were made of the sign FOLLOW:

– The movement in the citation form is reduplicated in a slow and semicircular manner.
– All the consultants added the same morpheme to express the same meaning.
– The added morpheme was identified as slow reduplication.
– The aspectual meaning the slow reduplication carried was continuative.

The morphemes in the sign FOLLOW were decomposable, as per sequence and duration. Except for small individual difference in the number of reduplications, the length of duration and the accompanying NMF, all other parts of the sign were uniform. The accompanied NMFs didn't change the meaning, and they varied depending on the context and related to the signers' impression of the actions, including stern face, focused and narrowed eyes.

The consultants' marking of the continuative on durational verb signs, which can be reduplicated such as; FOLLOW, WALK, TALK, and GIVE (FEED), were identical both in form and in semantics

(1) DSM(A) DOG FOLLOW(redS) GIRL.
   The dog kept **following** her.

(2) PRO3 DSM (2) WALK (redS)
   A girl was **walking** along.

(3) PRO3 TALK (redS).
   They continued **talking**/They had a discussion.

(4) DSM(A) (DOG) FOLLOW (redS) (GIRL)
   The dog kept **following** her.

(5) PRO2 FOOD GIVE (redS) (DOG).
   She was **feeding** the dog.

(6) GIRL DSM (2) WALK (redS)
   A girl was **walking** along.

But when the consultants were given the opportunity to mark certain durative verbs that are
   non-reduplicative in their citation form, they all either held the signs or extended the production:

(7) CAT RAT LOOK (hold) (THE GIRL)
   Tom and Jerry **gazed** at her (for a long time).

(8) PRO 2 FROWN-FROWN (ext)
   The girl walked away frowned. (She remained frowned as she walked away)

(9) CAT RAT HEAR (ext) SONG.
   Tom and Jerry continued **listening** to the song.

### 4.2.2 *Iterative*

The iterative carries the meaning 'to do something over again or repeatedly'. It was observed 31 times in the data studied. Like the continuative, it is produced slowly with an elliptical path movement and a tense or emphatic production. As discussed in Section 4.1, the difference is that the form carries a continuative meaning when added to durative verbs such as FOLLOW and WALK, and iterative meaning when added to non-durative verbs such as PEDAL-PEDAL and STRIKE. PEDAL-PEDAL is a verb sign derived from the noun PEDAL and is one of the signs which have no one-word meaning either in English or Amharic. It should be noted that there are many signs that have no one-word meaning in a spoken

language vocabulary. [1] The same can be said of certain signs such as PEDAL-PEDAL. The sign PEDAL-PEDAL is similar to the sign STEP, which is a non-durational sign and carries the meaning of pushing the pedal of a bicycle again and again with the intent of moving the bicycle forward. When the sign is reduplicated in a slow manner it means doing it again and again.
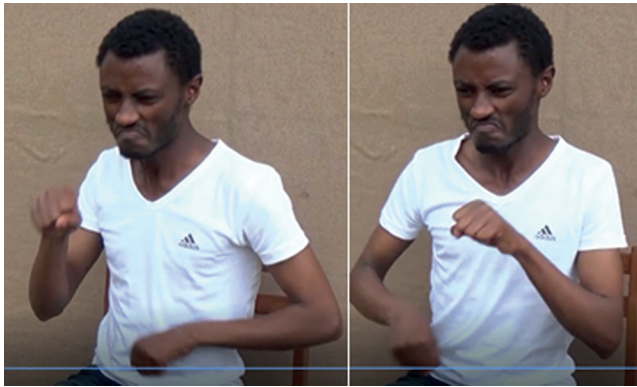


PEDALE-PEDALE (iterative)

**Figure 2.** PEDALE-PEDALE (marked for iterative)

The following observations were made on the sign PEDAL-PEDAL recorded on video and studied:

–  The movement in the citation form is reduplicated in a fast and semicircular manner to indicate 'again and again'.
–  All the consultants added the same morpheme to express the same meaning.
–  Added morpheme: Fast reduplication.
–  Aspectual meaning: Iterative

Just as was observed in the sign FOLLOW, the morphemes in the sign PEDAL-PEDAL were decomposable as per sequence and duration. The small difference observed has to do with the number of reduplications, and the accompanying NMF, which express the efforts and determination of the rider and which are not related to any aspectual meaning.

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**1.**  Such cases are not limited to sign languages only. As Chao (1968) noted, 'Not every language has a kind of unit which behaves in most (not to speak all) respects as does the unit called "word"'. He added that in the case of a Chinese language '…It is therefore a matter of fiat and not a question of fact whether to apply the word "word" to a type of subunit in the Chinese sentence'. (136).

The same forms of marking with similar meaning were observed in other cases, such as the following:

(10) RAT HIT (redS) (THE PIG).
    Jerry hit the pigs again and again.

(11) PRO3 EGG DSH (OPEN 5) PICK-PUT (redS)
    They picked the eggs one by one and packed them.

However, as observed in the continuative case, when the signers were provided with an opportunity to mark the iterative on durative sign verbs, they uniformly marked it with fast reduplication.

(12) PRO2 ENTER (THE CHICK) (redF)
    The farmer dropped the chicks inside the cage one by one.

(13) PRO ADD (redF)
    He did the sum again and again. (to make sure)

### 4.2.3   *Inceptive*

One interesting observation was how signers marked the sign FALL for the inceptive in a certain occurrence in the video in which a girl was about to fall but was saved in mid-air. Despite making some modifications to the sign for FALL (one signer starting from above head and bringing it downward and the other signer starting from the upper edge of his left open palm) necessitated by the context, both signers attached a morpheme similar in form and meaning that was easily identifiable. The citation form of FALL (physical) can be made in various ways, depending on the context as shown in Figures 3 and 4 below. For instance, it could be signed using only the dominant hand shape in the air direct to the real surface below, or by using the dominant hand shape to depict a person and the passive hand to represent a surface or an object from which the person falls. In both cases, the '2-shaped' palm down hand (which starts from the palm of the passive hand or from the air above the signers' head) moves downward while the palm turns up in the process, without any visible hold either in the beginning or end of the movement of the active hand.

