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University of Florence, Department of Languages, Literatures and Intercultural Studies
Santa Reparata Street 93, 50129 Florence
phone +39.055.5056664-6616; fax +39.06.97253581
email: <laboa@lilsi.unifi.it>
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Tesfay Tewolde Yohannes

DPs, Phi-features and Tense in the Context of Abyssinian (Eritrean and Ethiopian) Semitic Languages

A Window for Further Research

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Università degli Studi di Firenze
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This book is dedicated to the Memory of the following:
Prof. Paolo Marrassini (1942-2013) who devoted himself to the study of Semitic and Abyssinian Semitic languages; all Abyssinian youth who lost their lives in the Sahara desert, Mediterranean Sea and the Red Sea; all Abyssinian youth who lost their kidneys and other parts of the body for human traffickers in the Sinai; all the peoples in our planet who are victims of war, racism, ethnic cleansing, sexual abuse, extremism of any kind and nameless atrocities.

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LIST OF ABBREVIATIONS

nV= n followed by a Vowel
past = past
-Vn = a Vowel followed by n
± past = +past or -past
1sg = first person singular
2fs = second person feminine singular
2ms = second person masculine singular
3fs = third person feminine singular
3ms = third person masculine singular
1pl = first person plural
2fpl = second person feminine plural
2mpl = second person masculine plural
3fpl = third person feminine plural
3mpl = third person masculine plural
accus. = accusative
Agr = agreement
AgrO = object agreement
AgrP = agreement phrase
AgrS = subject agreement
AP = adjective phrase
Appl. = applicative
Art, ART = article
Asp = Aspect
aux. = auxiliary
C, comp = complementizer
CI = Conceptual-Intetional
CP = complementizer phrase
CV, cv = consonant and vowel pattern
D = determiner
Def = definite
DefP = definite phrase
Dem, DEM. = demonstrative
DemP = demonstrative phrase
DM = Distributed Morphology
DP = determiner phrase
E.C. = Ethiopian calendar
ECM = exceptional case-marking

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EES = Eritrean and Ethiopian Semitic
EPP = Extended Projection Principle
Foc = focus
FocP= focus phrase
gen. = genitive
ger. = gerundive
imper. = imperative
imperf. = imperfective
IntP = intensifier phrase
IP = inflection phrase
IR = non actual or irrealis
juss. = jussive
LF = Logical Form
lit. = literary
Md = mood
MS = Morphological Structure
N = number/big N
n = small n
Neg = negation/negative
NP = noun phrase
Num = number
obj. = object
OV = object-verb
pas. = passive
perf. = perfective
PF = Phonological Form
pl = plural
PP = prepositional phrase
Q = quantifer
QP = quantifier phrase
R = actual or realis
RED = reduplication
RR = Rhaeto-Romance
sg = singular
SOV = subject object verb
Spec = specifier
AgrSP = subject agreement phrase
PossP = possessive phrase
vp = small v phrase
T = Tense
Trans = transitive
TP = Tense phrase
V = big V
VP = big V phrase
v = little v

1

INTRODUCTION

1.1 *Some Points on the Languages and their Speakers*

In the centre of the Horn of Africa, a region currently well-known for piracy, political unrest, famine, conflicts, and war, we find Ethiopia and Eritrea.

In Ethiopia and in Eritrea, we find Afro-Asiatic and Nilo-Saharan languages. The language families which belong to Afro-Asiatic (also known as Hamito-Semitic or Semito-Hamitic) are Semitic, Egyptian, Cushitic, Libyco-Berber, and Chadic. Each of the countries currently known as Eritrea and Ethiopia has languages which belong to Nilo-Saharan, Semitic, and Cushitic language families. There are about 30 Ethiopian, Eritrean, and Modern South Arabian Semitic languages.

Eritreans and Ethiopians may call themselves *ħabäša* (in Tigrinya) or *habäša/abäša* (in Amharic). Tigrinya speakers call their language *qʷanqʷa ħabäša* 'the language of the *ħabäša*'. In the literature, we find names like *Habissinia, Habessinia, Abassa, Abissa, Abaseni, Abassia,* and *Ḫbsty* which correspond to Abyssinia /*ħabäša*. In many maps in the past, especially in the 17th-18th centuries, the extent of Abyssinia reaches all the way to South Africa (which according to Voigt 2003 is largely distorted). However, it is indicated in Voigt that later in the 18th century, it was reduced to East Africa. For Ancient Egyptians, *Ḫbsty* (in connection with Punt) refers to an area near the Red Sea (cf. Müller 1893; Glaser 1895; Voigt 2003: 59). In Epigraphic South Arabian (Sabaean) texts the name *ħabašat/ħbsty* occurs several times (cf. Irvine 1965; Voigt 2003). In the earlier texts, the name may refer to regions on either side of the Red Sea (i.e., areas which may include the present-day Eritrea/Ethiopia and Yemen).

Nowadays, we find people who identify themselves as Abyssinians in countries like Morocco and Niger. In 2001, I met some of these people in Rome. They told me that their forefathers came from present day Eritrea/Ethiopia hundreds of years ago. In the same way, we may assume migrant Abyssinians in Yemen. Moreover, the location of the Abyssinians or *Abasēnoi* in Yemen may probably be explained by remnant Abyssinian population from the conquests by Abyssinian or Aksumite kings. In fact, Sabaic inscriptions use the term *ḫbšt/ħbšt* to refer to Aksumite kingdom and its

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inhabitants especially when they were often at war with the Sabaeans and Himyarites in the 3rd century. In later texts, the name *ħabašat* clearly refers to later Abyssinia or present-day Eritrea/Ethiopia (cf. Irvine 1965; Voigt 2003 among others). Hence, in this book the languages spoken in Ethiopia and Eritrea can be referred to as Abyssinian or Ethio-Eritrean (EE).

Abyssinians have a very ancient alphabet which many scholars consider a modern offshoot of Sabaean/Minaean or Thamudian scripts. However, the order of Abyssinian Semitic alphabet is different from the order of North and South Semitic alphabets in other Semitic languages. If we compare the order of Abyssinian script (which belongs to the South Semitic group) and those of other South Semitic, we can observe that the similarities and the differences are striking and so far unexplained (cf. Daniels 1997: 33). During the time following the invention and spread of the alphabet, different orders of the letters arranged in different ways in different regions may be assumed. In fact, the Abyssinian order may well be very ancient and according to Dillmann (1907: 18-20), others compared with it can be regarded as innovations. It is also indicated in Daniels (1997: 24) that both the vocalized and unvocalized Abyssinian inscriptions are written from left to right. Thus, unlike the alphabets in several other Semitic languages, the Abyssinian mode of writing may be assumed to be from left to right as in the case of Egyptian or Babylonian-Assyrian that can be attributed to an ancient period following the invention and spread of the alphabet. As in other Semitic languages, the Abyssinian mode of writing was consonantal. However, ancient Abyssinians were able to mark different vowels. According to Dillmann (1907: 23-25), the vowel marking device:

a) was appropriate and sufficient;
b) leaves little to be desired for completeness and effectiveness;
c) is governed by very exact rules which brought about the development of the originally consonantal script into a highly perfected syllabary.

It has become the first Semitic script to notate vowels consistently since 4th century AD (so far recorded) in a way unique within the Semitic sphere (cf. Dillmann 1907; Daniels 1997; Lipinski 1997).

Abyssinian Semitic script belongs to the South Semitic group. However, the letters are not always similar to their counterparts in Sabaean or in other South Semitic scripts. For instance, the Abyssinian letters for *z* and for *ṭ* are similar or closely related to their counterparts in Sinai and Byblos; but they are different from their counterparts in Sabaean (cf. Driver 1948; Naveh 1987; Tesfay Tewolde 2014 among others for the comparison on the rest of the letters). As far as I can see, the claim that ancient Abyssinians borrowed their alphabet from Ancient South Arabian or from any other South Semitic script is not convincing.

Munro-Hay (1991), argues Sabaeans had only little influence in a limited geographical area of ancient Abyssinia. According to Fattovich (1999), (i) an obsidian trade network among peoples of the Horn (Eritrea, Tigray, and Djibuti) arose as early as the 7th-4th millennia BC, (ii) in the 4th-2nd millennia, there were trade contacts among the ancient Abyssinians, Sudanese, Egyptians and Ancient South Arabians.

According to Punkhurst (1997) and others, the Land of Punt corresponds to present-day Eritrea and some parts of Ethiopia. According to reports published in internet, and according to Fattovich (1991, 1993, and 1997), Punkhurst (1997), Kitchen (1993), and other scholars, we can take note of the following:

a) Ancient Egyptians reached the Land of Punt by land and by sea (via Red Sea);
b) The Sudanese kingdom of Kush and her neighbours Wawat and Punt made an alliance to invade ancient Egypt;
c) The flora and fauna depicted in ancient Egyptian reliefs correspond to those found in Eritrea and in northern Ethiopia (and some items were only found in the Eritrea's coastline);
d) Ancient Egyptians had the awareness of clear connection between the rain on "the mountains of Punt" and the subsequent (unseasonal) Nile flood;
e) History shows that in ancient times, as is the case today, sailors stick to the west (African) coast of the Red Sea. Sailors prefer the African side to the east side of the Red Sea. The reasons for this choice are, as indicated in the literature, (1) water is available and safe anchorage is easily found (2) sudden storms that blow up out of the Arabian deserts do not threaten disaster;
f) Rock drawings of domestic shorthorn cattle and people resembling, and dressed like the Puntites were found in Mai Aini (in Eritrea) similar to those portrayed in the Deir El-Bahri reliefs;
g) Archaeological investigations have confirmed the presence of a wide-ranging trading network [...] between the ancient peoples of the Sudanese Nile valley, ancient Egypt and the Red Sea coast;
h) Pottery from Ona Culture A in the suburb of Asmara in Eritrea have shown strong resemblance to the Punt pots featured in a Theban tomb relief and also to certain Puntite dress designs.

These and other evidence indicated in the literature prove that the Land of Punt corresponds to present-day Eritrea and parts of Ethiopia. In fact, this is also supported by recent genetic research results. Using the analysis of the baboon mummies from Punt found in ancient burials in Egypt, scientists have proved that the nearest relatives to the Punt baboons are found in the hills behind the city port of Massawa in Eritrea. Hence, the

claim that the Land of Punt is Eritrea (more or less the whole of it) and some parts of Ethiopia appears definitive.

In 2587-2459 BC, Egyptians were in contact with the land of Punt. Egyptian trade expanded further after the rise of the city of Thebes. In 2271-2112 BC, king Mentuhotep II sent his chief treasurer to the Red Sea coast where he built a ship or ships which were dispatched to Punt. But the most important thing is that there are indications that the Puntites were engaged in commercial voyages on their own account. Testimony to this is found in one Egyptian official's tomb at Thebes, believed to date from the reign of king Amenhotep II (1447-1427 BC). The chiefs of Punt came to Egypt using their own vessels. The presence of two small Puntite sailing vessels can have a very important historical significance. According to the archaeologist Nina de Garis Davies quoted in Pankhurst (1997), their presence reveals for the first time that the people of Punt were themselves making long sea journeys. Discussing these voyages, he comments that the commerce that revealed in Hatshepsut's inscriptions appears to have been continued and Puntite vessels used to bring their freight to an Egyptian port. According to Pankhurst (1997: 6-15), commercial contact between Egypt and Punt continued both by sea (as in 1350-1325 BC) and by land (as in 1198-1167 BC).

In the literature, we have the queen Hatshepsut's (c. 1460 BC) hieroglyphic *ḫbstjw* used in reference to "a foreign people from the incense-producing regions". Scholars assume *ḫbstjw* and "a foreign people from the incense-producing regions" correspond to Habesha and "the Land of Punt". Furthermore, we can also see in the literature that around 8th century BC a kingdom known as *Dʕmt* was established in Eritrea and in northern Ethiopia. The kingdom of Aksum,[1] its successor, emerged around the 1st century BC or 1st century AD and was described by Mani, a Persian philosopher, as one of the four greatest civilizations in the world, along with China, Persia, and Rome. At its peak, this kingdom controlled territories as far as southern Egypt, Omo River, Gulf of Aden, Nubian kingdom of Meroe, and western Saudi Arabia. The Aksumite kingdom had trade contacts with India and Ceylon and was in constant communication with Byzantine Empire.

As indicated above, there are about 30 Ethiopian, Eritrean, and Modern South Arabian Semitic languages. The Ethiopian and Eritrean (EE) Semitic languages are ignored or under-utilized in the general Semitic scholarship in much of the 20th century. They are regarded as deformed,

[1] It is indicated in the literature that Abyssinians kept an alliance with the Romans and Constantinople. Some scholars say that the Romans, probably with the help of Abyssinians, were driven to sea and carried in an open boat to India (cf. Müller 1893; Glaser 1895; Irvine 1965; Müller 1978, among others).

even degenerate outgrowth of Semitic, of anecdotal interest (cf. Hetzron 1977; Appleyard 2002). According to Appleyard (2002), however, Ethiopian and Eritrean Semitic languages have given up less of some of the typical traditional Semitic features than, say, Modern East Aramaic (Modern Syriac).

Almost all discussions on Semitic sub-grouping assume a single Semitic language later split into North and South Abyssinian Semitic languages. However, there is virtually no linguistic evidence for such a common Ethio-Eritrean or Abyssinian stage (cf. Faber 1997 among others).

On the other hand, there are scholars who believe that the origin of Semitic languages may be in or somewhere around the present-day Eritrea and Ethiopia (cf. Murtonen 1967; Hudson 1977; Murtonen 1991; Rogers 1991).

Eritrea and Ethiopia are found in the centre of the Horn of Africa. Though strategically very important and very rich in mineral resources (which are probably the causes of the problems), this region is currently identified with piracy, political unrest, famine, conflicts, and war. I tried to say some words on the past history of the two countries in question for the following reasons:

a) to make an attempt to neutralize the current negative image of the region;
b) to remind the wonderful Ethiopians and Eritreans of their impressive history and invite them to sit together, talk about the history of their forefathers and decide to make every effort so that peace may prevail in their countries;
c) to call in the peace loving peoples, political leaders and religious leaders of the region and of the world to investigate or assist in the investigation of the source of the problems, contribute in getting a genuine solution and save the youth (1) from losing their lives in the desert, in the Red Sea and in the Mediterranean sea (2) from illegal human traffickers in the Sinai who sell the kidneys and other body parts of Eritreans and Ethiopians, and make each parent of the victims pay tens of thousands of dollars.

I feel there is no place not appropriate to speak about such human tragedies and untold sufferings of the youth of this region.

1.2 *Limitations*

As indicated above, there are Semitic, Cushitic, and Nilo-Saharan languages in Eritrea and Ethiopia. The number of Semitic languages in Ethiopia

and Eritrea can be more than the number of Semitic languages in other parts of the world. The author has no intention to discuss all the languages of Ethiopia and Eritrea in this book. Two Semitic languages, Tigrinya (spoken in Northern Ethiopia and in Eritrea) and Amharic (an official language in Ethiopia and a member of South Ethio-Semitic), are selected as representatives of Abyssinian Semitic languages. Moreover, North Abyssinian internal plurals and some Phi-features of Saho are discussed.

Chapter 4 of this book concerns with Phi-features in Saho (Cushitic) and Tigrinya. But the other chapters of the book focus on Semitic languages. The aims of this book are (i) to have some understanding of DPs and tense of Eritrean and Ethiopian Semitic (ii) to explore the person, number, and gender morphemes of Saho and some selected Abyssinian Semitic languages so that we can have a general understanding of the Phi-features of Eritrean and Ethiopian Semitic languages (iii) to show the relationship among the Phi-features in pronouns and verbal affixes of the languages in question (iv) to make a modest contribution for further research on DPs, Phi-features and tense. As indicated above, it is fair to say that relatively little work was conducted on the languages of Abyssinian languages. As a consequence, the languages in question did not make their rightful contributions to Semitic or Afro-Asiatic comparative linguistics and to theoretical linguistics. Thus, the book also aims to draw the attention of scholars so that they can take steps towards correcting the situation, i.e., conduct further research on the languages.

Travis (2010) quotes Parson, (1990) who says: "The goal of this book is neither completeness nor complete accuracy; it is to get some interesting proposals into the public arena for others to criticize, develop, and build on" (cf. also Adger and Harbour 2008 for similar views). The book will, at least in this sense, be of use to readers. It is far from being complete. However, I hope it may serve as a window for further research.

This book is divided into eight chapters. In chapter one, we have the introduction. Chapter two focuses on DPs of Amharic and Tigrinya. In this chapter, demonstratives and definite articles of Amharic and Tigrinya are discussed and compared. In chapter three, the different possessive pronouns of Amharic and Tigrinya are discussed. In chapter four, the morphemes which indicate the person, number and gender in independent pronouns and in verbs of Saho and Tigrinya are discussed. Since Saho and Tigrinya belong to Cushitic and Semitic languages respectively, the comparison of Phi-features of the languages in question can reveal some Afro-Asiatic features. Chapter five deals with Tigrinya and Amharic Phi-features. In chapter six, tense and auxiliaries are discussed. It can be observed that in the languages in question tense is indicated by different forms of verb to be. In chapter seven, North Abyssinian Semitic internal plurals are discussed. Finally, we will have a concluding summary in chapter eight.

1.3 *Some Theoretical and Methodological Preliminaries*

According to Fuß and Trips (2004: 16), "related avenue of research has to do with the question of how diachronic data can be taken into account to provide new insights for the analysis of individual present-day languages". Hence, some relevant data from ancient languages may be taken into consideration in this book too.

In some languages, independent pronouns can develop from verb endings (affixes) as in the case of Irish (cf. Ole Askedal 2008: 54-55) while in others this may not be the case. Fuß (2005) believes verbal agreement marking can develop from independent pronouns.

In the literature, we can see that demonstratives, pronouns and verbal agreement markers can be related. However, the pronouns[2] may not have the same origin. According to Giusti (2002: 160), the only pronoun that a demonstrative could develop into is the third person pronoun. This is because a demonstrative is straightforwardly compatible with the features of third person. It is also believed that across languages, verbal agreement markers are much more common for first and second person subjects than for third person subjects and the latter are underspecified for person (cf. Fuß 2005: 247, 254). First and second person features are indicated as + Auth. (Author in Speech Event) and + PSE (Participant in Speech Event) for the former and - Auth. and + PSE for the latter while third person features are indicated by - Auth. and - PSE which denote a 'more remote' agent. In some languages, third person pronoun and demonstratives are the same. In fact, Fuß (2005) believes third person does not constitute a separate pronoun. In Ugaritic and Sabaic (two Semitic languages), for instance, the third person masculine singular form *hwt* (gen./accus.) corresponds to the far demonstrative form *hwt*.

In the literature, we find several interesting arguments regarding demonstratives and pronouns. There are scholars who argue that independent pronouns may be originally deictic elements which may be employed as pronominal subjects and objects (cf. Retsō 1989 among others). According to Hodge (1969), the concept of person was not necessarily basic to the system of Early Afro-Asiatic and the particle *k* occurred in first, second and third persons. Satzinger (2004: 487-497) discusses the different pronominal elements in Afro-Asiatic languages. According to him, the forms of absolute pronouns like Egyptian *ỉnk* 'I' are of secondary origin and in many cases they are derived from those forms that are regarded as object (also known as dependent or B) pronouns.

[2] According to Alexiadou (2004: 49-50), the German possessive pronouns originate from a number of different pronouns and hence the individual possessive pronouns differ from each other in behaviour. Moreover, possessive pronouns which were initially autonomous words may become determiner-like.

As indicated in Fuß (2005) and others, it may be possible to assume the development of demonstratives or pronouns into clitics and then into affixes. However, it may also be possible to assume the development of affixes into clitics and then into pronouns. When there are prefix pronominal affixes and suffix pronominal affixes in languages, the role of clitics[3] appears to be very important. We may assume the development of affixes into pronouns or pronouns into affixes via a clitic stage.

The verbs in Eritrean and Ethiopian Semitic languages can be classified into groups. In the case of Amharic and Tigrinya, we have type A, type B and type C verbs. We can divide the verbs using the gemination criteria (cf. Bender 1976 for Amharic; Tesfay Tewolde 1987 and 2002 for Tigrinya). Tigrinya and Amharic have perfective, imperfective, gerundive, imperative and jussive verb stems. These verbs have also causative, passive and frequentative stems. Morphemes which indicate person, number and gender of the subject and/or object occur attached to the verb stems. These person, number and gender indicating morphemes are related to the person, number and gender indicating elements in the independent pronouns.

In the literature, we find the Minimalist Program and lexicalist theory. In the latter, we find weak and strong lexicalists. The strong version of the Lexicalist Hypothesis holds that all word formation processes occur in the pre-syntactic lexical component. The weak Lexicalist Hypothesis, on the other hand, maintain that certain regular or productive word formation processes occur in the syntax while the irregular unproductive processes occur in the pre-syntactic lexicon conditioned by variety of criteria (cf. Satu 2010; Williams 2011 among others for details).

According to Satu (2010: 11), "scholars working within Minimalist Program (that do not adopt the Theory of Distributed Morphology) seem to assume the strong version of the hypothesis, […] essentially following the idea of Chomsky (1993, 1995) that syntax selects fully inflected lexical items from the numeration and combines them by the recursive process of Merge". On

[3] It is not always simple to clearly differentiate clitics (such as *'s*) from affixes. According to Fuß (2005), however, clitics have a low degree of selection with respect to their hosts while affixes exhibit a high degree of selection with respect to their stems. In English, for instance, clitics can attach to words of virtually any category. In contrast, inflectional affix *-d* in English attaches only to a verb. Fuß (2005) believes clitics may appear before or after verbs which develop as prefixes in the case of the former or suffixes as in the case of the latter. As indicated above, Satzinger (2004) says non-subject pronominal forms are original while the absolute forms are secondary. Hodge (1969) assumes the concept of person was not basic to Early Afro-Asiatic and the particle k may occur in all persons. Taking Fuß's (2005), Satzinger's (2004) and Hodges' (1969) assumptions into account, (i) we may assume (a) clitics + verbs > prefix + verbs, (b) verbs + clitics > verb + suffix, (ii) we may consider *k* an originally Afro-Asiatic clitic element that can be used for all persons. However, this needs further investigation.

the other hand, Distributive Morphology (DM) claims that there is a single generative component; syntax assembles words and sentences. In DM, the information which were assumed to be included solely in pre-syntactic lexical component in earlier theories are distributed across several components of the grammar; syntax, post-syntactic vocabulary insertion and the encyclopaedia. In DM, the primitive elements that syntax manipulates come in two types. These are (1) roots, which are atomic unanalyzable elements and (2) functional heads such as *n/v/a* as well as other ordinally postulated heads like Asp, Tense, C, Num, etc. They are also called l-morphemes and f-morphemes in the sense of Harley & Noyer (1999, 2000), roots and abstract morphemes in Embick & Noyer (2007). A root is acategorial. According to Sato (2010: 16), the syntactic category of a root is contextually specified by combining with a category-defining functional head such as *v*, *n*, or *a*.

Arregi and Nevins (2012) use "morphemes" to refer to *terminal nodes* (independently of whether they have phonological content), and "exponents" to indicate the phonological strings that realize the morphemes. For the sake of simplicity, the phonologically realized forms may also be called morphemes in this book. But distinctions will be made whenever necessary.

In Distributed Morphology, the functions ordinarily attributed to the Lexicon are distributed among various other components of the grammar. Within distributed Morphology, the grammar is divided into two parts. According to Noyer (2006), several distinct repositories contain listed information (a morpheme list, a vocabulary, and an encyclopaedia) in the first part. In the second part, Noyer argues, a generative engine consisting of the syntax proper and several post-syntactic mechanisms (like impoverishment, linearization and so on) is responsible for building structured linguistic expressions from morphemes chosen from the morpheme list, and interpreting these expressions both phonologically and semantically with information supplied by the vocabulary and the encyclopaedia. Furthermore, it is indicated above that Morphemes are of two types: (1) Root, representing an open class item of indeterminate category whose categorical features are determined by its syntactic context, and (2) various others which represent functional categories like Tense, v, C, or D (cf. Noyer 2006). In English, Noyer (735) argues: "The derivation of the word *feet* involves the insertion of the vocabulary item /fʊt/ in a root position in the context of a plural morpheme, insertion of a zero exponent into the plural morpheme, and finally, a morphophonological readjustment of the stem, changing its syllable nucleus to /ē/". One may assume related processes in the case of internal plurals of verbs and nouns of Tigrinya and Tigre. As can be observed in the next chapters, however, I assume it is more convenient to adopt Siddiqi (2009) and others. As illustrated in the next chapters, the internal plurals of *qätäl-ä* '(has) killed (3ms)' and *qätil-u* '(has) killed (3ms)' are *qätätäl-ä*/ '(has) killed repeatedly (3ms)' and *qätatil-u* '(has) killed repeatedly (3ms)' respectively.

Furthermore, I assume the derivation of perfective and imperfective forms by inserting vowel patterns into the consonantal root. I think the derivation of the perfective form like *qätäl-ä* from the root involves the insertion of the root *qtl* in the root position in the context of perfective pattern *1ä2ä3-ä*. The vocalic pattern *-ä-ä-* is inserted into the consonants of the root indicated by 1, 2, and 3 while the element *-ä* (3ms) is suffixed to the stem. I also assume the derivation of *qätatäl-ä* and *qätatil-u* from *qtl* involves the insertion of the root *qtl* (consisting of the root consonants) in the root position which move to a higher Asp (reduplicative) position with an internal plural pattern *1ä2a2v3-* (1, 2 and 3 refer to first, second and third consonants of the root).

Scholars argue that C and v are the source of phasehood and ϕ-features are generated in C and v and then passed down to T and V (cf. Gallego 2010 among others). Phi-features are taken to be those involved in predicate-argument agreement, typically person, number and gender (cf. Adger and Harbour 2008: 2). According to Harbour and Adger (2008), Phi-features are a rare opportunity for syntacticians, morphologists and semanticists to collaborate on a research enterprise. A morphosyntactic feature (or just feature) is a property of words that the syntax is sensitive to and which may determine the particular shape that a word has.

In Eritrean and Ethiopian Semitic languages, verbs have affixes which indicate person, number and gender of subjects. However, the verbs may also have suffixes which indicate person, number and gender of objects.

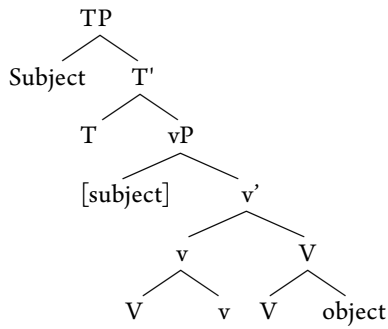
Verbs can be transitive or intransitive. They can be one-place-predicate, two-place predicate and three-place predicate verbs. The word *disappear*, for instance, involves only one object in the world, the object that disappears. Hence, it is said to be a one place-predicate. A one-place predicative intransitive verbs can be unergative or unaccusative. An intransitive verb (like *run* or *gallop*) may combine with an expression which plays the role of an agent (or sometimes the causer or the actor). Moreover, an intransitive verb (like *appear* or *fell*) may combine with an expression which plays the role of the thing that undergoes some change or position and hence the predicate is said to combine with a theme. The former (i.e. one-place predicates which combine with agents) are called unergatives predicates while one-place predicates which combine with a theme are called unaccusatives.

Transitive verbs can be divided into mono-transitive (two-place predicate) and ditransitive (three-place predicate) verbs. Words like *demonize* and *donate* are called two-place predicate and a three-place predicate verbs respectively. Linguists refer to these properties of predicates as thematic roles (Θ-roles). If we are talking about how many thematic roles a predicate assigns, we refer to theta-roles. Only some of the constituents of a sentence are assigned Θ-roles, and these are called arguments. Thus,

an argument is defined as a constituent in a sentence which is assigned a Θ-role by a predicate. Subjects and complements can be referred to as external and internal arguments respectively.

Adger (2003) indicates that sentences are the projections of T (a category that hosts the tense features for the whole sentence), with the subject in the specifier of TP and the vP as the complement of T. In the literature, scholars argue (cf. also Gallego 2010 among others for more details) that C and v are the source of phasehood and ϕ-features are generated in C and v and then passed down to T and V. According to Jelink (2002) agreement appears both on the auxiliary *kwn* 'be', where tense is marked, and on the main verb, where aspect is marked. In the literature, it is indicated that the verb phrase consists of 'little' v, which is responsible for assigning the agent Θ-role, and a 'big' V, which assigns Theme and Goal roles. The subject is assigned its Θ-role in the specifier of little v. Linguists assume that big V raises and adjoins to little v. In a simple transitive clause, the subject moves out of the specifier of vP and merges in the specifier of TP as indicated below:

(1)



In the tree in (1), we can see that two movements have taken place. These are the movement of the verb to adjoin to little v and the movement of the subject to become the specifier of TP (the position from which the movement took place is marked by enclosing a copy of the moved element in [ ]).

In the current literature, VP can be a label used for many disparate constituents (cf. Travis 2010 among others). In Siddiqi (2009: 75-7), VP appears to be indicated as TransP and the head that projects themes, *trans*, carries the feature [trans]. In Travis (2010), (a) *Asp* can have a meaning similar to *be/become*, (b) *V* introduces the Theme argument and the endpoint of the event, XP (c) *v* is a lexical category that introduces the external argument and has a meaning similar to cause. Moreover, Travis (2010), says there is an AspP between a vP and a VP which houses aspectual information. But Travis (2010) also puts AspP above vP. In Sato

(2010), the *Asp* head merges with a root to realize a reduplicative form. MacDonald (2010) argues an aspectual projection (AspP) occurs between vP and VP in English eventives too. I assume this holds for Abyssinian Semitic languages.

In the literature, it is indicated that English modals are T heads (cf. Adger 2003 among others). But they are derived from originally full verbs (cf. Kown 2009 among others). In Dutch, however, modals are simply V heads that select a non-finite TP complements (cf. Aelbrecht 2012: 4-6 among others). In Eritrean and Ethiopian Semitic languages, many of the modals function like full verbs with CPs as complements or modifiers. However, there are some modals which appear to be T heads.

In the tree structures in this book, we can have vPs and VPs. However, we can also find AspPs above vP and below vP. I assume Theme is a daughter of VP, while the lower Asp merges with VP to form perfective/imperfective aspect which can function as realis (actual) mood. I also assume the patterns which show imperative and jussive (which have similar patterns) can indicate irrealis mood. However, this merits further research.

Different forms of verbs merge with the higher Asp in order to get the reduplicative or internal plural of verbs. I assume the higher Asp head merges with the realis mood, irrealis mood, perfective aspect, or imperfective aspect of verbs to realize a reduplicative form with the same internal plural pattern. In the North Abyssinian Semitic languages, the internal plural pattern of all the verbs is *cäcācvc* > *cäcacvc* or *cacācvc* pattern (in Tigre the *v* in the last syllable may be long) which is similar to internal plural form of nouns.

Languages can have affixes attached to their stems. Affixes that come at the start of the word are called prefixes and those that come at the end of the word are known as suffixes. Many languages have a relation of agreement indicated by affixes. But the morphological resources that languages bring to bear in exhibiting agreement differ vastly. Some can use suffixes or prefixes while others may use both. In the case of English, we find nouns (singulars or plurals) which agree with verbs in number. The features responsible for morphological difference are also responsible for a semantic difference. Features that have an effect on semantic interpretation in this way are known as interpretable features. The notion of an interpretable feature and its opposite, an uninterpretable feature, play a significant role in building up a theory of syntax. A plural noun is usually associated with a group of entities in the world (not with a single entity). The plural feature has an effect not just on the morphology of the word, but also on its meaning. It affects whether we are talking about one person/object or more than one and so on. Observe the following example from Tigrinya:

(2) ʔɨt-a säbäyti moyt-a
the-f woman died -3fs
'The woman died'

The definite article *ʔɨt-a* 'the' has the morpheme *-a* which marks a feminine gender. Following the definite article, we have the word *säbäyti* 'woman' with a feminine grammatical gender. The last word, the verb, has a special marking (3fs) on it to signify that it agrees with the subject. Person, number, and gender go under the general name of Phi-features often written as ϕ-features. In the literature, the class of such features and the individual features which make up this class are indicated by ϕ and by φ respectively (cf. Adger and Harbour (2008: 2). Features can have pairs of interpretable and uninterpretable members.[4]

The approach we are taking relies on what is technically known as *derivation*. The derivation can be assumed to be the result of successively applying syntactic operations (the movement Adger 2003 calls 'Move' plus 'Merge' and 'Adjoin') to syntactic objects in order to form successively larger syntactic objects. According to Arregi and Nevins (2012: 6-7), the basic structure-building operation within minimalist syntax is Merge. They argue that under Agree, an item like T (called the Probe) has unvalued φ-features (person, gender and number) and initiates a search. The Probe finds the closest noun phrase under c-command (known as Goal). It copies the φ-feature values to itself. The features are abstract binary features whose values can be [+ participant], [+ feminine], etc. As indicated in Citko (2011: 6-7), Merge comes in two guises: External Merge and Internal Merge (often referred to as Move). Citko argues uninterpretable features play a crucial role in syntactic computation as they enter the derivation unvalued and receive values in the course of the derivation via an operation called Agree. Arregi and Nevins (2012) adopt a two-step process Agreement: one syntactic and another post-syntactic. According to them, the operation Agree is decomposed into (a) the establishment of agreement (Agree-Link) occurring within the syntax and (b) the actual copying of φ-feature values from Goal to Probe, which is accomplished through the operation called

[4] There are assumptions that in case, both of the members of the checking relations are uninterpretable and for many linguists this is unintuitive (cf. also Manzini and Savoia 2001; Adger 2003: 46). There are authors who assume that "case is actually an uninterpretable aspect/tense feature on D heads" (cf. Gallego 2010: 79). But according to Chomsky (2009) quoted in Gallego (2010: 78), "ϕ and case are different sides of the same coin". Baker (2012: 272) argues: "Accusative case and object agreement cannot be two realizations of the same abstract Agree relations in Amharic".

Agree-Copy in the first post-syntactic module. A Probe establishes an Agree relation in the syntax. In Agree-copy (occurring in Exponence Conversion module of post-syntax), the actual φ-feature values of the goal are copied onto the Probe. Arregi and Nevins (4-5) argue that the initial post-syntactic module (after syntactic operations are complete) is labelled the Exponence Conversion component. Arregi and Nevins (2012) call the entire path of derivational modules from the conclusion of syntax to the onset of the phonological computation as the Spellout process. They use Spellout to refer to the procedure or the sequence of derivational steps, whereas *Post-syntactic component* involves the modules that follow syntax and precede phonology. According to Arregi and Nevins (2012), (1) Exponence conversion (2) Feature Markedness (3) Morphological Concord (4) Linearization, Linear Operation and Vocabulary Insertion occur in different modules in Post-syntactic component. According to them, the Exponence module (the first module in the Post-syntactic component) is generally responsible for the initial steps of syntax-morphology mapping while vocabulary insertion constitutes the final stage of the Post-syntactic component.

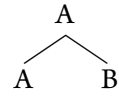
According to Wojdak (2008), the lexicon acts as the source of the elements which enter the computation. Moreover, Wojdak argues, (a) the semantic, syntactic, and phonological properties which are specific to each lexical item are coded in the lexicon (b) lexical items enter the computation from the lexical array called numeration. As indicated in the literature, syntactic derivations are built up from "bottom-to top", through successive application of two concatenative operations we call Merge and Move. Merge operates on elements selected from the numeration and pair items in binary fashion. The operation of Move parallels that of Merge in that both of them pair two syntactic objects and project a single category level. However, Move looks internally to the derivation to 'recycle' an already introduced lexical item while Merge applies to lexical items external to existing syntactic construct (cf. Wojdak 2008). As indicated above, Merge and Move are also known as External Merge and Internal Merge respectively. External Merge takes two disjoint syntactic objects and combines them together to form a larger syntactic object, while Move is responsible for displacement in the grammar. The difference between the two is that in Move one of the combined elements is part of the other (cf. Citko 2011).

In our earlier examples, we start off with a lexical item (like a verb) and merge with another lexical item (say a noun) to get an outcome, a new syntactic object. Then, the new object may combine with another, and so on. Each application of Merge or any other syntactic operation moves the derivation forward. However, the derivation must terminate at some point. The derivation stops because no further syntactic operation can be applied.

A derivation of a sentence involves many smaller sub-derivations that construct the constituent parts of a sentence. If we want to adjoin, for example, a VP to a PP, smaller derivations must construct the PP and the VP separately. Lexical items which consist of phonological, semantic and syntactic features are the smallest elements in a derivation. Hence, the derivation starts off with a collection of lexical items.[5] A collection of lexical items is technically called a numeration which is taken as an input by the syntactic system. The syntactic system takes the numeration as its input and gives a series of syntactic objects as output. Thus, the first task of a derivation becomes the selection of an element of numeration. As none of the syntactic operations apply to a single lexical item and nothing else, the operation Select applies again and introduces another item. The syntax can merge or adjoin the two items to form another new syntactic object as in the following (adopted from Adger 2003):

(3) a. Step 1: Select A

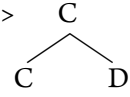
b. Step 2: Select B

c. Step 3: Merge A and B > 

Now we have a single syntactic object and Select applies again. Observe the following:

(4) a. Step 4: Select C

b. Step 5: Select D

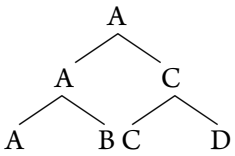
c. Step 6: Merge C and > 

We can now apply Merge/Adjoin to the already constructed (see above) syntactic objects and we have:

(5) *Step 7*: Adjoin the output of Step 3 (in 3) and Step 6 (in 4).

[5] A word like 'kissed' has a V- feature. It is the past tense of a verb. But it has at least one categorial selectional (c-selectional) N-feature. This N-feature signifies that something which merges with kiss must itself have a categorial N-feature. Hence, we can merge nouns like Samson or man with kiss. However, we cannot Merge it with another verb or a preposition (cf. Adger 2003).

(6)



At some point, we can exhaust the numeration. As a result we cannot apply any more syntactic operations and hence the derivation terminates successfully with all its unchecked features checked. When this happens it is said to *converge*. Nonetheless, it is said to *crash* if it terminates while there are unchecked uninterpretable features. Taking Adger (2003) into account, we will have a look at (7-11) from Tigrinya.

Numeration

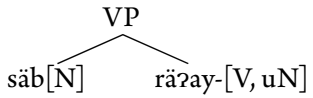
(7) {v, Sami, säb, räʔay-, -ä}

Derivation

Step 1: Select *säb* 'man' and *räʔay-* (as in *räʔay-ä* 'he saw'), Merge, satisfying uN features of *räʔay-*. For the sake of simplicity the verb is tentatively put as *räʔay-* (we can see from the discussion in the next chapters that we can derive the verb from a root and we will have tree structures modified).

Output

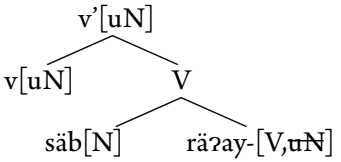
(8)



Step 2: Select v and Merge with the output of Step 1, respecting the hierarchy of Projections.

Output

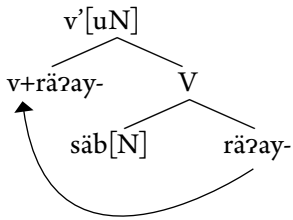
(9)



Adger (2003) argues no selectional feature is checked in step 2 and hence the c-selectional feature of v projects along with its other features to the v' mother node (the checked c-selectional feature of *räʔay-* does not project).
Step 3: Move *räʔay-* to v (by covert movement).

Output

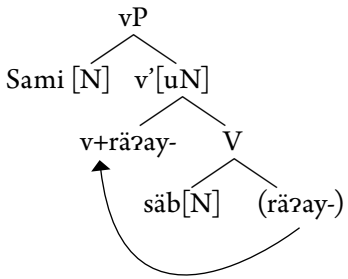
(10)



Step 4: Select Sami and Merge with output of Step 3, satisfying uN feature of v' (the verb is covertly moved).

Output

(11)



When Merge takes place, it takes either lexical items, or the outputs of previous operations as its inputs. On the other hand, Move zooms in on part of a tree, in this case the lexical item *räʔay-*, which has been constructed as an earlier output and makes a copy of that item. Then this item *merges* with another part of the tree, in our case the little v. In (8-11) above, an attempt is made to illustrate merge, move and adjoin. However, we can observe in the next chapters that verbs in the languages under discussion are derived from consonant roots. Aspect and mood are indicated by inserting vowel patterns into the root, affixes like *-ä* (3ms) are later added to the verb and we can have structures not exactly similar to those in (8-11).

Adger (2003) says all of the outputs of a derivation are syntactic objects. Syntactic objects can interface with the parts of the human mind which are concerned with meaning, sometimes known as *Conceptual-Intentional* (*CI*) system. This is possible because of the way the syntactic system arranges the semantic features of lexical items. As a consequence, Adger (2003) argues word order and morphological inflections have effect on meaning. The syntactic object with such a function is commonly

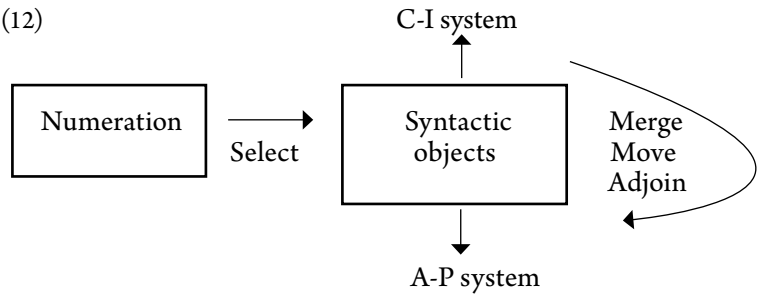
known as *Logical form* (*LF*). *LF* is said to be an interface level and according to Adger (2003) this is because it is where the interface rules apply. *LF* is usually taken to be the terminal syntactic object.