Regardless of their different impression of the falling process, in marking the inceptive, the consultants held the phonological configuration at the initial stage of the production for a longer period than needed in the citation form accompanied by a certain degree of intensity in their faces – eyes wide open, mouth open with the tip of their tongue out – then applied fast movement that was abrupt and stopped in midair where the phonological configuration was held briefly before the saving action was told.
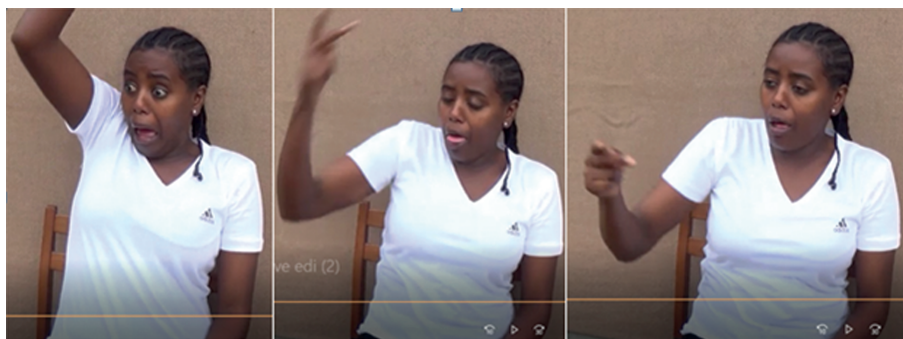
**Figure 3.** FALL (Marked for inceptive)



**Figure 4.** FALL (Marked for inceptive)

Despite the variation in depicting the same action of an interrupted event, a little girl falling fast and suddenly from the edge of a fence in both cases:

– The movement in the citation form is marked by a long tense initial hold-rapid performance-final hold.
– Consultants added the same morpheme to express the same meaning.
– Added morpheme: initial hold-final hold.
– Aspectual meaning: inceptive.

The observations made above can be summed up as follows:

The linguistic operations:
– Exhibit a high degree of uniformity among users, which indicates that the operations are guided by agreed-upon rules.
– Consistent and decomposable morphemes and dual patterning: sign, sequence and duration were observed.

– Uniform marking form: slow and fast, reduplication and initial and final hold (ihold-fhold).
– Uniform meaning: continuative, inceptive and iterative.

The data suggested that the marking of aspect on the verbs is done through a variety of sequences and durations that are identifiable and decomposable. In line with the theoretical framework for this research, these sequences and durations can be analysed in terms of smaller phonological features, such as reduplication, extended production, etc. In addition, a specific linguistic distribution, which is on display as a result of the modulation in the above data, shows internal systematicity in the dimension of patterning. It is a common knowledge in linguistics that if a modulation exhibits internal systematicity in its dimensions of patterning, it shows that the modulation is a morphological process. Consequent to these, if being uniform, being composed of morphemes that can be identified and decomposed into smaller units, and being guided by all-agreed rules are characteristics of a morphological operation, the logical conclusion is that the observation made in the EthSL data is morphological in nature. This is in line with the findings in well-researched sign languages, such as ASL (Klima & Bellugi 1979; Rathmann 2005 and others) and BSL (Sutton-Spence & Woll 1999).

## 5.   Inflectional vis-à-vis derivational

Now it is clear, at least in the context of this research, that the aspect marking process in EthSL is morphological in its characteristics. The next issue to address is the type of morphology on display. Before going deeper into the use of data to argue my position, let me use clear language to explain the criteria used to define aspectual operations identified as morphological as being either inflectional or derivational. Before that, it is worth noting that morphology is basically gratuitous, as well as complex and irregular. Owing to this fact, the distinction between inflectional and derivational affixes is a sometimes-convenient descriptive one, and not a basic distinction in theory. It should also be noted that not all linguists agree on categorising morphology into two broad categories, like inflectional and derivational, and argue that not every operation falls under either. Scholars such as Bybee (1985) have advanced a continuum approach, which, as the name suggests, entails that there is a continuum between inflection and derivation. Booij (1996, 2007), also proposed a **tri-partite approach** to get around this problem, and distinguished between two types of inflection, **inherent** and **contextual**. Inherent inflection, as he defines it, is the kind of inflection that is determined by the information a speaker wishes to

convey, like the concept of number. Contextual inflection, on the other hand, is determined by the syntactic context. Haspelmath (2002) also discusses several more distinctions between inflection and derivation, building on the narrow traditional definitions. He forwarded three sets of criteria for distinguishing inflection from derivation. The first set of criteria is 'all-or-nothing', the second set 'more-or-less' and the third criteria **obligatoriness.** In his view, the 'all-or-nothing' set of criteria unambiguously distinguishes inflection from derivation, whereas the 'more-or-less' set do so to a lesser extent. He also suggested that that inflection is 'obligatory', but derivation is not.

While acknowledging the above arguments and the vagueness of categorising morphological operations into inflectional and derivational, the two broad classifications of morphology were used for the purpose of this research. The most common differentiating characteristics of inflectional and derivational morphologies were also used to examine the data. One of the commonly agreed upon characteristics of derivational morphology is that the operation normally results in the creation of a new word with a new meaning. On the contrary, inflectional morphology involves an obligatory grammatical specification characteristic of a word class and does not result in change of meaning. Consequently, derivational morphemes are expected to make fundamental changes to the meaning of the stem, whereas inflectional morphemes are used to mark grammatical information without making any change in the meaning of the stem.

In the signs used above to discuss the argument on morphological vis-à-vis gestural, the morphological operations observed in signs for FOLLOW, FALL and PEDAL-PEDAL, as well as other signs observed, did not change either the meaning of the signs or their class. The signs remain verbs and semantically mean the same thing. Likewise, no new sign was created as a result of the operations. Most of the operations were obligatory in the sense that, without the operations, the verb wouldn't mean what it should mean. For instance, when no slow or fast reduplication is added to the citation form of FOLLOW, it would mean 'to follow' without specifying for how long the following happened. Adding a fast reduplication on the sign FOLLOW to express habitual meaning, or adding a slow reduplication on the sign FOLLOW to express continuative is obligatory (See the third picture in Figure 1 above where FOLLOW is marked for the continuative aspect). Otherwise, whole sentences could miss the intended meaning.

However, if the signer moved the sign FOLLOW in a zigzag line (as illustrated in Figure 6 below) instead of reduplicating it, it would result in a creation of FOLLOW-UP, an instance of derivational morphology.

FOLLOW-citation form                                  FOLLOW-UP
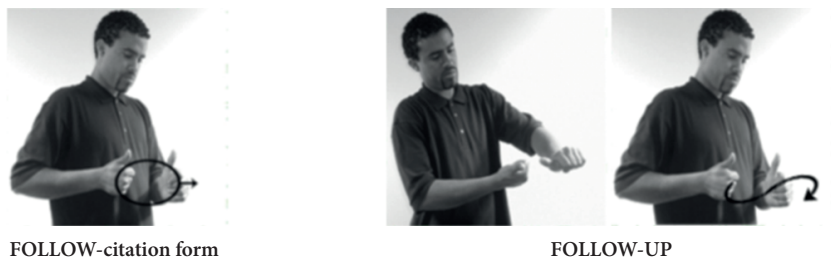
**Figure 5.** Derivational morphology in which FOLLOW-UP is created from FOLLOW

The same could be said of the other operations. It is, therefore, logical to conclude that the morphological operations observed points in the direction of an inflectional morphology. Aspect marking in EthSL, therefore, falls into the category of inflectional morphology.

## 6. Conclusion

The objective of this research was to examine the linguistic nature of the aspect marking system observed in EthSL in light of the ongoing worldwide debates concerning the linguistic nature of the aspect marking system in sign languages and to make a contribution towards the debate. Data collected from seven near-native speaker language consultants of different ages and genders, selected through purposive sampling methods, was transcribed and annotated using ELAN 4.9.1 software and analysed within the framework of McCarthy's prosodic theory of nonconcatenative morphology. The result of the investigation shows no convincing evidence in support of the claim that aspect marking in sign languages is derivational or gestural. Rather, the results pointed to the direction of inflectional morphology. This finding is in line with the findings of Klima & Bellugi (1979), Brennan (1983), Sutton-Spence & Woll (1999), Engberg-Pedersen (1983), Sandler (1996), Metlay & Supalla (1995), and Rathmann (2005), to mention a few, who all reported that the marking of aspect in the respective sign languages they studied is inflectional in nature. Just as reported in the earlier research mentioned above, the signs studied in this research were composed of free and bound morphemes that could be analysed separately. The free morphemes in this case were the citation forms of a particular sign, which are usually referred to as stem, root, or base sign, while the bound morphemes are the sequences and durations attached to the free morphemes. These bound morphemes take various forms such as reduplications, holds, extended productions etc., and carry different meanings such continuative, iterative, habitual, etc., depending on the context in which they are used. Moreover, the observed

markings of aspect are consistent, composed of decomposable morphemes and have dual-patterning sign, sequence and duration, which are characteristics of morphology. The pattern of the morphology, though, inexplicable in terms of prefixes and affixes as it is normal in oral languages morphology, displayed the characteristics of an inflectional morphology because they hardly change the class of the signs or result in the creation of a new sign.

## Acknowledgements

## Keys to conventions abbreviated words

Capital letters represent the nearest English gloss for the sign used

| EthSL | Ethiopian Sign Language |
| DSM (A) | Depicting sign of movement, a handshape |
| DSM (2) | Depicting sign of movement, 2 handshape |
| DSH | Depicting sign of handshape |
| redS | Slow reduplication |
| redF | Fast reduplication |
| PRO, 1,2,3 | First, second, third person pronoun |
| ext | Extended production |
| NMF | None Manual Features |

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# Polysemy of Ethiopian sign language

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The purpose of this study was to examine cases of polysemous signs in Ethiopian Sign Language (hereafter ETHSL). There are various processes of forming polysemy in sign language. To carry out this study, data was collected from users of sign language in Addis Ababa and Hossana by means of direct elicitation, video recording and analysis of ETHSL dictionaries. The data showed some cases of polysemy through meaning extension as well as other occurrences of polysemy. A qualitative descriptive method was used to describe the polysemous signs in ETHSL. The article describes different cases of initiating semantic extension processes, such as action vs. result of activity, noun vs. verb, systematic meaning relations, such as animal vs. meat, and generality. Also borrowings from oral language and other sign languages are found. One aim of this study is to contribute new knowledge about how polysemous signs in ETHSL are extended/derived, as well as accounts for the process of meaning extension. This study will be useful for lexicographers of sign language dictionaries, as well as for second-language learners of sign language.

**Keywords**: lexical semantics, polysemy, polysemous signs

## 1.    Introduction

Polysemy is usually a normal semantic feature in the lexical categories of nouns, verbs and adjectives. The more frequent a word is, the more polysemy it will develop. To investigate the development of polysemy and how certain signs in ETHSL become polysemous requires a clarification of how meaning extension in sign language can be explained. The term polysemy refers to multiple, related senses of one and the same phonological word. In sign languages, as in oral language, certain signs can convey more than one meaning, and a person normally knows by means of context which meaning is intended. For example: *foot* in *He hurt his foot* (as part of the body) and *She stood at the foot of the stairs* (as part of a flight of stairs) (Palmer 1979). Words or signs that have more than one meaning are known as

either 'homonyms' or 'polysemous words/signs. Homonyms have unrelated meanings that map onto the same phonological form. For example, *flour/flower, break/brake, read/red*.

In sign languages, Johnston and Schembri (2007) claim that homonymy can also be found in lexicalised finger-spelled signs in Australian Sign Language (Auslan). For them, often the reduction of fully finger-spelled items to a single manual letter sign can create homonymy. For example, MONTH, MINUTE and METRE (-M-); INFECTION and INSURANCE (-I-). Normally, homonymy is not an issue in sign language.

In contrast to homonymy, sense extension seems quite common in signed languages (e.g., Wrigley et al. 1990). The difference between homonymy and polysemy is not always clear-cut in oral language, and this makes the design of dictionaries difficult; polysemous meanings are usually listed under the same lexical entry, rule-based or not. Often, historical information about how a word's meaning has changed over time is used to decide whether polysemy or homonymy is involved.

There has been limited research on semantic aspects in sign languages globally, and there is no linguistic research done on lexical semantics of ETHSL to our knowledge, especially not about the relation of polysemy. This is a clear gap that needs to be filled for a better understanding of this special type of language. Furthermore, knowledge of semantics is an essential prerequisite for compiling dictionaries of ETHSL. This paper includes the short history of ETHSL (Section 2), conceptual literature (Section 3), methodology of the study (Section 4), findings of the research (Section 5) and the conclusion (Section 6).

## 2.   The history of the Ethiopian Sign Language

Sign languages are visual-gestural language expressed by movements of hands, eyes, face, mouth, head and body. Since William C. Stokoe's pioneering work in the 1960s, linguists have recognised that natural sign languages are autonomous linguistic systems, structurally independent from the oral languages with which they may coexist in any given community (Stokoe, Casterline & Cronberg (1965). This recognition has brought about extensive research into different aspects of American Sign Language (ASL), and has resulted in the recognition of other sign languages.

Ethiopian Sign Language is a visual language that is used by deaf people in Ethiopia. Ethnologists note that in Ethiopia 'several sign languages are used in different schools for the deaf' (Lewis 2009), but these might actually be different varieties of ETHSL that are used by deaf communities in different regions of Ethiopia. According to the *Ethiopian Sign Language Dictionary* (ENAD 2008: ii), 'In Ethiopia, sign language began to be used formally after the 1960s in connection

with the appearance of American and Nordic missionaries who opened schools for the deaf in Ethiopia'. Ethiopian Sign Language thus has links to American Sign Language (ASL). There was a deaf school in the middle of the 20th century in the northern province of Eritrea (then part of Ethiopia) at Karen, which was opened by missionaries from the Nordic countries, mainly from Sweden. They used the sign languages that were in use in the Nordic countries, such as Finnish Sign Language and Swedish Sign Language. When graduates from the Karen school for the deaf started coming to Addis Ababa in search of employment, deaf people from different schools started swapping signs to communicate (Birtat, 2008: 49).