Furthermore, one might imagine some syntactic object in the derivation will interface with the parts of mind which are concerned with the physical realization of the object in terms of sounds, or gestures, sometimes known as the *Articulatory-Perceptual* (*AP*) system.

However, researchers suggest that the level that interfaces with the AP is not regarded as a syntactic object, since other processes than purely syntactic are involved in constructing it (cf. Adger 2003). The assumption is, as indicated in Adger (2003), that a particular syntactic object in the derivation is the input to these extra processes which are concerned with pronunciation, morphological rules, etc. Such an object can be called the point of a *Spellout*. *Spellout* is different from *Phonetic Form (PF)*. According to Adger (2003), the former is said to be a set of operations that apply to a syntactic object to give rise to a representation which interfaces with the Articulatory-Perceptual system. Adger (2003) says *Spellout* is just a tree to which various non-syntactic operations might apply. On the other hand, the representation is called *Phonetic Form* (*PF*) and it is a level that interfaces with language external system.

The syntax relates a numeration to sound and meaning. This permits us to establish a link between them and thus accounting for the communicative power of language. The general architecture of the system adopted from Adger (2003) is the following (cf. also Bobaljik 2008; Harley 2008; Pfau 2009).

(12)



In the examples given above, we have seen that Move zooms in on part of a tree which has been constructed as an earlier output and makes a copy of that item (cf. also the discussion above). Taking Adger (2003) and others into account, items like *räʔay-* (as in *räʔay-ä* 'he saw' for instance), can merge with another part of the tree, in our case the little v (cf. also Adger 2003: 145). The causativiser *ʔa-* followed by *räʔay-ä* (i.e. -, *ʔa-* + *räʔay-ä*) has the meaning 'cause to see' or 'show' and moves into a position adjacent to the causal verb (cf. Adger 2003: 134 for English). This causal verb is often known as light verb.

As indicated in Lomashvili (2011), roots are acategorial elements which merge with the category-defining functional heads such as *a* (adjective) and *n* (noun). These category-defining heads can merge with roots. In that case, they are root-attached, i.e., they are in the inner domain. If that same category-defining head is attached to a structure that has already been categorized by another head, the head which merges later is assumed to be an outer domain head. Lomashvili, quoting Embick and Marantz (2008), argues that both inner and outer domain heads that categorize roots are cyclic.[6] This means when they merged into a structure, they trigger the *Spellout* operation that sends the part of the structure to interface components, PF and LF (cf. Lomashvili: 18-20).

In the literature and in our discussion so far, we can see different assumptions within the framework we call Distributed Morphology (DM). We are well aware that scholars who utilize DM disagree on several issues. This is because many of the issues under discussion are merely emergent (cf. Adger and Harbour 2008; Travis 2010 among others). This work utilizes DM. Hence, efforts will be made to appropriately use the different assumptions within this framework.

[6] It is indicated in the literature (cf. Lomashvili 2011 among others) that Phi-features and tense are put in T (higher than the cyclic category-defining head). According to Lomashvili, T is not a cyclic head. Moreover, Lomashvili argues the cyclic v does not block T from showing contextual allomorphy conditioned by roots. According to Lomashvili, the root first Merges with the category-defining v and that T is introduced later in the derivation.

2

DPs IN TIGRINYA AND IN AMHARIC

2.1 *Introduction*

DP has served as the structure for the nominal, with the demonstrative in the specifier of the DP and the article in the head of the DP since the 1980's (cf. van Gelderen 2013 among others). In much of the syntactic and semantic literature on English, cardinal numerals, quantifiers, demonstratives and articles were regarded as determiners which occupy the same position: D (Abney 1987 quoted in Gillon 2009). According to Gillon (2009: 201-3), however, some (the proportional or strong) quantifiers occupy positions higher than determiners, while cardinal quantifiers occupy an adjective position. Gillon (211) argues "determiners occupy a different position from quantifiers and demonstratives and that a vocabulary item is a determiner if and only if it occupies D" (cf. also Giusti 1997; Delsing 1998; Schoorlemmer 1998; Gillon 2009; Roehrs 2009, van Gelderen 2013 and others for different views).

In the literature, Tigrinya and Amharic are regarded as members of North and South Ethio-Semitic languages respectively. In this chapter, these two languages are selected as representatives of the Abyssinian Semitic languages.

Here we aim is to have some understanding of DPs of Eritrean and Ethiopian Semitic languages. It may also be a contribution for further research on synchronic and diachronic studies on Eritrean and Ethiopian Semitic languages.

The demonstratives and articles of the languages in question are combinations of different morphemes. In order to have a better understanding of the currently used demonstratives and definite articles, we need to discuss their ancient possible forms. It is important to make some kind of diachronic study so that (i) we can identify the person, number and gender morphemes (ii) we can see the allomorphs which, on the surface, look unrelated (as in the case of the ancient Semitic object suffix *-hu* which can be realized as *-w* or *-t* in Amharic) (iii) we can observe the similarities and differences among demonstratives, definite articles, focal elements and possessive elements in the languages in question. I will try to focus on the comparative aspect in sections (2.2.0 - 2.2.4) and on the structure of the DPs in currently used Tigrinya and Amharic in (2.3.0).

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The structure of this chapter is as follows. In section (2.2.0), demonstratives and definite articles are briefly discussed. Sections (2.2.1) and (2.2.2) deal with Amharic and Tigrinya demonstratives and definite articles respectively. Section (2.2.3) briefly discusses duality indicating morphemes in the languages in question. In section (2.2.4), an attempt is made to relate demonstratives, definite articles and reinforcers of Tigrinya and Amharic. In section (2.3.0), an attempt is made to show the structural positions of demonstratives and definite articles of the languages in question. In section (2.4.0), there will be an overview of quantifiers. In section (2.5.0), we provide a conclusion.

2.2 *Demonstratives and Articles*

According to Lyons (1999: 107, 116), demonstratives are probably to be found in all languages and definite articles almost always arise from them. It is believed that definite articles, in nearly all languages that have them, are descended historically from demonstratives. In many languages, the definite article and the demonstrative may be very similar as in the case of German *der* and Danish *den* which serve as definite articles and as demonstratives (with unstressed or reduced vowel in the case of the articles). In the literature, we follow the change of Early Scandinavian demonstrative *hinn* to the article (pro-nominal) *hinn* and to another article (post-nominal) *inn*. According to Roehrs (2009: 35), the free standing post-nominal (*h*)*inn* (which is currently becoming *in*) presumably formed the basis for the suffixed determiner. The literature in Old English suggests that the language did not have a definite or indefinite article, making use of demonstratives instead (Alexiadou 2004). Furthermore, Alexiadou argues English possessive pronouns which were initially autonomous words became determiner-like. In terms of phrase structure, this means they can no longer occur in a Spec position. Thus, they need to cliticise to D. In Old Akkadian, there is a demonstrative **hanni* which is related to West Semitic definite article *ha* (*hanni* > *han* > *ha*) (cf. Kaufman 1997 and Lipinski 1997 among others). In Hebrew, there are *ha* 'the' and *ha-ze* 'this' (cf. also Tonciulescu 2009: 169).

Demonstratives, in Semitic and non-Semitic languages, can be related to pronouns, especially to third person pronouns. In Ugaritic, we find *hwt*/*hyt* for 3ms (gen., accus.) pronouns, and *hn-d*, *hnk*/*hwt* for near and far demonstratives respectively. In Sabaic, the 3ms *hwt*/*hyt* (gen. accus.) can be used as a far demonstrative. Chaha (a Semitic language spoken in Ethiopia) 3ms *xuta* is related to far demonstrative *huta* in the language.

Some linguists assumed that demonstratives and articles occupy the same position in the structure. In languages like English, demonstratives and articles do not co-occur. However, according to Giusti (1997: 109) the Greek demonstrative can be found in several different positions from

the extreme left of the noun phrase where it precedes the article and occupies Spec, DP (as in 1a) to the extreme right of the noun phrase which is identified with the specifier of the lowest AgrP (as in 1c). According to Giusti (107), Greek examples such as those in (1a-c) indicate that articles and demonstrative do not compete for the same position. Giusti (109-13) therefore argues that demonstratives are lexical elements inserted in a low specifier and further moved to the Spec,DP (through an immediate position in a high Spec,AgrP immediately lower than D). According to Giusti (113) it is clear that demonstratives, contrary to articles, are not in D.

(1) a. afto to oreo to vivlio Greek
this the good the book
b. to oreo afto to vivlio
the good this the book
c. to oreo to vivlio afto
the good the book this
'This good book'

(Giusti 1997: 109)

Besides Greek, in Romanian post-nominal articles and demonstratives co-occur. In Romanian, articles and demonstratives co-occur if the former occurs suffixed to nouns as in (2):

(2) băiat-ul acesta/acela (frumos) Romanian
boy-the this/that (nice)

(Giusti 1997: 107)

Furthermore, there are a number of languages which have discontinuous demonstratives as in (3):

(3) a. an leabher Irish
'the book'
b. an leabhar seo
'this book'
c. an leabhar sin
'that book'

(Lyons 1999: 117)

In Hebrew too, the definite article *ha* 'this' and demonstratives such as *haze* or *ze* can co-occur as in (4) (cf. Tonciulescu 2009: 169 for Hebrew *ha* 'the' + *ze* 'this' > *ha-ze* 'this').[1]

(4) a. ha namer nadir ba-ezor ha-ze Hebrew
the tiger rare in-the area the-this
'The tiger is rare in this area'

(Tonciulescu 2009: 169)

b. ze ha-sefer Se-natati le-Dani ʕetmol
this the-book that-I-gave to-Dani yesterday
'The book that I gave to Dani yesterday'

(Boneh 2003: 65)

Similar examples can be found in different varieties of Arabic as in (5). The Arabic demonstratives can be affixes as in the case of *-da* in (5d) or free forms as in the case of *ha:za* in (5e).

(5) a. haaδa l-walad Standard Arabic
this (ms) the-boy

(Ihsane 2003: 264)

b. had l-wild Moroccan Arabic
this the boy

[1] Observe the relationship between Tigrinya *ʔɨzi* (< *hazi*) 'this', Hebrew *ha-ze* 'this', *hanze* > *haze* 'this' and Arabic *ha:za* 'this' (and the relationship between the definite article *ha* 'the' and the demonstrative *ze/za/zi* 'this' in the languages), and the possible derivation of *d* in *had* (5b), *δ* in *haaδa* (5a) and *z* in *ha:za* (4b) from *δ*. The forms *ze, za, zi* in Hebrew, Arabic and Tigrinya near demonstratives are related to *GiʕɨzI z* 'this' and Amharic *z* in *ɨzih* 'in here / here'. As in the case of *δ* > *d* and *δt* > *dt* in Ugaritic or *δ* > *z* in Phoenician, we assume the derivation of *z* or *d* in different Semitic languages from *δ* in ancient Semitic. I assume the derivation of the different Semitic articles and demonstratives like *hnd* 'this' in Ugaritic, **hanze* > *hazze* 'this' in Hebrew, *ʔɨzi* (< *hazi*) 'this' in Tigrinya from an earlier Semitic form *hnδ* and the different articles and demonstratives such as *z* or *zh/hz* can be regarded as reflexes of the ancient Semitic demonstrative form *hanδ*.

c. l-wɨld hada
the-boy this (ms)
(Benmanoun quoted in Ihsane 2003: 264)

d. il-ʔakli-da Cairene Arabic
the-food-this

e. haːza l-ʔakl
this the-food
(Holes 1995 quoted in Ihsane 2003: 265)

f. l-beːt hadaːk Syrian Arabic
the-house this

g. hadaːk l-beːt
this the-house
(Cowell 1964 quoted in Ihsane 2003: 265)

Articles and demonstratives can be related. But this does not mean that they have the same structural position.

2.3 *Amharic Demonstratives and Definite Articles*

Demonstratives, definite articles, independent pronouns,[2] affixed pronouns, possessive morphemes and focal elements can be etymologically related (cf. Hodge 1969; Ihsane 2003; Satzinger 2004 among others). In the literature, it is indicated that demonstratives (as in the case of Semitic) can be derived from two forms of earlier demonstratives or probably an early demonstrative and an earlier form of a person marker (cf. also Hodge 1969 for early Afro-Asiatic particle *k* for different persons). In Ugaritic, some scholars say the presentative *hn* may be attached to relative pronouns and demonstratives, which according to them, is a stage

[2] According to Alexiadou (2004), possessive pronouns can become determiner-like and may need to cliticise to D. Alexiadou believes possessive pronouns originate from personal pronoun paradigm. Hence they carry person specification or in case of third person pronouns they carry definiteness specification. Such features show similarity to the features located in D.

that precedes the full development of the definite article (cf. Pat-El 2009: 41-47). The forms which were derived from grammaticalized earlier demonstrative items can later develop into other different forms. These different ancient reflexes can be able to have some kind of division of labour and develop into articles, demonstratives, pronouns etc.[3]

In the literature on grammaticalization, there are many examples suggesting that, once a given grammatical form declines and/or disappears, a new form tends to be recruited on the same conceptual pattern as the old one and the result could be the emergence of a kind of morphological cycle. If such a development is repeated, the result is known as a "recursive" cycle (cf. Heine, Claudi and Hünnemeyer 1991 among others). According to Heine, Claudi and Hünnemeyer, the Yoruba verb *kpè* 'say' is desemanticized to a complementizer. Another Yoruba verb *wí* 'this' takes over the function of *kpè* and is grammaticalized to a complementizer in the same way as *kpè* was. However, *kpè* was not lost. Hence both *kpè* and *wí* are compounded and form a complex *wí-kpè*. Moreover, a third cycle is now emerging because another verb *ní* 'this' tends to replace the complex marker *wí-kpè* (cf. Heine, Claudi and Hünnemeyer 1991: 246-247).

In the case of Abyssinian Semitic languages like Amharic, it may be possible to assume something like the Yoruba recursive cycle mentioned above. In Amharic, the ancient deictic form like *hnk*(*t*) or *hnδ*(*t*) may develop into *hn* + *z*(*t*) > *ha/hu* + *z*(*t*). This is to say that in languages like Amharic, the ancient deictic form may develop into demonstratives, pronouns etc. However, it may also be possible to assume another alternative. The demonstratives, definite articles, pronouns and the like may combine among themselves to form other demonstratives etc. As indicated above, a grammaticalization process may be assumed on pronouns and demonstratives of Amharic too. We may assume (i) the split of the ancient form *hnk*(*t*) into different parts or (ii) the combination of the ancient deictic particle *hn* with pronominal elements like *k* or (iii) probably both.

[3] In Proto-Semitic, we have the demonstrative **hanni* which appears as *anniu*(*m*) > *annu*(*m*) in Old Akkadian and Assyro-Babylonian and which is related to Syriac *hānā*, Hebrew *hallā*, Tigre *ʔilli* 'this' and most importantly to Gafat **hinni* > *iňňi* 'this' **hanni* > *aňňi* 'that'. As indicated above, the different articles and demonstratives (and probably pronouns) can be reflexes of an ancient form like *hanδ/hnd/k* (cf. Pardee 1997 for Ugaritic demonstrative *hnd/k* and Trask 1996 for the development of *k* into *θ*, *δ*, *s*, *z*). In Punic, *hnkt* (*hn* + *k* + *t*) is used for both genders which appears to function as a nearer deixis. At some stages in the history of the languages, we may assume a reanalysis of the derived deictic forms. In Syrian Arabic, for instance, *haš* 'this' is a lexicalisation of the demonstrative and the article. A similar lexicalisation process can be observed in Hebrew (cf. Tonciulescu 2009: 169 for Hebrew *ha* 'the' + *ze* 'this' > *ha-ze* 'this'). We assume *δ* > *z* 'that' or 'this' as in Gɨʕɨz *zɨ* 'this'.

Amharic has the definite articles *-u* (and its variant *-w*) for the masculine and *-wa* for the feminine.[4] According to Hailu (1972a), the definite marker /*-u*/ is realized as /*-t*/ after back vowels. On the other hand, some data from other languages indicate that in some languages (cf. Tesfay Tewolde 2002 for related data from Tigrinya), the element *t* can occur as a substitute for glottals or pharyngeals. I assume the same thing occurs in Amharic. For instance, the infinitive of *säbbärä* 'he broke/has broken' is *mäsbär* 'to break' and we may expect the infinitive of *bälla* (< *bälʕa*) 'he ate /has eaten' to be *mäblaʕ*[5] (at times the segment t may substitute a covert glide). But we know the infinitive of *bälla* is *mäblat* 'to eat'. The element t is inserted instead of the covert consonant ʕ. In Amharic (6a-b), we see the loss of the ancient (3ms) *-hu* (6a) which is substituted by *t* (6b). In (6b), the consonant *t* may act as a substitute and hence appears substituting the lost glottal consonant *h* in *-hu*:

(6) a. sɨbär-i- w *sɨbär-i- -hu > sɨbär-i-w Amharic
break-fem.(imp.) -3ms(obj.)
'(you) break it'

b. sɨbär-u- t *sɨbär-u- hu > *sɨbär-u- w > sɨbär-u- t
break-3pl.(imp.) -3ms(obj.)
'(you) break it'

Amharic has the focal element *-w*/*-u* (< *-hu*). It can occur attached to other lexical items as in *ya-w kasa yɨ-särawal* (7c) which can be translated as 'Kasa will do it' but with some kind of emphasis. In (7a-b), I assume, as in (6b), the loss of a glottal element *h* in *-hu* which is substituted by *t*:

(7) a. amna yä-mäṫṫ-u- t(-u) ɨnnä-man na-ččäw Amharic
last year comp-come-perf-3pl.-one pl-who be-3pl
'Who are the ones that came last year'

[4] The definite articles *-u*/*-w* and *-wa* are derived from *-hu* and *-ha* respectively and are etymologically related to Semitic third person pronouns. In fact, the form *-hu* 'it' occurs in words like *ɨndihu* 'like it' (I assume **ɨndähu* > *ɨndihu* by partial distant regressive assimilation). Amharic has also the focal element *-w*/*-u* (< *-hu*).

[5] In Amharic, the element t may also occur as some kind of substitute for a covert glide as in *säläčč-ä* 'he became weary' which corresponds to Tigrinya *sälčäw-ä* 'he became weary'. The infinitive of Amharic *säläčč-ä* is *mäsälčät* 'to become weary'.

b. amna yä-mäťťa-hu- t(-u) nä-ňň
last year comp-come-perf-1sg.-one be 1sg
'The one who came last year is me'

c. *ya-w* *kasa yi-särawal*
that-foc. Kasa 3m-do-3ms.obj. aux.
lit 'That Kasa (he) will do it'

As indicated above, demonstratives, definite articles, pronouns and focal elements can be etymologically related. In the discussion below, however, articles and demonstratives will be brought into focus.

As indicated in the literature, third person pronouns can be related to demonstratives. Hence, the third person pronouns can be derived from the demonstrative forms. In the literature on Semitic languages, the definite article ha is regarded as a syncopated form of *han*(*n*). In course of time, it may be possible to combine the demonstratives and pronouns or pronominal affixes together and form other lexical items. We assume a lexicalisation process in that demonstratives and pronominal suffixes can develop into demonstratives and articles. As indicated in Segert (1997: 177, 184) and Garr (1985), *hu* > *yu* and *hi* > *yi* is possible (cf. also Foster 2001). In (8a), *yih* is derived from a demonstrative *z* (as we can see from *bä-zih* 'in this' and an element *h* < *hu*. In fact, Amharic *zih* is similar to Phoenician *zʔ/h*(*ʔ*)*z* 'this', and closely related to Arabic *ha:za* 'this' and Hebrew *haze* 'this' (< *ha* + *ze*). In Amharic demonstratives, plurality is indicated by *inn-* as in (8c) and (8d) while *č* marks feminine as in (8b, 8e). I assume demonstratives like those in (8b, 8e) are derived from *z* and *a* form similar to Ugaritic or Sabaic deictic or pronominal element *hyt* followed by the palatalization of *t* (as in *hyt* + *i* > *ič*). Moreover, Amharic distal demonstrative has a Semitic feminine marker *-a* (< *-ha*) in it. I assume *zi* + *ha* > *yi* + *ha* > *ya* for Amharic demonstrative in (8d). In (8e), *č* is added to *ya* and becomes *yač*(*č*) 'that'. I assume *zi* + *hati* > *yačč* (cf. also Hudson 1983 for *-ati* > *-ačč*). Furthermore, it is very interesting to see the realization of *z* in *innäzia* 'those' and *innäzih* 'these'. In *innäzia* (8f), we see *innä* + *zi* + *ya* (< *han* + *zi* + *ha*) while in (8c), we have *innä* + *zihu* (< *han* + *zi* + *hu*):

(8) a. yih (*zi + hu > yih) Amharic
'this(m)'

b. yihičč (*zihyti > yihičč/yičč)
'this(f)'

c. ɨnnäzih/ɨnnäyɨh (*ɨnnä + zihu > ɨnnäzih/ɨnnäyɨh)
pl this 'these'

d. ya (*zi + ha > ya)
'that(m)'

e. yaččˇ (*zihati > yaččˇ)
'that(f)'

f. ɨnnäzia/ɨnniya (*ɨnnä + ziha > ɨnnäziya/ɨnniya)
pl. that 'those'

In (9a-b), we have Amharic definite articles *-u/w* (< *hu*) for the masculine and *-wa* (*-ha*) for the feminine. In (9c), we find the focal element of Amharic *-u/-w* (< *-hu*) which, I believe, can be translated as 'of course', or 'the one(s)' with some kind of emphasis. According to Alexiadou (2004) indicated above, English earlier possessive pronoun becomes a determiner-like and can no longer be situated in a Spec position (cf. Alexiadou 2004: 48 for English data). Possessives of the languages in question will be discussed in the next chapter. However, I assume Amharic definite article need to cliticize to D:

(9) a. -u/-w (*-hu > u/w) Amharic
'the(m)'

b. -wa (-*ha > -wa)
'the(f)'

c. -u/-w (focal) (-*hu > u/w)
'The one(s)/of course'

In languages such as Arabic, French, non-standard English and several other languages, there are elements that Ihsane (2003) calls reinforcers. We can also observe from the examples in (1-5) above that there are pre and post-nominal demonstratives and articles. In Romanian, there is a definite article followed by a demonstrative as in (2). In the French examples in (10a-b) taken from Brugè (2002), we see the demonstrative *ce* 'this' and the focal elements *ci* 'here' and *là* 'there'. In the example from Swedish (10c) and from non-standard English (10d), *här* 'here' and here are focal elements:

(10) a. ce livre-ci b. ce livre-là French
'This book here' 'This book there'

(Brugè 2002: 38)

c. den här mannen — Swedish
the here man-the
'This man'
(Ihsane 2003: 277)

d. this here guy — Non-standard English
(Ihsane 2003: 277)

In Amharic too, I assume the focal element *-u* (< *-hu*) in (11a-b) functions as a reinforce:

(11) a. ya-u kasa yi-särawal — Amharic
that-foc. Kasa 3m-do-3ms.obj. aux.
(lit 'That Kasa (he) will do it')
'Of course Kasa will do it'

b. (kasa) ine-n-u säddäb-ä-ňň
Kasa I-accu.-foc insult perf.-3ms-1sg.obj.
lit 'Kasa insulted me, myself'
'Kasa insulted me'

2.4 *Tigrinya Demonstratives and Definite Articles*

Tigrinya has demonstratives and articles which are related. In (2.0), we have seen *hnd* 'this' in Ugaritic and **hanze* > *haze* 'this' in Hebrew (cf. Lipinski 1997). Proximal demonstratives in Hebrew and Ugaritic are composed of *ha*(*n*) + *δ* and the latter (*δ*) has become *d* in Ugaritic and *z* in Hebrew. It may be possible to assume the derivation of Tigrinya *hz* from *a* form like *hanz*. We also know that there are forms like the presentative *hn* and its variant *ht* (< **hnt*), *hnd* 'this', *hw* 'he', *hyt* 'that', *hwt* 'that/him' in Ugaritic (cf. Pardee 1997 among others). It may be important to note that the presence of *t* in *hwt* 'that/him' makes the far demonstrative (and an object) different from *hw* 'he'. In Sabaic, we find the forms *hwt*/*hyt* 'that' which are also used as 3ms genitive/accusative particles. Tigrinya far demonstratives are closely related to Ugaritic and Sabaic far demonstratives. As we can see from the Tigrinya examples in (12e-h), we have the form *ht* > *ʔt* (*hyt* > *ʔt* can be assumed) followed by pronouns for far (distal) demonstratives of Tigrinya. We find Tigrinya near (proximal) de-

monstratives in (12a-d) and distal demonstratives in (12e-h). In (12a), we have a proximal demonstrative composed of *ʔɨ* (< *ha*) and *zi* followed by *hu* which has different realizations in different dialects. Thus, the demonstrative can be realized as **ʔɨzihu* > *ʔɨziyu* (by lenition), **ʔɨzihu* > *ʔɨziyu* > *ʔɨzuyu* (lenition followed by assimilation), *ʔɨzuyu* > *ʔɨzuy* (by deletion of the last vowel *u* or *ʔɨziyu* > *ʔɨzi* (by deleting *-yu*). None the less, the forms which are more frequently used are *ʔɨzi* (the standard in Eritrea) and *ʔɨzuy* (in several rural areas of Eritrea and in Tigray). The form in (12b) differs from (12a) in that the former has *-ʔa* (< *-ha*) instead of *-u* (< *-hu*) to indicate the feminine gender. The forms *-hu* and *-ha* are similar to genitive or accusative suffixes (pronouns) of Semitic languages as in the case of *-hu*(3ms) and ha(3fs) in Aramaic, *-hu*(3ms) and *-ha*(3fs) in Arabic and also *-hu(3ms)* or *-u(3ms)* and *-ha(3fs)* or *-a(3fs)* in *Gɨʕɨz*. In (12c) and (12d), we have plural proximal demonstratives. The forms are composed of the original *ha* and *zi* followed by *-om* or *-än*. The morphemes *-om* and *-än* are similar to gerundive and possessive suffixes in Tigrinya.

(12) a. ʔɨzi/ʔɨzuy (*ʔɨzihu > ʔɨziyu > ʔɨzi/ʔɨzuy) Tigrinya
'this(m)'

b. ʔɨziʔa
'this(f)'

c. ʔɨziʔom
'these(m)'

d. ʔɨziʔän
'these(f)'

e. ʔɨti/ʔɨtuy (*ʔɨtihu > ʔɨtiyu > ʔɨti/ʔɨtuy)
'that(m)'

f. ʔɨtiʔa
'that(f)'

g. ʔɨtiʔom
'those(m)'

h. ʔɨtiʔen
'those(f)'

In (13a-d) and in (13e-h), we have Tigrinya articles which indicate near and far objects/persons respectively. The articles have morphemes which show person, number and gender:

(13) a. ʔɨzi (*ʔɨzihu > ʔɨziyu > ʔɨzuyu > ʔɨzu/ʔɨzi) Tigrinya
'the(m)'

b. ʔɨza
'the(f)'

c.	ʔɨzom	d.	ʔɨzän
	'the(m)'		'the(f)'
e.	ʔɨti/ʔɨtu (*ʔɨtihu > ʔɨtiyu > ʔɨtuyu > ʔɨtu/ʔɨti)	f.	ʔɨta
	'the(m)'		'the(f)'
g.	ʔɨtom	h.	ʔɨtän
	'the(m)'		'the(f)'

As we can observe from (12a-h) and (13a-h), the articles and demonstratives are closely related. We have indicated above that in the literature on grammaticalization, there are many examples suggesting that, once a given grammatical form declines and/or disappears, a new form tends to be recruited on the same conceptual pattern as the old one and the result could be the emergence of a kind of morphological cycle. If such a development is repeated, the result is known as recursive cycle.

In Semitic languages too, as indicated above, such kind of grammaticalization process on pronouns and demonstratives can be assumed. We may assume (i) the split of the ancient form *hnk*(*t*) into different parts or (ii) the combination of the ancient deictic particle *hn* with pronominal elements like *k* or (iii) probably both. However, this is not the focus of this article. The secondary gender markers, in Semitic languages, are *-ā* (for feminine) and *-ū* (for masculine) as in the case of Akkadian *ʔantinā* 'you (3fpl)' and *ʔantunū* 'you (3mpl)'. In Semitic languages, Egyptian and Cushitic languages such as Saho and Agaw, number is marked by *n*. As we can see from Akkadian *ʔantunū* and *ʔantinā*, plurality is indicated by *n* while *-ū* and *-ā* which occur in the word final position are secondary gender markers (cf. Buccellati 1996: 206). In Tigrinya, the secondary gender markers *-u* (< *-ū*) (for the masculine and *-a* (< *-ā*) (for the feminine) appear when the subject suffixes are followed by object suffixes as in (14c-d).

(14)	a.	fäli t'-om	b.	fälit'-än	Tigrinya
		'knew-3mpl'		'knew-3fpl'	
	c.	fälit'-om-u- ni	d.	fälit'-än-a- ni	
		'knew 3mpl-u-me'		'knew-3fpl-a-me'	

In (14a-b) the verb stem *fälit'-* is followed by subject suffixes *-om* and *-än* respectively. But in (14c-d), the verb stem is followed by subject suffixes *-om* and *-än* and by an object suffix *-ni* and hence we observe the secondary gender markers *-u* for the masculine and *-a* for the feminine. In (14a-b), the secondary gender marking elements are not overtly seen. In the former,

-u has changed *n* to *m* and then deleted and we may say it (i.e. *u*) is hidden in *m*. Hence *m* and *n* may, by default, function as secondary masculine and feminine markers (cf. also Noyer 1997 and Sidiqqi 2009: 25 for the Tamazight Berber plural element *n*, a verbal affix, which can be realized as *m* in second person masculine plural and as *n* in first person plural, second person feminine plural and third person plural pronominal verbal affixes).

As in the case of Moroccan Arabic (cf. 5c above), Tigrinya demonstratives function as reinforcers (cf. also the discussion below). Tigrinya has, as indicated above, definite articles and demonstratives. They are more or less formally the same. But in the definite articles, the form *-iʔ-* which occurs following *z/t* in the latter (i.e. demonstrative) is deleted.

2.5 *Duality Indicating Morphemes in Tigrinya and Amharic*

Semitic languages have a dual accusative-genitive maker *-ā* and *-ay* (cf. Buccellati 1996, Lipinski 1997). The morpheme indicating duality can be used outside the narrow limits of the linguistic expression of natural pairs (cf. Moscati *et al* 1964). In other words, duality indicating morphemes may also show a relationship (such as possessor and possessed) between groups, individuals, a group and an individual etc. In Tigrinya, as in other Semitic languages like Aramaic, we can form ordinal numbers and adjectives by the affixation of *-ay* as in *sälästä* 'three' and *salsay* 'third' and also *ħamli* 'vegetable' and *ħamlay* 'green'. In Amharic, we have *e-* or *-ye-* as in *gojam* 'a region in Ethiopia' and *gojam-e* 'someone from Gojam', *wollo* 'a region in Ethiopia' and *wolloye* 'someone from Wollo'. In the above examples, the morpheme *e/ye* shows a relationship between a region and someone from that region.

Comparative studies show dual endings *-ā* and *-ay* can be followed by mimation and nunation. For instance, we have a dual ending *-ayim* in Hebrew, a dual ending **-āmi/*-ēmi* in Ugaritic and another dual ending *-ayn* in Syriac (cf. Dolgopolsky 1991 among others) which can be compared to Tigrinya *-am* (16a), *-äyna* (16b) and *-ăňňa* (16c) and also to Amharic *-am* (15a) and *-ăňňa* (15b):

(15) a. Hod + -am (< hod + -am) Amharic
stomach + -am
'Heavy eater'

b. wänǰäläňňa (< wänǰäl + -ăňňa)
crime + äňňa
'criminal'

(16) a. märzam (< märzi + -am) Tigrinya
poison + -am
'Poisonous'

b. gäbänäyna (< gäbän + -äyna)
'crime' + äyna
'Criminal'

c. gäbänäňňa (< gäbän + -äňňa)
Crime + äňňa
'Criminal'

In the Amharic examples in (15a-b) and in the Tigrinya examples in (16a-c), we see some kind of relationships as in the case of crime and someone who commits the crime. In (16b-c), *-äyna* and *-äňňa* are variants. In fact, the latter is derived from the former.

In Amharic, we have the forms *-itu*, *-itwa*, *-ɨyyäw*, and *-ɨyyäwa*. The difference between *-u* (definite article) and *-itu* and also between *-wa* (definite article) and *-itwa* is the presence of *-t-* in *-itu* and *-itwa*. The element *-t* can function as a feminine marker (as everywhere in Semitic) or a diminutive morpheme (as in Amharic). The forms *-ɨyyäw*, and *-ɨyyäwa* are considered to be caritative or facultative (cf. Baye 1996). In *-ɨyyäw*, and *-ɨyyäwa*, we have forms similar to the definite articles preceded by *-ɨyyä-*. I believe *-ɨyyä* is etymologically a duality marker,[6] I also assume that *ɨyyä* is related to Amharic *yä* 'of' or even to *-e* as in *gojam-e* 'from/of Gojam', 'someone belonging to Gojam'. However, the elements indicated here as duality indicating morphemes are not included in the discussion regarding DPs in this chapter.

2.6 *Relating Amharic and Tigrinya Demonstratives, Articles and Reinforcers*

If we compare the pronouns, demonstratives and articles of Tigrinya and Amharic, we can observe (as indicated above) that they are related among themselves and with other Semitic languages.

[6] According to Buccellati (1996), Akkadian has dual marker *-ay* or *-ā* (< *-ay*) in genitive-accusative case which also indicates a relationship between the possessor and the possessed or between the lover and the loved ones etc. As indicated in Loprieno (1995), Egyptian has *nj* (< *n* + *j*) 'that of' which, I assume, is related to Tigrinya nay (< *n* + *ay*) 'of'.

In Tigrinya, the distal demonstrative *ʔɨt* (< *hɨt*) is related to Ugaritic and Sabaic *hwt/hyt* and Chaha *huta, xut-a* (indicated above). Besides, the Tigrinya proximal demonstrative *ʔɨz* (< *hɨ + z*) is related to Hebrew *haze*, Phoenician *zʔ/h(ʔ)z* 'this'. Amharic *yih/zih* 'this' is related to *Gɨʔɨz zɨntu* 'this' and to its counterparts in Phoenician, Hebrew and Tigrinya.

Both Tigrinya and Amharic demonstratives and articles take the etymologically third person possessive pronouns like *-u* (< *-hu*) and *-a* (< *-ha*) as suffixes. The suffixes *-u* and *-a* are related to Semitic suffixes such as Arabic *-hu* 'his' and *-ha* 'her'. The forms *yihičč* 'this' and *yačč/yač* 'that' in Amhaaric are related to Sabaic and Ugaritic *hwt/hyt* which function as genitive/accusative forms and also as far demonstratives. In Semitic languages, *t* can indicate a feminine gender (cf. Buccellati 1996 among others). As indicated above, the element *t* in Sabaic and Ugaritic may indicate a far demonstrative or a feminine gender. In Amharic demonstratives too, the Semitic feminine markers *t* and a function as morphemes indicating a feminine gender and a far demonstrative respectively. For the plural, Amharic takes *(ʔ)ɨnnä* as in *(ʔ)ɨnnäzih* (< *ʔɨn + zi + hu*) 'these' while Tigrinya uses other possessive third person masculine and feminine plural suffixes as in the case of *-än* in *ʔɨzi-ʔän* 'these (3fpl)' which looks like *-än* in *gänzäb-än* 'their money(3fpl)'.

The forms like *hnz* > *hz/ʔz/zh/znh* 'this' as in Hebrew, Tigirnya, Amharic and Aramaic respectively can be reflexes of the ancient form *hnn + k*(t) > *han + δt* and (cf. also Lipinski 1997, Pardee 1997, among others for Ugaritic *hnk* 'that' or *hwt* 'that', *hnd* 'this'. Moreover, the far demonstratives of Tigrinya are closely related to *hyt* 'that' or *hwt* 'that' in Ancient South Arabian and Ugaritic. As in the case of *ʔɨzi* 'the, this' and *ʔɨti* 'the, that' and also *ʔɨzom* 'the (pl)', *ʔɨziʔom* 'these', *ʔɨtom* 'the (pl)' and *ʔɨtiʔom* 'those' Tigrinya definite articles and demonstratives are very much related. Moreover, we can see that Amharic definite Articles *u* (< *hu*) and *wa* (< *ha*) are formally similar to possessive pronouns.[7] We also observe that forms that are similar to definite articles occur attached to Amharic demonstratives.

As indicated in the literature, the Semitic definite article *ha-* is derived from a Proto-Semitic particle **hanni* which used to functions as a demonstrative. Gafat[8] has *iňňi* 'this' (derived from hinni) and *aňňi* 'that' (derived

[7] Languages can have synthetic and analytic genitives. Regarding Ethio-Eritrean Semitic languages, the terms genitive and possessive can be used alternatively.

[8] For the plural, Amharic takes *(ʔ)ɨnnä* (derived from ancient Semitic demonstrative *hanni* and related to Berber, Cushitic, Semitic or Egyptian plural morpheme *-n*). Tigrinya and Amharic *(ʔ)ɨn-* in *(ʔ)ɨnnä* binyam 'Binyam and others' can correspond to an Afro-Asiatic plural morpheme *-n* and to a Semitic deictic element *han*(*n*).

from hanni). We also have hn-d 'this' in Ugaritic, *haδa*[9] 'this' in Arabic, znh in Aramaic, **hanze* > *hazze* 'this' in Hebrew (cf. Lipinki 1997 for Hebrew *hanze* > *hazze* 'this'), which are related. As *δ* > *z* or *δ* > *d* is possible, the derivation of the above indicated Semitic demonstratives from an earlier *hnδ*(*t*) form appears convincing. As indicated above, Amharic has *ɨnnäz-* as in *ɨnnäzih* 'these'. The Amharic singular demonstratives mainly differ from *ɨnnäzih* and *ɨnnäzia* because there is no *ɨnnä-* in the former. In Amharic demonstrative, *ɨnnä-* functions as a plural marker which corresponds to the plural marker *-n-* in Semitic, Cushitic, Berber and Egyptian.

In both Tigrinya and Amharic, we have the element ha (*hann* > *ha*) that can be changed to *ʔ* and can be preceded or followed by an element *z*. We assume it can be derived from a form related to Hebrew **hanze*.

As indicated above, the element z covertly or overtly occurs in far and near demonstratives in Amharic and in near demonstratives in Tigrinya. In Tigrinya, we have *ʔ* + *z* for near demonstrative. But in the case of far demonstratives, Tigrinya has a form like *ʔa* (< *ha*) + *t* or *ʔt*(< *hnt*) (cf. Lipinski 1997, Pardee 1997 among others for Ugaritic presentative particle *hn*(*t*), Mandaic *hānāt*) which is similar to the Ugaritic and Sabaic far demonstratives and genitive/accusative 3ms *hwt/hyt*. A lexicalised form composed of an earlier demonstrative is followed by possessive suffixes in both Amharic and Tigrinya. Number is indicated by *ɨnnä* in Amharic and by *n* or *m* (< *n*) in Tigrinya.

The demonstrative *annitān* at Mari is interpreted as a frozen feminine dual originally meaning "this, that, thing, matter". In Ugaritic, the form *hnd/k* used to function as a demonstrative pronoun and as an adjective for 3ms/3fs, dual and plural masculine. In other words, it is possible that sometime in the history of the languages the use of the forms like *hnd* was not able to distinguish number or gender. In the same way, it may be possible to argue that *ɨnnäziya* and *ɨnnäzih* were used to indicate different numbers or genders and the deletion of *ɨnnä* to form the singular may be a later phenomenon (e.g. *ɨnnäzih* > *zih* > *yɨh*) in Amharic.

On the other hand, we may assume the derivation of the singular demonstrative forms like *hz/zh* from *hnz* (< *hnδ*) and *ʔn* (< *hn*) may be added to the singular demonstratives to form plurals at some later stage in the history of Amharic. The second alternative appears more convincing. But this merits further research.

[9] Scholars assume the Egyptian (*i*)*mk* 'behold (2ms)' can develop into (*i*)*mθ* 'behold (2fs)' (cf. Gardiner 1950 and Lipinski 1997 among others). The form (*i*)*mk* can be etymologically related to the deictic *hn*(*m*)*k*. Some scholars suggest that the distinction between voiced and voiceless sounds may not be an original feature of Proto-Semitic and according to Lipinski (1997) it is possible that *θ* and *δ* were once allophones or free variants of the same interdental phoneme (cf. Lipinski 1997). According to Trask (1996), Old English *θ* later split into *θ* and *δ* (cf. Trask 1996: 83-85 for more details). We may assume a similar process in Semitic languages too.

In Amharic, *ɨnnä* is the plural marker, while gender is not marked in the plural. In Tigrinya, the secondary gender marker *-u* changes the number marker *n* into *m* and may be deleted.

As indicated above, several languages such as Spanish have forms which are similar or close to demonstratives which later change to articles. In (10a) above, we have the demonstrative *ce* and the focal element *ci* in French. Tigrinya and Amharic too, have demonstratives, definite articles and reinforcers which are formally and etymologically related. They can be derived from an ancient demonstrative (see also the discussion above for the derivation of articles from demonstratives). The reinforcers in Tigrinya and Amharic are demonstratives in the former and focal elements (as in 11 above) in the latter (cf. Also 2.7 below).

2.7 *Structural Positions of Demonstratives and Articles in Tigrinya and in Amharic*

The sequence of Tigrinya articles, nouns and demonstratives observed in the language is the following:

(17)	ʔɨtom	säbat	ʔɨtiʔom	Tigrinya
	the (3mpl)	man-pl	those (3mpl)	
	'Those men'			

According to Ihsane (2003), the post-nominal demonstratives indicated in Moroccan Arabic (5c), Cairene Arabic (5d) and Syrian Arbaic (5f) are reinforcers which sit in their base positions (cf. also Shlonsky 2000). Moreover, French *ci* 'here' (just like Moroccan Arabic *hada* in (5c) and other examples in (5)) is also regarded as a reinforcer as in (18a-b) (cf. Roehrs 2009).

(18)	a.	ce	garcon-ci	French
		This	boy-here	
		'This boy'		
	b.	l-wəld	hada	Morocca Arabic
		the-boy	this-ms	

(Ihsane 2003: 263)

In the same way, we may assume the function of Tigrinya demonstratives (as in 17) as reinforcers. As in the case of Moroccan Arabic *hada*, Tigrinya post-nominal demonstratives such as *ʔɨtiʔom* can be regarded as reinforcers.

We recall that Amharic demonstratives are lexicalised forms of different morphemes. We have indicated that, in Amharic, we have demonstratives *ɨnnäzih* 'these', *ɨnnäziya* 'those', *yɨh* 'this (ms)', *ya* 'that'. The plurals are composed of (*ʔ*)*ɨn* (cf. Moscati *et al.* 1964, Lipinski 1997 among others for the ancient demonstrative *hn*), *-zi-* and a form similar to a definite article (which may be covert). Amharic has also definite articles *-u*/*-w* (< *hu*) and *-wa* (< *-ha*).

We can see a relationship among the Semitic definite article *-ha* 'the' and the Arabic pronouns *-hu*, *-ha*, Hebrew pronouns *-hu* 'him', *-(h)a* 'her', *-ah* 'her' *-h* 'her' on the one side and the Amharic *-u*, *-a*, and -h on the other. If we put together the element h (of demonstratives) and also *u* and *a* (definite articles) of Amharic, we can form *-hu* and *-ha* which are similar to the Semitic definite article and to the pronouns indicated above. Either *-h* in the definite articles or the vowels *u*/*a* in the demonstrative seem to be covert or deleted. We observe that the Amharic plural demonstratives are composed of *ʔɨn* + *zi* followed by *-hu* or *-ha* (leaving the details of phonological changes aside). In Amharic, we have the forms *bäziya* 'there' and *bäzih* 'here'. Thus, I also think the singular demonstratives are etymologically composed of *zi* followed by pronominal suffixes. For instance, we can have **ziha* > **-ziya* > *-ya* and **zihu* > *yih* > *yɨh*.

So far, I tried to demonstrate that Amharic demonstratives and definite articles are related among themselves and with other Semitic languages. However, they do not occupy the same structural position. Articles and demonstratives occupy a D position and a specifier position (cf. also Giusti 1997; Roehrs 2009; van Gelderen 2013).

In languages like English, there are restrictions on the co-occurrence of the articles with demonstratives. In English, either the specifier or *head* can be present but not both (cf. Giusti 1997: 110; van Gelderen 2013: 197 among others for details).

In Romanian, Giusti (1997: 108) argues, demonstratives occur in Spec positions in all cases. She argues the demonstrative may move to a Spec,DP and a definite article can occur at D in languages like Romanian. According to Giusti (110), "[…] languages vary with respect to the level at which the demonstrative moves to SpecDP (its final position)". Observe the following examples taken from Giusti (107):

(19) a. acest/acel (frumos) băiat (frumos) Romanian
this/that (nice) boy (nice)

b. *acestul băiat
this-the boy

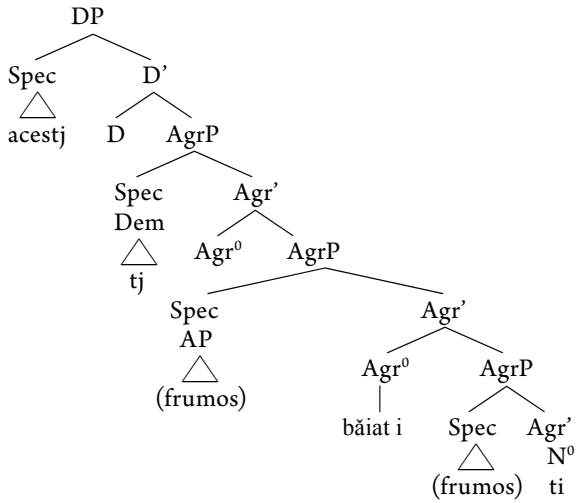
c. *acest băiatul
this boy-the

d. băiatul acesta/acela (frumos)
boy-the thisA/thatA (nice)

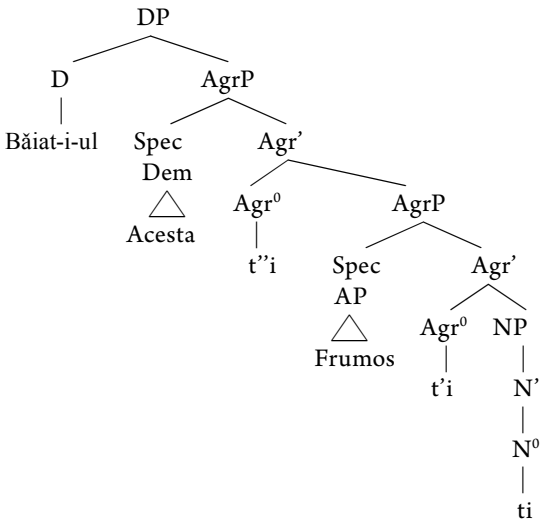
(Giusti 1997: 107)

In Romanian, the definite article is enclitic on the nominal element. It can be observed from the Romanian example in (20b) that a noun to which an article has encliticized is in D which is the left most element in the noun phrase while the Spec,DP is empty as in (19d, 20b). According to Giusti (1997: 107-115), (19a) and (19d) have the structures in (20a) and (20b) while (19b) and (19c) are ruled out.

(20) a. Romanian



b. Romanian



(Giusti 1997: 108)

Giusti (1997) argues the Romanian demonstrative acest in (19a) is in the highest Spec. She proposes that it has moved to Spec,DP as in (20a). Giusti also believes the phrase initial N, inflected with the enclitic definite article occurs in D position while the demonstrative is in second position as in (19d) and in (20b). As indicated above, we can find demonstratives and articles in Spec,DP and in D positions respectively and occur in complementary distribution in Romanian. In Romanian, Giusti (1997) believes, no article is needed to be inserted in D once the Spec,DP is filled with an element that has enough features to license the whole projection. The demonstrative checks its referential features in Spec,DP (cf. Giusti 1997: 108). Brugè (2002) argues the demonstrative can appear either in its base position or in Spec,DP position. If the demonstrative does not move to Spec,DP before spell out, Brugè (2002) believes the definite article must be realized in D in order to show also at PF that this position contains some particular feature (that is, the [+Ref] feature), which prevents it from being interpreted as existential.

Amharic has pre-nominal demonstratives like yih and a definite article which can occur suffixed to nominals. If we adopt the structure above (cf. Giusti 1997), we may assume, as in the case of English and Romanian, the movement of Amharic demonstratives (e.g. *ya* 'that') to Spec,DP. Observe the following examples:

(21) a. ya habtam säw — Amaharic
that rich man
'That rich man'

b. ya habtam-u säw
that rich-the man
'That rich man'

c. ya-w habtam-u säw
that-the rich-the man
'That rich man'

d. ya-w sɨssɨtam-u habtam säw
that-the greedy-the rich man
'That greedy rich man'

e. habtam-u säw
rich-the man
'The rich man'

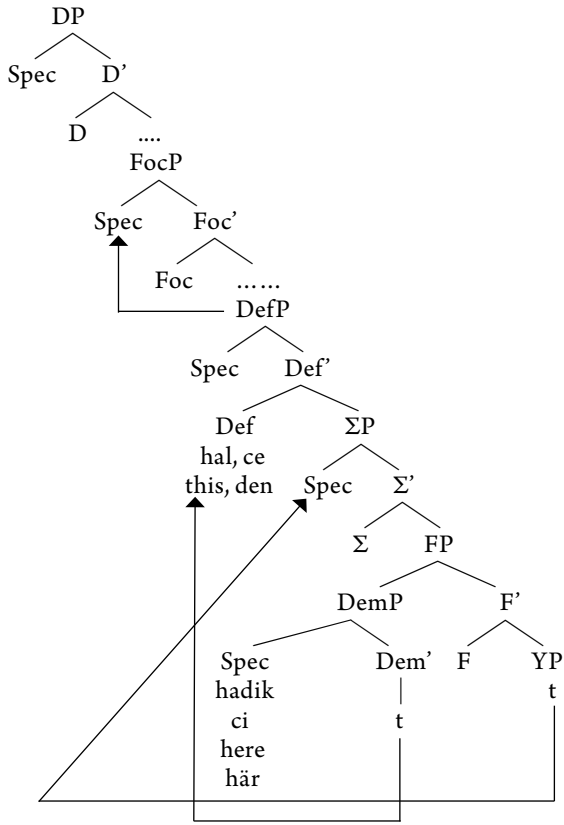
f. ya säw
that man
'That man'

g. bet-u
house-the
'The house'

If we adopt the structures in (20a-b) for Amharic, we may assume the movement of the demonstrative from a low Spec to Spec,DP. However, we will see later in our discussion that we can have better alternatives.

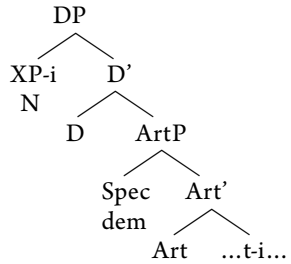
The issue of the structural position(s) of articles and demonstratives appears unsettled. Different scholars have different views on these issues. Ihsane (2003) argues that we can have a structure in (22a) which takes into account for the patterns in Arabic, French and other languages indicated above. In this analysis, the demonstratives like the French *ce* 'this' and reinforcers like the French *ci* 'here' sit in the periphery of nominals. Pre-nominal demonstratives such as Arabic *hal*, French *ce*, English *this*, Swedish *den* are assumed to head-move to Def. She also assumes the non-standard English data (10d) differ from Arabic and French in that YP does not undergo snowballing to Spec,ΣP. Furthermore, Ihsane (2003) claims the reinforcers (like the French *ci*) do not realise the features of the head Foc in the left periphery of nominals. According to Ihsane (2003), the whole DefP moves to the specifier of FocP to check the [+Foc] feature. Hence, she assumes reinforcers like the French *ci* 'here', Arabic *hadik* 'this' and *hada* 'this' and also Swedish *här* 'here' which sit in the specifier of DemP move to the specifier of FocP. None the less, Ihsane (2003) assumes it is the whole of DefP which moves to this position (cf. also Roehrs 2009). Let us see the structures in (22a) and in (22b) taken from Ihsane (2003) and Roehrs (2009) respectively:

(22) a.



(Ihsane 2003: 275)

b.



(Roehrs 2009: 43)

Taking Ihsane's (2003) and Roehrs' (2009) structures in (22a) and (22b) into account, we may have tree structures such as those in (23b). Tigrinya demonstratives (also reinforcers) like *ʔitiʔom* 'those' can semantically correspond to forms like French *là* 'there'. In the case of Tigrinya, unlike the demonstratives indicated in (22), we may not assume the movement

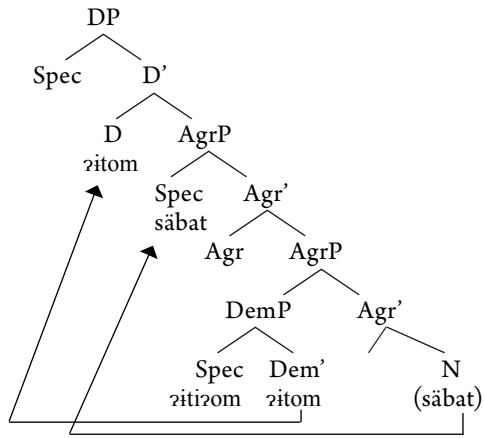
of the demonstrative to a higher position. Observe the structure in (23b) which corresponds to the phrase in (23a)

(23) a. ʔɨtom säbat ʔɨtiʔom Tigrinya

The (3mpl) man-pl those (3mpl)

'Those men'

b. Tigrinya



In Delsing (1998), PossP (which can correspond to AgrP) is used as a functional projection within the noun phrase (cf. Delsing 1998: 93 for the similarity between Spec,AgrSP and Spec,PossP). In (22a), Ihsane (2003) uses FP (functional projection) and ΣP (extended projection of N). In (23b), it may be possible to put FocP below DP as in the case of Ihsane (2003) or Intensifier phrase (IntP) above DP as in the case of Roehrs (2009). For the sake of simplicity, however, only DPs and AgrPs are used in (23b). Tigrinya demonstrative such as *ʔɨtiʔom* in *ʔɨtom säbat ʔɨtiʔom* may be translated as 'there' which corresponds to French *là* 'there'. Thus, *ʔɨtom säbat ʔɨtiʔom* can be translated as 'those men' or 'the/those people there'. Taking Ihsane (2003) and Roehrs (2009) into account, we may move *säbat* 'men' to Spec,AgrP and *ʔɨtom* 'the (3mpl)' into D, while *ʔɨtiʔom* 'those(3mpl)' may remain in situ. However, I assume this merits further investigation.

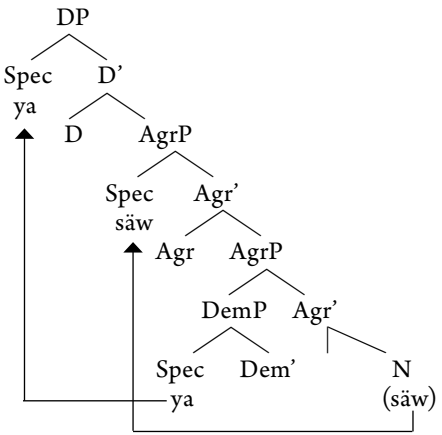
Furthermore, one may also assume the tree structures in (24c-d) for the Amharic phrases in (24a-b)

(24) a. ya säw Amharic

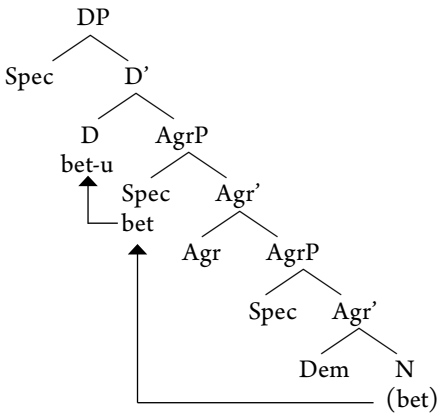
'That man'

b. bet-u
house- the
'The house'

c. Amharic



d. Amharic



Taking Ihsane's (2003) and Roehrs' (2009) structures into consideration, the DPs in (24a) and in (24b) may correspond to the structures in (24c) and in (24d) respectively. In the former, we may assume the movement of *säw* 'man' and *ya* 'that' to Spec,AgrP and to Spec,DP respectively, while in the latter we may assume the raising of the noun *bet* 'house' to D (occurs together with the definite article *-u*). In (24c), we have *ya säw*. It may be possible to assume the movement of the demon-

strative *ya* to Spec,DP from a lower position in the structure (cf. Roehrs 2009 among others). As we have said above, however, this merits further investigation.

In Amharic, I believe the demonstrative *ya-* occurs in Spec,DP. But it seems to me that *ya-w* in (21c) occurs in a position above DP. I assume the focal element attached to demonstratives as in (21c) is used for some kind of emphasis. I believe, the focal elements attached to demonstratives as in *yaw* in (21c-d) are reinforcers. Observe also the following:

(25)	yaw	ɨnnäzih	naččäw	Amharic
	of course	these	are	
	'Certainly they are'			

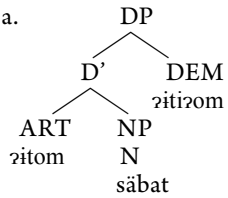
We may assume the movement of *ya* and *-u* from a lower position in the tree structure to the IntP on top of the DP (cf. also Roehrs 2009).

As indicated in (22a) above, Ihsane (2003) believes definite articles and demonstratives raise from DemP to higher positions.

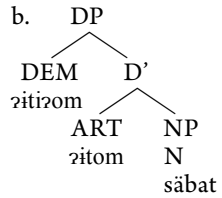
As suggested earlier, however, there are different views regarding the structural positions of articles and demonstratives. If a demonstrative (DEM) and an article (ART) appear in a language, van Gelderen (2013) assumes the order is [DEM ART N] or [ART N DEM]. According to van Gelderen, the former i.e., with the specifier in the initial position, could be the base order. Taking the structures indicated in van Gelderen (196-7) into account, we may have (27a) for the Tigrinya phrase in (17, 23a) repeated here as (26). According to Gelderen (196), the base order could be (27b) and we find (27a) as a left-ward movement of the definite article and the noun. However, I prefer to take Fuß (2005: 194) and van Gelderen (2013: 196-7) into consideration and assume (27c-d) for the Tigrinya phrase in (26).

(26)	a.	ʔɨtom	säb-at	ʔɨtiʔom		Tigrinya
		the (3mpl)	man-pl	those (3mpl)		
		'Those men'				
	b.	ʔɨtiʔom	ʔɨtom	säbat		Tigrinya
		those (3mpl)	the (3mpl)	man-pl		
		'Those men'				

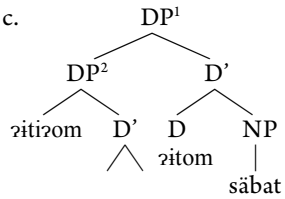
(27) a. Tigrinya



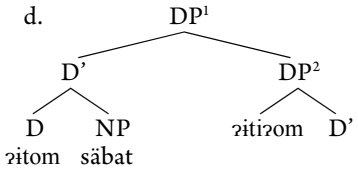
b. Tigrinya



c. Tigrinya



d. Tigrinya

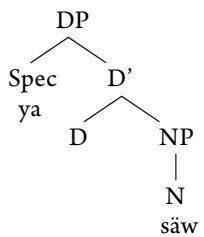


In (27a), we have a specifier last structure. We observe [ART N DEM] order in a DP in (27a). But in (27a), we have [DEM ART N].

In (27c-d), we see DP^1 and DP^2 (cf. Fuß (2005) for similar structures). Tigrinya speakers may use the form in (27c). However, the commonly used Tigrinya form is (27d). Taking van Gelderen (2013) and Fuß (2005) into account, we may assume a left-ward movement of the article and the noun in (27c) to get (27d). But we may also assume the left-ward movement of D^2 in (27d) to get the structure in (27c). Adapting van Gelderen (2013) and Fuß (2005), I assume the left-ward movement in the structures in (27c-d) for the Tigrinya phrases in (26a-b).

In English, there are restrictions on the co-occurrence of the definite markers (cf. van Gelderen 2013). Thus, in English, we can have either the specifier or the head, but not both. This argument may hold for Amharic too as in (28) for the phrase *ya säw* 'that man' in (21f, 24a):

(28) Amharic



As in the case of English, I assume there is a complementary distribution of the Amharic demonstrative and article. If we observe the Amharic phrases in (21b-c) and (25) it appears to me that ya and *-u* in *ya habtamu-u säw* (21b), *ya-w* and *-u* in *ya-w habtam-u säw* (21c) and also *ya-w* and *ɨnnäzih* in *ya-w ɨnnäzih naččäw* (25) do not occur within the same DP. I assume *ya* (21b), *ya-w* (21c) and *ya-w* (25) occur in a Spec position of a higher DP.

In the case of Tigrinya too, I assume a left-ward movement of the elements in the structure as in (27c-d) for the phrases in (26a-b).

Earlier in this chapter, we have seen that different scholars have different views regarding the DP structures. However, it appears to me that a unified analysis and adaption of the DP structures in van Gelderen (2013: 196-7) and in Fuß (2005: 194) may help so that they can be appropriately used for the languages in question.

According to Svenonius (2008:41), a demonstrative may be grammaticalized as a D head when a reanalysis takes place from the demonstrative being a phrasal adjunct to DP in one generation to being a head in another. In Old English, the distal demonstrative pronoun *se* is reanalysed as the definite article. In the languages in question, we have seen that demonstratives and definite articles are related. However, such a relationship does not lead one to think that they occupy the same position.

According to van Gelderen (2013) and others, articles are assumed to be clearly probes located in D with uninterpretable features probing the phi-features of the noun. As the article the has [u-phi], van Gelderen believes it cannot occur on its own. Hence, we cannot say **I saw the*. On the other hand, the demonstrative occurs on its own and we can say I saw that. Thus, van Gelderen assumes it has interpretable person features or interpretable person and deictic features. According to van Gelderen, the function of the articles and demonstratives depends on the features. I assume this holds for the languages in question.

As in the case of demonstrative in English, Tigrinya and Amharic demonstratives occur on their own, while the definite articles of the languages in question cannot. For instance, in Amharic *ya* 'that' occurs on its own while *-u* 'the' does not. In Tigrinya, we have the demonstrative *ʔɨtiʔa* 'that(f)' which occurs on its own. But this is not true for the Tigrinya definite article *ʔɨta* 'that(f)'.

2.8 *Quantifiers*

Even though articles, demonstratives and quantifiers were treated as determiners in much of the traditional syntactic and semantic literature on English (cf. Gillon 2009: 201), quantifiers are different from determiners (cf. Giusti 1997; Gillon 2009).

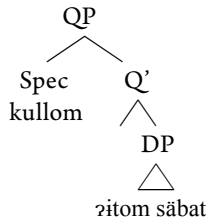
There are different classes of quantifiers. In fact, quantifiers do not occupy the same position. There are some quantifiers which may follow articles. There are others which neither follow nor precede articles (but co-occur). Such quantifiers will not be discussed in this article. However, we will see some elements which belong to the proportional or strong quantifiers (i.e., Qs proper). They occupy positions higher than definite articles as Tigrinya *kullom* 'all' (29a-b) and Amharic *hullum* 'all' (31a-b) which correspond to Italian *tutti* 'all' and English *all*.

(29) a. Kullom ʔɨtom säbat Tigrinya
all (3mpl) the (3mpl) men
'All the men'

b. ʔɨtom säbat Kullom
the (3mpl) men all (3mpl)
'All the men'

In (29a), we have a Tigrinya phrase which corresponds to the tree structure in (30).

(30)



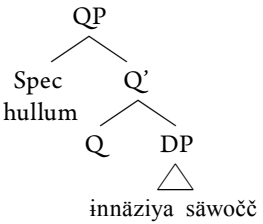
As the structure in (30) illustrates, the QP is left-adjoined to the DP. But, the phrase QP as in (29b) can be right-adjoined to DP. I think this can happen when the DP below QP moves to a position above QP. In Amharic too (31a-b), we have quantifiers similar or related to those of Tigrinya.

(31) a. hullom ɨnnäzzzia säwočč Amharic
all (3pl) those (3pl) men
'All those men'

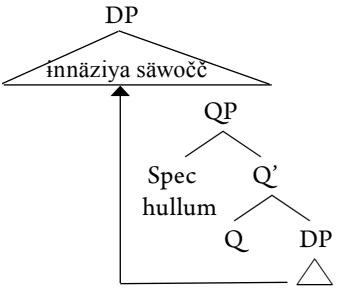
b. ɨnnäzzia säwočč hullom
those (3pl) men all (3pl)
'All those men'

As indicated above, quantifiers such as *hullom* 'all' are external to DP. The categorial status of Q is that of head selecting a DP and projecting a QP (cf. also Giusti 1997 among others) as in the following:

(32) a. Amharic



b. Amharic



The phrases in (31a-b) correspond to the structures in (32a-b) respectively. We assume a similar process for Tigrinya too.

Quantifiers, in Tigrinya and Amharic, may usually have their own morphological features that agree with the noun in gender and number as in the case of *kullom* and *hullum*. The proper quantifiers *hullu*(*m*) in Amharic and *kullom* in Tigrinya can be compared to Hebrew *kol* 'all' as in *kol ha-yeladim* 'all the boys' and *ha-yeladim kulam*. The proper quantifiers in Tigrinya and Amharic may occur to the right of DP. As we can see from (29a-b, 30) for Tigrinya and also (31a-b, 32a-b) for Amharic above, I assume this is because the whole DP which occurs below QP raises to a position above it and moves to the left of it (QP) (cf. Shlonsky 1991 for similar views).

2.9 *Conclusion*

Demonstratives and articles belong to a category of determiners. Both Tigrinya and Amharic have distal and proximal demonstratives. As both the languages are Semitic, their demonstratives and definite articles are related (though their relationship only shows archaisms).

The discussion on the changes on demonstratives and definite articles can contribute to the study of these (or related) issues in the current languages (cf. Fuß 2005; van Gelderen 2013 among others for similar views). However, their relationship does not lead one to think that they occupy the same position. As indicated in Roehrs (2009: 31), "diachronically related elements may occur in different synchronic positions".

In the literature, we see different views regarding the positions of demonstratives and definite articles (cf. Giusti 1997; Ihsane 2003; Roehrs 2009 among others). In our discussion above, we have seen some of these views so that the readers can have their own judgements.

However, I believe Fuß (2005) and van Gelderen (2013) can be adapted for Tigrinya and Amharic. In Amharic, as in the case of English, we see a complementary distribution of demonstratives and definite articles as we can observe in the structure in (28). Regarding Tigrinya, I assume the demonstratives and definite articles occur in different DPs. Tigrinya demonstratives function as reinforcers (cf. Ihsane 2003: 274 for postnominal Arabic demonstratives functioning as reinforcers) and hence occur in a specifier position of another DP. As we can observe from (27c-d), I assume D selects for a reinforcing full nominal in its specifier and the two elements are then merged together to form a Big DP (cf. Fuß 2005: 194 for similar views).

Moreover, elements like -(*h*)*u* in Amharic, as in *ya-u*, can function as reinforcers. When the Amharic focal element -*u* occurs attached to a demonstrative (as in *ya-u*) both may raise to a position above DP.

3

POSSESSIVE DPS IN TIGRINYA AND IN AMHARIC

3.1 *Introduction*

In chapter 2, we have discussed the DPs. Possessive DPs are regarded as complex DPs (cf. Delsing 1998; Uriagereka 2002 among others). In (3.2), we have the background. I hope it can serve as an outline of the theoretical context. I hope the views of different scholars indicated in this section can help the reader in understanding the relatively complex issue in this chapter. In (3.3) and (3.4), the possessives of Tigrinya and Amharic will be discussed. In section (3.5), we will have more discussion on possessor constructions in the two languages in question and the structures in (7-9) will be reviewed. In (3.6), a conclusion will be given.

3.2 *Background*

In the literature, it is indicated that in many Germanic languages, possessive pronouns corresponding to *his/her* and genitives are clearly different. In such languages, possessive pronouns and genitival DPs are structurally different. The former are assumed to be prenominal functional heads within the noun phrase while genitival possessors are assumed to be postnominal complements (cf. Delsing 1998 for details). Furthermore, Delsing (1998) assumes the following (for Germanic languages):

a) A PossP is a functional projection within the noun phrase;
b) Possessive pronouns (in Germanic languages) are generated in Poss º-head;
c) Genitives are (non-pronominal) noun phrases used as possessors which appear as PPs or case marked DPs;

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d) Genitives[1] are generated in the complement of N, and that they might be Moved to the left;
e) The possessor DP moves from the complement of N to Spec,PossP (lexical material seems to move further to Spec,DP if there is nothing in that position, but can also remain in Spec,Poss);
f) Spec,DP position is quite similar to Spec,CP in V2 languages, i.e., topic position within DP;
g) The Spec,PossP is an argument position similar to Spec,IP or Spec,AgrSP in clauses.

As we can see later, a definite article and a possessive element like *mio* 'my' can co-occur in languages like Italian. Languages like Italian seem to indicate that there is a Poss-projection in a position in between D and N.

In Tigrinya and Amharic, we have particles like *nay* 'of' and *yä* 'of'. In languages like Modern Persian, there is a linking element such as *è* or *yè* referred to as Ezafe which can correspond to English *of* (cf. Larson and Yamakido 2008). Languages can have synthetic and analytic types of genitives. English of-genitives and Modern Hebrew Sel-genitives belong to the latter while English Saxon (*'s*) genitives and Modern Hebrew Construct State associates belong to the former (cf. Dobrovie-Sorin 2003).

According to Buccellati (1996), an Akkadian noun in the construct state is bound with another element which can be either a noun or a pronominal suffix in the genitive, or a clause with the verb in the subjunctive. According to him, "construct refers" to a noun in the construct state, construent refers to the element bound with the construct and constructive to the pair of both elements. For instance, in *bēl bītim* 'master of the house' *bēl* and *bītim* together (and hence *bēl bītim*) is a constructive in which *bēl* is the construct and bītim the construent. In Akkadian two types of construct can be distinguished. These are Construct I as in (1a-b) and Construct II as in (1c).

[1] Regarding the position of genitives, different scholars may have different views (cf. Adger 2003: 274 among others for problems regarding the merge position of such categories). Alexiadou (2001: 177-9) believes number could be argued to be the locus of genitive casfeatures. Alexiadou does not consider the possibility of locating the genitive case features in D, although the morphological realization of this feature may be determined by the presence of D, which determines the nominal character of the clause. For Alexiadou number bears genitive case feature by virtue of being the nominal counterpart of aspect. Some scholars suggested a functional FP between the lexical NP and the functional DP and this should be a NumP, a projection responsible for number specifications (cf. also Egedi 2005: 138-9 among others). Alexiadou (2001: 179) believes the Possessor is assumed to be situated below Agr, in Spec,FP.

(1)	a.	Construct I:	bēl bītim	'the master of the house'	Akkadian
	b.	Construct I:	bēl illiku	'the lord who went'	
	c.	Construct II:	bēl-šu	'his lord'	

(Buccellati 1996: 79)

The Akkadian examples in (1a) and (1c) can be compared to Tigrinya examples in (2a-b) and to Amharic examples in (2c-d).

(2)	a.	bäʕal bet	'master of the house/ husband'	Tigrinya
	b.	bet-u	'his house'	
	c.	balä bet	'master of the house/ husband'	Amharic
	d.	bet-u	'his house'	

Moreover, Tigrinya and Amharic have the forms *nay* 'of' and *yä-* 'of' comparable to English of-genitives and to Hebrew Sel-genitives. In Modern Hebrew, we find a possessor DP like *le-Dani* 'to-Dani'. Some scholars claim that all datives (including possessors) are DP's and hence forms like *le-Dani* are DP's. For others, such possessors[2] are PP's as the preposition *le-* 'to' is responsible for assigning the theta-role to the possessor. Thus, views diverge on the matter (cf. Boneh 2003 for more details).

In Coptic, the possession and the possessor may require direct adjacency as we can see from the following data taken from Egedi (2005):

(3)	p-šēre	em-p-rōme	en-cabe	Coptic
	def:sg.m.-son	of-def:sg.m.-man	clever	
	a. 'The man's clever son'			
	b. 'The clever man's son'			

(Egedi 2005: 149)

[2] In Hungarian, Szabolsci (1994) argues possessors inflect much like verbal arguments. Szabolcsi using the Hungarian data, suggests that the locus of structural case within the DPs is AgrP. According to Den Dikken (1998), quoted in Uriagereka (2002) and others, possessive constructions involve a small clause whose head takes the possessor as its complement. The possessor can undergo movement to an A-specifier just outside the small clause.

Egedi (2005) indicates that the elements *en-* or *em-* can be regarded as case markers on the possessor. According to Egedi, the base position of the phrase expressing the possessor can be assumed to be in the Spec,NP and can be raised to Spec,PossP position. Egedi believes that in Coptic the possessor itself does not raise. None the less, the definite feature of the possessor has to be raised in order to be checked by the D head.

According to Egedi languages such as Italian have the pronominal possessor like *mio* 'my' which can co-occur with a definite/indefinite article as in (4a-b):

(4)	a.	il mio amico	b.	un mio amico	Italian
		the my friend		a my friend	
		'My friend'		'A friend of mine'	

(Egedi 2005: 151)

According to Giusti (2002: 74), this happens only if the possessive is lower than the article.

Uriagereka (2002) assumes the genitive *'s* to materialize as the head of D when its specifier is specified. According to Kayne (1994) and Brugè (2002: 27) the French element *de* 'of' in *este de aqui* 'this of here' occupies the head position of a maximal projection, while este obligatorily moves to Spec, XP assuming that de in X requires that its specifier be occupied by a lexical element. According to Larson and Yamakido (2008), DPs projected from the thematic structures of determiners are much like VPs projected from the thematic structure of verbs. It is indicated in Larson and Yamakido that determiners express relationships between sets. In (5a-c) below, we have SC (small clauses) which according to Uriagereka (2002) are designed to capture a Relation R in the syntax. As indicated in Uriagereka, a possessive DP can be more complex than a regular DP, involving a relation ("possessor", "possessed"). For instance, John's car implies that John has a car. Uriagereka (198-200) argues that in city neighbourhoods there is a relationship between the possessor (city) and the possessed (neighbourhood). He says the former and the latter can be regarded as a subject and a predicate respectively and assumes that nominal and verbal expressions are structurally alike.

Larson and Yamakido (2008) argue that all DP modifiers begin post-nominally as complements of D and suggested that case is behind the pre-/post nominal distribution. A genitive morpheme like Ezafe is considered a special device for making case available in its base position. Thus we find the underlying post-nominal [+N] modifiers in their position. APs, NPs and nominal PPs need case. If they can't get in situ, however, they go to

prenominal position (cf. Larson and Yamakido). In Larson and Yamakido, it is indicated that DP bears genitive and there is only one head within DPs which bears the feature [assign genitive].[3]

Miyagawa (2012) argues phases are defined universally by case and not by ϕ-feature agreement (cf. Chomsky 2001 quoted by Miyagawa 2012: 134 for a different view). Miyagawa (157) believes "if a head has case to assign, that head is designated as a phase head" According to Miyagawa (8, 126, 131, 134, 146), the nominative case marker occurs within a full CP; the CP, being a phase, is opaque from outside and hence the D which selects it cannot reach into this domain. Miyagawa argues the nominative subject is contained in a CP, while in the clause that contains the genitive subject there is no CP. In the case of the former, a full CP occurs and T inherits formal features (including nominative case feature) from C. As indicated above, Miyagawa says the structure that contains the nominative subject is a CP and the C selects the T (it is a full structure with an active T), whereas the structure that contains the genitive subject is without CP and as a consequence the T cannot be selected by C and is defective. Thus, Miyagawa argues, the D that takes the defective T is allowed to license the genitive case.

In Germanic languages, Delsing (1998) assumes genitives are (non-pronominal) noun phrases used as possessors, appearing within PPs or as case-marked DPs.

As indicated above, Delsing makes distinctions between possessive pronouns and genitives in Germanic languages. Delsing argues there are distinctions between possessive pronouns and DP/PP possessors. The latter are believed to be generated in the complement position of the head noun. But in the case of the former they are argued to be generated in Poss. In the case of Uralic languages, however, pronominal and nominal possessors have the same distribution. In Uralic languages, pronominal possessors are not treated as Poss heads, but as complements of the noun (cf. Delsing: 93-105).

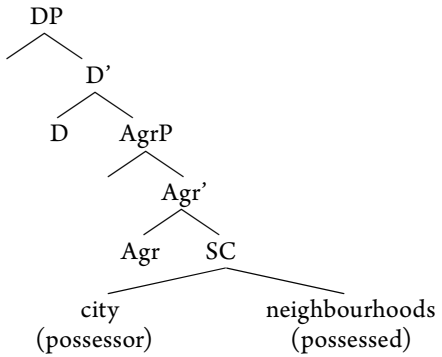
As far as I know, the distinctions between pronominal possessives and genitives in Germanic languages (indicated in Delsing 1998) are not observed in Tigrinya and Amharic. Hence, something related to that of Uralic languages may be assumed for Tigrinya and Amharic. I think the

[3] According to Larson and Yamakido (2008: 59), DP is like VP. Assuming that DP is like VP they also indicate the following: (a) [+N] complements of D need case, they bear a case feature that must be checked, (b) D/δ can (in general) check case on its internal argument, just as V/v checks accusative on an internal argument of V. Hence, according to Larson and Yamakido, we can have the following consequences: D will in general check case on its NP restrictions. DP modifiers that do not have case features to be checked (PPs, CPs, and disguised CPs) will remain in situ.

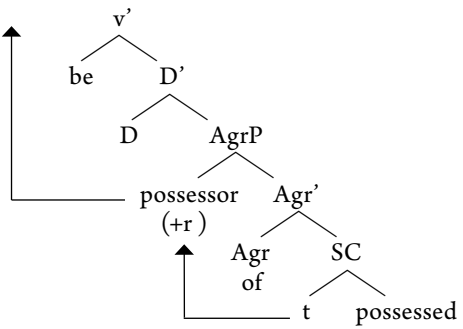
pronominal possessives and genitives in Tigrinya and Amharic occur as daughters of NP in a specifier position or as complements of the head noun (cf. also Dobrovie-Sorin 2003: 93-99).

According to Uriagereka 2002, small clauses (SC) like city neighbourhoods as in (5a) can have a subject (city) and a predicate (neighbourhoods) which are also possessor and possessed respectively (cf. also Delsing 1998: 93). We can have possessor raising as in (5b) or possessor and possessed raising as in (5c). In (5a-c), we have structures taken from Uriagereka (2002). In (5a) we have the structure of a small clause. In (5b) the possessor is moved to Spec of Agr.[4]

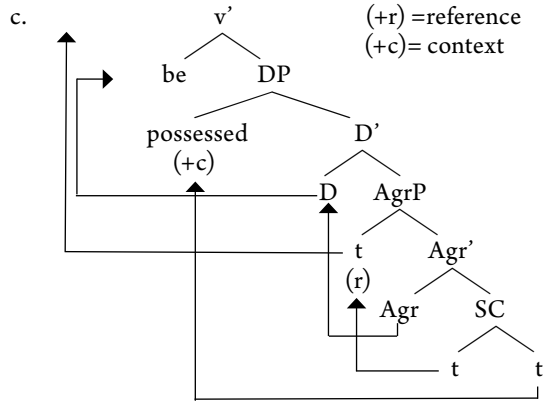
(5) a.



b.



[4] As indicated in Fuß (2005) and others, the assumption of separate agreement projections raises conceptual problems. According to Chomsky quoted in Fuß (2005: 58), "[...] agreement projections are present only for theory internal reasons, namely to provide the structural configurations in which the feature content of T, V (case, non-interpretable φ-features) is checked against the feature content of nominal arguments". I assume we can use AgrP in this sense.



In (5c) we see the movement of the possessor and the possessed. As indicated in Uriagerika (2002), possessor raising is an issue involving the verb have in (5c) and be in (5b). We will not discuss the issue here (cf. Uriagereka: 199-203 among others for details). But we can see in our later discussion the raising of possessors in Tigrinya and Amharic.

So far I have tried to give an overview of the different assumptions regarding case checking, structural positions and movements of possessive DPs in the literature. Possessive DPs are said to be complex and the different assumptions indicated so far reflect their complexities. The following sections deal with possessive DPs in Tigrinya and Amharic and some of the assumptions indicated above will be quoted whenever necessary.

3.3 *Tigrinya Possessives*

Tigrinya has, as in other languages, compound words as in (6a). Compounds are different from clauses. One of the differences is that compounds, unlike phrases, behave as islands from which no material can be extracted. The members of the compound together form one word with one concept. A compound such as *bet mägbi* in (6a) does not have the meaning of the phrase *bet mägbi* 'house of food'. However, compounds will not be discussed in this chapter

Tigrinya has possessive suffixes such as *-u* (< *-hu*) 'his' and *-ka* 'your' and possessive pronouns like *natka* 'yours'. Moreover, Tigrinya has the construct state form as in (6b.) and the *nay* 'of' form as in (6c-d). The phrases in (6b-c) may have the structures in (7-9) respectively (as we can see in the discussion in section 3.5, however, these structures will be modified). Observe the following:

(6) a. bet mägbi Tigrinya
house food
'Restaurant'

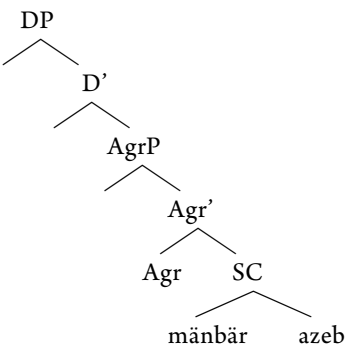
b. mänbär azeb
chair azeb
'Azeb's chair/a chair of Azeb'

c. nay azeb mänbär
of Azeb chair
'A chair of Azeb'

d. mänbär nay azeb
chair of Azeb
'A chair of Azeb'

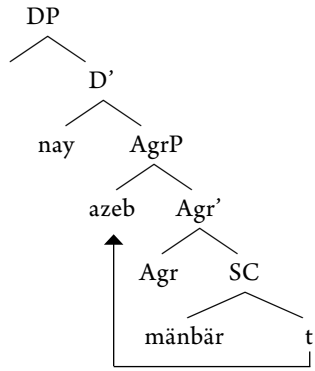
The construct state in (6b) may also be regarded as a small phrase (SC). In (6b), we have two members of the phrase: possessed and possessor which may be regarded as a predicate and a subject respectively. In (6b), the possessed is *mänbär* while *azeb* is the possessor. We may assume the structure in (7) for the phrase in (6b).