There are two ETHSL dictionaries, both published by the Ethiopian National Association of the Deaf (ENAD). The first was published in 1976 in collaboration with schools for the deaf (Mekannisa School of the Deaf, Alpha School of the Deaf) and the Ministry of Education. The dictionary, entitled *Ha Metshaf* (First Ethiopian Sign Language dictionary) includes 1009 signs. The second dictionary was published in 2008 in cooperation with the Finnish Association for the Deaf, Deaf schools in Ethiopia and the Ministry of Labour and Social Affairs. It includes 1321 signs. The publication of these two dictionaries paved the way for development and further research into Ethiopian Sign Language. Most of the studies conducted on ETHSL are focused on aspects of phonology (Teshay 2012), morphology (Kidane Admasu 2013) and sociolinguistics (Eyasu 2017).

The lexical semantics of ETHSL has hardly been researched. Linguists such as Fromkin (1992) note that all sign languages used in deaf communities have structural constraints, related forms and meanings derived by means of rules, and contain equivalent kinds of sub-lexical units, just like oral languages.

Transfer of meaning seems to be the most obvious feature of language, but all the same it is the most obscure aspect to study. Transfer of meaning is the reason why we use language to communicate with each other, to convey what we mean effectively. Therefore, questions of semantics are an important part of the study of linguistic structure. These studies encompass several different investigations: how each language provides words and idioms for fundamental concepts and ideas (lexical semantics), and how the parts of a sentence are integrated into the basis for understanding its meaning (compositional semantics). This study focuses on the polysemous signs in ETHSL, and falls under lexical semantics.

## 3.   Conceptual framework

### 3.1   Conceptual theories that relate to polysemy in lexical meaning

As mentioned above, little research has been done on lexical semantics of sign language and no theoretical framework has been developed for semantic lexical relations, including polysemy. In this article conceptual theories of lexical semantics and principles developed for oral languages have been considered. In principle, the modality of language is quite different in oral and signed languages. Consequently, there should be different theories developed on the notion of polysemy. Some of the traditional descriptions of polysemy have been studied and are discussed briefly below in search for theories and definitions of concepts in line of relevance to this study.

### 3.2   Distinguishing polysemy from other lexical semantic relations

According to Riemer (2010: 161) linguists have adopted different tests to distinguish polysemy from monosemy as well as homonymy, but they did not find any a reliable method. Polysemy (from Greek: 'many signs/meanings') can be defined a single phonological form having several conceptually related meanings. The opposite of polysemy is monosemy (from Greek 'single sign/meaning'): a word is monosemous if it conveys only one single sense. Homonymy (Greek 'same name'), on the other hand, is the situation where the same phonological form has two or more unrelated meanings.

Riemer (2010: 162) concludes that contrasting polysemy and monosemy is a false dichotomy. When coining technical terms, monosemy is obligatory: *orrery*, for example, has no other recorded meaning in English than 'clockwork model of the solar system', and *appendectomy* (or *appendicectomy*) means only 'excision of the appendix' (Remier 2010: 162). A good example of a homonym is provided by the English noun *wave* and verb *waive*, both pronounced [weɪv]. The different spellings of this word are a clue to the fact that we are dealing with two historically different verbs whose pronunciations happen to have converged.

Lyons (1977: 550) gives a set of criteria to detect lexical polysemy from homonymy, which will be used in the investigation of ETHSL in this paper. His criteria can be summed up as follows:

a.   There must be a clear sense relation between the different senses of a word.
b.   The polysemous senses of a word must be shown to be etymologically related to the same original source word.
c.   Lexical polysemy is a sense relation within a particular syntactic category, i.e., lexical polysemy does not cut across syntactic word class boundaries.

Saeed (1997: 64) states that lexicographers tend to use criteria of relatedness to identify polysemy, such as speakers' intuition and what is known about the historical development of the items.

Apresjan (1974, as cited in Klepousniotou 2002: 55) proposes dividing polysemy into two types: metaphorical polysemy, in which an analogy is assumed to hold between the sense of the word, and metonymic polysemy, in which both basic and literal senses are the same. He explains that in metonymically motivated polysemy, both of the basic senses are the same, for example, the word *chicken* possesses the basic sense that refers to the animal and a secondary sense that refers to the meat of that animal. Therefore, it is widely believed that the meaning of polysemous words has been extended through metaphor and metonymy in order to acquire new meanings through active language users.

The neurolinguist Klepousniotou (2002: 4) states in her study of ambiguity that derivation of polysemy might be motivated metaphorically or metonymically, as well as through foreign language influence.

Palmer (1976) discusses the striking example of metaphors that are found when talking about parts of the body, such as the hand, foot, face, leg and tongue, and explains how the speaker makes this choice based on intuition and context, as one might speak of the hands and face of a clock or the foot of a bed or a mountain. Interestingly, only some of these meanings can be transferred to the relevant object, as the clock has no legs and the bed has no hands. Therefore, in the case of polysemy a word has a literal meaning and a transferred meaning that has been extended through the use of metaphor.

Pustejovsky (1996) introduces the term systematic polysemy. It is defined by a set of word senses that are related in systematic and predictable ways. If we are to identify the semantics of lexical items, we have to check for the eventuality of any given word having multiple interpretations.

Copstake and Briscoe (1996: 15) discriminate between constructional polysemy in an underspecified lexical entry, where a single sense assigned to a lexical entry is contextually specialised, and sense extension, which predictably relates to two or more senses according to rules as a kind of systematic polysemy.

## 3.3　Notions of polysemy in sign language

In sign languages, as in oral languages, the term polysemy is used to describe the same sign as having two or multiple related meanings. Only some discussion about polysemous signs in sign language can be found in linguistics text books or has been listed in definitions in sign language dictionaries. These include Johnston & Schembri (2007) for Auslan Sign language, Valli & Lucas (2005), Cokely (2014), and Naughton (2001) for ASL, and Dikuva et al. (2017) for Turkish Sign Language (TID).

In Auslan, Johnston and Schembri (2007) elaborated some polysemous signs. Below are two examples of polysemous signs in Auslan.



**a.** Street, Road, Way, Method            **b.** Congratulate, favourite, popular, praise

**Figure 1.** Lexically extended polysemous signs in Auslan, taken from Johnston & Schembri (2007)

The two signs in Figure 1 are polysemous: sign (A) means 'street', 'road', 'way' or 'method' and (B) means 'congratulate', 'favorite', 'popular' and 'praise'. It seems likely that these meanings are related, due to a process of lexical extension. Signers extend the sign of a former word for other words that are related in meaning. The result is a single sign with multiple related meanings. Therefore, the signs in Figure 1 qualify as polysemous signs in Auslan, based on the definition of polysemy. The above examples of polysemous signs may also be the same in oral languages. However, it is not clear how they are related to form polysemy in Auslan. Furthermore, the meanings in Figure 1, (B), suggest that they belong to different syntactic categories. As mentioned above in Lyons, lexical polysemy is a sense relation within a particular syntactic category, i.e., lexical polysemy, does not cut across syntactic word class boundaries. The description of polysemy in sign language so far indicates that the categories of parts of speech can be different in sign language. In the case of distinguishing nouns and verbs through the process of reduplication, Supalla and Newport (1978, cited in Naughton 2001: 89) discovered 100 noun-verb pairs in which the movement of the verb is reduplicated to derive a related noun. All of the nouns are concrete objects (e.g. CHAIR, KEY, CAMERA), while the corresponding verb (SIT, LOCK, SNAP-PHOTOGRAPH) displays the action performed with or on the object.