(7)



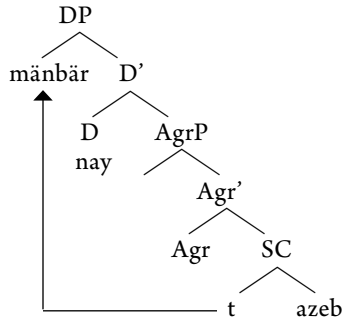
The word *mänbär* is followed by *azeb*. However, *azeb* in *mänbär azeb* (in 6b) is, I presume, covertly preceded by *nay* 'of' (cf. Arteaga and Herschensohn 2010 for the similarity of genitive constructions with and without prepositions) and this can be supported by data in other languages like Arabic. The meaning of (6b) is similar to those in (6c) and (6d). If we adopt Uriagereka (2002), (6c) and (d) can have the structures as illustrated in (8, 9).

(8)



As we can see from the phrase in (6c) and the structure in (8), *nay* occurs in D, while *azeb* moves to Spec,AgrP. Thus, we have *nay azeb mänbär* 'Azeb's chair' or 'a chair of Azeb'. In (6d), we have *mänbär nay azeb* 'a chair of Azeb'

(9)



In (9) we have the word *mänbär* which moves to a higher position. It may be possible to assume the movement of the head noun *mänbär* to a Spec,DP (cf. Delsing 1998: 94, 105 for the possibility of movement of the head noun or the possessor DP to Spec,DP) and hence we get *mänbär nay azeb* 'chair of Azeb' or 'Azeb's chair'. The construction *mänbär nay azeb* is less common; but it is possible. We note that in constructions like *mänbär azeb*, the particle *nay* 'of' is, I assume, covertly present and must go with the second item such as Azeb. In (7-9), we have structures that can be related to those in (5a-c) (cf. also Uriagereka 2002).

According to Delsing (1998), the behaviour of Germanic possessive pronouns is not universal and the Uralic languages miss the Germanic pattern. Delsing argues the possessive/genitive forms of the Uralic type can be generated in the complement position of the head noun. In the case of the languages under discussion, we may have possessives/genitives related to the Uralic type. As we can also see later in this chapter,

however, the possessive/genitive forms in the languages in question occur in a specifier position (not in a complement position). Moreover, I assume Tigrinya phrases such as those in (10a) can develop into DPs (cf. Dobrovie-Sorin 2003 for related discussion).

In the literature, we can observe the following:

a) Miyagawa (2012: 126-7) argues (i) phases are defined universally by case and not by ϕ-feature agreement; (ii) covert genitive subject movement to Spec,DP can be assumed (iii) D directly licenses the genitive subject by Agree without requiring to overtly move the subject to Spec,DP;
b) According to Arteaga and Herschensohn (2010: 285, 291, 295, 298), (i) in Old French genitive constructions the null preposition checks oblique case on the possessor; (ii) preposition bears T- features similar to Tense; (iii) T is not simply an indication of temporality, it is an abstract grammatical feature that grounds the DP in reference while syntactically licensing the complement; (iv) the complement of N should be headed by interpretable T; (v) genitive constructions with and without introducing prepositions are very similar; (vi) pre-nominal juxtaposition is derived from post-nominal one;
c) According to Adger (2003: 271, 279), (i) the raising of N + n complex to D can be predicted and the agent may remain in situ in languages where [unum] is strong, and [gen] on D is weak; (ii) Agent usually moves to the specifier of DP and this happens when the [gen] feature of D is strong, and (iii) this movement is attributed to the strength of a feature and not to case;
d) Huybregts (2010) argues case and agreement are different reflexes of the same mechanism, Case-Agreement.

I have no intention to discuss these issues. As we can see from the examples and the discussion below, however, I assume (a) Tigrinya pronominal possessives and genitives occur as daughters of NP in specifier positions, (b) arguments which are merged as specifiers of n projection are interpreted as Agents, while arguments which merged as daughters of NP are interpreted as Themes and occur in Spec positions (cf. Adger 2003 among others), (c) the theme (possessor) and the head noun can be raised or remain in situ. Observe the following:

(10) a. kɨdan säbɔay Tigrinya
clothes man
'Man's clothes/clothes of man'

b. ʔɨta kɨdan ʔɨti säbɔay
the (3fs) clothes the (3ms) man
'The man's clothes/the clothes of the man'

c. nay ʔɨti säbʔay kɨdan
of the (m) man clothes
'The man's clothes/ clothes of the man'

d. kɨdan nay ʔɨti säbʔay
clothes of the (m) man
'The man's clothes/ clothes of the man'

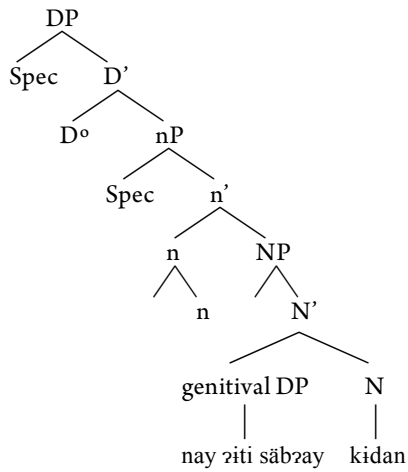
e. ʔɨta kɨdan nay ʔɨti säbʔay
the(3fs) clothes of the (m) man
'The man's clothes/the clothes of the man'

(10a) differs from (10b) because in the latter there are the definite articles. The example in (10a), does not contain overt D. As we can observe in the discussion below, the structures of the Tigrinya phrases in (10a, 10b, 10d. and 10e) can be related.

Hoeksema (2010) assumes the ending 's is a syntactic head of category D, and the possessor is a specifier. As indicated in Adger (2003: 268-272), the Theme can raise to the specifier of D and be realized as a genitive. According to Adger (2003), the enemy in the enemy's destruction is a DP which is also a specifier of another DP.

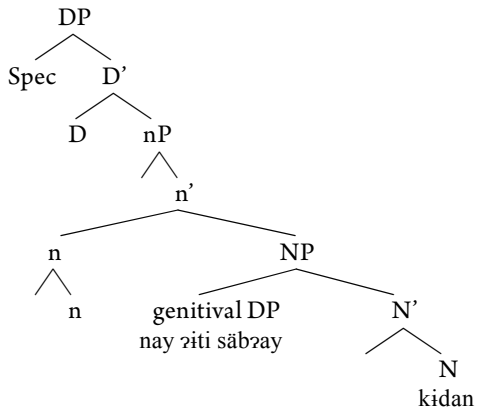
In the case of Tigrinya, I assume the structure of the phrase in (10c) could be as in (11a) or (11b). If we adapt Delsing (1998), it may be possible to base generate the possessive/genitive elements from a position below the N' (and as a complement to N) as in (11a).

(11) a.



If, however, we adopt Siddiqi (2009) and others (cf. also Adger 2003) we assume that the Theme is merged as the daughter of NP in a specifier position as in (11b).

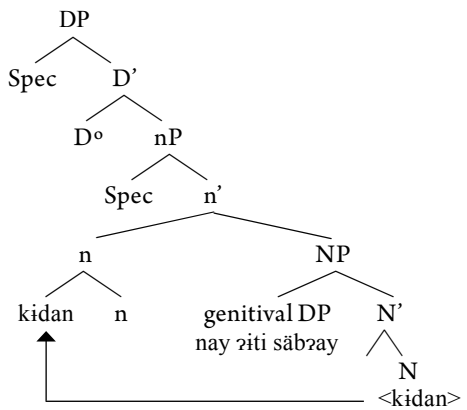
(11) b.



It appears more appropriate to adopt Siddiqi (2009) and Adger (2003) among others in that the genitival DP occurs in a specifier position within NP. In (11b), we can see that the head noun and the possessor remain in situ (cf. Adger 2003, Siddiqi 2009, Arteaga and Herschensohn 2010, Miyagawa 2012 among others for more discussion on related issues).

As indicated above, the structures of the phrases in (10a, 10b, 10d and 10e) can be related. As noun phrases are actually determiner phrases (cf. Adger 2003 among others), I assume (10a) is also a DP. We find singular or plural nominals which appear without an overt determiner in Tigrinya. In the structures for the phrases in (10a, 10b, 10d, 10e), the head noun N (i.e., kɨdan 'clothes' moves and attaches to n). In the case of (10d), I assume we can have the structure in (12).

(12)



As indicated above, the structure in (12) corresponds to the phrase in (10d). In the structure in (9), we tentatively assumed the raising of *mänbär* to Spec,DP. In the structure in (12) too, we may be tempted to raise *kɨdan* (the head noun) to Spec,DP. In structures like those of (9) we may assume that the possessor occurs in a complement position. However, we have tried to illustrate that Tigrinya possessors occur in specifier positions. As in the case of vP/VP, we also assume nP/NP in the noun phrases. Hence, we can raise the head nouns like *mänbär* and *kɨdan* to a higher position and attach them to *n* as in (12) and not to Specc,DP as in (9) (cf. also Delsing 1998: 92, 105; Roehrs 2009 among others for different arguments).

In (10e) too, we have *kɨdan* that can raise and attach to *n*. The definite article *ʔɨta* 'the' can occur in the D position and hence we get the DP *ʔɨta kɨdan* followed by the possessor (cf. also the structure in 12). The phrases in (10b) and in (10e) are related. But *nay* 'of' is covert in the former. The phrase in (10d) is related to (10e). However, *kɨdan* is not preceded by the definite article (in this case *ʔɨta*) in the former.

Furthermore, Tigrinya genitive particles like *nayka/natka* 'your' *nayyäy/natäy* 'my', I assume, occur as daughters of NPs (cf. Adger 2003 among others for comparison) in a specifier position.[5] Observe the examples in (13a-e):

(13) a. gänzäb-ka — Tigrinya
money -your
'Your money'

b. nat-ka gänzäb
of-you(r) money
'Your money'

c. nay-ka gänzäb
of-you(r) money
'Your money'

d. nat-ka
of-you(r)
'Yours'

e. nay-ka
of-you(r)
'Yours?

The Tigrinya particles *nat* 'of' (13b, d) and *nay* 'of' (13c, e) can correspond to Egyptian genitival adjective *ny* 'belonging to' (for masculine) and its feminine counterpart *nyt* 'belonging to' (cf. Gardiner 1950 among oth-

[5] According to Hoeksema (2010) and others, the possessors are placed in the specifier of DP. The intention here is not to discuss the details.

ers). The forms *natka* and *nayka* are dialectal variants spoken in Eritrea and Tigray respectively which can be used as possessive adjectives (13b-c) and as possessive pronouns (13d-e). The particle nay corresponds to English 'of', *gänzäb-ka* 'your money' (13a) is semantically similar to *nat-ka gänzäb/nay-ka gänzäb* (13b-c) which can also be similar to *gänzäb natka/ gänzäb nayka* (though the latter is less common). It appears to me that the important thing to note is *natka/nayka* occur in a Theme position.

3.4 *Amharic Possessives*

As in other languages, Amharic too has compound words as in (14a). Compounds are different from clauses. One of the differences is that compounds behave as islands from which no material can be extracted. The members of the compound together form one word with one concept. A compound such as *šay bet* 'tea room' in (14a) does not have a meaning of the phrase. The compound word šay bet does not have the meaning 'house of tea' or 'a house where tea can be stored', etc. It only means 'tea room'. However, compounds will not be discussed in this article.

Amharic has possessive pronouns/adjectives like *yanta* (< *yä* + *antä*) 'yours/your' (composed of possessive element *yä* 'of' and a pronoun like *anta* 'you'. As in the case of Tigrinya, I think the possessors are generated in the specifier positions as daughters of NP (cf. Delsing 1998 for the treatment of pronominal possessors in the complement position of the head noun, and also, Adger 2003; Siddiqi 2009; Hoeksema 2010 for the position of the possessor in the specifier position). Moreover, Amharic has the construct state forms as in (14b) and the *yä* 'of' form as in (14c-d). The forms in (14a-b) are usually compound words and hence will not be discussed here. Consider the following examples:

(14) a. šay bet
tea house
'Tea room'

b. betä kiristiyan
house christian
'Church'

Amharic

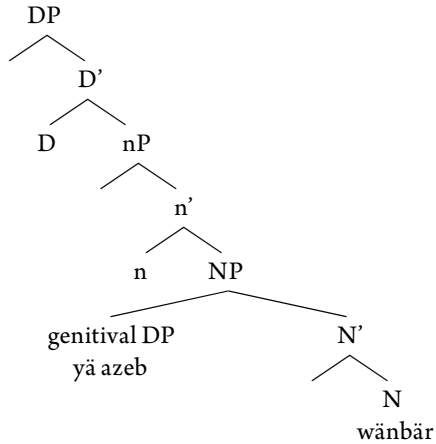
c. yä- azeb. wänbär
of Azeb chair
'Azeb's chair/a chair of Azeb'

d. yä- antä. wänbär
of you chair
'Your chair'

e. wänbär-u
chair his/the
'His/the chair'

The structure in (15) corresponds to the phrase in (14c):

(15)



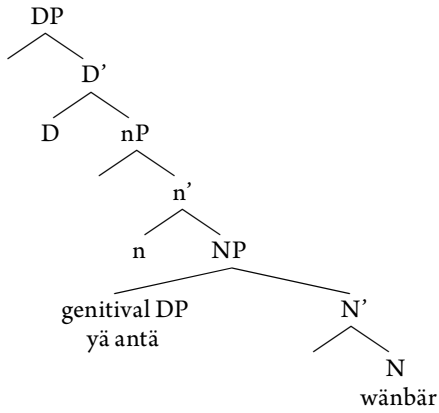
In Amharic, the possessor (which functions as a subject in DPs) is the first member of the phrase. Thus, the possessor azeb and *yä-* 'of' can remain in situ. But we can assume a covert movement of the genitival DP (cf. Miyagawa 2012 for the covert movement of the genitive subject to Spec,DP). In languages like Italian, a possessive element such as *mio* as in:

(16) Il mio libro Italian
The my book
'My book'

is, according to Delsing (1998), generated in Poss-head position. Schoorlemmer (1998) believes the arguments of nouns (which include all possessors) are base generated inside NP and may raise to Spec,PosP[6] to be formally licensed and then may either stay in Spec,PosP or raise on to Spec,DP preventing the insertion of an article. The discussion on such issues seem to be complex. Regarding Amharic, I assume the forms like *yantä* (< *yä* + *antä*) can stay in situ as in (17).

[6] According to Schoorlemmer (1998) (a) the position of PosP is between DP and NumP; (b) PosP is the nominal equivalent to IP (in clauses) which may correspond to AgrSp in Uriagereka (2002).

(17)



We have said earlier that Amharic has a particle which corresponds to Tigrinya *nay* 'of', English 'of' and Hebrew *le* 'to' as part of the possessors.

The Amharic particle *yä* 'of' + *anta* 'you' can be used as a possessive adjective (18b) and as a possessive pronoun (18c). The particle *yä* in (18b) corresponds to English of-genitive or to Hebrew Sel genitive indicated above. Moreover, *gänzäb-ih* 'your money' (18a) is semantically similar to *yä-antä gänzäb* (18b). In (18c), we have *yä-antä* which becomes *yantä* as in *gänzäb-u yä-antä* (> *yantä*) *näw* 'the money is yours'. Consider the following:

(18) a. gänzäb-ih — Amharic
money -you(r)
'Your money'

b. yä-antä gänzäb
of-you money
'Your money'

c. yä-antä
of-you
'Yours'

Regarding the properties of the possessor, views appear to diverge. In the literature, there are scholars who claim that datives and possessors are argument DPs. But there are other scholars who claim that the possessor is a PP because the preposition (like *le* 'to' in Hebrew) is responsible for assigning a theta-role to the possessor (cf. Boneh 2003). In fact,

Boneh (65) leaves the question of whether the possessor is a DP or a PP open for further research. According to Adger (2003), however, possessors are argument DPs.

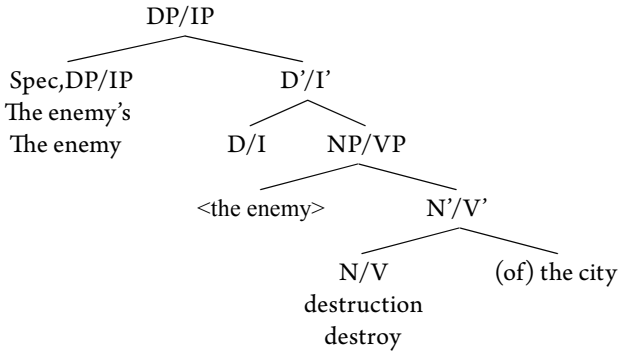
To recapitulate, DPs projected from the thematic structures of determiners are much like VPs projected from the thematic structure of verbs. As indicated in Uriagereka (2002), a possessive DP can be more complex than a regular DP, involving a relation (possessor, possessed). For instance, in *mänbär azeb* 'Azeb's chair' (6b), there is a relationship between the possessor (Azeb) and the possessed *mänbär* 'chair'. As indicated above, *Azeb* (the possessor) and *mänbär* (the possessed) can be regarded as a subject and a predicate respectively. In Amharic too, we have *yazäb* (possessor) and *wänbär* (possessed) which function as a subject and a predicate respectively. As we can understand from the example in (6b), the possessor has underlying *nay* 'of' in Tigrinya and this can be supported by the Amharic examples in (14c-d) and by the Tigrinya examples in (6c-d). The possessor as in the case of *nay* + *azeb* (6c) or *yä* + *Azeb* (14c) can remain in situ. In Amharic, the possessor is in the initial position while its Tigrinya counterpart may also be in the final position.

As indicated earlier, arguments which are merged as daughters of an NP are interpreted as Themes and arguments which are merged as specifiers of a little n projections are interpreted as Agents. In Amharic and Tigrinya, the former are base generated as daughters of NPs in specifier positions.

3.5 *More on Possessor Constructions*

As indicated earlier, scholars suggest that there are completely parallel structures for noun phrases and clauses. They say the subjects in both nouns and clauses are generated within the projection of the lexical categories (N in the former and V in the latter). According to Fukui (2006), they receive θ-role in their original positions, and then raise to the Spec positions of associated non-lexical categories (D in the case of noun phrases and I in the case of clauses). The elements are moved in order to receive genitive case in the former and nominative case in the latter. As indicated in Fukui, DP analysis claims that a noun phrase is a DP (similar to that of IP or TP). The head of DP is a D which takes a noun phrase as a complement while the head of IP is I which takes a complement headed by V. Fukui believes the Spec is the landing site for movement. It is assumed that only functional categories can have Specs as landing sites for movements. In (19) we see a DP/IP (adapted from Fukui: 272-5) which immediately dominate Spec,DP/Spec,IP and D'/I'. D'/I' immediately dominate D/I and NP/VP. It can be observed that the subjects get genitive case in the noun phrase and nominative case in the clause (cf. also Fukui: 275; Miyagawa 2012: 8, 126, 131, 134, 146):

(19)

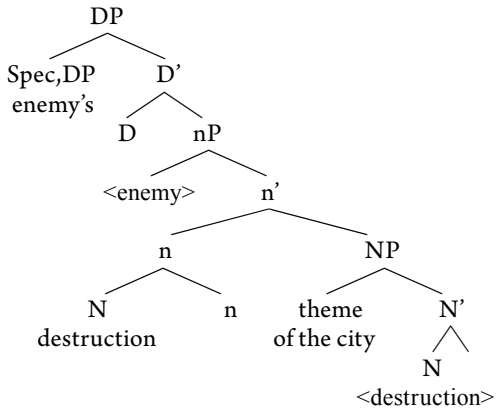


In (19) we can see how the DP and the IP (IP=TP) are related. In (19) the enemy raises to spec,DP/IP. Some scholars use AgrP[7] in the tree structure (cf. Uriagereka 2002; Klooster 2010 among others). Other scholars argue that Agr lacks an independent meaning and agreement projections must be eliminated from the structure (cf. Fuß 2005). According to Fuß (58) Chomsky (2001) says that agreement projections are present only for theory-internal reasons, i.e. to provide the structural configuration in which the feature content of T, V (Case, non-interpretable ϕ-features) is checked against the feature content of nominal arguments. I assume, we can use AgrP for similar purposes here too. The author has no intention to deal with this issue. However, nPs will be used in the following structures.

As indicated above, we can have nP in between a DP and a NP. As we can see from the English noun phrase in (20), enemy raises from Spec of nP to spec,DP (adopted from Adger 2003: 267-280). According to Adger, we find nominative case on pronouns because the T node checks case on the DP that ends up in its specifier. In the same way, Adger argues, we find genitive case in a DP rather than nominative because the D head in a DP checks genitive case. Adger argues the genitive feature of D is strong and the movement of agent takes place to satisfy the locality requirement imposed by this feature. Adger believes the genitive feature on D agrees with the case feature on enemy, valuing it, and projects to D' level and enemy raises to the specifier of DP as in (20).

[7] Adger (2003) assumes there is a PossP (an optional functional category) between DP and nP. Adger argues possessors are merged in the specifier of this specialized optional functional head Poss (of this category). There are scholars who argue for N + Agr movement to D (cf. Cinque 1994, Giusti 1997). Alexiadu (2001) believes the feature [assign genitive] resides within Agr type of phrase, labelled Possessor Phrase and clitic possessor raises to D.

(20)



According to Hoeksema (2010), the proper name Jan in Jan's book is adjoined to the head element s and that this is possible only when the adjoined element is not a full DP, but a simple head. Hoeksema (2010: 171) assumes the "ending 's is a syntactic category of D, and the possessor its specifier". Hence, as indicated in Adger (2003) and in (20) above, we can assume the raising of enemy to Spec,DP and occur attached to *'s*. However, I have no intention to discuss the details here.

Furthermore, scholars assume that the head N (as in the case of V) raises from its position below N' to n (as in 20 and 25) to get the right word order in English (cf. Adger 2003: 268-270 among others).

In section (3.3), we tried to adapt Uriagereka (2002) among others and form structures in (7-9). The aim is to show alternative views to readers. In (11-12), however, we tried to adapt Adger (2003) and others and modify the structures. In the following structures too, we adapt Adger (2003) and others. We will first see structures in (20, 25) adopted from Adger, form the structures like those in (22, 23) and try to modify those in (7-9). Let us now compare the English DP indicated in (20, 21a) and its Tigrinya (21b-c, d), Amharic (21d) and Hebrew (21e) counterparts:

(21) a. The enemy's destruction of the city

b. nay ṣälaʔi ʕinwät (nay) kätäma — Tigrinya
of enemy destruction (of) city
'The enemy's destruction of the city'

c. ʕinwät kätäma ṣälaʔi
destruction city enemy
'The enemy's destruction of the city'

d. yäťälat yäkätäma wɨdmät Amharic
of-enemy of-city destruction
'The enemy's destruction of the city'

e. harisat ha-oyev ʔet ha-ʔir Hebrew
destruction the-enemy OM the-city
'The enemy's destruction of the city'

Adger (2003: 279)

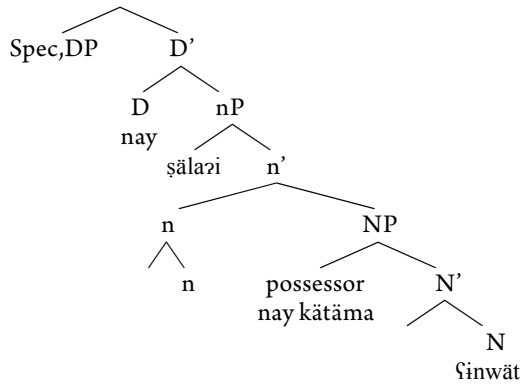
f. nay ṣälaʔi nay kätäma ʕɨnwät Tigrinya
of enemy of city destruction
'The enemy's destruction of the city'

According to Adger, the structure of the DP in (21a) can correspond to (20).

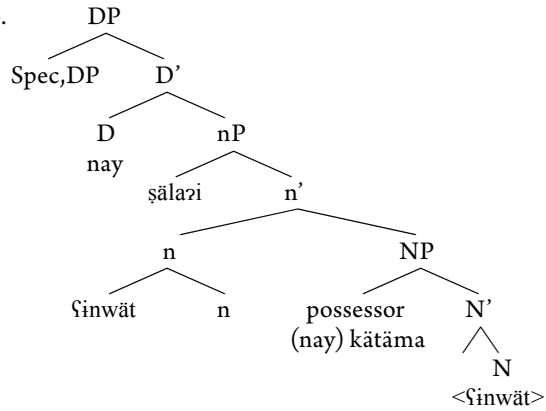
As indicated above (cf. also 25b), an agent within DP is generated in the specifier of a little n whose complement is NP. Adger (2003) believes the [unum] feature in English is weak. As indicated above, Adger assumes the [gen] feature of D is strong in English, and forces movement of the closest DP whose case feature it values (in this case agent). The [gen] feature on D agrees with the case feature in enemy, valuing it (cf. Adger 2003: 279). Hence, according to Adger (271), the agent enemy raises to specifier of DP.

In other languages, this may not be the case in that the elements indicated above as weak and strong could be strong and weak respectively. It is indicated in the literature that there are languages where [unum] is strong, and [gen] on D is weak (cf. Adger: 261-263 for details on interpretable number and unumber features on N(P) and D). According to Adger, this would predict that N + n (see also the discussion below) would raise to D, and that the agent would stay in situ. Such languages do exist. Modern Hebrew is one of these languages and the construction which displays these properties is known as construct state. Could this argument hold for Abyssinian Semitic languages? Let us first see the structures in (22a and 22b) which correspond to the phrases in (21f) and (21b) respectively. In Adger and others, the possessor (theme) such as the 'of the city' are put as in (20). In Delsing (1998) and others, the possessor (theme) is put as a complement of N. In (22) I will adapt the former. As indicated above, the phrases in (21f) and (21b) correspond to the structures in (22a) and (22b) respectively. The structure in (22b) is derived from (22a). Observe the following:

(22) a. Tigrinya



b. Tigrinya



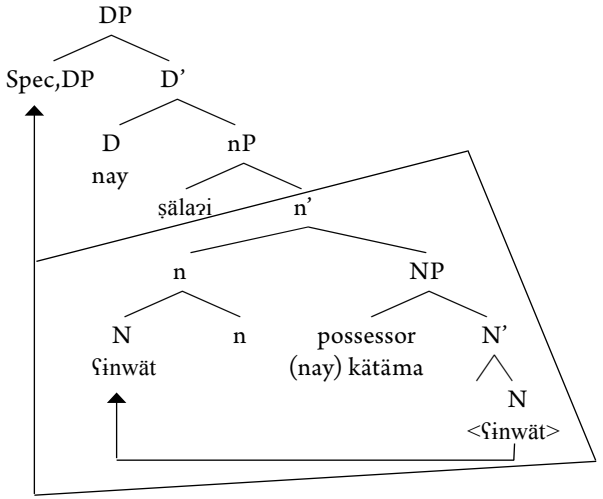
As we can see from (22) above, the agent appears to remain in situ (the nP dominated by DP may correspond to AgrP). The phrase in (21b) can develop into (21c) which corresponds to the structure in (23).

According to Adger (2003), the head noun of the construct state raises to n and N + n (cf. also (22) above and (25) below) complex raises to D in Modern Hebrew (the sequence of the items in Modern Hebrew is a noun head followed by agent + possessor). Such a sequence of the DP phrase (21e) is either less acceptable or has a different meaning in Tigrinya construct state.

The phrases in (21b-c) are acceptable. But (21c) is more common. As can be observed from the structure in (23), the agent (*nay*) *ṣälaʔi* in (22) appears to remain in situ. The head noun *ʕinwät* may move to N and then n' (in 23) may move to a DP position above DP or to DP position in Spec,DP. It appears more convincing to assume the movement of n'

to Spec,DP (cf. Hoeksema 2010: 170-4 for the position of possessor in a Spec,DP). But this merits further research. In (23, we can annotate a tree for Tigrinya phrases in (21b, 21c and 21f):

(23) Tigrinya



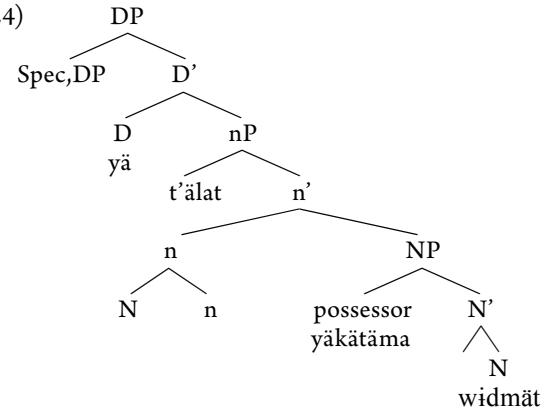
Thus, after raising the structure under n' to a higher DP position in (23), we have the acceptable DP *ʕinwät kätäma ṣälaʔi* (cf. also Soltan 2007 for Egyptian Arabic DPs).

Earlier in this chapter, we formed the structures in (7-9). Taking structures like those in (11-12) and (22-23) above, we can review the structures in (7-9). We have said the phrases in (6b-d) may correspond to structures in (7-9) respectively. However, we will modify them as in the following:

a) We put nP between NP and DP;
b) The possessor *nay azeb* in (6c) occurs in specifier position below NP, while the head noun is *mänbär*;
c) In (6b), the head noun *mänbär* in (6c) raises from its head position under N to n. Hence, *nay azeb mänbär* in (6c) becomes *mänbär azeb* in (6b).
d) In (6d), the head noun in (6c) raises from its head position under N to n. Hence, *nay azeb mänbär* in (6c) becomes *mänbär nay azeb* in (6d). The phrases in (6b) and (6d) can be derived from (6c).

In (21d), we have the Amharic DP which corresponds to (cf. also its counterparts in Tigrinya) the structure in (24) below:

(24) Amharic



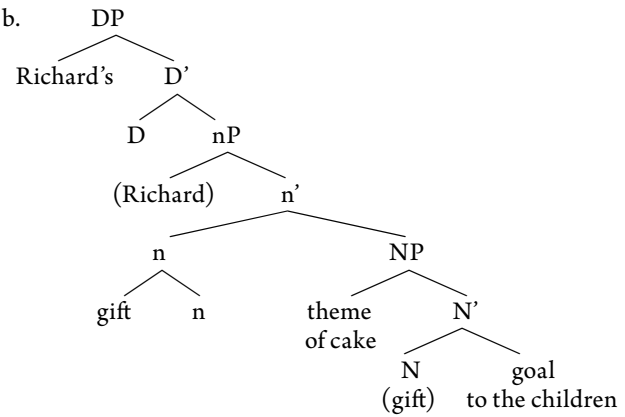
As we can observe from (24), the possessor and the head occur as daughters of NP. It can be illustrated from the examples in English, Amharic and Tigrinya (19-24), that the nPs are dominated by DPs.

Moreover, we can see in the literature that PPs can be complements or adjuncts. If the PP is an argument of the noun, Adger (2003) argues, it must occur in a complement position. But if the PP is not in an argument, then it must be adjoined. According to Adger, such a PP (like an AP) occurs as an adjunction to nP. Let us observe the examples in (25a-b) below:

(25) a. Richard's gift of cake to the children

According to Adger, we have the structure in (25b) for the phrase in (25a):

(25) b.



(cf. Adger 2003: 268-269)

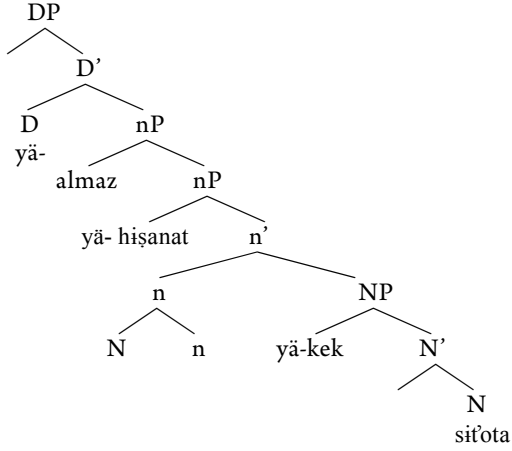
As we can see from (25), an NP is selected by the little n whose function is to introduce an agent. N moves and attaches to little n. Moreover, Richard's has moved from the specifier of nP to the specifier of DP. In English, N (gift) is moved and attached to n and hence precedes both the theme (of cake) and goal (to the children). In (25b) we see a possessor (Theme) and a PP in Spec and in argument (complement) positions respectively. As indicated above, it is possible that a PP can be an argument or an adjunct. Observe the following Amharic (26a) and Tigrinya (26b) phrases:

(26) a. yä-almaz yä-hiṣanat yä-kek siťota Amharic
of Almaz of-children of-cake gift
'Almaz's gift of cake to children'

b. nay almaz nay hiṣanat nay kek hiyyab Tigrinya
of Almaz of-children of-cake gift
'Almaz's gift of cake to children'

In the case of Amharic, it appears to me that the PP *yä-hiṣanat* in (26a) is not an argument. In (27) we have a structure which corresponds to Amharic in (26a):

(27) Amharic

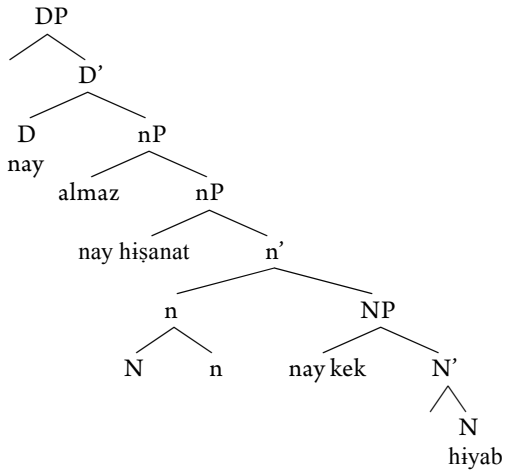


As we can see from the structure above, *siťota* 'gift', unlike that of English in (25b), remains in situ and the PP *yä-hiṣanat* is adjoined to nP.

We have said earlier that there are cases where the PP can be an argument which occurs in a complement position or adjoined to nP as a modifier. According to Adger (2003: 277), APs and the PPs such as those in (27) can be adjoined to nP and this adjunction corresponds semantically to modification.

In Tigrinya, we have phrases (as in 26b) which semantically correspond to the phrase (26a) in Amharic. The Tigrinya phrase in (26b) is structurally similar to that of Amharic in (26a). Thus, in (26b) too the PP nay hiṣanat is adjoined to nP while hɨyyab remains in situ as in (28):

(28) Tigrinya



In (28) above, we have a structure similar to that of Amharic in (27) above. Just as VP is selected by a little v, an NP is selected by a little n. The function of the little n is to introduce an agent. As in the case of v and V in clauses, N moves and attaches to n. According to Adger (cf. the structure in (25)), Richard's has moved from the specifier of n to the specifier of DP. Adger argues n occurs attached to N even in phrases without agents. The noun gift, as in the phrase the gift of cake to the children, for instance (cf. Adger for the example and for the argument), need not have an agent. But we can see that the noun (i.e. gift) still precedes both the theme and goal (cf. 25 above for comparison). According to Adger (269), this suggests that n is projected even if there is no agent. None the less, an overt movement may not be observed in Amharic and Tigrinya and the nouns siʾota 'gift' (27) and hɨyyab (28) remain in situ.

3.6 *Conclusion*

In Tigrinya and Amharic, I assume pronominal possessives and genitives occur as daughters of NP in specifier positions. Amharic and Tigrinya have phrases with possessed and possessor elements. The possessor (Theme) and the possessed (head noun) can remain in situ. In the construct state, however, the head noun moves and attaches to n. In Tigrinya, there are cases where both the possessor and the possessed may move to a position above the agent.

4

SOME POINTS IN SAHO AND IN TIGRINYA PHI-FEATURES

4.1 *Introduction*

Tigrinya is a Semitic language spoken in Eritrea and Ethiopia. Saho is a Cushitic language spoken mainly in the Red Sea region of Eritrea and partly in the Tigray region of Ethiopia. Both Tigrinya and Saho belong to Afro-Asiatic language family. The archaic features which occur in both of them can be Afro-Asiatic features. These languages have person and number morphemes which occur in independent pronouns and in verbs. Moreover, Tigrinya independent pronouns and verb stems have also morphemes which mark gender.

The element n which occurs attached to affixes, as in the case of n in Aramaic *t…ūn* (2mpl) and *t...ān* (2fpl), is regarded as a North West Semitic innovation by some scholars and as a dialect continuum for others. In Afro-Asiatic languages, however, plurality can be indicated by n as in Akkadian *ʔanti* > *ʔatti* 'you (2fs)' versus *ʔantinā* > *ʔattinā* 'you (2fpl)', Bedja *ba-rūk* 'you (2ms)' versus *ba-rā-kn-a* 'you (2mpl)', Tigrinya *ʔanti* 'you (2ms)' versus *ʔantɨn* 'you (2fpl)' or *ʔɨn* (< *hn*) as in Tigrinya and Amharic *ʔɨnnä bɨnyam* 'Binyam and others'.

The morpheme *t* is assumed to be the Proto-Semitic second person subject marking morpheme. On the other hand, second person is marked by *k* or *t* in Afro-Asiatic languages.

In the literature, it is indicated that third person is featurally unmarked (cf. Sauerland 2008: 57). According to Harley (2008: 271), third person forms are regarded as demonstratives and pattern with nouns (not with the person pronouns). First and second person morphemes play a pioneering role in the grammaticalization of agreement markers across languages (cf. Fuß 2005).

Further research on gender, number and person markers may help in bettering the understanding of the morphemes of the languages in question. Due to time and space limitations, however, this chapter focuses on number, gender and second person morphemes in Saho and in Tigrinya. This chapter deals with currently used data from Saho and from Tigrinya.

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However, data from ancient related languages can be used as long as they are useful for the betterment of the analysis of the features in question.

The chapter is organized as follows. In section 4.2, an attempt is made to give an introduction to the framework used in this article. In section 4.3, we have an overview of some person, gender and number morphemes in Afro-Asiatic languages. In section 4.4 an overview of Saho and Tigrinya Phi-features is given. In section 4.5, Phi-features and second person independent subject pronouns of the two languages in question are briefly discussed. Sections 4.6-4.6.1.8 deal with the Saho and Tigrinya perfective and imperfective verbal stems and the Phi-features which occur attached to the verbal stems. Sections 4.7-4.7.2 concern the relationship among the Phi-features in related languages. Section 4.7.3 tries to see the possible role of the Phi-features in the classification of Semitic languages. Section 4.8 discusses the development of Phi-features. Sections 4.9-4.9.2 deal with the structure of Phi-features while section 4.10 concerns syncretism in the Phi-features of the languages in question. Finally a conclusion is given in section 4.11.

In the literature, it is indicated that the emergent Phi-Theory is at its early stage (cf. Adger and Harbour 2008: 27). I believe the work in this chapter is far from being complete.

However, the data together with questions raised and to be raised in this article and from this article may have their own modest contributions to the development of the emerging theory in question.

4.2 *Background*

Person, number and gender features go under the general name of Phi-features. Person, number and gender are typical Phi-features. However, features which involve in honorification and definiteness, though not included in this article, may also fall within this definition. We can refer to the class of such features as Φ, and to the individual features that make up this class as φ-features. As in any emerging theory, however, the precise definition of φ-features are expected to emerge after much more work (cf. Adger and Harbour 2008: 2). Fuß (2005: 211) argues that in Mongolian SOV languages like present day Buryat, agreement suffixes originated from a marked word order option in which weak unstressed pronouns followed the finite verbs, while additional full forms could be added in preverbal positions probably for emphasis. Fuß assumes that in the course of time, the unstressed/clitic pronouns were reanalysed as verbal agreement suffixes while the preverbal pronouns turned into the 'true' subject of the clause. According to Mavrogiorgos (2010: 2), the clitic moves to

the left edge of v*/T and incorporates into it to form a proclitic. Furthermore, Fuß (2005) argues that the verb is contained within TP which can either remain in situ or move to T. Fuβ assumes OV-languages allow the verbs to stay in situ. In these languages, the verbs can combine with the agreement morpheme on T via morphological Merger at MS. This is due to the fact that in a strict OV grammar, the verb is string-adjacent to the set of right inflectional heads. According to Fuß (2005: 213-4), this alternative appears to be more economical than the derivation involving verb movement. Taking examples from French and English, Lasnik and Uriagereka (2005: 75-6) assume that a checking relation is needed even though the details can be left for further research.

In the framework adopted in this article (cf. Fuß 2005; Harbour 2008 among others), inflected words are built in the syntactic and/or morphological component and later realized by the insertion of phonological exponents. Thus, an inflected verb can only be spelled-out if it is combined with its inflectional affixes prior to Vocabulary insertion. This morphological requirement must be satisfied prior to PF. Many scholars assume that this can be accomplished by overt head movement to higher functional head or at MS (morphological structure) by Morphological Merger which combines the verb root with its inflectional morphemes post-syntactically under structural adjacency which can be related to the apparent syntactic lowering or affix hopping as in the case of finite verbs in English (cf. Halle and Marantz 1993; Baker 2002; Fuß 2005; Harbour 2008 among others).

In languages like Tigrinya, the verb root is composed of consonants we call radicals. Different vocalic patterns are inserted into the verb root to form verbal stems indicating aspect and mood. The Phi-features are affixed to the verb stems indicating aspect and mood (cf. also Tesfay Tewolde 2002; Arad 2005).

According to Pfau (2009), little x (in which x can be the verbal little v, the nominal little n, or adjectival little a) determines the edge of a cyclic domain at which a derivation is shipped off to PF and LF.

As indicated in Fuß (2005: 34-5), most researchers agree there is a universal inventory of core functional categories which consists of the elements C (clause type, subordination), T (tense, subject-verb agreement, nominative assignment), v (voice, transitivity, accusative assignment, object agreement) and D (nominal inflection, definiteness).

Fuß (2005: 35) says: "Strictly speaking, there is no such thing as 'syntactic change'". Fuβ also argues, apparent "syntactic change" and synchronic differences in different languages result from changes which affect the feature content of functional categories like C, T, v and D via phonological erosion, grammaticalization etc.

A set of morphological operations may apply to the output of the syntactic component prior to Vocabulary insertion which result in the

change of the content and hierarchical structure of the morphemes. The most important of these, according to Fuß, are the insertion of the so-called dissociated morphemes, Fusion, Fission and impoverishment. The constituent structure of morphemes derived in the syntax can be modified by the post-syntactic insertion of "dissociated" morphemes. These "dissociated" functional morphemes may attach to other functional morphemes. As indicated in the literature, (cf. Fuß 2005 among others), they are called dissociated because they are not present in the syntactic derivation and only reflect properties expressed by structural configurations in the syntax proper. In Distributed Morphology (DM), this mechanism is commonly used to account for case and agreement phenomena. For instance, subject-verb agreement is analysed in terms of the post-syntactic adjunction of an Agr morpheme to T.

Furthermore, we can see in the literature that fusion leads to the amalgamation of two separate syntactic terminals, while in the case of fission, a single syntactic terminal node is realized by more than one vocabulary items. Fusion creates a mismatch between the number of underlying morphemes and the number of inserted vocabulary items in that two or more syntactic nodes are fused into a single terminal node which is then realized by a single phonological exponent. In English, for instance, Fuß (2005) argues Agr and T fuse into a single morpheme prior to Vocabulary insertion.

The concept of fusion is related to the notion of the insertion of Vocabulary items in that they discharge the inflectional features present in the morpheme. In standard cases, the insertion procedure stops after a phonological exponent is inserted. This happens even if the exponent discharges only a subset of the inflectional features present in the morpheme. If a morpheme is marked for undergoing fission, however, the inflectional morphemes that are not discharged by the first insertion operation are copied into an additional morpheme that is generated by the insertion procedure. This additional morpheme itself is subject to vocabulary insertion. Typical examples of fission come from Afro-Asiatic languages like Berber, Semitic and Cushitic where agreement is marked by combination of prefixes and suffixes (cf. Noyer 1997 among others for more details).

4.3 *Number, Gender and Second Person Elements in Afro-Asiatic*

This chapter focuses on Saho and Tigrinya person, gender and number morphemes. As the languages in question are members of Afro-Asiatic, however, we will have an overview of the person, gender and number morphemes in some languages of this family. Afro-Asiatic languages have independent and affix pronouns. The following are examples:

P./N./G.	Egyptian	Bedja	Akkadian	Tigrinya
1sg	ʔan-ūk	ʔan-i-h	ʔanāku	ʔan-ä
2ms	n-t-ūk	ba-r-ūk	*ʔanta >ʔatta	ʔan-ta
2fs	n-t-ūθ/t	ba-t-ūk	*ʔanti > ʔatti	ʔan-ti
3ms	n-t-ūf	ba-r-ūs	sū	nɨss-u
3fs	n-t-ūs	ba-t-ūs	sī	niss-a
1pl	an-on (Coptic)	han- an	nī-nū /anē-nū	nɨhna
2mpl	n-t-tn-ū	ba-rā-kn-a	*ʔantunū > ʔattunū	ʔan-tum
2fpl	n-t-tn-ū	ba-tā-kn-a	*ʔantinā > ʔattinā	ʔan-tɨn
3mpl	n-t-sn-ū	ba-rā-sen-a	šu-nū	niss-at-om
3fpl	n-t-sn-ū	ba-tā-sen-a	ši-nā	nɨss-at-än

Table I

In Table I, we have independent pronouns of Egyptian, Bedja, Akkadian and Tigrinya. As we can see from the table, the elements *n* or *m*<*n* mark plural number in Egyptian, Akkadian, Tigrinya and Bedja (cf. Loprieno 1995 for the etymological relationship between Egyptian preposition *m* 'in/at/by/with/from' and its Semitic counterpart *b* 'in/from/with/by'). In the languages indicated in Table I, second person morphemes are indicated by *t* or *k*. In the case of the latter (i.e. *k*) we can find *k* > *θ* or *k* > *θ* > *s* (cf. also Loprieno 1995; Kaye and Rosenhouse 1997 among others). In Bedja, gender is distinguished through the alternation of *-r-* and *-t-*. In Semitic languages, primary gender is marked by *-a*/*-i* while *-u* -a mark secondary gender. In Egyptian, gender is not distinguished in the plural. In the case of the singular, however, Loprieno (1995) indicates an element *-i*, similar to Semitic *-i*, as in *ki* > *θ* for 2nd person feminine singular.

In Tigrinya, the form niss followed by *ka* 'you (2ms)', *ki* 'you (2fs)', *kum* 'you (2mpl)' and *kɨn* 'you (2fpl)' are commonly used for second person pronouns. However, *nɨss* is formed on the analogy of the stem for third person pronouns. Hence, the author prefers to use the form *ʔan-* followed by *-ta* 'you (2ms)', *-ti* 'you (2fs)', *-tum* 'you (2mpl)' and *-tɨn* 'you (2fpl)'.

In section (4.2) above, we have indicated that word order can play a role in the development of agreement morphemes. In the pre-classical Mongolian languages, personal and demonstrative pronouns are placed after the finite verb. However, the personal pronouns can sometimes be put before the verb, but repeated after the latter (cf. Fuß 2005). We may assume similar situations in early Afro-Asiatic languages. In Semitic languages like Gɨʕɨz, pronouns or demonstratives can occur in pre or post

verbal positions. Clitics or pronouns which precede and follow verbs can develop into prefixes and suffixes respectively. Furthermore, additional full forms could be added in preverbal positions, initially for reasons of emphasis or related reasons, which later develop into true subjects of the clauses. I assume they occur attached to the originally deictic element han (cf. Table I).

In Semitic languages, there are perfective and imperfective forms which are indicated by different CV (consonant and vowel) patterns. In the imperfective t can indicate second person subject prefix while in the perfective, *k*/*t* indicate second person subject suffix. Moreover, Semitic languages have suffixes which indicate non-subject forms. In Akkadian, Ugaritic, Hebrew, Syriac, Arabic, Gi‹iz and Tigrinya suffix pronouns, second person is marked by *k* in the genitive, accusative, and dative forms. In Egyptian suffix and dependent pronouns, second person is indicated by k or $\theta < k$ (cf. Gardiner 1950 and Loprieno 1995 among others). According to Satzinger (2004: 487-497), the Egyptian absolute pronouns are of secondary origin and in many cases are derived from the forms that are regarded as object pronouns (also known as dependent or B pronouns).

4.4 *Phi-features in Saho and in Tigrinya*

As indicated above, Person, number and gender features go under the general name of Phi-features.

In Saho and Tigrinya, the verb may reveal person, number and/or gender of the subject and/or object. Furthermore, Saho and Tigrinya can have subject and non-subject independent pronouns which mark person, number and/or gender. In other words, Saho and Tigrinya can have morphemes which mark person, number and/or gender in independent pronouns, and pronominal affixes. The latter can be prefixes and/or suffixes.

Tigrinya has subject, object and possessive independent pronouns. Moreover, Saho has personal pronouns which can be classified into subject forms as in the case of atu 'you (2s)', short non-subject forms as in *ku* 'you (2s)', and long non-subject forms as *kowa-/kowyya/-kotta* 'you (2s)'. Furthermore, Saho has forms like *kutiya* 'you (2s)' which can correspond to forms such as the genitive/accusative *kuāti* (2ms) and *kāti* (2fs) in Akkadian. In this chapter, however, we will focus on perfective and imperfective subject verbal affixes and also subject independent pronouns of the two languages in question.

4.5 *Phi-features and Second Person Subject Independent Pronouns of Saho- and Tigrinya*

According to Fuß and Trips (2004: 16), "A related avenue of research has to do with the question of how diachronic data can be taken into account to provide new insights for the analysis of individual present-day languages". Hence, some relevant data from ancient languages may be taken into consideration in this chapter too. We have indicated above that the two languages in question have subject and non-subject independent pronouns. As the focus is on the former, we have the subject independent pronouns of Tigrinya and Saho in Table II below.

P./N./G. of Tigrinya	Sub. Independent Pronouns	Sub. Independent Pronouns	P./N./G. of saho
	Tigrinya	Saho	
1sg	ʔan-ä	anu	1sg
2ms	ʔan-ta	atu	2s
2fs	ʔan-ti		
3ms	nɨss-u	usuk	3ms
3fs	nɨss-a	ishi/ishe	3fs
1pl	nɨħna	nanu	1pl
2mpl	ʔan-tum	atin	2pl
2fpl	ʔan-tin		
3mpl	nɨss-at-om	usun	3pl
3fpl	nɨss-at-än		

Table II

Table II above shows that Tigrinya has second person pronouns *ʔan-ta* 'you (2ms)', ʔan-ti 'you (2fs)', *ʔan-tum* 'you (2mpl)' and *ʔan-tɨn* 'you (2fpl)'. Moreover, Saho has the pronouns (*ʔ*)*atu* 'you (2s)' and (*ʔ*)*atin* 'you (2p)'. Saho does not distinguish gender in the second person singulars and in the plurals. Taking the Akkadian, Tigrinya and other related languages into account, we assume **ʔan-tu* > (*ʔ*)*atu* 'you (2s)',* *ʔantin* > (*ʔ*)*atin* 'you (2pl)'. I think it is not difficult to see the deletion of *n* in Saho.

As we can see from Table II above, second person singulars and plurals are marked by *t* in both Saho and Tigrinya. In Tigrinya, we have *ʔan-ta* 'you (2ms)' *ʔan-ti* 'you (2fs)' in the singular forms. It can be observed that *t* marks second person while the vowels *a* and *i* following the second person marking element *t* indicate masculine and feminine respectively. Moreover, we can also see that *ʔan-* is a Pan-Afro-Asiatic pre-formative element. In Tigrinya the element *n-* in the form *ʔan-* can optionally be assimilated to the following *t* as in *ʔan-ta* > *ʔatt-a* or *ʔanti* > *ʔatti* (cf. also Buccellati 1996 among others for similar process in Akkadian). In Saho, we do not overtly see the element *n-* in *ʔan*. It is deleted and thus we see *ʔan-* > (*ʔ*)*a-*. Saho has (*ʔ*)*atu* for the masculine and feminine second person singular pronoun. The morpheme *t* in (ʔ)*atu* marks second person. In the plural, Saho has (*ʔ*)*atin* 'you (2pl)'. The vowel *-i,* (in the second person plural of Saho) following the element *t* in (*ʔ*)*atin* appears similar to Semitic primary feminine gender marker *-i*. The vowel *-u*, following *t* in (*ʔ*)*atu*, may correspond to Semitic secondary gender marker *-u*. None the less, these merit further research. The currently used Saho does not have second person pronouns which distinguish gender. However, the number is marked by *n*. The element *n* occurs in the plural second pronoun (*ʔ*)*atin* (it has *n* which indicates plurality). But we do not find this *n* in the singular form (*ʔ*)*atu*. In Tigrinya, we have *ʔan-tum* and *ʔan-tin*. However, they can also occur (though not frequent) as *ʔan-tumu* and *ʔan-tinä* (cf. also the sections below for the discussion on the final vowels *-u* and -a of pronominal affixes) respectively. The latter (i.e., *ʔan-tinä*) is derived from *ʔantina* while the former is, I assume, derived from *ʔantanu* (cf. Lipinski 1997: 298 among others for Paleosyrian [2mpl] *ʔantanu*). I assume *ʔan-tanu* > *ʔan-tumu* by the regressive assimilation of *-u*. I assume *n* > *m* and *a* > *u* due to the influence of the last vowel *-u* (cf. also Buccellati 1996: 206 for the secondary gender markers *-ū* and *-ā* in Akkadian *antunū* [2mpl] and *ʔantinā* [2fpl] respectively).

4.6 *Perfective and Imperfective Verb Forms in Saho and in Tigrinya*

The Phi-features may occur attached to different verb stems. But in this chapter, only the perfective and the imperfective verb stems are taken into consideration. In Tigrinya and Saho, perfect and imperfect forms are indicated by different cv (consonant-vowel) patterns.

Saho verbs can be divided into class I, class II, class III and class IV. The last two belong to stative and compound verbs (cf. Vergari and Banti 2005). In this chapter, only class I verbs (e.g. *eerhege* 'I knew' and *aarhige* 'I know') and class II verbs (e.g. *faak-e* 'I opened' and *faak-a* 'I open') are indicated below (cf. Vergari and Banti 2005 for the examples). Observe the following table:

P./N./G.	Saho class I verbs		Saho class II verbs	
	Perfective	Imperfective	Perfective	Imperfective
1sg	eerhege	aarhige	faak-e	faak-a
2s	t-eerhege	t-aarhige	fak-te	fak-ta
3ms	y-eerhege	y-aarhige	faak-e	faak-a
3fs	t-eerhege	t-aarhige	fak-te	fak-ta
1pl	n-eerhege	n-aarhige	fak-ne	fak-na
2pl	t-eerheg-in	t-aarhig-in	fak-ten	fak-tan
3pl	y-eerheg-in	y-aarhig-in	faak-en	faak-an

Table III

As we can see from Table III, Saho perfective and imperfective forms are indicated by different vowels in the stem. In the perfective we have e following the person morpheme such as t while in the imperfective we have a following the person morpheme such as *t*.

Tigrinya can have gerundive, perfective and imperfective stems. Both gerundive and perfective forms have perfective functions. Hence, in this chapter both of them will be included under perfective aspect. Tigrinya has type A verbs as in *qätäl-ka* 'you (have) killed' or *qätil-ka* 'you (have) killed' *ti-qättɨl* 'you kill', Type B verbs as in *wässän-ka* 'you (have) decided' *wässin-ka* 'you (have) decided' *ti-wɨssɨn* 'you decide', Type C verbs as in *baräx-ka* 'you (have) blessed' or *barɨx-ka* 'you (have) blessed' and *ti-barɨx* 'you bless'. Observe the following:

P./N./G.	Tigrinya			
	Perf. A	Imperf. A	Perf. C	Imperf. C
1sg	qätil-ä	ʔɨ-qättɨl	baräx-ku	ʔɨ-barɨx
2ms	qätil-ka	tɨ- qättɨl	baräx-ka	tɨ-barɨx
2fs	qätil-ki	tɨ- qätl-i	baräx-ki	tɨ-barɨx-i
3ms	qätil-u	yɨ- qättɨl	baräx-ä	yɨ-barɨx
3fs	qätil-a	tɨ- qättɨl	baräx-ät	tɨ-barɨx
1pl	qätil-na	nɨ- qättɨl	baräx-na	nɨ-barɨx
2mpl	qätil-kum	tɨ- qätl-u	baräx-kum	tɨ-barɨx-u

2fpl	qätil-kɨn	tɨ- qätl-a	baräx-kɨn	tɨ-barɨx-a
3mpl	qätil-om	yɨ- qätl-u	baräx-u	yɨ-barix-u
3fpl	qätil-än	yɨ- qätl-a	baräx-a	yɨ-barix-a

Table IV

We can see from Table IV that Tigrinya perfective and imperfective forms are indicated by consonant and vowel patterns. However, in Tigrinya the vowels which distinguish perfective and imperfective aspect are inserted within the verb root which consists of consonants, while in Saho, the vowels *-e-* and *-a-* in perfective and imperfective aspects respectively are put after the morpheme which indicates person. The verb types of Tigrinya do not differ in their affixes. For instance, type A, type B and type C verbs take the same affixes in the perfective.

4.6.1 *Pronominal Affixes*

As illustrated in (4.5) above, we have independent subject pronouns of Saho and Tigrinya. The second person (in these languages) is indicated by *-t-*. Furthermore, Tigrinya and Saho independent subject pronouns have a morpheme n which marks number. In Tigrinya, as in other Semitic, we can have primary and secondary gender markers. As can be seen from our discussion above and the sections below, the languages in question have pronominal affixes which can indicate person, gender and number (cf. also Table III).

4.6.1.1 *Second Person, Gender and Number Markers in the Pronominal Affixes of Saho*

As indicated above, the Saho verbs in this chapter are selected from class I and class II verbs. In both classes, second person pronouns are marked by the morpheme t while number is marked by n.

4.6.1.2 *Second Person Markers in Saho*

We have seen above that the element t indicates second person. Observe the following:

	Perf. (class I)	Imperf. (class I)	Perf. class II	Imperf. (class II)
2s	t-eerhege	t-aarhige	fak-te	fak-ta
2pl	t-eerheg-in	t-aarhig-in	fak-ten	fak-tan

Table V

However, it is also interesting to see that the morpheme t occurs as a prefix and as a suffix. In class I verbs of Saho, second person pronouns are marked by the prefix *t-*, while in class II verbs second person pronouns are indicated by the suffix *-t*.

4.6.1.3 *Number Markers in Saho*

We can observe from Table V that Saho has a morpheme which marks plurality. In t-eerhege and t-eerhegin, for instance, the former and the latter show singular and plural respectively and this is due to the morpheme *n* in *t-eerhegin* (cf. Table V).

4.6.1.4 *Gender in Saho Verbal Affixes*

In the independent subject pronouns, we can observe that Saho does not distinguish gender in the plurals and in the second person singulars. In the same way, we can see from Table V that Saho verbs do not have morphemes to distinguish gender in the plurals and in the second person singulars.

4.6.1.5 *Second Person, Gender and Number Markers in the Pronominal Affixes of Tigrinya*

As in the case of Saho, Tigrinya has verbal affixes which indicate person and number. The second person pronouns are marked by *t/k* while number is marked by *n*.

Tigrinya has Type A, Type B, and Type C verbs. However, these verbs have similar prefixes and suffixes which indicate person, number and gender. As we can see from Table VI below, the second and third columns show verbs of type A with perfective (in the gerundive stem) and imperfective forms respectively. In columns 4 and 5, we see verbs of Type C with perfective (in the perfective stem) and imperfective forms respectively as illustrated in the following:

P./N./G.	Tigrinya			
	Perf. A	Imperf. A	Pref. C	Imperf. C
2ms	qätil-ka	ti- qättil	baräx-ka	ti-barɨx
2fs	qätil-ki	ti- qätl-i	baräx-ki	ti-barɨx-i
2mpl	qätil-kum	ti- qätl-u	baräx-kum	ti-barɨx-u
2fpl	qätil-kɨn	ti- qätl-a	baräx-kɨn	ti-barɨx-a

Table VI

4.6.1.6 *Second Person Markers in Tigrinya*

In Table VI, the subject can be indicated by suffixes and prefixes. In the perfective, the subject is indicated by suffixes while in the imperfective, the subject is marked by prefixes. The morpheme *t-* in the prefixes corresponds to *-k* in the suffixes. The element *-k* is followed by *-a* and *-i* to form *-ka* and *-ki* respectively. The vowels *a* and *i* (in *-ka* and *-ki*) are gender markers. The former marks masculine while the latter indicates feminine. The morpheme *k* in the suffixes corresponds to the morpheme *t* in the prefixes. In the (2ms) of the prefixes, gender is not marked. But in the (2fs) (prefix), gender is marked by the suffix *i* which is similar to the gender marker *i* in *-ki* (suffix). Moreover, Tigrinya has second person masculine and feminine plural morphemes *-kum* and *-kɨn* which can be realized as *kumu* and *kɨna* when followed by object suffixes. The suffixes *-kum* and *-kɨn* can be compared to their counterparts in other Semitic Languages. The former corresponds to Proto-Semitic (2mpl) subject pronoun *tanū* > *tumū*, and to the genitive (2mpl) forms *kunū* (< *kanū*) in Akkadian and *kanu* in Ugaritic. The latter (i.e., *-kɨn*/*-kɨna*) corresponds to Proto-Semitic (2fpl) subject pronoun *-tinā* and also to genitive and/or accusative (2fpl) forms *-kinā* in Akkadian, *kinā* > *kēn* in Aramaic. As in the case of several other Semitic languages *-kɨn* (or *kɨna*) is derived from *kina*. The element *-k-* marks second person, while the vowel *-ɨ* following *k* (derived from an earlier *i*) indicates primary feminine gender.

4.6.1.7 *Number Markers in Tigrinya*

As indicated in Table VI, the suffixes and prefixes can indicate a subject. We also said that the affixes mentioned above are composed of different morphemes. These morphemes can indicate person and gender. However,

the pronouns have also number indicating morphemes. In the independent subject pronouns and in the perfective verbal stems in Table VI, we can see that number is indicated by *n* or *n* > *m* (cf. Egedi 2005; Siddiqi 2009 for related data in Berber and Egyptian respectively). In the imperfectives in Table VI, however, number indicating morphemes are not overtly seen. Taking the data from Saho and other related languages into account, we can assume that Tigrinya, at some point in its history, had the element n to indicate number. But in the present usage, the imperfective forms of Tigrinya have lost this number distinguishing element. The feminine secondary gender marker a and the masculine secondary gender marker *u* are also used to indicate plurality. Thus, the former and the latter show feminine plural and masculine plural respectively of the second person.

4.6.1.8 *Gender Markers in Tigrinya*

As indicated above, the morpheme *n* (or its variant *n* > *m*) is a plural marking element while the element *-a* (following *n*) appears if followed by an object suffix and indicates a secondary feminine gender (cf. Buccellati 1996 for the vowels *-ū* [masculine] and *-ā* [feminine] secondary gender markers in Akkadian). As illustrated above, Tigrinya has the primary gender markers *-a* (for the masculine) and *-i* (for the feminine). Tigrinya *kum* indicates 2mpl. But I assume it is derived from **kanu*. I believe, the primary gender marker in 2mpl was originally marked by *a*. However, it was changed to *u* due to regressive assimilation. Thus, I assume **-kanu* > **-kunu*. Later in the history of the language, further changes were made. I assume **-kunu* > *-kumu* or *-kum*. The change of n to m was due to assimilation (by *u*) which may be followed by the deletion of the last vowel *u*. The last vowel *-u* which was supposed to indicate secondary gender is, I assume, hidden in *m*. Thus, even when the morpheme *-u* is deleted or not overtly seen, the element m may be assumed to indicate masculine and plural. In the 2fpl too, the morpheme *-a* in *kɨna* may not be overtly seen. If we assume m to indicate masculine plural, *n* may by default indicate feminine plural. However, we have also the primary gender markers *i* > *ɨ* in kina > *kɨna* and also *a* > *u* in *kanu* > *kumu* > *kum* (cf. also the discussion in 4.6.1.7 above).

4.7 *Relationship Among Phi-features in the Languages in Question*

In Afro-asiatic languages (like Saho and Tigrinya) the elements indicating person and number can be prefixes, suffixes or both prefixes and suffixes. In the languages in question, these affixes show very interesting similarities.

4.7.1 *Relationship among Phi-features in Saho and in Tigrinya*

We can observe in Tables III-IV that the verbal aspect of both Saho and Tigrinya are marked by consonant and vowel patterns of the verb stem. It can also be observed that the subject pronominal affixes which indicate person and number are attached to the verb stems of the languages in question as prefixes and/or suffixes.

In the imperfective form of Tigrinya (as in the case of Proto-Semitic and other Semitic languages), second person indicating subject is marked by the prefix *t-*, while gender is marked by suffixes. In *tɨ- qätl-u* and *tɨ- qätl-a*, for instance, *t* indicates second person while *-u* and *-a* mark masculine gender and feminine gender respectively. The morphemes *-u*, and *-a* are actually secondary gender markers which, as in *-kina* and *-kumu* in the perfective form, can be expected to occur after the number element *n* or *n* > *m*. In the imperfectives of Tigrinya, however, the element which was expected to indicate number is deleted and the elements which look like the originally secondary gender markers indicate both number and gender of the subjects.

Greenberg (1966a) assumes a verbal agreement in gender becomes available only if the language has developed a full paradigm of number. It is indicated in the literature that gender agreement, at least in verbs, is highly marked grammatical trait which is found only in a couple of languages. Such generalization on the distribution of morpho-syntactic features can be explained if we assume that φ-features are organized hierarchically where number features dominate gender features (cf. Fuß 2005: 255). Whenever the verb agrees with nominal subject or nominal object in gender, it also agrees in number (cf. Greenberg 1966a). A language can develop verbal agreement in gender only if it has previously grammaticalized a set of number distinctions (Fuß 2005). If we take the data from Arabic (e.g. *t-*[...]*-na* [2fpl]), Hebrew (e.g. *t-*[…]*-nā* [2fpl]) and Aramaic (e.g. *t-*[…]*-ān* [2fpl]) and also the Saho data indicated above into account, we may assume the deletion of the number element in Tigrinya. In the imperfective, Tigrinya does not have an overt number marker. But it has gender markers, which also function as number markers. Following Fuß (2005), I assume this is because the language has a set of covert number distinctions previously grammaticalized at some point in its history.

In the perfective, Tigrinya subject pronominal affixes are suffixes. In these suffixes, person is indicated by *-k-* followed by number and gender elements (cf. also the discussion below). In Saho, both perfective and imperfective forms of class I, indicate their second person by prefix *t-*. But in class II verbs, second person is marked by suffix *-t* in both perfective and imperfective forms.

In Tigrinya, the second person pronominal affixes make gender distinction. However, it can be observed from the Tables in (III-IV) above

that Saho second person pronominal affixes do not show gender distinctions. This appears common in world languages. Gender agreement is highly marked grammatical trait and hence is not commonly found in languages. According to Greenberg (1966a) and Fuß (2005), verbal agreement for gender becomes available only if a language has developed a full paradigm of number distinction. According to Fuß (2005: 255), this is because the possibility of gender distinctions appears to depend on the existence of number distinctions. Saho, however, makes number distinctions. The fact that its verbal stems do not make gender distinctions merit further research. However, it appears to me that any gender feature is reduced to a bundle with no feature by impoverishment. I assume the gender feature is deleted from the structure (cf. Harley 2008: 157-8 for similar views related to Latin and Russian).

In Table II, we have independent subject pronouns. As we can see from Table II, second person singulars and plurals are marked by t in both Saho and Tigrinya. In Tigrinya, we have *ʔan-ta* 'you (2ms)' *ʔan-ti* 'you (2fs)' in the singular forms. It can be observed that t marks second person while the vowels a and i following the second person marking element t indicate masculine and feminine respectively. Moreover, we can also see that *ʔan-* is a Pan-Afro-Asiatic pre-formative element. In Tigrinya, the element *n-* in the form *ʔan-* can be assimilated to the following *t* as in *ʔan-ta* > *ʔatt-a* or *ʔanti* > *ʔatti* (cf. also Buccellati 1996 among others for similar process in Akkadian). In Saho, the element *n-* in *ʔan-* is deleted and thus we see *ʔan-* > (*ʔ*)*a-*. Saho has (*ʔ*)*atu* for the masculine and feminine second person singular pronoun. The morpheme *t* in (*ʔ*)*atu* mark second person. In the plural, Saho has (*ʔ*)*atin* 'you (2pl)'.

Saho has, in the plural, the vowel *-i* following the element *t* in (*ʔ*)*atin* which may appear similar to Semitic primary gender marker *-i*. The currently used Saho does not have second person pronouns which distinguish gender. As in the case of verb stems, I assume the gender feature is deleted from the structure in Saho second person singular and plural independent subject pronouns too. The number is marked by *n*. The plural second person pronoun (*ʔ*)*atin* is different from its singular counterpart in that it has n which indicate plurality.

In Tigrinya, we have *ʔan-tum* and *ʔan-tin*. However, they can also occur (though not frequent) as *ʔan-tumu* and *ʔan-tinä* (cf. also the discussion on the final vowels *-u* and *-a* of pronominal affixes) respectively. The latter is derived from *ʔantina* while the former is, I assume, derived from *ʔantanu* (cf. Lipinski 1997: 298 among others for Paleosyrian 2mpl *ʔantanu*). I assume *ʔan-tanu* > *ʔan-tumu* by the regressive assimilation of *-u*. We see *n* > *m* and *a* > *u* due to the influence of the last vowel *-u* (cf. also Buccellati 1996: 206 for the secondary gender markers *-ū* and *-ā* in Akkadian ʔantunū (3mpl) and *ʔantinā* (3fpl) respectively and Saddiqi 2009 for *n* > *m* in similar Berber data).

4.7.2 *Afro-Asiatic Nature of the Relationship*

In both Tigrinya and Saho, different vowels are inserted into the verb stems to indicate aspect (perfective and imperfective). In the independent subject pronouns of Saho and Tigrinya, we see the morpheme *t* which mark second person. In the imperfective aspect of both the languages in question, we have *t* which corresponds to the second person morpheme in independent subject pronouns. In Tigrinya, subject second person morphemes are, as in other Semitic, prefixes in the imperfective and suffixes in the perfective. In Saho, on the other hand, subject second person morphemes are prefixes in perfective and imperfective aspects of class I verbs and suffixes in perfective and imperfective aspects of class II verbs. In Akkadian, Arabic, Aramaic, Hebrew and Proto-Semitic subject second person morpheme is indicated by *t* in the perfective subject suffixes. But in Tigrinya and in other Eritrean and Ethiopian Semitic languages, second person morpheme is indicated by *k* in the perfective subject suffixes. In Saho, however, this second person morpheme is indicated by *t* (not *k*) in the perfective and imperfective subject suffixes and prefixes. Thus, the fact that second person morpheme in the perfective and imperfective subject affixes is indicated by t is not limited to Semitic in general or to a branch of Semitic in particular. As indicated above, it also occurs in Cushitic.

In different Afro-Asiatic languages, either *k* (as in Bedja) or *t* (as in Egyptian and Saho) can be used as second person morphemes in different independent subject pronouns. In the subject pronominal affixes too, either *k* (as in Egyptian *ku* > *k* [2ms]; *ki* > *θ* [2fs]; *kina* > *θn* [2pl]) or *t* as in Saho) can be used as second person morphemes.

Different Ethio-Eritrean Semitic languages use the element *k* to indicate second person subject morpheme in the perfective aspect which corresponds to its counterpart t in other Semitic languages in the Middle East. In the non-subject pronominal affixes, however, *k* (or elements derived from *k*) indicates second person in different Afro-Asiatic languages such as Egyptian and Semitic languages such as Akkadian. Satzinger (2004: 487-497) discusses the different pronominal elements in Afro-Asiatic languages. According to him the forms of absolute pronouns like Egyptian *ỉnk* are of secondary origin and in many cases they are derived from those forms that are regarded as the object pronouns (also known as 'dependent' or 'B pronouns'). Satzinger (2004) assumes that B pronoun is the unmarked form. If Afro-Asiatic data are taken into consideration, the second person pronominal affixes with a *k* element may be more archaic than their counterparts with the *t* as a pronominal element. This, however, merits further investigation.

The Afro-Asiatic languages include Egyptian, Semitic, Cushitic, Libyco-Berber and Chadic. Saho and Tigrinya belong to Cushitic and Semitic respectively. The number and person features of Saho and Tigrinya indicated above are Afro-Asiatic features (cf. also Thacker 1954; Castellino 1962; Zaborski 1991).

4.7.3 *The Possible Role of Number and Person Markers in Semitic Classification*

In Saho (Cushitic), North West Semitic and East Semitic languages, the second person morpheme is marked by *t* in the perfective and imperfective subject affixes. In Tigrinya, however, the second person morpheme is indicated by *t* in the imperfective affixes and by *k* in the perfective affixes. On the other hand, the second person morpheme is indicated by *k* in the non-subject pronominal suffixes of Semitic languages.

As in the case of Akkadian *-tinā* (2fpl) and Tigrinya **kina* > *kɨn* (2fpl) the element *n* marks number in the perfective. In the independent subject pronouns (such as Akkadian *ʔantunū* [2mpl] and *ʔantinā* [2fpl], or Tigrinya **ʔantina* > *ʔantɨn* [2fpl]) and in the non-subject pronominal suffixes (such as *kina* > *kɨn* [2fpl] in Tigrinya), *n* shows plurality.

In Tigrinya imperfectives, subject is indicated by discontinuous agreement morphemes, though the element *n* is not overtly seen. In Table VI, for instance, we have *t--u* (2mpl) and *t--a* (2fpl) which correspond to Akkadian *t---ū* (2mpl) and *t---ā* (2fpl). On the other hand, the element *n* appears in several Semitic languages as in the case of Aramaic *t--ūn* (2mpl), *t--ān* (2fpl), and Arabic *t--ū- na* (2mpl), *t--na* (2fpl) which may correspond to the Saho plural element *n* in the discontinuous morpheme *t..in* (in table III) or in the suffix *-ten* (in Table V).

Some scholars used to assume that the elements -Vn or -nV is an innovation of Central Semitic languages (cf. Hetzron 1975; Goldenberg 1977; Voigt 1987). However, the element *n* in -Vn or -nV occurs in Ancient South Arabian languages and in Cushitic languages as in, for instance, *te-kátim-na* 'you (pl) arrive' in Bedja (cf. Thacker 1954; Castellino 1962; Zaborski 1991). Furthermore, we can also see in this chapter that Saho has the morpheme *n* which mark plurality and occur attached to the perfective and imperfective stems. As the person and number morphemes indicated above are archaic Afro-Asiatic features (not innovations which belong to a particular group), they may not help for classification (cf. Zaborski 1991 for similar views).

4.8 *Possible Developments of the Pronouns*

There are different views regarding the development of independent pronouns and pronominal affixes. Alexiadou (2004) believes the German possessive pronouns originate from a number of different pronouns[1]

[1] In the 1st and 2nd person singular and plural of German, the possessive pronouns have developed from the genitive forms of the personal pronouns. In the third person masculine singular and neuter, the possessives have developed from the genitive form of reflexive

and hence the individual possessive pronouns differ from each other in behaviour.

In some languages, independent pronouns can develop from verb endings or affixes as in the case of Irish (cf. Askedal 2008: 54-55).

In the literature, it is indicated that independent pronouns can be originally deictic elements which may be employed as pronominal subjects and objects (cf. Retsō 1989 among others). Hodge (1969) believes that the concept of person was not necessarily basic to the system of Early Afro-Asiatic and the particle *k* occurred in first, second and third persons.

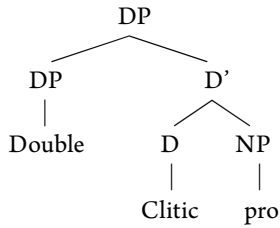
Satzinger (2004: 487-497) discusses the different pronominal elements in Afro-Asiatic languages. According to him the forms of absolute pronouns like Egyptian *ỉnk* 'I' are of secondary origin and in many cases they are derived from those forms that are regarded as object (also known as dependent or B) pronouns.

It may be possible to assume the development of demonstratives, pronouns or other lexical items into clitics and then into affixes (cf. Fuß 2005 among others). As indicated above, however, it may also be possible to assume the development of affixes into clitics and then into pronouns. When there are prefix pronominal affixes and suffix pronominal affixes in languages, the role of clitics appears to be very important. We may assume the development of affixes into pronouns or pronouns into affixes via a clitic stage (cf. also Harris 2008: 279). In comparison to pronominal affixes, clitics can have different positions. Clitics may appear before or after verbs which develop as prefixes in the case of the former or suffixes as in the case of the latter. Clitics may be regarded as a prerequisite for the grammaticalization of new agreement markers. It is possible to assume, at least in some languages, that new forms of agreement may result from a formerly stylist strategy. We may assume the addition of a full DP/tonic pronoun for the sake of emphasis or in order to reinforce a phonologically defective clitic leading to clitic doubling.

According to Fuß (2005), the clitic D-head selects full nominal (henceforth called the "double") in its specifier for a reinforcing (cf. Uriagereka 1995; Kayne 2002) and the two elements are then merged together in a 'big DP'. The big DP is composed of the reinforcing full nominal or the double in its specifier, the clitic in D and pro in NP dominated by D'. Let us see the following tree in (1).

pronouns. But there were no possessive pronouns for all other third person pronouns (3rd person feminine singular and 3rd person plural) in Old High German. However, the function was taken over by the genitive forms of the personal pronouns of the third person singular feminine and the third person plural (cf. Alexiadou 2004: 49-50).

(1)



(Fuß 2005: 194)

In the literature it is indicated that in several Rhaeto-Romance (RR) dialects, clitic doubling can be optional. However, in Sutselvan (one of the RR dialects) clitic doubling is obligatory. The fact that doubling is not necessarily used for emphasis and does not obey the definiteness restriction observed in other dialects of RR suggests at some point in the history of the language, it (doubling) has lost its use for emphasis or stylistic force due to probably over-use. In the course of time, the construction may lose its stylistic or emphatic force of the full pronoun. On the other hand, the eventual reanalysis of the originally reinforcing or emphatic element into a "real" argument can be assumed, while the former clitic can be reinterpreted as a verbal agreement (like person or number) marker (cf. Fuß 2005: 183-216 among others).

Fuß (2005: 82) argues, any of the functional categories C, T, v or D can, in principle, host the agreement morphemes. By assumption, Subject-verb agreement results from an agreement morpheme adjoined to T, while object-verb agreement involves the presence of an agreement morpheme added to v.[2]

In the literature, it is indicated that the complex DP, as in the case of Swiss RR languages, can be base generated in Spec,vP, where it receives the Θ-role for external argument. Subsequently, Fuß argues, the complex or big DP (cf. Grewendorf 2002) moves to Spec, TP and from there the clitic may adjoin to C at either at MS/PF or in the overt syntax (cf. Fuß 2005: 193-5 for details).

As can be illustrated in (2), object agreement can be checked after the merging of v with its complement VP which contains the object.

[2] Fuß (2005: 24) quotes (Chomsky 1993, 1995) and says in earlier versions of minimalist program it was assumed that "[...] functional heads host formal features such as [Nominative], [Past] and φ-features (e.g. [person], [number] and [gender]) which are deleted by entering into a checking relation with identical features on substantial lexical categories such as N, V, or A. The latter are combined with inflectional affixes in the lexicon and are inserted fully inflected" (cf. Fuß 2005: 24-28, for Chomsky's 2000, 2001a, 2001b revised analysis).

In the structure in (2), the head complex [v agr(v)] can (under closest c-command) enter into an agree relation with the feature set of the object. As indicated in the literature, the movement of pronouns to C is not limited to V2 languages (such as the Swiss RR languages) mentioned above. According to Fuß (2005: 211-215), weak pronouns can adjoin to C in SOV languages like Mongolian. According to him, this cliticization movement can be followed by fronting of a larger constituent, presumably TP, into a CP.

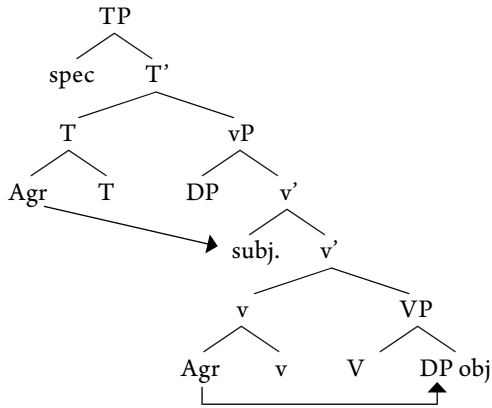
It appears that the Agr-morphemes do not occupy a unique position in the structure of the clause. They are parasitic on contentful functional categories like C, T, D, v. The reanalysis of pronominal elements as agreement formatives can come about from different syntactic environments. Thus, attempts to reduce the grammaticalization of these elements to a single syntactic scenario appear to be misguided.

In Distributed Morphology, it is assumed that the morphological derivation must reflect the syntactic derivation. The phonological exponent of the lower functional head must be closer to the verb stem than the phonological exponent of the higher functional head. As a consequence, vocabulary insertion affects the verbal or nominal roots before it affects functional heads that the roots adjoin to (known as root-out insertion) (cf. also Fuß 2005: 90-2 for more details).