Dikyuva et al. (2017) states that the meaning of words or signs is related to language-internal factors and non-linguistic factors, such as entities in the world, situations in which the word is uttered or signed, thought processes of interlocutors,

and intentions of interlocutors. Therefore, it is not an easy task to derive meaning from a linguistic perspective only. Nonetheless, senses in the mind can refer to both physical and non-physical entities. Therefore, natural languages have the same words (or signs) for both types of entities. According to them, there are many (without mentioning how many polysemous signs there are and without comparing them with oral language) polysemous signs in Turkish Sign Language (TiD).

Cokely (2014: 9) states that polysemous items also commonly exist in English and ASL. For example: 'orange' is identically polysemous, i.e., the multiple semantic senses of the sign in ASL and the multiple semantic senses of the English word are linked. The sign and the word each refer to a particular type of citrus fruit and to the same color. The use of the English word *orange* when either semantic sense of the sign is intended, would result in a successful interpretation. Items of this type can be called paired polysemous lexical items because these real-world realities are common to both communities and are similarly perceived by both communities, and we can conclude that the four realities referred to by the two ASL signs and the two English words are essentially the same for each community. However, there are some cases in which there are polysemous lexical items in ASL that have no direct symmetrical counterpart in English. Of course, if we do not know the real-world realities or how the ASL-signing community refers to them, then there is no possibility that use of either sign will result in clear and accurate communication. Items of this type can be called unpaired polysemous lexical items.

In her description of polysemy in ASL, Naughton (2001: 88) raises questions regarding the nature of polysemy in consideration with signed languages in general and ASL in particular. Using the traditional definition of polysemy, a lexical item that has multiple related meanings, she found few polysemous usages of verbs of visual perception in ASL (SEE and LOOK-AT). Naughton (2001: 88) mentions that ASL has a large inventory of derived forms of these vision verbs, wherein additional morphology changes the meaning, sometimes in very subtle ways.

According to Naughton (2001: 89) there are differences in the polysemy found in English verbs of visual perception and those in ASL. These differences are reflected both in form and meaning. In English, polysemous words are phonologically the same, as in the lexeme *see*, which has a wide array of meanings not strictly associated with visual perception, although the motivation for recruiting *see* to express the meanings can be systematically analysed. The words or signs in language that we use are combined in order to create utterances that convey meaning.

Taub (1997, cited in Naughton 2001) states that 'signed languages use the same kinds of semantic motivations that spoken languages do, e.g., association and metaphor'. Taub also states 'with the hands of the signer as the primary articulators, the shape of the hands and their movement in space often are iconically motivated'.

Taub defines iconic items as those in which 'some aspect of the item's physical form (shape, sound, temporal structure, etc.) resembles a physical referent'.

To conclude, no widely accepted or acclaimed theory and criteria have been developed for polysemy in sign languages. However, some sign linguists mentioned above are trying to investigate polysemy by adopting some definitional concepts of polysemy from oral language. Some will be used in this study, like Lyons' criteria to distinguish polysemy and some traditional definitional concepts used in sign language polysemy.

## 4.   Research method

This research is designed as a qualitative descriptive approach to investigating polysemy in ETHSL. Participants were signers of ETHSL of both genders, over 15 years of age, with an educational level of 8th grade or higher. All participants were members of the deaf community being raised in hearing families, with ETHSL as their L1. Relatively young participants were targeted, since signers in that age bracket generally had a better experience with ETHSL. Twelve participants (six from Addis Ababa and six from Hossana) were selected for the study based on the above criteria. The data were collected using direct elicitation, observation, and video recording of narratives. Additionally, the ETHSL dictionaries, especially ENAD (2008), were used as a secondary source in the analysis.

### 4.1   Direct elicitation

In this study we engaged participants in metalinguistic discussion about what meanings various signs in ETHSL have, whether or not they were conceptually related, or why a given sign has its meanings. The researcher and participants discussed in which process signs form polysemy in ETHSL, as well as how selected signs were judged to be polysemous and whether they were diachronically related. The participants were engaged in metalinguistic discussions with the researcher about what causes signs to develop polysemy in ETHSL and how diachronic information is provided. The researcher asked the participants to give examples of polysemous signs in ETHSL that were conceptually related using criteria and given definitional concepts of polysemy, and showed participants some signs and asked them to list the different meanings for the signs chosen. These metalinguistic discussions were recorded and still pictures taken.

## 4.2    Observations

Some of the data were collected through observations when the researcher was attending informal interview among participants. The researcher was repeatedly involved in the interactions with consultants during informal gatherings and collected polysemous signs that relate to the conceptual definition of polysemy. Consultant observation is an ethnographic research method for qualitative research work, and usually such data provide a control of the data collected from the interviews and a more structured means of soliciting information (Schilling 2013). The researcher met these selected deaf signers during informally scheduled meetings or church programmes.

## 4.3    Video recording

Researchers in sign language make use of videos, still photographs and note-taking as the means of collecting sign language data. The video sessions engaged signers of ETHSL to record their narratives, then to extract the signs, which helps in searching for the occurrence of polysemous sign in videos. For this, six participants were asked to tell multiple narratives in order to generate data. These demonstrations of narratives were recorded as input data for the analysis. The researcher limited her analysis to the signs which are produced by the signers on the video and consulted with signer participant only on extracted polysemy signs from the video.

At the end of each session, the videos were annotated using ELAN software (Crasborn & Sloetjes 2008). ELAN was used to annotate, search and list lexical signs from recorded videos as data sources, and it led to finding examples of polysemous signs to be analysed. ELAN application allows videos to be transcribed, annotated and edited. All the still photos were actually taken from the videos. Any lexical signs were extracted from the elicitation data and then only potential polysemous ones were identified for analysis. The data from videos were identified and analysed in line with the presented theoretical framework and the criteria presented there. Signs that were regarded as polysemous based on these criteria and conceptual literature were selected for further analysis.

Lexical signs were selected from the videos and it was also discussed with the participants to what extent these lexical items were polysemous.

## 4.4   ETHSL dictionary analysis

The two ETHSL dictionaries – a first edition from 1976 with 1009 entries, and a second edition with 1321 entries – were used as a source of data to select potential polysemous signs. This method enabled the researcher to verify the existence of historical relationships. If the polysemous signs found in the video were also included in the existing dictionaries, and – even more importantly – if they indicated diachronic development between the documented senses, these items were counted as potentially polysemous. ETHSL signs were selected for comparison if they were commonly regarded as polysemous signs in the dictionaries. In addition to a meta-linguistic discussion on polysemous signs selected from videos and samples from the participants, the definitions of these polysemous signs collected from the dictionaries were also discussed with the participants.

## 5.   Research findings

The selected polysemous ETHSL signs were described in the light of the definitional concepts, sense of relatedness and preferred criteria for oral language to find different cases of and paths to polysemy in ETHSL. The data were collected from twelve participants from the selected two research areas Addis Ababa and Hossana, and compared with ETHSL Dictionary description of polysemous entries. The data are analysed and discussed below.

**Table 1.**  Polysemous signs registered in the collected data

| Polysemous ETHSL signs collected from video recording | Polysemous ETHSL signs collected from metalinguistic discussion and observation | Total number of polysemous signs for data analysis |
|---|---|---|
| 10 | 12 | 22 |
| INTEREST/NEED, STORY/ NARRATIVE, ENTRANCE/ INSIDE/IN, SICK/DISEASE, PAST/AGO, FOREIGNER/WHITE, YEAR/ AGE/OLD, NATURAL/NATURE, SEAT/ BENCH, MEDICATION/ HOSPITAL | FISH, CAR/DRIVE, POOL/SWIM, TRAIN/LA GER, MERCATO/MARKET, AIRPLANE/FLY, KETTLE/CLAY POT, ORANGE, SEVENTEEN, CHICKEN, CROSS COUNTRY BUS/BUS STATION, CONNECTION/INTERNET | |

As shown in Table 1, the video data gave 10 polysemous signs, and from metalinguistic discussion and observation of data another 12 were obtained. Additionally, 18 polysemous signs from the EthSL dictionary were chosen for closer scrutiny. A total of 40 polysemous signs were collected for analysis based on the criteria mentioned above. These polysemous signs in EthSL are described and discussed below, especially in terms of which semantic process led to their polysemous status.

## 5.1    Different cases of polysemy in EthSL

As stated in Section 1, polysemy refers to a single sign with multiple related meanings. As the data obtained from participants show, polysemous signs are common in EthSL.

Figure 2 below is from a video recording of a story. The sign means 'narrative' or 'storytelling'. These two senses are probably due to their meanings of 'action' and 'result of activity'. The sign 'storytelling' denotes an action, while a narrative is a result of this activity. It probably makes sense to say this sign is polysemous because signers use this sign in different contexts to express different-but-related meanings.



**Figure 2.**  Narrative, Storytelling, Story

There are also polysemous EthSL signs that were extracted from the signed stories told by the consultants. The sign in Figure 3 denotes 'need' or 'interest', which are expressed in same way and have semantically related meanings. This is due to influence from English oral language translated into Amharic, as the two senses are

expressed with the same word in oral Amharic language. As observed from participants discussion, they gave examples that are familiar with this when requested to give polysemous sign examples in EthSL.
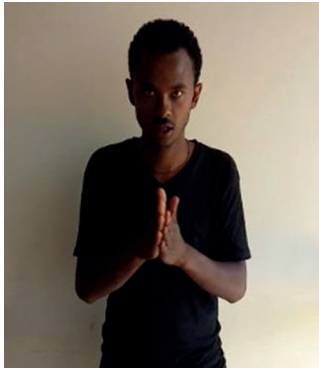


**Figure 3.**  Interest, Need

The sign in Figure 4 below was also extracted from a video of a story telling narrative. The sign produced by this woman means 'chicken', which is typical systematic polysemy: animal/meat (cf. Pustejovsky 1996). She actually used one sign to denote 'chicken' in her narrative, both as animal and as meat, which are multiple related meanings of a polysemous sign. In this way, if signs denote an individual animal or a kind of meat that is produced from that animal, and signers systematically refer



**Figure 4.**  CHICKEN (a kind of animal), CHICKEN (chicken meat)

to them with one and the same sign, this sign has multiple related meanings and is polysemous. Other polysemous sign examples in EthSL collected from participants through direct elicitation includes the sign FISH to denote the type of animal (fish) and the kind of fish meat, as in Figure 5 below. This is also found in oral Amharic.



**Figure 5.**  FISH (kind of animal), FISH (fish meat)

The sign in Figure 6 below was also extracted from a video of a metalinguistic discussion. The sign produced by this man means 'kettle' (metal) and 'pot' (traditional handmade). The signer used the same form of sign language for both senses. This shows that some signs for concrete entities are polysemous because of generality.



**Figure 6.**  Kettle, Pot

Some signs in ETHSL become polysemous as result of grammatical ontology between nouns and verbs. This means that some nouns and verbs are represented with the same sign, hence forming polysemy. There is no clear-cut way to distinguish nouns and verbs in sign languages, although repetition of movement for a given noun in sign language may denote a verb derived from the noun. For example, in Figures 7, 8 and 9: AIR PLANE (noun) vs. FLY-BY-PLANE (verb), CAR (noun) vs. DRIVE (verb), POOL (noun) vs. SWIM (verb), and so on. These signs have multiple

**Figure 7.** Airplane, Fly



**Figure 8.** Car, Drive
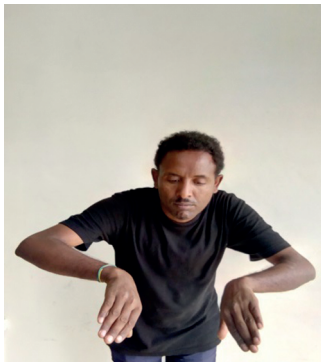


**Figure 9.** Pool, Swim

related meanings based on the grammatical ontology in sign language (as in Lyons in oral language, and Supalla cited in Naughton). Lyons states sense relation within a particular syntactic category, i.e. noun or verb, while in sign languages, Naughton

mentioned that noun and verb relations exist to form polysemy. However, not all nouns and verbs in EthSL have one sign to denote the polysemy of verbal derivation of nouns.

The polysemous EthSL signs described below given during the participant's metalinguistic discussion are signs related in a systematic and predictable way to form a lexicalised systematic polysemy. This is because there is a predictable relationship between place and function, place and object and physical objects and their activity. For example, MERCATO is a physical object where market activity takes place (activity) as in Figure 10. There are clear relations between these senses.



**Figure 10.** Mercato, Market

– MERCATO (place where shopping takes place)
– MARKET (process of selling/buying)



**Figure 11.** La Ger (local place name), Train

– LA GER (place where a train station is found)
– TRAIN (a kind of transport)

**Figure 12.** Cross Country Bus, Bus Station

- CROSS COUNTRY BUS (bus that transports passengers to the countryside)
- BUS STATION (a place from where buses start trips)

The polysemous examples in Figures 11 and 12 also relate systematically to form polysemy. For instance, LA GER (a place where a train station is found) and TRAIN (a kind of transport) are signed the same way due to the relationship between the place where the train station is located and the object itself, where there is a clear relation between two different senses to form polysemy. This is also true for Figure 12.