As indicated above, Fuß (2005) argues subject-verb agreement involves the presence of an agreement morpheme added to T, whereas object agreement results from an agreement morpheme added to v.[3] Observe the tree structure in (2) adopted from (Fuß 2005: 84):

[3] In is indicated in Marantz (1992), Halle and Marantz (1993) and also Halle (1997) that agreement is purely morphological phenomenon and agreement heads are completely absent from syntactic component. They assume that they are only added post-syntactically at morphological structure to substantial functional categories like T, Asp or Neg that are represented in syntax (cf. also Fuß 2005 for more details). However, this view is not shared by all. According to Fuß and others, agreement features/morphemes are (i) present in the syntax, though parasitic on other functional heads (ii) part of the numeration, but do not head their own projections in the syntax (iii) merged with other 'substantial' functional heads before the latter are combined with phrasal complements (cf. Fuß 2005: 82 for more details).

(2)



As indicated in the literature, not all languages show overt movements. In principle, OV languages always allow the verb to stay in situ and combine with the argument morpheme on T via Morphological Merger at MS. This is because in a strictly OV grammar the verb is always string-adjacent to the set of right functional heads (cf. Fuß 2005 among others). This may hold for SOV languages like Tigrinya too. In different SOV languages like Mongolian, personal and demonstrative pronouns occur before or after verbs. In Giʕiz, a classical language of Eritrea and Ethiopia, we have pronouns which occur in different positions. In the languages in question, the pronouns may develop into clitics and/or into affixes.

In the literature, subjects can be assumed to be former topics. The example in (3) is taken from Fuß and Trips (2004).

(3)	[The wizard],	he-i lived in Africa	→	The wizard	he-lived in Africa
	Topic	Pronoun		Subject	AGR

(Fuß and Trips 2004)

As indicated in (3) above, the topic and the pronoun are changed to a subject and to agreement affix respectively. We may assume something similar to this in the early form of the current Afro-Asiatic languages. Let us see the imperfective form in (4ai-bi) and the perfective form in (4aii-bii) of Tigrinya:

(4)	ai.	*han-tina	t- barix-a	→	bi.	ʔantin	t-barix-a
		Topic	pronoun bless-f(pl)			vocative	prefix-bless-f(pl)
						'you (2fpl) bless'	

(4)	aii.	*han-ti	barix-ki	→	bii.	ʔanti	barix-ki
		Topic	bless pronoun (2fs)			vocative	bless suff.2fs
						'you (2fs) blessed'	

I assume (4bi) and (4bii) are derived from (4ai) and (14aii) respectively. The meaning of earlier form **han-tina* could be assumed to be **hantina* 'you there/those of you'. The formal relationship between *han-tina* and the currently used *ʔantɨn(a)* seems clear. Moreover, I assume we can relate the vocative meaning of the currently used *ʔantɨn(a)* 'you there/hey' and the possible meaning of **hantina* indicated above.

The development of former topics into subjects can go hand in hand with the development of pronouns/clitics into agreement affixes. The data in the languages in question clearly show that the pronominal agreement affixes and the independent pronouns are related. I assume the second person independent subject pronouns of the languages in question are derived from an ancient deictic element *han* and a pronoun such as *tina* or *kina* composed of person, number and/or gender features (cf. also 4.9). Taking the Afro-Asiatic data into account (cf. also Tesfay Tewolde, ongoing research; Satzinger 2004) may be right in regarding the object pronouns as the unmarked forms and in assuming the derivation of other pronouns from them.

As in other languages, we can assume the development of pronouns into clitics and then into affixes[4] in certain contexts. We can have preverbal and post-verbal clitics which can develop into prefixes and suffixes respectively. We have observed that the elements indicating second person in Saho and in Tigrinya are *t* and/or *k*. In different Semitic and Afro-Asiatic languages, *k* indicates second person in non-subject pronouns. Taking Satzinger's proposal into consideration, the element *k* could be the original person marker. We may assume an original *t* indicating feminine gender which later became a 2nd person marker. But it may also be possible to assume a derivation of *t* from *k* (i.e., *k* > *t*). However, the details merit further research.

As indicated above (cf. also (1)), a full DP can be added to reinforce the clitic (or for emphasis). I assume such an argument or something related to it may fit to the data of the languages in question. In the case of

[4] In the literature, we can find views regarding ϕ-features, case and tense as in the following: a) case assignment can be independent of the realization of agreement (cf. Fuß 2005: 84); b) "[...] what we call case is actually an uninterpretable aspect/tense feature on D heads (cf. Gallego 2010: 79 among others); c) "[...] Structural case is a "reflex of an uninterpretable ϕ-set" (cf. Chomsky 2000: 122 quoted in Manninen 2003: 49); d) prepositions bear T-features similar to tense (cf. Arteaga and Herschensohn 2010: 291).

Saho, Tigrinya and related languages, the pronominal morphemes can move to a Spec position and attach to the deictic element *han* > *ʔan*. The main formal difference between the independent subject pronouns and the subject pronominal affixes is the presence of *ʔan* (or *ʔan* > (*ʔ*)*a* in the case of Saho) in the former. This *ʔan-* (< *han*) is a pan-Afro-Asiatic preformative which can be related to an ancient deictic particle *han*. The Proto-Semitic particle which used to function as a demonstrative is assumed to be **hanni* which changed into different demonstrative forms. For instance, we have a demonstrative annum in Old Akkadian, *ɨňňi* < *hanni* 'that' in an Ethiopian Semitic language called Argoba. The demonstrative *annitān* at Mari is interpreted as a frozen feminine dual originally meaning "this and that", "thing, matter". Initially, the demonstrative may be added to the pronoun for reinforcement or emphasis and hence we may get pronominal forms with and without deictic form. In the course of time, I assume the form with deictic particles (ancient demonstratives) and the form without deictic particles have developed into independent pronouns (full pronouns) and agreement affixes respectively. However, this too merits further research.

4.9 *The Structure of Phi-features*

This section deals with the structure of Phi-features. In (6.1), some general points will be discussed. In section (6.2), an attempt is made to present the structure of Phi-features in the languages in question.

4.9.1 *Some Points on the Structure of Phi-features*

Phi-features are taken to be those involved in predicate-argument agreement, typically person, number and gender. In the Saho and Tigrinya data indicated above, we have seen affixes which indicate subjects. An affix could be a suffix, a prefix or a discontinuous morpheme. The latter is an agreement with a single argument by distinct parts of the verb as can be illustrated below. It is assumed that morphemes created by fission contain only a subset of the features contained in the original morpheme. Some linguists assume that features like person and number head separate projections. They assume that there is ideally a one-to-one correspondence between morphosyntactic features and terminal nodes, i.e., there are separate projecting nodes for individual inflectional categories such as person, number and gender. However, this view is not shared by all. According to Fuß (2005) and others the possibility to insert dissociated morphemes post-syntactically entails that not every morpheme (and

hence a feature) enters the syntactic computation as a projecting head. If we agree that a purely morphological operation such as fission existed, Fuß (2005) and others argue that the syntax must at least sometimes operate on bundles of morphosyntactic features which can then be split into several morphemes by post-syntactic morphological operations. Scholars like Fuß believe that fission only gives a false impression that this split of inflectional features/heads is located in the syntax. This merits further research. In this chapter, however, Fuß's (2005) view is adopted. According to Noyer (1997) and Siddiqi (2009), the Tamazight Berber examples in (5d-e) illustrate a morpheme split. According to them, the examples in (5d-e) show the agreement morpheme splits into three positions of exponence which are realized by successive fission of one Agr-morpheme and insertion of the Vocabulary items (cf. Noyer 1997; Siddiqi 2009 for more details).

(5) a. ti-säbk-u — Tigrinya
2-preach-mpl
'you preach'

b. t-eerheg-in — Saho
2- know-pl
'you(2pl) know'

c. yi-zrq-uu — Hebrew
3-throw-pl
'they will throw'

(Halle 1997: 432 quoted in Harbour 2008: 185)

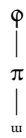
d. t-dawa-n-t — Tamazight Berber
2-cure-pl-fem.
'you (pl.fem) cured

e. [2] ⟷ /t-/
[pl] ⟷ /-n/
[fem] ⟷ /-t/

(Noyer 1997 quoted in Siddiqi 2009: 25)

The examples in (5a-c) are taken from Tigrinya, Saho and Hebrew (cf. Harbour 2008: 185-189 for more discussion on the Hebrew example) respectively. In every sentence in (5a-c), the left italicized morpheme gives the person of the agreeing argument while the right flank shows number. The fact that the discontinuous agreement obeys a "person left, number right" is not new (cf. Trommer 2002; Harbour 2008). However, linguists appear eager to know the whys. Harbour (2008: 186-7) adopts a general frame work of distributed morphology from Halle and Marantz (1993, 1994). According to this view (adopted by Harbour 2008) phonological content (vocabulary items) is introduced (vocabularization) to syntactic structures only once syntactic computation has ceased. He also refines distributed morphology in the following two ways. First he proposes a syntactic structure as in (6):

(6)



(Harbour 2008: 187)

According to Harbour (2008), φ is just a category label. It is used for expositional clarity (so that it becomes obvious where in the structure the φ-features are) while the real syntactic positions are π (person) and ɯ (number).

Furthermore, he (Harbour 2008) assumes that vocabularization occurs cyclically, root out; that is, if X and Y are syntactic entities such that Y dominates X, phonological content is inserted into X before it is inserted into Y. If the φ-set is vocabularized by a single phonological string, X, then the syntactic structure [φ (Y)] is linearized straightforwardly as [X⟶ Y] (the arrow is borrowed from Harbour's (2008) formulation of linear precedence and adjacency). In cases of multiple sub-φ exponence, however, we do not always get pure (left-to-right) linear string (cf. Harbour 2008). Observe the following:

(7)

(Harbour 2008: 187)

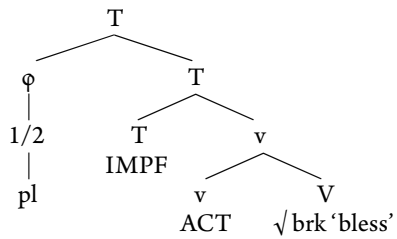
In cases of multiple sub-exponence, i.e., when the subparts of (6) are vocabularized independently, (e.g. by X and Z), the result is that of (7) and not a simple (left-right) linear string. Discontinuous agreement responds to the need to (i) linearize such structures and (ii) preserve ordering and adjacency relations imposed by the syntax and the φ-structure. Thus, Harbour (2008) proposes that (a) agreement can be discontinuous when

there is multiple sub-φ exponence (b) the order person-left number-right arises from the internal syntax of the φ-set and (c) cyclic root-out vocabularization forces flanking.

4.9.2 *The Structure of Phi-features*

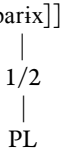
According to Harbour (2008: 188), "Syntax deals in whole φ-structures and determines their positions with respect to other syntactic material". Moreover, he also says: "Postsyntactically, vocabularization may deal in sub-φ-features and determines the position of different pieces of inflection with respect to other phonological material". To illustrate, Harbour takes the discontinuous (5c) and the simplex *ni-zroq* 'we will throw' ((1pl) -throw) from Hebrew. In Tigrinya we can have similar examples. Adapting Harbour (2008), we may have the structures in (8) and (9) below for Tigrinya discontinuous agreement *ti-barix-u* 'you (2ms) bless' (see also 5a above) and for Tigrinya simplex *ni-barix* 'we bless' (1pl-bless).

(8) Tigrinya



Vocabularization proceeds root out. In our case it begins at the verb root V and can reach φ-1/2-pl. Leaving aside the complexities of the verb morphology of the language in question, it can be noted that the φ' s sister is realized as *barix* (when ungeminated k is preceded by a vowel, we see *k* > Harbour 2008 in Tigrinya). Observe also the following:

(9) Tigrinya



Adapting Harbour (2008), let us consider the first person plural first. When φ is targeted for vocabularization we can see from (10) below that the syntactic sisterhood relation is immediately transformed into one of linear adjacency.

(10) [φ ⟶ barɨx] Tigrinya
|
1
|
PL

The φ-set-1-pl, has a single exponent, */nɨ/*. The result of the insertion into (10) is *nɨ-barɨx* and clearly shows a perfect linear string. In the second person plural, however, matters are not so straightforward (cf. Harbour 2008 for more details). Nonetheless, sisterhood is immediately transformed into linear adjacency into which two vocabulary items are inserted. These are [φ-2] ⟷ */tɨ-/* and [PL] ⟷ /u/.

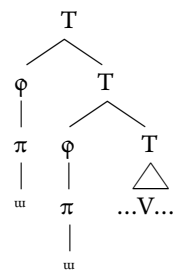
(11) [φ ⟶ barɨx] ⟶ [tɨ ⟶ barɨx] Tigrinya
|
2 u
|
PL

In (11), the result of vocabularization is a frayed string, not linear. However, (11) can be linearized. As *tɨ-* dominates *-u* hierarchically, the former must precede the latter. As a consequence, this rules out (a) the order *u-tɨ-barɨx* (number-person-verb) and (b) *tɨ-u-barɨx*.

The order tɨ-barɨx-u respects both the dominance/linear precedence of *tɨ-* (person) over *-u* (number) and the earlier established adjacency. Thus, regular phonology yields the surface form *tɨbarɨx-u*.

As indicated earlier, discontiguous agreement arises when multiple sub-φ exponence creates a frayed string. The internal structure of the φ-set gives the order person-left number-right. These can be the answers to the questions "why is agreement sometimes discontinuous?" and "why, when agreement is discontinuous, is person left and number right?". With these in mind, we may raise another question of why the double discontinuities flank. The reasons for flanking follow from devices called upon earlier (cf. Harbour 2008: 191 for the structure in (12):

(12)



Since, as we have seen above, vocabularization proceeds cyclically root-out, it starts, in our case, at V and finish at the higher φ-set. Tentatively disregarding the higher φ-set (cf. Harbour 2008), the structure to be linearized is similar to the Tigrinya tree (8). As a result, vocabularization and linearization of the higher φ's sister yield:

(13) [φ [π →V→ ɯ]]
π
ɯ

(13) is structurally identical to (9): this gives π → π →V→ ɯ → ɯ (cf. also Harbour 2008: 191). Hence, Harbour (2008) argues that flanking follows from the cyclic application of the linearization procedure already established. However, his work does not appear conclusive, In fact, he concludes his article by expressing his desire that his data and questions in his work can help to stimulate further research on the issue.

4.10 *Syncretism and Phi-features in Saho and in Tigrinya*

Syncretism can be defined as the representation of different combinations of morphosyntactic values by the same form. In English, for instance, (1sg) and (3sg) of verb to be syncretize and so do (2sg), (1pl) and (3pl). For the (1sg) and (3sg), we have was as the past tense form of the verb to be. For the (2sg), (1pl) and (3pl) too, there is the word were as the past tense form of the verb to be. Syncretism occurs when a single vocabulary item (e.g. gender element u) realizes more than one combination of features in a syntactic terminal node.

According to Williams (1994), dative and ablative case in Latin, always synchronize in the plural, regardless of what the actual suffix is (cf. also Manzini and Savoia 2001 among others). According to Harley (2008), this is a metaparadigm. Metaparadigm is a generalization over the shape of a given type of paradigm within a language. A syncretism that holds in a metaparadigm is, according to Harley, metasyncretism. It is a syncretism which, regardless of the particular forms or affixes used in any particular instance of the syncretism, holds for a particular set of features in a language. Hence, the plural ablative/dative syncretism in Latin case ending are, according to Harley (2008), apparently metasyncretism.

In the literature (cf. Adger and Harbour 2008: 24-5 among others), it is indicated that π (person) and ɯ (number) are not equally marked.

In some languages (e.g. Hebrew finite verbs), the verb forms agree for person, number, and gender, while in other languages the verb forms agree for number and gender without person. However, none agrees for person without number and gender (cf. Harbour 2008 among others). According to Harbour (2008: 194), one cannot have person without number, just as one cannot have C without T. However, he says, it is possible for number to project without person (just as it is possible for T to project without C). Moreover, Adger and Harbour (2008) indicate that number and gender distinctions are frequently lost with respect to person, but in opposite fashions. If a language makes number distinctions for some persons only, they will be either 1st persons or 1st and 2nd persons. If, on the other hand, a language makes gender distinctions for some persons only, they will be 3rd persons or 2nd and 3rd persons. However, these generalizations are tendencies; not universals (cf. Adger and Harbour 2008: 24).

In the case of Saho and Tigrinya, we have seen above that the verb forms and the independent pronouns mark their second person by *k* or *t* or both *k* and *t*. Moreover, we can also see they indicate number by *n* (in the case of Saho and *n* or *n* > m in the case of Tigrinya. Nonetheless, Saho verb forms and independent pronouns do not have morphemes to make gender distinctions in the second person forms. As illustrated in Table III and Table II, Saho verb forms and independent pronouns do not distinguish between second person masculine singular and second person feminine singular, or between second person masculine plural and second person feminine plural. In the case of Tigrinya, however, gender distinctions can be made. But we can find an amalgam of number and gender. To illustrate this, consider Table VI, repeated below:

P./N./G.	Tigrinya			
	Perf. A	Imperf. A	Pref. C	Imperf. C
2ms	qätil-ka	ti- qättɨl	baräx-ka	ti-barix
2fs	qätil-ki	ti- qätl-i	baräx-ki	ti-barix-i
2mpl	qätil-kum	ti- qätl-u	baräx-kum	ti-barix-u
2fpl	qätil-kɨn	ti- qätl-a	baräx-kɨn	ti-barix-a

Table VII

In the perfective form, person is marked by *k*, while gender is marked by primary gender markers *-a* (for masculine) and *-i* (for feminine). In the plural (perfective), we see the forms *-kum* and *-kɨn*. The forms *-kum* and *-kɨn* are also realized as *-kumu* and *-kɨna* respectively whenever they are followed by object suffixes as in (14a-d):

(14)	a.	barix-kum	b.	barix-kum-u-ni	Tigrinya
		bless-2mpl		blessed-2mpl -u- me	
		'you blessed'		'you blessed me'	
	c.	barix-kɨn	d.	barix-kɨn-a-ni	
		blessed-2fpl		blessed 2fpl- a-me	
		'you blessed'		'you blessed me'	

In (14a) and (14c) we have (2mpl) and (2fpl) agreement morphemes which indicate subject. In (14b) and (14d), however, there are morphemes which indicate subject and object. Between the subject indicating morphemes and the object indicating morphemes, we observe secondary gender markers *-u* and *-a* which are actually part of the former. Hence, we can see that the secondary gender markers can be surfaced whenever they come before object suffixes. As we know, Proto-Semitic short *i* can correspond to *ɨ* in Eritrean and Ethiopian Semitic languages. Thus, it is obvious that Tigrinya *-kɨn* corresponds to *kina* 'you (2fpl)' in other ancient Semitic languages. Taking other Semitic languages into account (as in the case of **-kanu* > *-kunu* [2mpl] for Akkadian and *-kanu* [2mpl] for Ugaritic), I assume *-kanu* > *-kunu* (by regressive assimilation which is very common in Tigrinya) and *-kunu* > *-kumu* (n > m) and finally *-kumu* > *-kum/-kumu*. To summarize, we see that in the perfective *k* marks 2nd person while number is indicated by *n* or *m*. The secondary gender markers *-u* (masculine), and *-a* (feminine) may not always be overtly seen. However, the primary gender markers may serve the purpose.

In the perfective form of Tigrinya, the φ-features are suffixes. But in the imperfectives, they are not limited to suffixes. The prefix *t-* indicates 2nd person and corresponds to 2nd person marker *k* in the perfectives. In the 2nd person masculine singular, the primary gender marker *-a*, which corresponds to primary masculine gender marker in the perfective, is deleted. However, the primary feminine gender marker *-i* occurs in *tɨ--i* (you[2fs]). The morpheme *t-* marks second person while *-i* shows feminine gender which corresponds to primary gender *-i* in the perfective. In the plural 2nd person affixes too, we have *t-* which indicates second person. However, gender and number are marked by the originally secondary gender markers. The originally masculine secondary gender marker *-u* and the originally feminine secondary gender marker *-a* indicate both gender and number. Hence, *tɨ--u* and *tɨ--a* mark (2mpl) and (2fpl) respectively. Hence, we find an amalgam of number and gender in the imperfective forms. The originally secondary gender marker is used to indicate both gender and number. But there is no number marker different from that of gender. In the imperfective, Tigrinya appears underspecified for number. I assume this is syncretism.

We have seen above that Saho agreement affixes are underspecified for gender. As such a widespread syncretism cuts across different vocabulary items (VIs), I assume it is metasyncretism. Tigrinya syncretizes number in the imperfective while Saho syncretizes gender in the perfective and in the imperfective. I assume that the syncretisms in the languages in question are metasyncretisms.

We have seen above that in the perfective and imperfective verb stems of Saho and Tigrinya, 2nd person is indicated by *k*, *t* or both (cf. Table V and Table VI). Moreover, argeement affixes also occur in the independent second person pronouns of Saho and Tigrinya. In the independent pronouns too, 2nd person of both the languages is indicated by *t*. The examples thus far given show that number in independent pronouns, just like in the verb stems, is also marked by *n* in Saho and by *n* and *m*<*n* in Tigrinya. Observe the following:

P./N./G. of Tigrinya	Sub. Ind. Pronouns of Tigrinya	Sub. Ind. Pronouns of Saho	P./N./G. of Saho
2ms	ʔan-ta	(ʔ)atu	(2s)
2fs	ʔan-ti		
2mpl	ʔan-tum	(ʔ) atin	(2pl)
2fpl	ʔan-tɨn		

Table VIII

We can also see that in Tigrinya, primary gender is marked by *-a* in the masculine and by *-i* in the feminine. In the plural, the secondary gender markers, *-u* and *-ä* < *-a* are not usually overtly seen. In the singular, the primary gender markers occur immediately after the person marker *t-*. In the plural too, we find the gender markers in the same position. In the plural forms, however, we assume, *ʔantanu* > *ʔantumu* > *ʔantum* for the masculine and *ʔantina* > *ʔantɨn* for the feminine and hence we see *a* > *-u* in the former and *i* > *ɨ* in the latter (cf. also the discussion in section 4.7.1 above). But in the case of Saho, gender is not marked. As in the case of verbs, Saho syncretizes gender in the second person independent pronouns too.

4.11 *Conclusion*

Tigrinya and Saho belong to Semitic and Cushitic languages respectively. Both Cushitic and Semitic are members of Afro-Asiatic languages.

In this chapter, gender, number and second person morphemes in Saho and in Tigrinya are discussed. In this chapter, I have focused on sec-

ond person perfective and imperfective subject verbal affixes and also on the second person subject independent pronouns of the languages in question. In both Saho and Tigrinya, we observe that second person is indicated by *t* and *k* or either *k* or *t* in the verb stems and in the independent subject pronouns. We can also see that in the perfective and in the imperfective verb stems of Saho, in the perfective verb stems of Tigrinya and in the independent subject pronouns of both languages, number is indicated by *n* in Saho and by *n* or *n* > *m* in Tigrinya. In Tigrinya, the originally secondary gender markers indicate gender and number in the imperfective verb stems, while in the perfective the secondary gender markers are frequently deleted. In the imperfective verbs of Tigrinya, the Phi-features are marked by prefixes and suffixes. The person markers are prefixes, while the gender/number morphemes are suffixes. In the perfective forms, however, the Phi-features are marked by suffixes.

In Saho, the Phi-features are indicated only by suffixes in class II verbs. In Class I verbs, however, they are indicated by prefixes and suffixes.

In Saho class II verbs, the prefixes indicate person while the suffixes mark number. In Tigrinya the prefixes indicate person while the suffixes mark number and/or gender. The results are in line with Harbour (2008) because discontinuous agreements respond to the need to (i) linearize such structures and (ii) preserve ordering and adjacency relations imposed by the syntax and the Phi-features. In this sense, I assume the data from Saho and Tigrinya correspond to the theory in the literature.

Tigrinya syncretizes number in the imperfective verb stems, while Saho syncretizes gender in the perfective and imperfective forms of verbs.

In the literature, subjects may be assumed to be former topics. The development of former topics into subjects can go hand in hand with the development of pronouns/clitics into agreement affixes. The data in the languages in question clearly show that the pronominal agreement affixes and the independent pronouns are related. I assume the second person independent subject pronouns of the languages in question are derived from an ancient deictic element han and a pronoun such as tina or kina composed of person, number and/or gender features (cf. also Satzinger 2004 for the derivation of pronouns from the non-subject pronominal forms).

5

PHI-FEATUTRES IN TIGRINYA AND IN AMHARIC

5.1 *Introduction*

In chapter 5, I will discuss the Phi-features of Tigrinya and Amharic. The affixes are prefixes and suffixes indicating person, number and gender of the subject and/or the object. The subject indicating affixes can be prefixes and/or suffixes while object indicating affixes are always suffixes. The verb stems can be free or bound. The verb stems without the affixes are always bound. All verb stems obligatorily need subject affixes in order to be free.

As indicated above, chapter 5 is concerned with Phi-features. Nonetheless, an overview of the verbal stems of the affixes will be given. Section (5.2) deals with the background. Section (5.3) is concerned with the verb classification of the languages in question. In (5.3.1) different verbal stems are discussed. Sections (5.3.1.1) and (5.3.1.2) deal with simple stems and frequentative stems respectively. Section (5.3.1.3) is concerned with stems with derivational prefixes. Section (5.3.2) deals with prefixes and suffixes which indicate person, number and gender and occur attached to the verb stems. Section (5.4) is concerned with independent pronouns, while in section (5.5 - 5.5.1.3) different Phi-features are compared and identified. In sections (5.5.2) and (5.5.3) archaisms and syncretisms of the languages in question are discussed. In Section (5.6) a conclusion is made.

5.2 Background

In the literature, it is indicated that morphology is a natural place to look for a theory of the internal featural constitution of φ-structures (cf. Adger and Harbour 2007). According to Halle and Marantz (1993) and others, the term "Distributed morphology" was chosen to emphasize the fact that the machinery of what has been traditionally called morphology is distributed among several components of the grammar and is not concentrated in a single component (cf. also Pfau 2009).

Tesfay Tewolde Yohannes, *DPs, Phi-features and Tense in the Context of Abyssinian (Eritrean and Ethiopian) Semitic Languages. A Window for Further Research*, ISBN (online) 978-88-6453-329-2, ISSN (online) 2420-8361, CC BY-NC-ND 4.0 IT, 2016 Firenze University Press

The grammar within Distributed Morphology (DM) is divided into two parts. In the first part, several distinct repositories contain listed information: a morpheme list, a vocabulary, and an encyclopaedia. In the second part, we have a generative engine consisting of the syntax proper and various post-syntactic mechanisms such as impoverishment and linearization. The morphemes in the morpheme list contain no phonological features. It is left to vocabulary items to relate phonological exponents to morphemes and to detail the contextual conditions on the insertion of these exponents while encyclopaedia entries relate interpretations and structured linguistic expressions that may be words or phrases (cf. Noyer 2006: 745).

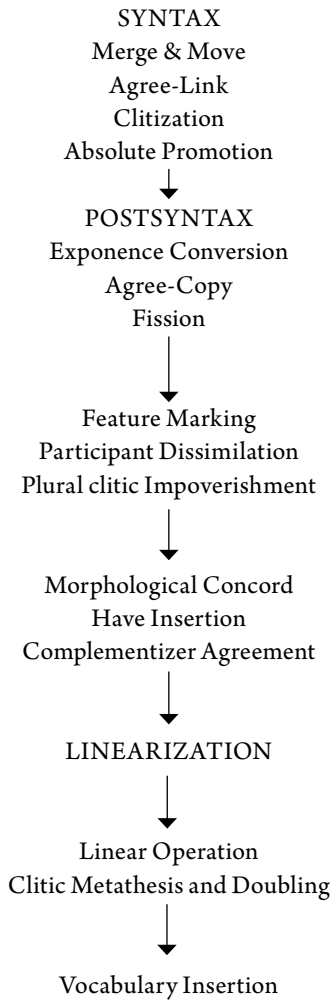
In some versions of DM, it is assumed that subject-verb agreement is implemented by adjoining an agreement morpheme to the tense node, and then features of the subject DP are copied onto this agreement node (cf. Pfau 2009). Furthermore, Pfau (74) argues: "Case-number-gender concord within German DPs is implemented by supplying appropriate agreement suffixes to adjective and determiner nodes and by copying features associated with the nominal head of the DP onto them". According to Pfau, these morphemes are inserted only at MS, i.e., after syntax but before spell-out. Moreover, Pfau assumes that derivational morphemes like *-er* (as in dancer) are inserted at Morphological Structure (MS). This derivational morpheme is abstract which is expected to be spelled out at PF.

According to Noyer (2006: 734-5), "the exact timing of vocabulary insertion is a subject of current debate". However, Noyer also says "the simplest view, following Embick (2000), is that the exponents of root morphemes are inserted early, prior to or perhaps cyclically during syntax, while the exponents of other morphemes are supplied after syntax".

There are scholars who assume that all agreement is post-syntactic (cf. Marantz 2000, Bobaljik 2008b). As we can see from (1), however, this view is not shared by all.

As indicated in Arregi and Nevins (2012), DM adopts the basic Y Model of grammar. In this Model of grammar, syntactic structure-building creates hierarchical relations in a tree structure that is then independently interpreted by separate modules of Logical Form (LF), and Phonetic Form (PF). Observe the following:

(1-i)



Adapted from Arregi and Nevins (2012: 4)

In the above structure, we find a syntax section followed by a Morphological Structure referred to as a Post-syntactic component. DM adopts a model of grammar in which syntactic computations precedes the Module of grammar that Arregi and Nevins call a post-syntactic component.

As outlined above, Arregi and Nevins (2012) adopt a two-step model agreement: Agree-Link (in syntax) and Agree-Copy (in the Exponence Conversion module). They argue that in the former a Probe establishes an Agree relation (they call it a link or 'a contract to copy features') in the syntax, while in the latter (the initial post-syntactic module labelled as Exponence conversion component) the actual φ-feature values of the goal are copied onto the Probe.

Moreover, we can see in (1) that the initial postsyntactic module is also the locus of Fission operation that split person and number features into two separate terminals -of- exponence. This happens even when they originate from the same single syntactic element.

The second postsyntactic module that Arregi and Nevins (2012) identify in their architecture is Feature Markedness. In this component, well-formedness is evaluated through specific morphosyntactic constraints on feature co-occurrence. This may call for the enactment of repair operations. In Impoverishment, a feature on a terminal is deleted, while Obliteration deletes the entire terminal.

The third post-syntactic module is responsible for what Arregi and Nevins call Morphological Concord. They are the operations responsible for setting up particular terminals for vocabulary insertions (cf. Arregi and Nevins for details).

According to Arregi and Nevins, the syntactic computation has the function of enacting Merge, Agree, and Re-merge operations. The syntactic computation does not directly operate on phonological content. It also does not contain statements of linear order – only of sisterhood and dominance. Thus, Spell-out to PF has two major functions. It converts (a) morphosyntactic features into phonological content (b) hierarchical dominance relations into relations of linear precedence. The latter is accomplished by the procedure of Linearization. Arregi and Nevins (2012) assume Metathesis may reorder the sequence that results from Linearization.

It is indicated in the literature that Vocabulary Insertion is the most important process during Spell-out. It is the one that literally trades morphosyntactic features for phonological content. It is a process that occurs at the unit of the terminal node. When the terminal node specifically refers to the process of exponing (or realizing with phonological content) the assorted morphosyntactic features that are present at that node, it is often known as terminal-of-exponence. Phonological rules like syncope, glide formation, palatalization begin to apply once vocabulary insertion is complete.

Furthermore, Arregi and Nevins assume that:

a) Spell-out refers to the entire path of derivational modules from the conclusion of syntax, through the postsyntactic component, to the onset of phonological computation. They use spell-out and Postsyntactic component to refer to the sequence or procedure of derivational steps and to the modules that follow syntax and follow phonology respectively;
b) Inflectional morphology is a reflection of what occurs in the syntax that necessarily follows the establishment of feature-copying relations;
c) Post-syntactic components are given the task of converting abstract morphosyntactic features like [-past, -singular] into phonological content such as suffixes and prefixes and this conversion process as known as Spell-out.

According to Arregi and Nevins, lexical items such as verbs pick up abstract inflectional features through a mechanism of Agree (that is a feature value-copying relation). They believe that under Agree an item like T (that linguists call Probe) has unvalued φ-features (like person, number, and gender) and initiates a search. The Probe finds the closest noun phrase under c-command (known as Goal), and copies the φ-feature values to itself. These feature values are assumed to be abstract binary features with values like [+ participant], and [+ feminine].

Scholars like Arad (2005: 9-10) believe the syntax only manipulates abstract roots and features. Moreover, Arregi and Nevins (2012) assume, terminals can enter the syntax with certain features unvalued and obtain values for these features as a result of the operation Agree. However, they also argue that certain terminals enter syntax with features valued. For instance, pronouns or noun phrases referred to as DPs enter syntax with their features for [± author], [± participant], [± plural], [± feminine] already specified, while tense node enters with its value for [± past] already specified.

Furthermore, we find the following in the literature on DM:

a) In the syntax, the terminal nodes are purely abstract (cf. Pfau 2009: 66-81);
b) The term morpheme properly refers to a syntactic or morphosyntactic terminal node and its content and not to the phonological expression of that terminal (cf. Pfau 2009: 66-81 among others);
c) Morphemes are of two kinds. (a) Root which represents an open class item of indeterminate category whose categorical features are determined by its syntactic contexts. (b) Various others representing functional categories of syntax like tense, v, C, D (cf. Noyer 2006);
d) Roots are considered acategorial in that their syntactic category is contextually specified by combining with category-defining functional

heads such as v, n and a. For instance, the root √destr is realized as the noun destruction under nominalization environment and as the verb destroy under verbalizing environment (Sato 2010: 16-19);
e) A verb is a root whose nearest c-commanding f-morpheme (or licenser) is v (the light verb), aspect, or tense. In contrast to that, a noun is a root whose nearest c-commanding f-morpheme is a determiner (or put it differently a noun is a root which is locally licensed by a determiner) (cf. Pfau 2009: 66-81).

According to Pfau, the light verb head is a functional head with a very limited inventory of meanings. The v may have three different specifications, namely BE (stative), CAUSE and BECOME. As a consequence, we can have transitive and intransitive verbs. Pfau illustrates the role of the light verb by the German verb pair senken 'to lower' (transitive) versus sinken 'to drop, to sink' (intransitive and unaccusative). In Abyssinian Semitic languages, the causativer *ʔa-* and a light verb and also the passiver *tä-* and a light verb can have functions similar to those of German examples indicated above (cf. Adger 2003: 131-133 among others).

In languages like English, the joining of the Tense with the main verb may be attributed to a lowering operation. As indicated above, there are scholars who assume that in many languages subject-verb agreement is implemented by adjoining an agreement morpheme to the tense node. Subsequently, features of the subject DP are copied onto this agreement node (cf. Pfau 2009).

We have indicated above that roots are acategorial elements (cf. Lomashvili 2011 among others). When the category defining heads merge with the roots, Lomashvili argues that they are root-attached, i.e., they are in the inner domain. Lomashvili, however, assumes there is an outer domain too. This happens if the same category-defining head is attached to a structure which has already been categorized by another. According to Lomashvili, both the inner and the outer domain heads that categorize roots are cyclic. This means they trigger spell-out when merged into a structure. This is the operation that sends the part of the syntactic structure to the interface components, PF and LF. According to Lomashvili v merges with √ROOT to form the inner domain (as in the case of v and √BREAK). But if a category-defining head (as in the case of -able in breakable) is attached to a structure that has already been categorized by another head (as in the case of inner domain indicated above), it is known as outer domain. Lomashvili stresses that vocabulary insertion in the latter is not root-conditioned.

It is assumed that the variety of contexts that each root appears is listed in the encyclopaedia. It is indicated in Arad (2005) that the encyclopaedia is a list of what we know about roots in different environments. For instance, Arad (2005: 9) argues the entry for the root √cat lists the following meaning in a nominal environment:

(1-ii) √cat furry, purring quadruped in the environment of [N]

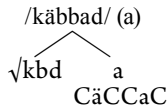
Furthermore, Arad (2005: 12) assumes the vowels *-a-a-* in *cacac* as in gadal 'grow' spell-out in voice. Arad also believes the binyan is inserted under v. But the consonant root is inserted under the root node, √ (cf. Arad: 42-3).

According to Arad (40-2), there is a structural asymmetry between nouns and verbs. Once a root is embedded in a nominal environment, under an n head, it becomes a noun. In order to become a verb, however, Arad argues a root has to merge first with a verbal head and then with voice, aspect, tense and mood. A root is verbalized once it is associated with a v head. However, it only becomes an actual verb when merged with the syntactic features that constitute verbs, i.e., voice, tense, aspect (in some languages) etc.

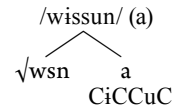
Hebrew has verbal patterns or binyanim (e.g. CVCVC, nvCCvC). Arad assumes the binyam morpheme is inserted under the v node (cf. Arad: 191 for the binyanim insertion in the structure). Moreover, Hebrew nouns fall into two groups known as *mišqalic* and *non-mišqalic*. It is indicated in Arad that Hebrew has nominal patterns called *mišqalim* (e.g. CaCiC, miCCaC). A consonantal root together with a nominal pattern *-mišqal-* forms a noun (cf. Arad: 31). *Mišqalim* have their inherent vowels specified (as in CaCiC), while binyanim have slots (as in CVCVC) (cf. Arad: 33-34, 42-3 for details on non-mišqal nouns).

If we take Lomashvili's (2011) and Arad's (2005) assumptions into account, we may have the structures in (2a-c) for the languages in question.

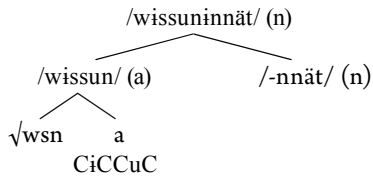
(2) a.



b.

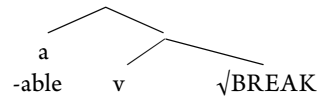


c.



d.

e.



Embick (2010) quoted in Lomashvili (2011: 18)

The structures in (2d-e) are adopted from Embick (2010) quoted in Lomashvili (2011: 18). In the structures in (2a-e), *a* and *n* indicate adjective and noun respectively. When the category-neutral roots are embedded in a nominal and adjectival environments, Arad (2005) argues, they become actual nouns or adjectives. In (2a) too, I assume the root merges with a category-defining functional head a and form the adjective *käbbad* 'heavy' in Amharic and in Tigrinya. In (2b), the root merges with a category-defining functional head a and form the adjective *wɨssun* 'limited' in the languages in question. If we adopt Arad, we may assume the form CäCCaC in (2a) and CɨCCuC in (2b) as nominal patterns. Taking Arad into account, we may combine a consonantal root like *kbd* and nominal pattern CäCCaC to form an adjective *käbbad* (2a). In the same way, we may combine a consonantal root like wsn and nominal pattern CɨCCuC to form an adjective *wɨssun* 'limited' in (2b). Moreover, we can combine *wɨssun* (adjective) and the nominal suffix *-nnät* to form the noun *wɨssunɨnnät* 'limitation' in (3c).

In (2a-b), the category defining head merges with roots. They are root attached. Hence, they are in the inner domain. In (2c), we have two category-defining heads (*a* and *n*). We can see in (2c) an important property of the outer domain head *n* in that *a* vocabulary insertion into this position is not root-conditioned.

Lomashvili (2011) and others assume that inner and outer domain heads that categorize roots are cyclic in that they trigger spell-out when merged into a structure.

I assume this holds for the examples like those in (2a-c) above. In DM model, it is assumed that roots are underived primitives in syntactic derivation. They are said to be 'atomic' non-compositional items (cf. Lomashvili).

In Abyssinian Semitic languages, we have said earlier, that aspect and mood are indicated by inserting different patterns of vowels into the root of the base stem, while tense is marked by different forms of the verb to be. It appears to me that subject-verb agreement, in Abyssinian Semitic languages, can be implemented by adjoining an agreement morpheme to the mood node and to the aspect node. I assume aspect and mode nodes enter syntax with their values [± perfective] and [± realis] already respectively specified (cf. also Arregi and Nevins 2012 among others for similar views in the case of tense).

As indicated above, the term morpheme properly refers to a syntactic or morphosyntactic terminal node and its content and not to the phonological expression of that terminal. On the other hand, some authors make use of the notion abstract morpheme to refer to syntactic terminals. This is done to avoid the confusion with the traditional usage of the term morpheme (cf. Fuß 2005: 50 among others in order to understand the usage of the term better). For the sake of simplicity, however, the term morpheme may also refer to abstract morpheme or to the traditional term morpheme (in its traditional usage) in this book. But a distinction can be made whenever necessary.

5.3 *Verb Types in Tigrinya and in Amharic*

The verbs of Tigrinya and Amharic have the perfective, imperfective, gerundive, imperative and jussive conjugations. The vast majority of the verb stems have roots consisting of 3 or 4 radicals. Furthermore, the verbs of Tigrinya and Amharic are classified into type A, type B and type C. They are classified by gemination criteria. Taking the gemination criteria into account, the four radical verb roots are classified as type C verbs. They differ from each other depending on the extent to which their forms geminate their penultimate radical. Type B verbs geminate their penultimate radical throughout in both Tigrinya and Amharic. In Tigrinya, type C verbs never geminate in any of the above mentioned verbal forms, while type A verbs geminate their penultimate radical only in 1s, 2ms, 3ms, 3fs, and 1pl of the imperfective forms (cf. Tesfay Tewolde 1987, 2002). In Amharic, type A verbs geminate their penultimate radical only in the perfective, while type C verbs geminate their penultimate radical only in the perfective and imperfective forms (cf. E.C. Bender 1976; Baye 2007/2008 (2000 E.C.): Leslau 1995).