## 5.2    The process of developing derivative polysemous signs in EthSL

In this chapter we shall discuss the process or pathways through which the registered polysemous signs in EthSL are motivated to form polysemy. The above polysemous signs presented in Section 5.1 are authentic examples in EthSL from our study. They are analysed and categorised in Table 2.

From Table 2 we can see which signs in the collected data were regarded as polysemous in EthSL, and how the processes are motivated through various pathways of derivation. In addition to metonymic derivation (8), there are metaphorical derivations (5), iconically motivated processes (2), motivation through foreign sign language influence (7). This shows that most common polysemous EthSL signs are motivated/derived through a metonymic process. Below, we shall discuss the pathways to or processes of forming polysemous signs in EthSL.

**a.**    *Metonymically motivated EthSL polysemous signs*
EthSL also has polysemous signs that have been extended metonymically and have received meaning through language users. One form of the sign is used as a referential device, one entity is used to stand for another with the primary function of

**Table 2.** Classification of derivational processes of registered polysemous EthSL signs in the investigated data

| Metonymically motivated EthSL polysemy signs | Metaphorically motivated EthSL polysemy signs | Foreign influence polysemy EthSL signs | Iconically motivated polysemy EthSL signs |
|---|---|---|---|
| 8 | 5 | 7 | 2 |
| STORY/NARRATIVE, CAR/ DRIVE, BUILD/CONSTRUCT, POOL/SWIM, TRAIN/LA GER, MERCATO/MARKET, CROSS COUNTRY BUS/ BUS STATION, CHICKEN ANIMAL/MEAT | ENTRANCE/INSIDE/IN, 17 (17/CRAZY),* SICK/DISEASE, FOREIGN/WHITE, PAST/AGO | INTEREST/NEED, FISH ANIMAL/MEAT,** MEDICATION/ HOSPITAL, YEAR/AGE/ OLD, SEAT/BENCH, ORANGE FRUIT/COLOUR, CONNECTION/ INTERNET, NATURAL/NATURE | KETTLE/CLAY POT, AIR PLANE/FLY |

\* The two senses of sign 17: One sense is simply the number 17. The other is derived from bus no. 17, which goes to a church that has holy water that could heal you if poured over you.
\*\* Borrowed from ASL.

providing an understanding. As in Apresjan's explanation that in metonymically motivated polysemy both of the basic senses are the same. The two meanings of such signs are distinct from each other, resulting in polysemy. For example, in Figure 13, the sign for BUILD has the basic sense of BUILDING and CONSTRUCTION, which are linked. This also close to the grammatical ontology process of new meaning extension.



**Figure 13.** Sign illustration for TO BUILD and CONSTRUCTION

There are also commonly used metonymically motivated EthSL signs that are used in Amharic, as well, the surrounding oral language that co-exists with EthSL. For example, as in Amharic, the sign CHICKEN has the basic sense that refers to the animal as well as a secondary sense that refers to the meat of that animal.

The other polysemous EthSL signs obtained from the data that are metonymically motivated are STORY/NARRATIVE, CAR/DRIVE, POOL/SWIM, TRAIN/LA GER, MERCATO/MARKET, CROSS COUNTRY BUS/BUS STATION. Some of these signs are mentioned in the figures above. The sign CAR is the object, and the sign DRIVE is the activity of first sense. This is also true for POOL/SWIM AND STORY/NARRATIVE. In the case of TRAIN/LA GER (place name), the relationship is a result of the interaction between the object and the location of its activity. This is also true for the signs MERCATO/MARKET and CROSS COUNTRY BUS/BUS STATION.

**b.** *Metaphorically motivated polysemous EthSL signs*

From the obtained data, some polysemous signs are analysed to be metaphorically motivated. That is, polysemous signs are extended through metaphor, because there is an analogy between the senses of the sign.

In the EthSL sign ENTRANCE/INSIDE/IN, the closed, bent handshape of the right hand is directed to the 'C' handshape of left hand, indicating that something or someone is inside or entering. The movement of the sign towards the left hand also indicates entering or being inside something. There is an analogy between the senses of the sign. See Figure 14 below:



**Figure 14.** ENTRANCE/INSIDE/IN

In the EthSL sign for PAST/AGO, the flat handshape of the dominant hand of the signer moving backward through shoulder horizontally behind the signer indicates a time metaphor (cf. Naughton). In this case, the sign is motivated through a time metaphor in which a relationship exists between time tense and signing. The metaphor that links these meanings is that portraying the concept of behind. See Figure 15 below:

**Figure 15.**  PAST/AGO

**c.**   *Polysemous EthSL signs originated from semantic borrowing*
      *from foreign languages*

The obtained data of EthSL lexical signs have shown that there are EthSL polysemous signs that arise from foreign influence and semantic borrowing, especially from American Sign Language (ASL). They are also influenced by the oral Amharic language. As languages influence one another when they come into contact, ASL has also influenced EthSL by altering the meaning of existing EthSLsigns.

Sometimes a borrowed sense has replaced the old one. For example, the EthSLsign for CONNECTION originally meant 'connection' but later it developed to mean INTERNET, due to the influence of ASL. This claim comes from deaf signer participants during metalinguistic discussion. In this case, the old sense has survived alongside the new sense, creating a state of polysemy.

Polysemous signs can also rise as a result of semantic borrowing. It may mainly occur during frequent close contact between sign languages, as one of the two languages serves as a model for the other. For instance, some deaf signers use the sign LAND to refer to the country instead of EARTH, where signers borrowed THE sign for LAND from ASL.

Borrowing can also happen between oral and signed languages. For example: *Orange* in oral Amharic can represent both the colour and the fruit itself. This is also the case in EthSL, despite modality differences: whereas oral languages are based on sounds/voice and signed languages are based on visual/manual structure. Deaf people can sign ORANGE to mean 'colour' and to mean 'a type of fruit'. EthSL probably borrowed these related meanings from oral Amharic.

Other examples of polysemous EthSL signs obtained from the data that were motivated through foreign influence include INTEREST/NEED (see Figure 2 above) and FISH (see Figure 5 above), as well as metonymically motivated relations such as CHICKEN as animal and food, MEDICATION/HOSPITAL, YEAR/AGE/OLD, SEAT/BENCH, ORANGE FRUIT/COLOUR, CONNECTION/INTERNET and NATURAL/NATURE.