In languages like Tigrinya and Amharic, verbs have perfective and imperfective aspects and also realis and irrealis mood. According to Tesfay Tewolde (2002) perfective and imperfective aspects are also realis mood, while jussive and imperative can be regarded as irrealis mood (cf. also Chung; Timberlake 1985 among others).

According to Arad (2005: 193), there are two ways to capture the selection relation between roots and binyamin. One of this is to state that the root comes with a 'tag' on which the binyan it takes is specified. In Hebrew, for instance, Arad argues the root √qšb appears only in binyan 5 (hiCCiC) and is specified as +5 and in this way the root determines the identity of the verbal morpheme it combines with. The other alternative is to say that roots do not have any specification on them and according to Arad (193) "all we have is the listings in the Encyclopaedia of the environments in which meanings are available for roots. If the binyan inserted is such that the root has no interpretation in its context, the result is ruled out at LF, since the verb is uninterpretable". We may have similar situations in the languages in question. As indicated in Arad, we may assume either (i) the root determines the verbal morpheme it combines with or (ii) we can have the listings in the Encyclopaedia (cf. Arad 2005: 193). At least in the verbs, the first option appears more appropriate for the languages under discussion. I assume the root comes with a 'tag' on which the type of verb it takes is specified. As indicated above, Arad argues the root √*qšb* appears only in binyan 5 (hiCCiC) and is specified as +5 in Hebrew. In the same way, we can assume the root √*sbr* BREAK appears only as Type A and can be specified as +Type A.

As suggested above, I also assume aspect and mode nodes enter syntax with their values [± perfective] and [± realis] respectively already specified.

5.3.1 *Verb Stems in Tigrinya and in Amharic*

Tigrinya and Amharic have simple stems as in (5.3.1.1) and extended stems as in (5.3.1.2, 5.3.1.3-5.3.1.5). Phi-features are added to the simple and extended stems.

5.3.1.1 *Simple Stems*

Stems can be with or without affixes. I call the latter simple stems. They are composed of consonants and vocalic patterns. The different verb conjugations have simple stems composed of verb roots and vowel patterns. For instance, the root *qtl* and the vowels *-ä-ä-* form the bound stem for the perfective conjugation. Thus, we get the bound stem *qätäl-*. However, we need to add subject affix in order to form a free stem. If we add a suffix *-u* (3mpl) to it, we get *qätäl-u* 'they (have) killed'. The stem *qätäl-* is a simple stem because it is composed of the root *qtl* and the vowels *-ä-ä-* while in *qätäl-u* we have an affix *-u*. The word *qätäl-u* can be a stem to other affixes. Hence, it is called an extended stem (cf. also Moscati *et al.* 1964). Observe the following simple stems in the perfective (perf.) imperfective (imperf.), gerundive (ger.) imperative (imper.) and jussive (juss.) in (Tables I-i & I-ii):

Amharic

Aspect/mood	Type A	Type B	Type C
perf.	gäddäl-u	wäddäs-u	barräk-u
imperf.	yi- gädl-u	yi-wädiss-u	yi-barrik-u
ger.	gädl-äw	wäddis-äw	barik-äw
imper.	gidäl-u	wäddis-u	barik-u
juss.	yi-gdäl-u	yi-wäddis-u	yi-barik-u

Table I-i

Tigrinya

Aspect/mood	Type A	Type B	Type C
perf.	qätäl-u	wäddäs-u	baräx-u
imperf.	yi- qätl-u	yi-widdis-u	yi-barix-u
ger.	qätil-om	wäddis-om	barix-om
imper.	qitäl-u	wäddis-u	barix-u
juss.	yi-qtäl-u	yi-wäddis-u	yi-barix-u

Table I-ii

In both Amharic and Tigrinya, the vowel patterns inserted into the verb stems are either similar or highly related. In the perfective, we have the *-ä-ä-* vowel pattern in the languages in question as in *qätäl-u* 'they (have) killed', *wäddäs-u* 'they (have) praised' in Tigrinya and *gäddäl-u* 'they (have) killed', *wäddäs-u* 'they (have) praised' in Amharic. The pattern *-a-ä-* in the Tigrinya word *baräx-u* 'they (have) blessed' is the same as the pattern *-a-ä-* [in Amharic *barräk-u* 'they (have) blessed'. In the imperfective, the vowel patterns in *yi-qätl-u* 'they kill', *yi-widdis-u* 'they praise' and *yi-barix-u* 'they bless' in Tigrinya are similar to the Amharic patterns in *yi-gädl-u*, *yi-wädiss-u* and *yi- barrik-u*. The only difference is that the form *yi-wäddis-u* in Amharic has become *yi-widdis-u* in Tigrinya. In other words, we observe the change of the vowel *ä* following the first radical *w* in Amharic *yi-wäddis-u* to *i* in Tigrinya *yi-widdis-u*. In the gerundive, the vowel patterns in Tigrinya *qätil-om*, *wäddis-om* and *barix-om* are similar to the vowel patterns in Amharic *gädl-äw*, *wäddis-äw* and *barik-äw* except that the vowel *i* following the penultimate radical in Tigrinya is either changed to *i* or deleted in Amharic. In the imperative and jussive stems, the vowel patterns of type A, type B and type C in Tigrinya are the same as their counterparts in Amharic. The above indicated simple stems show aspect (perfect vs imperfect) and mood (actual vs non-actual). The indication of aspect and mood by vowel patterns in these languages is not based on individual vocabulary items. They are grammar-wide facts. In fact, the indication of aspect by vowel patterns is not limited to Semitic languages of Eritrea and Ethiopia. We can find them in other Semitic languages and in Afro-Asiatic languages like Saho. It is an Afro-Asiatic feature.

5.3.1.2 *Frequentative Stems*

Tigrinya and Amharic verbs reduplicate their second radical in order to show frequency, intensity, reduplication, plurality etc. For the sake of simplicity, I call such a form a frequentative stem. In (3ai-v), we have simple stems followed by subject affixes of Tigrinya type A verbs while in (3bi-v), we have frequentative forms followed by subject suffixes. In fact, the stems in (3bi-v) are the frequentative forms of the verbs in (3ai-v) respectively:

(3)		Simple stems + subject affixes	Tigrinya
	ai.	qätäl-u 'they (3mpl) (have) killed'	
	aii.	yi- säbr-u 'they (3mpl) break'	

aiii. qätil-om
'they (3mpl) (have) killed'

aiv. qɨtäl-u
'you (3mpl) kill'

av. yɨ-qtäl-u
'(let them (3mpl) kill'

(3) Frequentative stems + subject suffixes Tigrinya

bi qätatäl-u
'they (3mpl) (have) killed repeatedly'

bii. yɨ-säbabɨr-u
'they (3mpl) break repeatedly'

biii. qätatil-om
'they (3mpl) (have) killed repeatedly'

biv. qätatɨl-u
'you (2mpl) kill repeatedly'

bv. yɨ-qätatɨl-u
'let them (3mpl) kill repeatedly'

The simple stems in (3ai-v) are not the same. But it is interesting that their frequentative forms have the same pattern. The above examples show that the frequentative forms of the stems *qɨtäl* (imperative), *qätäl-* (perfective), *qätil-* (gerundive), *-qtäl-* (jussive) and *-qätl-* (imperfective) may differ in the vowel of last syllable. If they are stripped of their affixes, we see the frequentative stems *-qätatɨl-* in the imperfective, *qätatɨl-* in the gerundive, *qätatäl-* in the perfective, *qätatɨl-* in the imperative and *-qätatɨl-* in the jussive. In other words, they all have a *cäcacvc* pattern. This verbal frequentative form is also known as a verbal plural (cf. Tesfay Tewolde 2002, 2003 and 2009 for details). It corresponds to the nominal broken plural form cäcacvc observed in Tigrinya and Gɨʕɨz. As the short *a* in Proto-Semitic (and also in other Semitic languages like Arabic) corresponds to *ä* in Eritrean and Ethiopian Semitic languages, we can see that *cäcacvc* (nominal broken plural pattern) in languages like Tigrinya is related to (in fact, originally the same as) the nominal broken plural pattern *cacaacv(v)c* that we find in Arabic (cf. Greenberg 1955 and 1991; McCarthy 1982 for Arabic, Marantz 1982; Zaborski 1999; Benmamoun 2003 among others for verbal and nominal plurals).

Furthermore, we can observe similar patterns in Amharic frequentative forms.

As in the case of Tigrinya, the penultimate radical in each of the simple stems in (4ai-v) is reduplicated in (4bi-iv) in order to form a frequentative stem. Hence, the stems in (4bi-v) are frequentative forms which correspond to the stems in (4ai-v) respectively:

(4)		Simple stems + subject affixes	Amahric
	ai.	gäddäl-u 'they (3pl) (have) killed'	
	aii.	yɨ- säbr-u-all-u 'they (3pl) break)'	
	aiii.	gädl-äw-al 'they (3pl) (have) killed'	
	aiv.	gɨdäl-u 'you (2pl) kill'	
	av.	yɨ-gdäl-u 'let them (3pl) kill'	

(4)		Frequentative stems + subject suffixes	Amahric
	bi.	gädaddäl-u 'they (have) killed repeatedly'	
	bii.	yɨ-säbabbɨr-u-all-u 'they break several times'	
	biii.	gädadɨl-äw-al 'they (have) killed repeatedly'	
	biv.	gädadɨl-u 'you (2pl) kill repeatedly'	
	bv.	yɨ-gädadɨl-u 'let them (3pl) kill repeatedly'	

If we remove the affixes (and also the forms *-all-* and *-al*) from the frequentative stems, we get the pattern *cäcac*(*c*)*vc* in Amharic. The only difference between the frequentative patterns in Tigrinya and Amharic is that the penultimate in the latter may (as in 4bi-ii) be geminated.

The frequentative stem is very common in type A verbs. It may be possible to derive type B and type C verbs from type A via frequentative stems. The derived stems can, however, be reanalysed and form roots (cf. McCarthy 1982 among others for similar views) of type B and type C verbs (cf. Tesfay Tewolde 2009 for the possibility of deriving Tigrinya type C and type B verbs from Type A via frequentative stems).

5.3.1.3 *Derivational Prefixes*

Tigrinya and Amharic have prefixes like (ʔ)a- (ʔ)*as*, *tä*- (ʔ)*an*, *tän*- etc. (cf. Leslau 1995; Baye 2007/2008 (2000 E.C.); Tesfay Tewolde 2009). In this section, only the prefixes *tä*- (in Tigrinya and Amharic), *a*- and *as*- (in Amharic), *ʔa*-, *ʔas*- (in Tigrinya) are discussed. In order to indicate the prefixes in both languages, I will write them as *tä*, (ʔ)*a*- and (ʔ)*as*-. In the literature, the Amharic glottal sound *ʔ* is not always overtly realized (cf. Leslau 1995; Baye forthcoming among others). In this work too, the glottal sound *ʔ* is not always overtly shown. For instance, the Amharic causative elements may be written as *a*- and *as*- or (ʔ)*a*- and (ʔ)*as*- instead of *ʔa*- and *ʔas*-.

In Tigrinya and Amharic, inflectional affixes which mark person, number and gender can be affixed to the above indicated simple and frequentative stems. As in other languages, derivational affixes can be closer to basic stems when compared to inflectional affixes. Tigrinya and Amharic have passive stems (stems preceded by a passive morpheme *tä*-) and causative stems (stems preceded by causative morphemes (ʔ)*a*- (ʔ)*as*). (ʔ)*a*- and (ʔ)*as*- are causativizers while *tä*- is a passive marking morpheme (cf. Bender 1976; Tesfay Tewolde 2002 and 2009 for Tigrinya; Bender 1976; Leslau 1995; Baye 2007/2008 (2000 E.C.) among others for Amharic). These prefixes are regarded as derivational affixes (cf. Scalise 1984 for the criteria of derivational affixes). When there are *tä*-, (ʔ)*a*- and (ʔ)*as*- prefixes attached to the stems, the inflectional prefixes occur before them.

5.3.1.4 *Causative Prefixes*

The prefixes *ʔa*- and *s*- can function as causative morphemes in Semitic and different Afro-Asiatic languages. In Ethio-Eritrean Semitic languages, we find epenthetic elements to break the impossible consonant clusters in word initial positions. For instance, Tigrinya has taken the words like *scarpa* 'shoe' and *spazzola* 'brush' from Italian. But in Tigrinya, they are pronounced as *ʔascarpa* 'shoe' and *ʔaspasla* 'brush' respectively. Amharic has taken words like sport from English. But in Amharic, they are pronounced as ɨsport. Thus, it may be possible to assume the element (ʔ)*a*- in (ʔ)*as*- as an originally epenthetic element. In Tigrinya, the derivational prefix *ʔas*- is rarely used. But in Amharic, both forms are common. I am aware that currently (ʔ)*a*- and (ʔ)*as*- can have different functions. These may be due to a division of labour that the two causative morphemes got in course of time. Nonetheless, this issue will not be discussed here.

We have unergatives and unaccusatives which are intransitives. Unergative predicates have a single agent argument and that argument must appear as the daughter of vP. Unaccusative predicates have a single theme argument. That argument appears as the NP daughter of VP (cf. Adger 2003

among others). The languages in question have monotransitives and ditransitives. The morphemes *(ʔ)a-*, *(ʔ)as-* can change intransitive verbs into transitives and simple transitive verbs into ditransitives. Such an affix can also be prefixed to ditransitive verbs. However, human languages don't appear to lexicalize predicates which have more than three places (cf. Adger: 78).

Amharic and Tigrinya are pro-drop languages. In the Amharic examples in (5a-c), subjects and objects are indicated by affixes. In (5a) the form *gäddäl-* is a bound stem followed by a subject suffix *-ä-* (3ms) which is also followed by an object suffix *-äw* (3ms). In (5b), the bound stem *säbbär-* is followed by a subject suffix *-u* (3pl) and by an object suffix *-ačč̌äw* (3pl). Consider the Amharic transitive verbs in (5a-c) and intransitive verbs in (5d-e):

(5) a. *gäddäl-ä-äw > gäddäl-äw — Amharic
'he killed/has killed him'

b. *säbbär-u-ačč̌äw > säbbär-u-wačč̌äw
'they (3pl) broke/have broken them'

c. *šäyäť-ä-äw > šäť-äw
'he sold it'

d. därräs-ä
'he (has) arrived'

e. *qäwäm-ä qomä
'he (has) stopped'

(5d-e) are intransitives. But in (5c), the Amharic verb is a ditransitive one as in:

(6) issu bet-u-n lä-wändim-u šäť-ä-äw (*šäyäť-ä-äw > šäťäw)
he house the- to brother -his sold -3ms(sub)-3ms (obj.)
'He sold the house to his brother'

In (6), we have the subject *issu* 'he', the direct object *bet* 'house' followed by the definite article *-u*-'the' together with the direct object marker *-n*, and the indirect object *lä-wändim-u* 'to his brother'. The verbs in (5a-c) are transitives. But the verbs in (5d-e) are intransitives and as unaccusative verbs they do not assign accusative case to their objects. However, they can have applicative objects and applicative object suffixes to mark the objects (cf. Tesfay Tewolde 2010).

If we add *a-* or *as-* to the verbs in (5a-e), we get (7a-f) below. In (5a-e) the one who killed (5a), the ones who broke (5b), the one who sold (5c),

the one who arrived (d) and the one who stopped are the subjects. In the Amharic examples in (7a-f), however, the subjects become the cause and not direct actors:

(7) a. as- gäddäl-ä-äw — Amharic
'he made or cause others kill him'

b. as-säbbär-u-ačč̌äw
'they (3pl) made or cause others break them'

c. as-*šäyäť-ä-äw > aššäť-äw
'he made or cause others sell it'

d. a-därräs-ä- äw
'he helped or accompanied him to arrive at a place'

e. a-qom-ä-äw
'he (has) stopped or blocked him'

f. as qom- ä-äw
'he made something or someone to stop him'

In Tigrinya too, we can have similar examples as in the following:

(8) a. *qätäl-ä-o > qätäl-o — Tigrinya
'he (has) killed him'

b. *säbbär-u-om > säbbär-u-wom
'they (3pl) broke/have broken them'

c. *šäyäť-ä-o > šäť-o
'he sold it'

d. *bäṣäħ-ä > bäsħ-ä
'he (has) arrived'

e. qäwäm-ä > qomä
'he (has) stopped'

As in Amharic, there are subject and object affixes in (8a-c) and subject affixes in (8d-e) and when both of them are suffixes, object suffixes come after subject suffixes. The bound stems, the subject morphemes and the object morphemes of Tigrinya in (8a-e) correspond to their Amharic counterparts in (5a-e). If we add the causativizer *ʔa-* to the stems in (8a-e), we get (9a-e) in Tigrinya.

(9) a. ʔa- *qätäl--ä-o > ʔa- qtäl-o
'he made or cause others kill him'

b. ʔa-*säbär-u-om > ʔa- sbär-u-wom
'they (3pl) made or cause others break them'

c. ʔa-*šäyäť-ä-o > ʔašäť-o
'he made or cause others sell it'

d. ʔa-*bäṣäh-ä-o > ʔabsäh-o
'he helped or accompanied him to arrive at a place'

e. ʔa-*qäwäm-ä-o > ʔa-x'om-o
'he (has) stopped or blocked him'

In Tigrinya, as in the case of Amharic examples in (5a-e) and in (7a-f), the subjects in (8a-e) have become the cause and not direct actors in (9a-e).

Furthemore, the examples in (10a-g) from Tigrinya and the examples in (10h-m) from Amharic can help in understanding the situation better.

(10) a. binyam säb qätil-u
Binyam man (has) killed-3ms
'Binyan (has) killed a man'

b. binyam ni-ħaww-u säb ʔaqtil-u
Binyam to brother-his man made kill-3ms (sub)
'Binyam made his brother kill a man'

c. binyam säb ʔaqtil-u-wwo
Binyam man made kill-3ms (sub)-3ms (obj)
'Binyam made someone kill a man for the benefit of his brother'

d. binyam säb ʔa-qtil-u
Binyam man made kill-3ms (sub)
'Binyam made someone kill a man'

e. binyam ni-ħaww-u säb ʔa-qtil-u-wwo
Binyam to brother-his man made-kill-3ms (sub)-3ms (obj)
'Binyam made his brother kill a man'

f. binyam ni-ħaww-u gäza ʔasriħ-u-wwo
Binyam to brother-his house made-build-3ms (sub)-3ms (obj)
'Binyam made his brother build a house'

g. binyam nɨ-ħaww-u gäza ʔasriħ-u
Binyam to brother-his house made-build-3ms (sub)
'Binyam made someone build a house for his brother'

h. binyam wändɨm-u-n lɨbs as-aťťäb-ä-äw
Binyam brother-his-to clothes made-wash-3ms (sub)-3ms (obj)
'Binyam made his brother wash clothes'

i. binyam lä-wändɨm-u lɨbs as-aťťäb-ä
Binyam to-brother-his clothes made-wash-3ms (sub)
'Binyam made someone wash clothes for his brother'

l. binyam wändɨm-u-n ɨrša as-arräs-ä-äw
Binyam brother-his-to farm made-till-3ms (sub)-3ms (obj)
'Binyam made his brother till a farm'

m. binyam lä-wändɨm-u ɨrša as-arräs-ä-llät
Binyam to-brother-his farm made-till-3ms (sub)-ben.
'Binyam made someone till a farm for his brother'

In (10a-g), we see Tigrinya examples. In (10a), the killer is Binyam, the subject. In (10d), Binyam is the cause of killing a man. The killer is some unknown person. In (10e), the killer is *ħaw* (brother), not Binyam. The subject affixes are obligatory. If the indirect object is overtly seen as in (10b), we also expect the object suffix to be overtly realized as in (10e). Otherwise, (10b) can be ambiguous or semantically different from (10e). Whenever there are different objects, object suffixes which correspond to one of the objects can occur attached to the verbs to avoid ambiguity. In (10e), for instance, the object suffix *-ww-o* corresponds to the indirect object *ħaw*. Moreover, if an indirect object suffix is overtly seen as in (10c), we also expect the object which corresponds to it to be overtly seen as in (10e). If there is an object suffix attached to the verb, we expect a preposition (in Tigrinya) and preposition or post-position (in Amharic) attached to the object and hence (10c) is unacceptable sentence. The sentence in (10b) is not necessarily the same as (10e). In the case of the sentences in (10f-g) too, we can see that the meaning of the sentences are different. The difference between (10f) and (10g.) is that there is no object suffix in the latter. In the former Binyam has made his brother build the house, while in the latter the house is built for his brother. Hence, object

suffixes attached to verb stems with causative morphemes (as in 10f-g) do not appear optional.

In (10h-i), we see Amharic sentences. In Amharic verbs preceded by causative morphemes as in the case of (10h-i) too, we can observe situations similar or related to their counterparts in Tigrinya.

Lomashvili (2011: 37) argues: "[...] in a simple X makes Y do V causatives of unergative verbs such as sing, laugh, etc. only one CAUSE is merged that takes the aforementioned vP complement". In the case of Tigrinya and Amharic, we have *säħax'-ä* 'he laughed' in the former and *saqä* 'he laughed' in the latter which become *ʔasħax'ä* 'he made someone laugh' and *as-saqä* 'he make someone laugh' respectively. In Tigrinya, we have *ʔa-* (the causative morpheme) prefixed to the verb. In Amharic, I assume we have an epenthetic *a-* preceding the element *s-* (a causative morpheme). In the above examples, I think that *ʔa-* in Tigrinya and *s-* in Amharic make the intransitive verbs transitive.

When the CAUSE iterates, however, Lomashvili says two causing events are introduced into the structure and as a result, two causee arguments are introduced to the structure of these complex causatives. As a consequence, Lomashvili (2011: 37) believes, the morphological realization of the two CAUSEs reflects the syntax as two VIs (like *a-* and *-in* in Georgian) and are inserted into separate CAUSE heads.

In the case of Amharic too, we may assume two causative morphemes *a-* and *s-* (which may be related to *a-* and *-in* indicated in Lomashvili above) as in the case of *mäťťa* (he came/has come), *a-mäťťa* (he brought/has brought) and *a-s-mäťťa* 'he made others bring (something)'. If we adopt Lomashvili's (2011) model, we may put *-a* and *s-* in different vP levels in the structure (50-60).

In both the transitive and the intransitive cases, Pfau (2009) argues the same l-node combines with the little v morpheme in order to produce the final verbal form. Pfau quoting Harley (1995) says v may only have three different specifications and these are BE (stative), CAUSE and BECOME. Pfau (71) illustrates the role of the light verb in the derivation of transitive verbs. According to Pfau, the l-node combines with the CAUSE morpheme to yield the transitive verb *brech* 'break'. Pfau argues, the l-node is licenced by a CAUSE morpheme in the head of vP and hence a transitive verb is produced.

In the case of Abyssinian Semitic languages, the details merit further research. As indicated above, however, the morphemes *ʔa-* in Tigrinya and *a-*, *as-* in Amharic can change intransitives and transitives into verbs which appear transitives and ditransitives respectively. Some of the objects are applicative objects. For instance, *-lät* in (10m) is an applicative suffix which corresponds to the applicative object *läwändɨmu* 'to his brother'. Many languages have the structures which involve the juxtaposition of a verb with a special particle (like *ʔa-*) or auxiliary marking causation (cf.

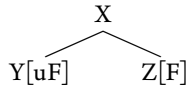
also Adger 2003: 131). We notate a causal category v (pronounced as 'little v'). If we put a prefix *ʔa-* to the word *räʔay-ä* 'he saw' in Tigrinya and as- to the Amharic word *ayyä* 'he saw', we get *ʔarʔay-ä* 'he showed' and *asayy-ä* 'he showed' respectively.

According to Adger, the English show is assumed to basically have the meaning see but must move into a verb with the meaning cause. In the case of Tigrinya and Amharic too, we assume the verbs *ʔarʔay-ä* 'he showed' and *asayy-ä* 'he showed' have basically the meaning *räʔay-ä* 'he saw' and *ayyä* 'he saw' which must move (covertly or overtly) into a verb with the meaning cause.

As we can see below, the VP containing the direct object and the indirect object is a projection of the verb *ʔarʔa-ä* which moves into a position adjacent to the causal verb. This causal verb is often known as a light verb and this kind of analysis is called a VP-shell analysis (cf. Adger 2003). If the elements move, the moved elements leave traces (the same is also valid for Amharic *asayy-ä*).

In the literature, it is proposed that the verb contains a number of c-selectional features. It is assumed that Uninterpretable (c-selectional) features must be checked, and once checked, they can be deleted. According to Adger and others, an uninterpretable c-selectional feature F on a syntactic object Y is a sister to another syntactic object Z which bears a matching feature F as in the following:

(11)



(Adger 2003: 86)

It is noted that the feature F on Y is uninterpretable by prefixing it with *u*. By the statement in (11), uF on Y must be checked. It must be checked by being in a syntactic relation with another F feature somewhere else. As Z is a sister to Y, the syntactic relation of sisterhood allows feature matching to take place and uF to be checked. As indicated in (13) below, I notate this by marking uF with a strikethrough. All the checked uninterpretable features self-destruct when the derivation stops and the semantic interface rules apply. Hence, the final representation consists only of interpretable features as required by Full Interpretation. C-selectional features (categorial selectional features) can be regarded as uninterpretable categorial features on the head (another name for c-selectional features is subcategorization features). In the literature, it is indicated that interpretable features are features which have an effect on the semantic interpretation of a category. On the other hand, uninterpretable features are the features which appear to make no difference to the semantics of the sentence, but which are somehow required if we are to explain the

grammaticality or ungrammaticality of sentences (cf. Adger among others). For instance, a stem *qätil-* 'kill' has an interpretable [V] feature and an uninterpretable [uN] feature. If the form *qätil-* Merges with a noun bearing an interpretable [N] feature, then this Merge allows the checking of the uninterpretable [N] feature on the verb. The Tigrinya sentences in (12a,12c) correspond to the Amharic sentences in (12b, 12d) respectively. Consider the sentences in (12a-d) and the tree structure in (13):

(12) a. yonas bota ni-ħaww-u *ʔarʔay.ä-o (> ʔarʔayo)
yonas place to brother-his show(perf)-3ms (sub.) 3ms (obj)
'Yonas showed a place to his brother'

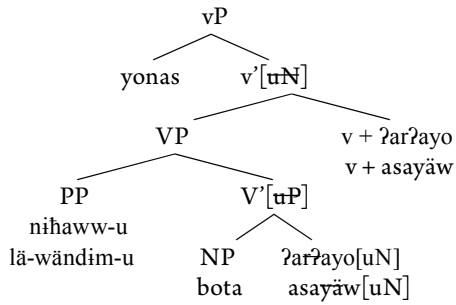
b. yonas bota lä-wändɨm-u *asayy-ä-äw (> asayyäw)
yonas place to brother-his show(perf)-3ms (sub.) 3ms (obj)
'Yonas showed a place to his brother'

c. yonas ni-ħaww-u bota *ʔarʔay.ä-o (> ʔarʔayo)
yonas to brother-his place show(perf)-3ms (sub.) 3ms (obj)
'Yonas showed a place to his brother'

d. yonas lä-wändɨm-u bota *asayy-ä-äw (> asayäw)
yonas to brother-his place show(perf)-3ms (sub.) 3ms (obj)
'Yonas showed a place to his brother'

In (12a, c), we get Tigrinya sentences with similar meanings. In (12b, d) too, we have semantically similar Amharic sentences. In (12a-b), however, the direct object of each of the sentences is put higher in the structure. It may be possible to assume this is due to emphasis (cf. also the discussion in chapter 8?). Some scholars (cf. Adger among others) assume that the PP (like *ni-ħawwu*) is closer to the verb than the object (like *bota*). Other scholars (cf. Radford 1997; Siddiqi 2009 among others) assume the object like bota is closer to the verb than the PP (such as *niħawwu*). This merits further research. Nonetheless, we can observe that the monotransitive verbs *räʔay-ä* and *ayy-ä* have become ditransitive verbs *ʔarʔayä* and *asayyä* respectively comparable to ditransitive verbs like those in (14a-c). Each of these verbs (i.e. *ʔarʔay-ä* 'show' and *asayy-ä* 'show') can be specified as [V, uN, uP] (cf. Adger 2003; Pfau 2009; Siddiqi 2009; Arregi and Nevins 2012 among others for more details). Let us observe the tree structure in (13) which corresponds to the sentences in (12c-d).

(13)



The verbs of Tigrinya and Amharic indicated in (13) move to a higher position. Here we observe c-selectional features being checked under sisterhood. We can assume that V first checks its [uN] feature via Merge of NP. The unchecked [uP] feature is projected to V' and is checked by Merge of the PP to sister V'. Then little v Merges with the complete VP. We also see that it projects its c-selectional [uN] feature to v'. Then Merge of the NP Agent checks this selectional feature (we will have more discussion below in the next chapters).

As indicated above, all the sentences in (12a-d) are acceptable in Abyssinian languages like Tigrinya and Amharic. Nonetheless, we can find a difference of emphasis between (12a) and (12c) and also between (12b) and (12d) in that (12a) and (12b) may show some kind of emphasis.

According to Siddiqi (2009), it is possible to say Julie sent the package to France in English. However, Julie sent France the package is not an acceptable English sentence. I do not intend to discuss the structure of the sentences indicated in Siddiqi (2009). On the other hand, it appears to me that such English sentences and the Abyssinian Semitic sentences indicated in (12a-d) do not have similar tree structures. Taking the data from different languages into account, however, I assume the structure in (14d) for the languages in question. In the structure, we can have two AspPs: one above vP and the other above VP (cf. Kandybowicz 2008; Sato 2010; Travis 2010 among others).

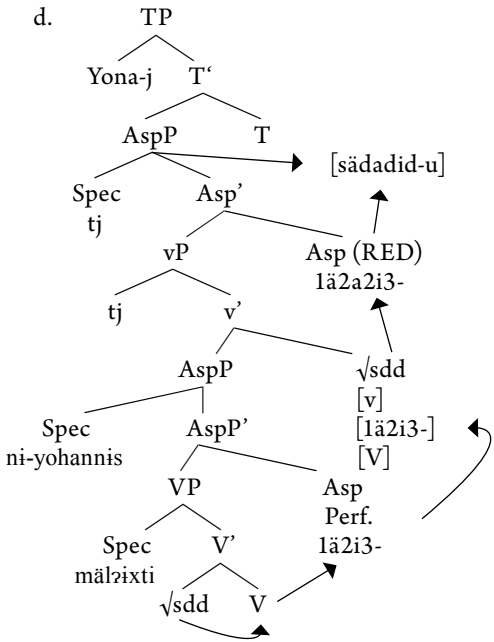
I believe we can form sentences like (14c) by raising the lower arguments (e.g. *mälʔɨxti* in (14a-b)) to a higher position above vP for some kind of emphasis. It appears to me that (14d) can be the structure for the sentences in (14a-b).

(14) a. Yonas nɨ-yohannes mälʔɨxti sädid-u — Tigrinya
yonas to yohannes message sent-3ms
'Yonas sent a message to Yohannes'

b. yonas nɨ-yohannes mälʔɨxti sädadid-u
yonas to yohannes message sent-repeated-3ms
'Yonas sent a message to Yohannes several times'

c. yonas mälʔɨxti nɨ-yohannes sädid-u
yonas message to yohannes sent-3ms
'Yonas sent a message to Yohannes'

d. Tigrinya



In the tree structure in (14d), *√sdd* moves to v through V and lower Asp. As it moves, the features of each head that *√sdd* is attached to are added to the complex head structure. The verb can move to a higher Asp to form a verbal plural, a reduplicative form which has the same CV pattern as the nominal internal plural.

5.3.1.5 *Passive Prefixes*

In Tigrinya and Amharic, the prefix *tä-* can be prefixed to stems to form derived stems. Besides, Tigrinya has internal passive forms. The following are examples from Tigrinya (15a-f) and from Amharic (15g-h):

(15) a. säb sɨga yɨ-bälliʕ Tigrinya
man meat 3- eat (imperf.)
'Man eats meat'

b. sɨga yɨ-bɨllaʕ
meat 3-eat (imperf.)
'Meat can be eaten'

c. nɨss-u sɨga yɨ-blaʕ
he food 3-eat (juss.)
'Let him eat meat'

d. sɨga *yɨ-t-bälaʕ > yɨbbälaʕ
food 3-pass.- eat (imp.)
'Let meat be eaten'

e. ʔɨt-om säbat tä-x'atil-om
the-3mpl men tä- kill-3mpl
'The men kill each other'

f. ʔɨtom säbat nɨ-kalʔot säbat *ʔa-t-qatil -om > ʔaqqatilom
the-3mpl men to other men ʔa-t- kill -3mpl
'The people made other people kill each other'

g. säwwočč-u tä-gaddäl-u Amharic
man-pl-the tä- kill-3pl
'The men kill each other'

h. saw-očč-u lel-očč saw-očč-in a-t-gaddäl-u > aggaddäl-u
man-pl-the other-pl man-pl-accu. caus. Pass. kill-3pl
'The people made other people kill each other'

In the above Tigrinya examples, we have an active imperfective form in (15a). The passive imperfective form in (15b) is a passive counterpart of (15a). The active form in (15a) has become passive (15b) by inserting vowel patterns into the root consisting of the consonants *blʕ*. In both Tigrinya

and Amharic, the causativizer *(ʔ)a-* is prefixed to the stem. But the prefix *(ʔ)a-* follows the person prefixes (such as the third person prefix *yɨ-*). In (15c), we have the active jussive form *yɨblaʕ*, while in (15d), we find the passive jussive form *yɨ-t-bälaʕ* which becomes *yɨbbälaʕ*. The jussive form in (15d) is a passive counterpart of the active jussive form in (15c). As in the case of causative morpheme *ʔa-*, the passive morpheme *t-* in (15d) (the vowel *ä* in *tä-* is deleted) occurs between the simple stem *-bälaʕ* and the third person marker *yɨ-* in (15d). In (15f), we have the frequentative stem *-x'atil-* (< *-qatil-* < *-qätatil-*) preceded by the passivizer *tä-*. Hence, (15e) is a frequentative passive form. The causative form of the frequentative stem in (15e) is the causative verb form in (15f). In (15f) the passive morpheme *t-* (the vowel *ä* in *tä-* is deleted) is a prefix. But it occurs following the causative morpheme *ʔa-*. However, we can also notice that the passive and causative morphemes can be assimilated with neighbouring sounds. Thus, we observe *yɨ-t-bälaʕ* > *yɨbbälaʕ* in (15d) and *ʔa-t-qatil-om* > *ʔaqqatilom* in (15f).

In (15g-h), we have Amharic examples. In (15g), the passive morpheme *tä-* is prefixed to the stem. In (15h), the causative morpheme *a-* occurs preceding the passive morpheme *tä-* (cf. also Baye 2007/2008 (2000 E.C.) for more examples).

In our discussion on unaccusatives above, we have indicated that (i) such verbs are associated with little verb v projections (ii) there is no intervening subject between the EPP feature of T, and the N feature of the Theme (cf. Adger 2003 and Pfau 2009 for details). As a consequence, Adger says the Theme should be able to undergo movement to the specifier of TP to satisfy EPP on T. The same holds for passives. As in the case of unaccusatives, finite T can be assumed to have [nom] case. Thus, the single argument of passives or unaccusatives is able to agree with T in case features too. Hence, even though this NP is merged in object position, it receives nominative case from T (according to Miyagawa 2012: 148-9 and other scholars, T inherits nominative case feature from C). Unaccusative and passive predicates have a single Theme argument which appears as the NP daughter of VP. We move an underlying object to a surface subject. As indicated above, the subjects of unaccusatives are treated in the same way as the objects of transitives since they are both merged in the same position (cf. Adger 2003 for more details). Passives are regarded as alternants of simple sentences (i.e. their active counterparts) where the subject is demoted in importance. Moreover, the object comes to be in the structural subject position in passives. As we have seen above, passives are akin to unaccusatives in that (a) they do not appear to have a thematic subject (b) they do not assign accusative case to their object. As a consequence, the object checks [nom] case with [nom] on T and raises to the specifier of TP (cf. Adger 2003 among others).

5.3.2 *Affixes*

In Amharic and in Tigrinya, we have affixes which indicate number, gender and person of the subjects and objects. These affixes occur affixed to the different simple and extended stems indicated above.

5.3.2.1 *Phi-features in Semitic Languages*

As indicated above, Person, number and gender features go under the general name of Phi-features.

Following the pioneering work of scholars such as Lightfoot (2002), Fuß (2005: 33) argues: "[...] there is by now a general agreement on the notion that the study of language change can provide important insights into the properties of Universal Grammar that cannot be gained from a purely synchronic properties". As indicated in Fuß and Trips (2004: 16), "[...] related avenue of research has to do with the question of how diachronic data can be taken into account to provide new insights for the analysis of individual present day languages". In this chapter too, some diachronic data of the languages in question will be taken into account. This chapter focuses on Tigrinya and Amharic person, gender and number morphemes. As the languages in question are members of Semitic languages, however, we will have an overview of the person, gender and number morphemes in some languages of this family. Semitic languages have independent and affix pronouns. In the independent pronouns, we have morphemes which indicate person, number and gender which can correspond to their counterparts in the affix pronouns in Table II.

Pro.	Akkadian		Gɨʕɨz		Classical Arabic		Classical Arabic	
	Person suffix	Person prefix	Person suffix	Person prefix	Subj. suffix	Poss. suffix	Obj. suffix	Person prefix
1sg	-ku	a-	-ku	ʔɨ-	-tu	-i/-ya	-ni	ʔ-
2ms	-ta	ta-	-kä	tɨ-	-ta	-ka	-ka	t-
2fs	-ti	ta…i	-ki	tɨ..-i	-ti	-ki	-ki	t-..-i(na)
3ms	-	i…	-ä	yɨ-	-a	-hu	-hu	y-
3fs	-at	i/ta...	-ät	tɨ-	-at	-ha	-ha	t-

1pl	-nu/-ni	ni…	-nä/na	nɨ-	-na	-na	-na	n-
2mp	-tunu	ta...ā	-kɨmu	tɨ-..-u	-tum	-kum	-kum	t-..u(na)
2fp	-tɨna	ta… ā	-kɨn	tɨ-..-a	-tunna	-kunna	-kunna	t-..-na
3mp	-ū	i…ū	-u	yɨ-..-u	-u	-hum	-hum	y-..u(na)
3fp	-ā	i…ā	-a	yɨ-.-a	-na	-hunna	-hunna	y-..-na

Table II

In Table II, Akkadian, GɨʕɨzandClassical Arabic affixes are indicated. It may not be necessary to discuss the details of the affixes in Semitic languages. However, we can mention the elements that are important for our discussion in this chapter.

In Table II, we have the person suffixes and the person prefixes (affixes under the columns person suffix and person prefix) preceding and following the stems. According to Ungnad (1969: 60-62), a vowel *ā* occurs preceding the Akkadian person affixes and is called a connecting vowel. The presence of such a connecting vowel may be useful in understanding the forms of some affixes in Abyssinian Semitic languages (cf. also Caplice 1980; Izreʔel 1991 among others for the class of roots which takes the vowel *u* instead of *a* or *i*). However, this issue will not be discussed here.

The prefixes and suffixes in Table II are related to the person, gender and number elements in the independent pronouns (Segert 1984: 51 for 1sg short *ana* and long *anaku*). The Akkadian and Gɨʕɨzperson suffixes (in Table II) are subject suffixes (which correspond to classical Arabic subject suffixes in the Table). In Akkadian, the second person suffix *t* corresponds to the second person prefix *t*. The person prefix *i-* in the third person pronouns corresponds to *y-* in GɨʕɨzandClassical Arabic (cf. Ungnad 1969: 61 among others for the derivation of *i-* from *ya-*). Besides, gender and number markers in the prefixes and suffixes are related.

In GɨʕɨZ, the second person suffix *k* corresponds to the second person prefix *t*. In Classical Arabic, the possessive and object suffixes differ only in the first person singular (i.e., *-i* or *-ya* as a possessive suffix and *-ni* as an object suffix). According to Segert (1984: 51), the Ugaritic genitive and accusative forms are identical except in the first person singular, in which the object suffix contains */-n-/* while the possessive suffix is *-ī* or *-ya* (cf. Tragger and Rice 1954; Murtonen 1967; Ungnad 1969; Caplice 1980; Segert 1984; Arbeitman 1991; Izrʔel 1991). The data from different Afro-Asiatic languages show that the element *n* or its variant *m* (i.e. *n* > *m*) mark plural (cf. Loprieno 1995 among others). In Berber, for instance, the elements *n* or *m* < *n* mark plural number.

We can observe in our later discussion on Phi-features that this is also true in Semitic languages. In the independent subject pronouns of Akkadian, for instance, the singular and plural pronouns differ. We observe the presence of an additional *n* in the latter. In Semitic languages, primary gender is marked by *-a*, *-i* while *-u*, *-a* mark secondary gender (cf. also Table I). As we can see later in our discussion, Tigrinya has the form *nɨss* followed by *ka* 'you (2ms)', *ki* 'you (2fs)', *kum* 'you (2mpl)' and *kɨn* 'you (2fpl)' commonly used for second person pronouns. However, *nɨss* is formed on the analogy of the stem for third person pronouns. Furthermore, Tigrinya uses the form *ʔan-* followed by *-ta* 'you (2ms)', *-ti* 'you (2fs)', *-tum* 'you (2mpl)' and *-tɨn* 'you (2fpl)'.