**d.** *Iconically motivated polysemous EthSL signs*

An iconic sign is one whose form resembles its meaning in some way (cf. Oxford Research Encyclopedia of Linguistics). The sign shown in Figure 16 means 'kettle' or 'clay pot', and signers use one form for both meanings. This is probably due to the influence of iconicity as language-internal criteria in which two or more entities have the same or a very similar shape.



**Figure 16.** KETTLE, CLAY POT

There are some iconically motivated semantic extensions found in EthSL signs in the studied material. It is in relation to some aspects of the item's physical form or features such as shape, structure, tempo, etc., that resemble the physical referent. From the sign in Figure 6 above, the left hand shape represents shape of a cave hole and the movement of the right hand shape shows the entrance through the hole. This is meant to represent the physical form of the entity. AIR PLANE/FLY is another example of an iconically motivated EthSL polysemous sign.

**5.3    Discussion of polysemy in EthSL dictionaries
         and in the studied material**

Some materials taken from existing EthSL dictionaries were described as polysemous signs in EthSL based on the given criteria and the conceptual definition of polysemy. These polysemous EthSL signs include: BOOK/MAGAZINE/ARCHIVE, INJERA/BAKING INJERA, TUBE/CAVE/HOLLOW, PRACTICE/TRAIN/EXERCISE/REHEARSE, CLASS/ROOM/PART/SERIES, PROFESSOR/PROFESSIONAL, SCISSORS/CUT, CLOTH/WEAR, CEREAL/MILL, CABBAGE/CABBAGE MEAL, PICTURE/DRAW, PUBLISH/PRINT, COPY/DUPLICATE and GAS/DIESEL/BENZINE/KEROSENE.

These examples show that, in contrast to the polysemous signs obtained from my data, those taken from the existing EthSL dictionaries are the same in many

cases. Like polysemous signs obtained from the data, these polysemous signs from existing EthSL dictionaries are the same in their aspects to form polysemy. The aspects of polysemy that were found in the obtained data were also found in the material from the existing dictionaries. For example: vegetable/food as in CABBAGE and CABBAGE MEAL, noun vs. verb, as in SCISSORS/CUT, CLOTH/WEAR, generality as in BOOK/MAGAZINE/ARCHIVE, entity vs. activity, as in INJERA/BAKING INJERA.

On the other hand, the sign presented in Figure 17 means 'practice', 'to exercise', 'training', 'rehearse'. Signers use this sign to represent these multiple related meanings. This is judged as polysemy in two ways: one is within existing various English equivalent translations and the other is the concept itself: 'practice, exercise, train and rehearse' relate to each other.



361. አምሮ፤ መለማመድ፤ ስልጠና፤ መሰልጠን
practice, to exercise, training, to rehearse
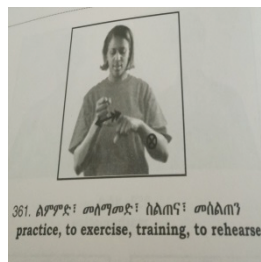
**Figure 17.** PRACTICE, TO EXERCISE, TRAINING, TO REHEARSE
(taken from the EthSL dictionary ENAD, 2008)
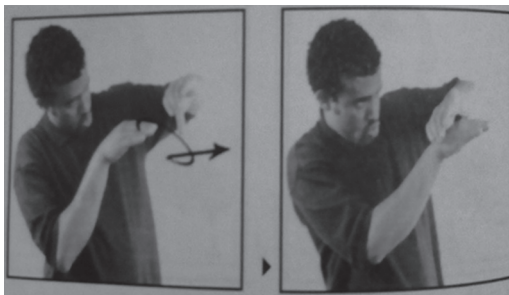


**Figure 18.** TUBE, CAVE, HOLLOW (taken from the EthSL dictionary ENAD, 2008)

In Figure 18, the EthSL sign for 'cave', 'tube', 'hollow form' is polysemous and iconically motivated: there are mapping relations among these entities. The processes of forming polysemy in EthSL that have been found in my elicited data have also been found for material in the existing dictionaries.

## 6. Conclusion

Polysemy is one part of lexical semantic relations that has been studied in various disciplines since ancient times. More recently, studies on polysemy show that this subject is becoming of interest in linguistics, as it presents conceptual and theoretical methods to distinguish polysemy from monosemous lexical items, and also describes the derivational process to form polysemous words/signs. The present study can be one that contributes to the advancement of lexical semantic relations in sign languages focusing on polysemous signs in EthSL.

The study was designed to examine some cases of polysemy in EthSL and to describe the derivational pathways informing polysemous signs in EthSL. The method used was to analyse polysemous signs in the investigated material and to provide descriptive information about which semantic processes they had undergone. To achieve this aim, data were collected in Addis Ababa and Hossana using direct elicitation, video recording and two EthSL dictionaries. A qualitative descriptive research method is applied in the overall study. The video data is analysed using ELAN aligned software to extract lexical signs and selection of polysemy signs using applied criteria and conceptual theories.

The findings show that polysemous signs are a product of such semantic processes as metaphorical, metonymical and iconical development, and also as a result of language contact. The study shows that the polysemous signs in EthSL were motivated or extended through different processes and pathways to form polysemy. These motivational pathways and processes can be metaphorically motivated, being extended through metaphors and acquiring new meanings for a given sign. They can be extended metonymically to acquire new meanings that are different from the sign's original sense. They can also have arisen from foreign influence and semantic borrowing, especially from American Sign Language (ASL). Some are motivated through iconicity, which plays a creative role in forming new and different senses from the existing signs and language internal factors. The study describes the language-internal factors of meaning extension, such as action vs. result of activity, noun vs. verb (grammatical), signs denoting animal vs. meat, and equivalent translation from oral language. The language-internal pattern is the most common motivational extension process of lexical meaning in EthSL, and metonymic and metaphoric motivation are the least common extension processes.

As indicated in the findings section, polysemous signs are common in EthSL. The study also shows that the third criterion presented in Lyons (1977), that the polysemy should be within a particular syntactic category, is not operative in the polysemy of sign language. These polysemous signs are derived/extended to new meanings in different pathways and processes to form polysemy. The

semantically-related polysemous EthSL signs are helpful in using language wherever required. It is useful for language users to be aware of lexical sign ambiguity and its representation of meaning in language. The study also should provide information for lexicographers in developing sign language dictionaries and for broadening research in the area.

## Acknowledgements

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# Index

The focus of this unique publication is on Ethiopian languages and linguistics. Not only major languages such as Amharic and Oromo receive attention, but also lesser studied ones like Sezo and Nuer are dealt with. The Gurage languages, that often present a descriptive and sociolinguistic puzzle to researchers, have received ample coverage. And for the first time in the history of Ethiopian linguistics, two chapters are dedicated to descriptive studies of Ethiopian Sign Language, as well as two studies on acoustic phonetics. Topics range over a wide spectrum of issues covering the lexicon, sociolinguistics, socio-cultural aspects and micro-linguistic studies on the phonology, morphology and syntax of Ethiopian languages.

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