In our earlier discussion above (see chapter 4), we have indicated that word order can play a role in the development of agreement morphemes. In the pre-classical Mongolian languages, personal and demonstrative pronouns are placed after the finite verb. However, the personal pronouns can sometimes be put before the verb, but repeated after the latter (cf. Fuß 2005). We may assume similar situations in early Afro-Asiatic languages. In Semitic languages like Gɨʕɨz, pronouns or demonstratives can occur in pre or post verbal positions. Clitics or pronouns, which precede and follow verbs, can develop into prefixes and suffixes respectively. Furthermore, additional full forms could be added in preverbal positions, initially for reasons of emphasis or related reasons, which later develop into true subjects of the clauses. As indicated in the literature, the form *ʔan-* which occurs attached to independent subject pronouns like *ʔanta* and *ʔanti* is a preformative. The preformative *ʔan-* which precedes person elements such as *t* and gender morphemes like *a* is assumed to be an originally deictic element *han* (cf. Lipinski 1997 among others and the discussion on [(5.4)] below).

In Semitic languages, there are perfective and imperfective forms which are indicated by different consonant-vowel (CV) patterns. In the imperfective *t* can indicate second person subject prefix while in the perfective, *k*/*t* indicate second person subject suffix. Moreover Semitic languages have suffixes which indicate non-subject forms. In Akkadian, Ugaritic, Hebrew, Syriac, Arabic, Gɨʕɨz and Tigrinya suffix pronouns, second person is marked by *k* in the genitive, accusative, and dative forms. In Egyptian suffix and dependent pronouns, second person is indicated by *k* or *θ* < *k* (cf. Gardiner 1950; Loprieno 1995 among others). According to Satzinger (2004: 487-497), the Egyptian absolute pronouns are of secondary origin and in many cases are derived from the forms that are regarded as object pronouns (also known as dependent or B pronouns).

5.3.2.2 *Subject Prefixes and Suffixes in Tigrinya and in Amharic*

In Tigrinya and in Amharic, the verb may reveal person, number and/or gender of the subject and/or object. Furthermore, Tigrinya and Amharic

can have subject and non-subject independent pronouns which mark person, number and/or gender. In other words, Amharic and Tigrinya can have morphemes which mark person, number and/or gender in independent pronouns, and pronominal affixes. The latter (i.e., pronominal affixes) can be prefixes and/or suffixes. In the imperfectives and jussives, subject is marked by prefixes and/or suffixes while in the perfective and gerundive forms subject is indicated by suffixes only. In the imperatives, however, subject is marked by suffixes only in the affirmative forms while in the negative forms it is indicated by both suffixes and prefixes. In both Tigrinya and Amharic, basic stems can be formed by inserting different vowels into the root consonants as in the case of *qätäl-* in *qätäl-ä* 'he (has) killed' and *-qättɨl* in *yɨ-xättɨl* 'he kills' in the perfective and imperfective forms of Tigrinya and also as in *gäddäl-* in *gäddäl-ä* 'he (has) killed' and *-gädl-* in *yɨ-gädl-al* 'he kills/will kill' in the perfective and imperfective forms of Amharic. In Amharic, the verb of existence *all-* (followed by subject suffixes) which becomes *-al* in (3ms) is obligatorily added to imperfective and gerundive verb stems. But in Tigrinya, imperfective and gerundive verb stems may occur alone (without the presence of the verb of existence). Observe the affixes in the perfective (perf.), in the imperfective (imperf.), imperative (imp) and jussive (juss.) of Tigrinya and Amharic in Table in III:

Pro.	Tigrinya		Amharic		Tigrinya		Amharic	
	perf.	imperf.	perf.	imperf.	imp.	jussive	imp	jussive
1sg	-ku	ɔɨ-	-hu/-ku	(ɔ)ɨ-…+ -allähu		yɨ-		lɨ-
2ms	-ka	tɨ-	-k	tɨ-… + -alläh	-		-	
2fs	-ki	tɨ-…-i	-š	tɨ-…i- + -alläš	-i		-i	
3ms	-ä	yɨ-…	-ä	yɨ-…+ -al		yɨ-…		yɨ-…
3fs	-ät	tɨ-...	-äčč	tɨ-…+ -alläčč		tɨ-...		tɨ-...
1pl	-na	nɨ-…	-n	(ɔ)ɨn-…+ -allän		nɨ-…		ɔ)ɨn-..
2mp	-kum(u)	tɨ-...-u	-aččɨhu	tɨ-…-.u + - allaččɨhu	-u		-u	
2fp	-kɨn(a)	tɨ-…-a			-a			
3mp	-u	yɨ-…-u	-u	yɨ-…-u + -allu		yɨ-..+ -u		yɨ-..+ -u
3fp	-a	yɨ-…-a				yɨ-..+ -a		

Table III

The affixes in Table III can be affixed to stems in the perfective, imperfective, imperative and jussive. In Tigrinya, second person can be marked by

k in the perfective and by *t* in the imperfective. In Tigrinya, the vowels *-a* (in the [2ms] perfective) and *-i* (in the [2fs] perfective, imperfective and imperative) are primary gender markers. The former mark masculine while the latter indicate feminine. In the imperfective and imperative stems of Tigrinya, the primary second person masculine gender marker is deleted while the primary feminine gender marker *-i* occur after the basic stem as a suffix.

In Amharic too, second person is marked by *-k* or *-k* > *-h* in the perfective and by *-t* in the imperfective. In the case of gender, the vowel *-a*, unlike that of its counterpart in Tigrinya perfective, is not overtly seen (i.e., the masculine primary gender marker is deleted in Amharic). Moreover, the Amharic primary feminine gender marker, in the perfective, palatalizes the person marker *-k* (hence we see *-ki* > *-š*). However, the primary gender marker *-i* occurs overtly in the imperfective and imperative forms as a suffix following the stem in the latter and as a suffix following the stem and preceding the verb to exist in the former.

In the plural too, second person is marked by *-k-* in the perfective and by *-t-* in the imperfective in Tigrinya.

In Tigrinya, we have *kum* (that becomes *kumu* when followed by object suffixes) for the second person masculine plural and *kɨn* (which becomes *kɨna* if followed by object suffixes) for the second person feminine plural. The morphemes *kum* and *kɨn* are, I assume, derived from *kanu* (which becomes *kunu* > *kumu* by assimilation) and *kina* respectively (cf. also Castellino 1962; Moscati et al 1964; Buccellati 1996; Lipinski 1997; Fuß 2005: 31 among others). Number is marked by *n* or *n* > *m* in Tigrinya (cf. Saddiqi 2009 for the change of number element *n* > *m* in a Berber language and Egedi 2005 for related data in Egyptian) . Moreover, Tigrinya has secondary gender markers *-u* and *-a*. The vowels *-u* and *-a* which occur following the number morpheme *n* or *n* > *m* in *kumu* and *kɨna* are secondary gender markers.

Tigrinya distinguishes gender in the plural. However, this is not the case in Amharic. In Amharic, we find *-ačč̣hu* for the second person plural (i.e. we find the same forms for the plural in Amharic). In Semitic languages, *-at* can be used as a plural morpheme. Moreover, we find *-hu* 'the' in Semitic languages. But the Semitic element *-hu* may indicate a third person singular. Thus, we may try to derive *-ačč̣hu* from forms like *-at* + *hu* (i.e., a plural form + [3ms]). But *-ačč̣hu* indicates a second person plural. Hence, it appears to me that *-ačč̣hu* is derived from double plural form composed of elements like *-at* (a plural form) and *kumu* (2mpl). In Amharic, it is possible to observe *k* > *h* (as in *-ku* > *-hu* for first person singular) and *t* > *č* (as in *amrɨt* 'you (2ms) produce' and *amrɨti* > *amrɨči* 'you (2fs) produce'. In Tigrinya, we have the forms *-kum* 'you (2mpl)' and *-atkum* 'you (2mpl)'. In the same manner, we may assume *ati* + *kumu* > *ačč̣hu* 'you (2pl)' for the Amharic second person plural. It can be

observed that the form which can correspond to Tigrinya second person masculine plural is used to indicate the masculine and feminine second person plural form in Amharic.

Besides, in Tigrinya we have the prefix *yɨ-* attached to the jussive stem to mark first person singular as in *yɨ-* 'I' in *yɨ-ħmäm* 'let I be sick' (lit.) in the sentence *wäla yɨħmäm ʔay-giddɨsäkka-n ʔɨyyu* 'you do not care even if I got sick'. In Amharic, we have the prefix *lɨ-* attached to jussive stem to mark first person singular as in *lɨ-hid* 'let me go'. Furthermore, both Tigrinya and Amharic have first person singular and plural affixes in the perfectives and imperfectives. In Tigrinya, we have *-ku*, as in *baräx-ku* 'I (have) blessed' in the perfective and *ʔɨ-* as in *ʔɨ-barɨx* 'I bless' in the imperfective. In Amharic, we have *-ku* or *-hu* as in *baräk-hu* 'I (have) blessed' in the perfective and *(ʔ)ɨ-* as in *(ʔ)ɨbarrɨk* (which together with *allähu* indicates non-past as in *(ʔ)ɨbarrɨk-allähu* 'I (will) bless' and together with *näbbär* as in *(ʔ)ɨbarrɨk näbbär* 'I used to bless' shows past actions (I assume the imperfective stem can be realized as *ɨbarrɨk* or *ʔɨbarrɨk*).

In several Semitic languages, subject and non-subject second persons can be indicated by *t* and *k* respectively. According to Satzinger (2004), the subject pronouns can be derived from the non-subject.

In Afro-Asiatic languages, *k/t* is attested in the first and second person singulars and plurals as in Old Babylonian *anāku* 'I', *Argobba ank* 'you', *Gafat anati* 'you', *Soddo äd* (< *äti*) 'I', Tigrinya *ʔanta* 'you (2ms)', *Bedja barūk* 'you' and *Tuareg kay* 'you'. Moreover, there are first person pronouns with endings in *-ku* (as in Akkadian *anāku*) and *-ki* or *-kiy* (as in *ʔanokī*^{y}). Originally, the functions of *-ku* and *-ki/-kiy* may be to indicate masculine and feminine respectively. It may be possible to assume the original forms as *ʔanaku* 'I (m)' and *ʔanaki(y)* 'I (f)' and the forms *ʔaniy* and *ʔana* may be derived from earlier forms. For instance, we may assume a process like *ʔanaki(y)* > *ʔanahi(y)* > *ʔana/ʔani(y)* (cf. also Hasselbach 2004: 14 for (1sg) *ʔanākū*, *ʔanōkī* forms in Hebrew). Hodge (1969: 373-4) believes the concept of person was not necessarily basic to the system of early Afro-Asiatic and the particle *k* can occur in pronouns and demonstratives. He (Hodge) made an attempt to drive the forms *-ku* 'I', *-ka* 'you (2ms)' and *-ki* 'you (2fs)' from *k* by adding the vowels *-u*, *-a* and *-i* to it.

The changes *k* > *h* and *h* > *ʔ* is possible in languages. Hence, the segment *ʔ* in the imperfective first person singular subject prefix *ʔɨ-* (which can be realized as *ɨ-* or *ʔɨ-* in Amharic) can be related to *k* (in Tigrinya) or *k/h* (in Amharic) in the perfective 1st person singular subject suffix *-ku/-hu*. Furthermore, we have, in the first person plural subject affixes, *-na* as the perfective subject suffix which corresponds to imperfective and jussive prefix *nɨ-* in Tigrinya. In Amharic, we have the first person plural perfective subject suffix *-n* which corresponds to the prefix *ɨn-* in the imperfective and jussive forms.

So far, we have seen the affixes which indicate first and second person singular and plural subject prefixes and suffixes. As can be observed from Tables II-III, the perfective suffixes of both languages are related. Moreover, the imperfective and jussive prefixes and suffixes of Tigrinya and Amharic are very much related. Nonetheless, we can note the following:

a) As we can see from Table III, Tigrinya and Amharic can use *yɨ-* and *lɨ-* respectively as the jussive first person singular subject prefix;
b) Amharic has the verb of existence attached to the imperfective form;
c) Palatalization occurs in the 2fs suffix of Amharic;
d) Amharic does not show gender distinction in the plural.

Furthermore, the imperative form does not overtly show the second person subject prefix *t* in the affirmative form. But in the negative form, the second person prefix appears overtly in both the languages as in *sɨbär* 'you(2ms) break' and *ʔay-tɨ-sbär* 'you(2ms) do not break' in Tigrinya and also *sɨbär* 'you(2ms) break' and *at-tɨsbär* 'you(2ms) do not break' in Amharic (in the latter, *y/l* of the negative particle is not overtly seen; but it is followed by the gemination of the person prefix *t-*).

So far, an attempt was made to show that first and second person pronominal affixes are related to *k/t-*. On the other hand, the developments of third person pronouns appear different from those of the first and second.

In the literature, it is indicated that there are only two grammatical persons, namely first and second (cf. Bobaljik 2008). It is assumed that third person does not actually constitute a separate person feature at all. Instead, it (third person) is analysed as the result of the absence of (positive values for) the features of first and second person. It is indicated in the literature that third person agreement formatives arise (cross-linguistically) later (if at all) than markers for first and second person (cf. Fuß 2005: 247-249 among others). In many Semitic and non-Semitic languages, demonstratives and third person pronouns are related. In Ugaritic, we find *hwt/hyt* for (3ms) (gen., accus.) pronouns, and *hn-d*, *hnk/hwt* for near and far demonstratives respectively. In Sabaic, the (3ms) *hwt/hyt* (gen., accus.) can be used as far demonstrative. *Chaha* (3ms) *xuta* is related to far demonstrative *huta* in the language. In the case of Amharic and Tigrinya third person pronouns like *nessu* 'he' and *ʔɨrsu* 'he', *su* can be related to Egyptian *su* 'he' Akkadian *šu* 'he' and Bedja *s/š* (3ms), while *n* and *ʔɨr* (we may assume *ʔr* < *ʔn* < *hn*) can be related to a pan-Afro-Asiatic *ʔan* (< han) which can also be related to ancient demonstrative form. Akkadian has a determinative-relative pronoun *šu*. Can we assume the derivation of the element *s/š* from an early demonstrative? I believe this merits further investigation.

In Tigrinya, Table III shows that we have *-ä* (3ms) *-ät* (3fs), *-u* (3mpl) and *-a* (3fpl) in the perfective, *yɨ-* (3ms), *tɨ-* (3fs) *yɨ-…-u* (3mpl) *yɨ- -a* (3fpl) in the imperfective and in the jussive forms which are related to

their counterparts in Amharic. But can we relate the different third person pronominal affixes in the languages in question? According Segert (1997: 177, 184), Phoenician and punic *-y* may stand for *-yu* < *-*hu*, while the causative morpheme is realized as *yi-*, i.e., *hi* > *yi* by assimilation. In Aramaic, a third person pronoun is used as a copula with a form of verb *hwy* 'to be' (cf. Kaufman 1997: 128) which corresponds to Tigrinya verb to be *hwy* > *ʔyy*. In Tigrinya, it is possible to find *y* and *h* > *ʔ* as dialectal variants. Instead of the first person singular prefix *ʔ* (*ʔ* < *h*) and causative morpheme *ʔa-* (*ʔ* < *h*), it is possible to use the element *y-*. For instance, we can say *yä-lgɨss-o* 'you (2ms) take it away' and *yɨ-xäyyɨd ʔalläxu* 'I am going' instead of *ʔa-lgɨss-o* 'you [2ms] take it away' and *ʔɨ-xäyyɨd ʔalläxu* 'I am going'. According to Segert (1997), third person feminine singular is indicated by *-h* in Moabite and by *-t* in Phoenician (cf. also Ungnad 1969: 61 for the prefix *i-* which derives from *-ya*; Foster 2001: 13 for Akkadian [3fs] prefix *i-* in *i-prus* 'she decides'). I assume the consonantal prefix *y-* which designates third person could be originally *h-* which can be part of the ancient deictic or pronominal element like *hwt/hyt*. In Ugaritic, we have *hwt/hyt* for the (3ms) genitive and accusative forms, *hn-d* for near demonstrative and *hwt/hnk* for far demonstrative forms. In Sabaic, we have *hwt/hyt* for the (3ms) genitive and accusative and far demonstrative forms. I assume the prefix *yɨ-* in the imperfective and jussive forms of Amharic and Tigrinya correspond to (or is derived from) the element *h* in forms like *hwt/hyt*. In Tigrinya, we have *ʔɨt* (< *ht*) to indicate a far demonstrative. In the literature (cf. Segert 1997 among others), we can see that third person feminine singular can be indicated by *t* (as in Phoenician, Tigrinya, Amharic) or by *h* (as in Moabite). In Tigrinya, it is possible to say *h* instead of *t*. For instance, *wäx'iʕatikka* 'she hit you' and *wäx'iʕahikka* 'she hit you' are both acceptable forms. It appears to me that it is possible to assume the relationship of the prefix *tɨ-*(3fs) in the imperfectives and jussives of the languages in question to the element *t* in *hwt/hyt*.

In the plural forms of the imperfectives and jussives of Tigrinya, we find *-u* and *-a* as in *yɨ-...-u* (3mpl) and *yɨ-..-a* (3fpl). In the gerundive and perfective subject suffixes, we find second person masculine plural suffix *-kum* (derived from *kanu* > *kumu*) and in some contexts also realized as *kumu*, and second person feminine plural *kɨn* (derived from *kɨna* and can be realized as *kɨna*). Moreover, we find third person masculine plural *-om* (which can be realized as *-omu* in some contexts) and third person feminine plural *-än* (which can be realized as *-äna* in some contexts) in the gerundive form. The element *-u* which occurs in *-kumu* and in *-omu* is a secondary masculine gender marker, while the element *-a* which occurs in *-kɨna* and in *-äna* is a secondary feminine gender marker. The elements *-u* and *-a* in *yɨ-...-u* and *yɨ-...-a* of Tigrinya are originally masculine and feminine secondary gender markers. In *yɨ-...-u* and *yɨ-...-a*, however, the secondary gender elements also indicate plurality. In the perfective

suffixes of Tigrinya, plurality is indicated by *n*. In Saho, an Afro-Asiatic language, number is indicated by *n* in the perfecive, impefective and subjunctive forms. Tigrinya independent pronouns have the element *n* to indicate plurality. In the imperfective and Jussive forms of Tigrinya, however, the number element *n* is not overtly seen.

In the plural forms of the imperfectives and jussives of Amharic too, we find *-u* as in *yi-...-u* (3pl). In the perfecive subject suffixes, we find, second person masculine plural suffix *-ačč̌ihu*, which I assume is derived from *-atkumu* (I also assume *kanu* > *kumu*). Moreover, Amharic has third person plural suffix *-u* in the perfective. As in Tigrinya, the ancient Amharic secondary gender marker *-u* is also used to indicate plurality. The element *-u* in *yi-*...-u of Amharic is originally secondary gender marker. In *yi-...-u*, however, the secondary gender element also indicates plurality. In Amharic, independent pronouns indicate their plural form by the preformative (*ʔ*)*n* (cf. Zaborski 1991 among others for the element *n* in West Semitic languages). In the imperfective and Jussive forms of Amharic (as in Tigrinya), however, the number element *n* is not overtly seen. The jussive pronominal subject affixes are similar to imperfective pronominal subject affixes in both Tigrinya and Amharic. Nonetheless, we have the jussive prefix *li-* in Amharic which can correspond to *yi-in* Tigrinya. The pronominal subject affixes we find attached to the verb forms in the perfectives, imperfectives, and imperatives of Tigrinya are related to their counterparts in most Semitic languages. However, we can observe that the second person element *t* in the latter are realized as *k* in the former. Observe the following:

	Proto-Semitic Affixes		
	Perfect	Imperfect	Imperative
1sg	-kū	ʔv-	
2ms	-ta	tv-	
2fs	-ti	tv-..i	-i
3ms	-(a)	yv-	
3fs	-at	tv-	
1pl	-na	nv-	
2mpl	-tumu	tv-..-ū	-ū
2fpl	-tina	tv-..-ā	-ā
3mpl	-ū	yv-..-ū	
3fpl	-ā	yv-..-ā	

Table IV

If we compare the affixes of Tigrinya and Amharic in Table III and the Proto-Semitic affixes in Table IV, the relationship is clear. However, the following changes (in Amharic) are worthy of notice:

(16) a. we see some Palatalization processes like *-ki* > *š* in Amharic

b. in Amharic, we observe the addition of the verb to exist (*-all-*) and the presence of *-aččɨhu* (which I assume is derived from *-at* + *kumu*)

c. the loss of gender distinction in the plural and the use of the masculine morphemes for both masculine and feminine genders

d. as in Tigrinya, Amharic second person subject suffix *-k* in the perfective corresponds to Proto-Semitic second person subject suffix *-t*

However, it is not difficult to see the relationship of the Amharic subject affixes indicated in Table III to their Proto-Semitic counterparts indicated in Table IV.

Tigrinya and Amharic have gerundive verbal stems with the vowel patterns *-a-i-* > *ä-i-* in Tigrinya and *-a-i-* > *ä-*(*ɨ*) in Amharic. The gerundive stems in both languages take different subject suffixes. Besides, the languages in question have possessive and object suffixes. In Table V, we see (a) gerundive suffixes (ger. suf.) that can be suffixed to gerundive verb (ger. v.) forms like *barix-* 'bless'; (b) possessive suffixes (poss. suf.) that can be suffixed to nominals; (c) object suffixes (obj. suf.) which occur as suffixes of verbs following the subject affixes. The object suffixes indicated in the table as (A) and (B) are different forms which occur in different contexts.

Pro.	Tigrinya		Amharic		Tigrinya		Amharic	
	ger. v. + ger. suf	N + poss suf.	ger. v. + poss. suf.	N + poss. suf.	obj. suf (B)	obj.suf. (A)	obj. suf. (B)	obj. suf. (A)
1sg	-ä	-äy	-yä + -	-yä	-ni, -nni	-änni	-ňň	-ɨňň, -äňň
2ms	-ka	-ka	-äh + -	-(ɨ)h	-xa,-kka	-äkka	-h	-ɨh
2fs	-ki	-ki	-äš + -	-(ɨ)š	-xi,-kki	-äkki	-š	-ɨš
3ms	-u	-u	-o + -	-u	-o	-w(w)o, -y(y)o, -ʔo	-w, --t	-ɨw, -äw, -ɨt
3fs	-a	-a	-a + -	-wa	-a	-w(w)a, -y(y)a, -ʔa	-at	-yat, -wat

1pl	-na	-na	-n + -	-ačč*i*n	-na, -nna	-änna	-n	-än, -*i*n
2mp	-kum(u)	-kum	-ačč*i*hu+ -	-ačč*i*hu	--xum, -kkum	-äkkum	-ačč*i*hu	-wačč*i*hu, -yačč*i*hu
2fp	-k*i*n(a)	-k*i*n			-x*i*n, -kk*i*n	-äkk*i*n		
3mp	-om(u)	-om	-äw + -	aččäw	-om	-w(w)om -y(y)om , -ʔom	-aččäw	-waččäw, -yaččäw
3fp	-än(a)	-än			-än	-w(w)äm -y(y)än, -ʔän		

Table V

As we can see from Table V, Tigrinya has gerundive and possessive suffixes which are almost the same. Possessive suffixes occur attached to nominal forms. Moreover, gerundive suffixes occur attached to stems which are similar to the nominal type of Gɨʕɨz stem *cäcil* as in *qätil*. However, we can observe the following difference between these two Tigrinya forms:

(17) a. Gerundive and possessive suffixes occur attached to verbs (the gerundive stems function as verbs) and to nouns respectively

b. The element *-ä* as in *barix-ä* 'I (have) blessed' corresponds to *-äy* as in *gänzäb-äy* 'my money'

c. In the gerundive, the secondary gender markers *-u* and *-a* appear if followed by object suffixes

If, for instance, we compare *barix-kum* 'you (2mpl) blessed' and *barix-kumu-wo* 'you (2mpl) blessed him', we have the masculine secondary gender marker *u* in the latter. In the case of *barix-än* 'they (3fpl) blessed' and *barix-äna-ʔo* 'they (2fpl) blessed him' too, the secondary gender marker *a* appears in the latter and not in the former. In *barixkumuwo* and *barixänaʔo*, we have the secondary gender markers *-u* and *-a* which occur preceding the third person allomorphs *-wo* and *-ʔo*. In the examples like *barix-kum* and *barixän*, the secondary gender markers u and a are lost because they are not protected by the object suffixes (cf. Hasselbach 2004: 8 for the loss of vowels not protected by mimation in Akkadian).

In Amharic too, we have gerundive and possessive suffixes indicated in Table V. The gerundive suffixes occur attached to gerundive verb stems while the possessive suffixes occur affixed to nouns. The suffixes are relat-

ed. For the first person singular, we have the suffix *-yä* affixed to nominals (as in *bet-yä* 'my house') and to verbs (as in *barɨk-yä* [*-yä* > *e* is possible]). However, the verb of existence occurs attached to the gerundive stem as in *barɨkyä* + *allähu* > *barɨkyallähu* 'I have blessed' (the symbols + - in Table V shows the verb of existence occurs following the gerundive suffixes). In the first person plural, the suffix *-än* occurs attached to the gerundive stem. The element *n* in the gerundive stem corresponds to the suffix *-n* in the perfective stem and to the prefix *n-* in the imperfective and jussive stems of Amharic. The Amharic person plural possessive suffix *-aččɨn* differs from its counterpart *-än* in the gerundive. Murtonen (1967: 20) assumes a process like *at*(*i*) + *kū* > *ačɨhu*. However, second person singular suffixes are *-ka* (2ms) and *-ki* (2fs) and not *-kū*. On the other hand, I have indicated above that *aččɨhu* is composed of two plural forms: *at*(*i*) and *kumu*. As in *-at* + *kum* (indicated above) of Tigrinya and *liqawɨntočč* 'intellectuals' (composed of a broken plural and a suffix *-očč*) of Amharic, I believe there are two plural forms in *aččɨhu* (cf. also the discussion above). In the same manner, I assume *at*(*i*) + *n* > *aččɨn* for the Amharic first person plural possessive indicated in Table V.

As we can see from Table V, we find second person possessive suffixes *-h* (< *-k*) for the second person masculine singular and *-š* (< *-ki*) for the second person feminine singular (which can be preceded by *ɨ*) in Amharic. The second person gerundive suffixes are *-äh* (2ms) and *-äš* (2fs). The element *ɨ* which occurs preceding the second person possessive suffixes can be an epenthetic segment or an originally dual element *ä* (< *a*) which becomes *ɨ*. However, it seems to me that the element *ä* preceding the second person gerundive suffixes is an originally dual element. Besides, we find *-aččɨhu* as a second person plural suffix affixed to a gerundive verb stem and to nouns. It is used as a gerundive verbal suffix in the former and as a possessive suffix in the latter.

As indicated earlier, third person pronouns can be related to demonstratives. For instance, Ungnad (1969: 31) says Akkadian possesses personal pronouns, in the strict sense of the word, only for first and second person while the third person is an anaphoric pronoun. Proto-Semitic short *a* corresponds to Ethio-Eritrean Semitic *ä*. In languages like Tigrinya, *-äw* > *o* as in *yɨʔtäw* > *yɨʔto* 'let him enter' is common. In other Semitic languages, we can find *ahu* > *o* (cf. Hasselbach 2004: 11). Thus, I assume *a* + *hu* > *ähu* > *o* for the third person masculine singular and *a* + *ha* > *ä* + *ha* > *a* for the third feminine singular gerundive suffixes indicated in Table V. Regarding the third person plural affixes, we have different morphemes as gerundive and possessive suffixes. Amharic has third person plural *-äw* in the gerundive and the third person plural *-aččäw* in the possessive forms. I assume *-aččäw* is derived from *ati* + *hamu* (cf. Murtonen 1967: 20 for *-ati* > *-ač* in Amharic). According to Arbeitman (1991: 94-95), Amharic *-äw* of *-aččäw* is derived from (*h*)*äw*, while Tigrinya and Tigre *-*(*h*)*om* is

derived from (*h*)*ämu*. The vowel *a* in *-ka* marks primary masculine gender. The last vowel *u* in *ʔantumu* indicates secondary masculine gender. According to Lipinski (1997: 298), *ʔantumu* is derived from *ʔantanu*. We have indicated earlier that Phi-features in independent pronouns are related to Phi-features attached to verbs. In the literature, we can find the vowel *ā* preceding the pronominal suffixes such as *t* which according to Ungnad (1969: 61) is a connecting vowel (cf. also Satzinger 2004). As indicated in Hasselbach (2004), *ahu* > *au* > *ō* is possible. In Tigrinya, the process *äw* > *o* as in *yɨʔtäw* > *yɨʔto* 'let him enter' is commonly found in verbs and in pronominal affixes. Short *a* in Proto-Semitic becomes *ä* in Ethio-Eritrean Semitic languages. Taking such things into account, I assume Tigrinya/Tigre -(*h*)*ämu* and Amharic -(*h*)*äw*, indicated in Arbeitman (1991: 94), can have the same origin and can be derived from an originally *hanu* as in the following:

(18) a. Hanu > hä(a)mu > homu > om (3mpl) for Tigre and Tigrinya

b. Hanu > hämu > hawu > äw (3pl) for Amharic

In both Amharic and Tigrinya, the vowel *a* can become *ä*. In Amharic *n* > *m* > *w* can be assumed due to *u* (which can be followed by a deletion and degemination processes) and we get (18b) above. In **hanu*, *n* is a plural element. As we can observe from other Afro-Asiatic languages like Berber, this number indicating element *n* can become *m* in some contexts. The element *ä* (< *a*) can become *o* due to regressive assimilation. Hence, we assume *ä*(*a*) > *o* and *n* > *m* due to *u* (by regressive assimilation) in Tigrinya and Tigre as in (18a). In Tigrinya, we find *ä* preceding the object suffixes. Hence, I assume *a* + *hanu* > *ä* + *hämu* > *omu* (the final *u* regressively assimilating *ä*, i.e. *ä* > *o*) in Tigrinya which can also be applied to Tigre.

The gerundive and possessive suffixes of Tigrinya are almost the same or very close to each other. However, there is a very interesting relationship between the gerundive and possessive suffixes of Amharic too. In the gerundive suffixes of Amharic, we observe *ä* + *h* > *-äh* (2ms), *ä* + *š* > *-äš* (2fs), *ä* + *hu* > *o* (3ms), *ä* + *ha* > *ha* > *a*(3fs), *ä* + *n* > *-än*(1pl). As indicated earlier in this chapter, I assume *ati* + *kumu* > *ačč*ɨ*hu* (2pl) and *a* + *hanu* > *ä* + *hänu* > *ämu* > *-äw* (3pl) in the gerundive plural forms of Amharic.

Regarding the possessive suffixes of Amharic, we observe -(*ɨ*)*h* (2ms), -(*ɨ*)*š* (2fs), *hu* > *-u* (3ms), *-hua* > *wa* (3fs), *ati* + *n* > *-ačč*ɨ*n* (1pl), *ati* + *kumu* > *-ačč*ɨ*hu* and *ati* + *äw* > *-aččäw* (3pl). The element *ɨ* may be assumed to be an original *a* > *ä* which later becomes *ɨ*. However, *ɨ* may also be an epenthetic. The main differences between the gerundive and the possessive suffixes of Amharic appears to be the presence of *ä* in the former and presence of *ati* > *ačč* in (1pl) and (3pl) in the latter.

5.3.2.3 *Object Suffixes in Amharic and in Tigrinya*

In 5.3.2.2, we have observed the relationship among person, gender and number morphemes in the perfective, imperfective, imperative, jussive and gerundive subject affixes. In the literature, we can see that in languages like Ugaritic, the possessive and object suffixes are identical except in the first person singular. In this section, we will see object suffixes in Tigrinya and Amharic. In both the languages in question, there are object affixes indicating first, second and third person pronouns and are all suffixes. As we can see from Table V, Amharic has different object suffixes. According to Leslau (1995), each of the Amharic object suffixes can have different forms as in the following:

(19)
a. Whenever the object suffix pronoun is *-C* (*C*=consonant), the *-C* suffix (such as *-h*) is attached to a verb form ending in a vowel (as in *-h* in *näggär-ä-h*)
b. Whenever the object suffix pronoun is *-ɨC* , it (i.e., *-ɨC*) is attached to a verb form ending with the subject suffixes *-š* and *-č* as in *nägär-š-ɨw* 'you (have) told him', and *näggär-äčč-ɨh* 'she (has) told you (2ms)'
c. The object suffix *-äC* (like *-äh, -äw, -äš*) is attached to a verb form ending in any other consonant
d. If the verb form ends in *-u, -o,* the object suffix pronouns of 3rd person masculine 'him' has the allomorph *-t* as in *näggär-u- t* 'they (have) told him' and *nägr-o-t* 'he telling him'
e. If the verb form ends in *-w* as in *nägrä-w,* the object suffix pronoun of the 3rd person masculine has the form *-ɨt* as in *nägrä-w-ɨt* 'they telling him'
f. If the verb form which ends in a vowel is attached to a vowel initial object suffix, the final vowel of the verb form is elided as in *sämm-a + - aččɨhu* > *sämmaččɨhu* 'he listened to you(pl)', *näggär-ä + aččɨhu* > *näggär-aččɨhu* 'he told you(pl)' (cf. Leslau 1995: 418-419)
g. The suffixes *-yat, -yaččɨhu -yačča̱w,* are added to verb forms ending in *-i, -e* as in *nägɨrr-e + yačči̱h* > *nägɨrreyačči̱hu* 'I having told you (pl)'
h. The suffixes *-wat, -wačči̱hu, -wačča̱w* are added to verb forms ending in *-u, -o* as in *näggär-u-wačča̱w* 'they told them'

On the other hand, there are reasons for the variation in object suffix forms. Some of these reasons could be insertions or deletions. A sequence of two vowels is not permissible in Amharic and hence we may observe processes of deletion or insertion. The elements *y* and *w* are epenthetic segments inserted between two vowels as in (19g-h). The former is inserted between a verb form ending in *i/e* and a vowel initial object suffix, while the latter occurs between a verb stem ending in *u/o* and vowel initial object suffix.

Besides, deletion is also possible, when two vowels are in sequence. When the vowel final verb stem is attached to a vowel initial object suffix, one of the vowels may be elided as in (19f).

Moreover, the data from Amharic and Tigrinya reveal that the element *t* can surface in substitution of an original pharyngeal, glottal or a glide segment which Amharic lost sometime in its history. For instance, the Amharic verb *gäddäl-ä* 'he (has) killed' has the infinitive form *mägdäl* 'to kill', whereas the Amharic verb *sämma* 'he (has) heard', which corresponds to Gɨʕɨz and Tigrinya verb root *smʕ* 'hear', has the infinitive form *mäsmat* and not **mäsmäʕ* or **mäsmaʕ*. The Amharic verbs *säläčč-ä* 'exhausted (3ms)' and *tämäňň-ä* 'he became desirous', which correspond to Tigrinya verbs *sälčäw-ä* 'exhausted (3ms)' and *tämännäw-ä* 'he became desirous' have the infinitive forms *mäsälčät* and *mämmäňňät* respectively (instead of **mäsälčäw* and **mämmäňňäw* respectively).

In Semitic languages, we have suffixes which may be preceded by *a* which may be a connecting vowel or an element originally indicating duality (cf. also 2.5 of chapter of two). In Tigrinya, *äw* > *o* as in *fatäw-ä* > *fäto* 'he became willing' is possible. Thus, the third person object suffix o 'him' could be the result of some phonological processes. The vowel *a* > *ä* followed by a third person pronoun *-hu* or *-hu* > *w* (as in *ähu* > *äw* > *o*) can become *o*. The data from Semitic languages show that we have the object suffixes *-hu/-u/-o* (3ms), and *-ha/-a* (3fs) in Gɨʕɨz, *-hu/-hi* (3ms) and *-ha* (3fs) in Arabic, *-(h)i/-h* (3ms), *-h/-ah* in Syriac, *-hu/-o* (3ms), *-(h)a/-ah/-h*(3fs) in Hebrew. Besides, Aramaic genitive and object pronominal suffixes can be preceded by *ā* or e. In the same way, we may assume a vowel *a* > *ä* preceding the object suffixes like *-hu* in Amharic too.

Moreover, the gerundive form *nägr-* of Amharic can be followed by *-äw* (3pl). According to Arbeitman (1991), Tigre and Tigrinya third person plural suffix *-(h)om(u)* is derived from *-(h)ämu*. Moreover, I assume Gɨʕɨz, Tigre and Tigrinya third person plural suffix *-(h)om(u)* can be derived from *a + hanu* as in *a + hanu* > *ä + hämu* > *homu* > *om(u)*. In the same way, we can assume *a + hanu* > *ä + hämu* > *ämu* > *äww* > *äw* for Amharic third person plural subject suffix. I assume the suffix *-o* 'he' as in *säbr-o* 'he breaking' can be derived from *-ähu* (i.e., *ähu* > *o*), the object suffix *-äw* 'him' as in *yi-sbär-äw* 'let him break it' can be derived from *-ähu* > *-äw*. As in other Semitic languages, the object and subject affixes are related.[1]

[1] I assume the vowel *-a* > *-ä* preceding the pronominal element in languages like Tigrinya is a duality indicating segment which shows a relationship between two parts. In *yi-fäṫṫir* 'he creates' and *yifäṫr-ä-kka* 'he creates you (2ms)' of Tigrinya, for instance, we see a relationship between the two: the creator and the created. This may merit further research.

However, originally different morphemes may appear the same. It appears to me that the object suffix *-äw* 'him' and subject suffix *-äw* 'they' as in *säbr-äw* 'they breaking' are originally different. The former is derived from *-ähu* > *äw* while the latter is, I believe, derived from *-(ä)hämu* > *äw*. The Amharic gerundive verb stem followed by subject suffix *-äw* (3pl), as in *nägr-äw*, can be followed by object suffixes like *-(ɨ)h*, *-(ɨ)š*, *(ɨ)n*, *-ähu/-hu* and hence we can have the forms *nägr-äw-ɨh* 'they telling you(2ms)', *nägr-äw-ɨš* 'they telling you (2fs)', *nägr-äw-ɨn* 'they telling us', **nägr-äw-ähu* > *nägr-äw-ɨt* 'they telling him'.

As in Amharic, Tigrinya has different allomorphs of the object suffixes. As we can see from Table V, (cf. also Tesfay Tewolde forthcoming), Tigrinya has the first person object suffixes indicated in (20a-c), second person object suffixes indicated in (21a-c) and third person object suffixes indicated in (22a-c):

(20) a. *-änni/-ɨnni* (1sg), *-änna/-ɨnna* (1pl) after consonant ending stems (including stems ending in *-ät*)

b. *-nni* (1sg), *-nna* (1pl) after *-ä* and other historically assumed to be short vowels in *-ka, -ki, -i*

c. *-ni*(1sg), *-na*(1pl) after historically long vowels *-u, -a* (including the last vowels in *-kumu, -kɨna, omu, -äna*)

I assume, the first person singular and plural object suffixes are derived from *-äni* and *-äna* respectively by geminating the element *n* (to become *-änni* and *-änna*), by deleting *ä* and geminating *n* (to form *-nni* and *-nna*), by deleting *ä* (to form *-ni* and *-na*).

(21) a. *-äkka/ɨkka* (2ms), *-äkkum/ɨkkum* (2mpl), *-äkki/ɨkki* (2fs), *-äkkɨn/ɨkkɨn* (2fpl) after consonant ending stems (including stems ending in *-ät*)

b. *-kka* (2ms), *-kkum* (2mpl), *-kki* (2fs), *-kkɨn* (2jpl) after *-ä* and another historically assumed to be short vowel in *-na*

c. *-xa* (2ms), *-xum* (2mpl), *-xi* (2fs), *-xɨn* (2fpl) after historically long vowels *-u, -a* (including the last vowels in *-kumu, -kɨna, -omu, -äna*)

I assume, (2ms), (2mpl), (2fs) and (2fpl) object suffixes are derived from *-äka, -äkum, -äki* and *-äkɨn* respectively by geminating the segment *k*, (to become *-äkka* and *-äkkum, -äkki, -äkkɨn* respectively), by deleting *ä* and geminating *k* (to form *-kka, -kkum, -kki* and *-kkɨn*), by deleting *ä* and *k* > *x* (to form *-xa, -xum. -xi, and -xɨn*).

(22) a. *-o*(3ms), *-om* (3mpl), *-a* (3fs), *-än* (3fpl) following *ä* (*ä* is elided) or following a consonant (including stems ending in *-ät*)

b. *-y*(*y*)*o* (3ms), *-y*(*y*)*om*(3mpl), *-y*(*y*)*a*(3fs), *-y*(*y*)*än*(3fpl) following *-i*, *-ka*, *-ki*, *-na* (most probably historically short vowels)

c. *-w*(*w*)*o*(3ms), *-w*(*w*)*om*(3mpl), *-w*(*w*)*a*(3fs), *-w*(*w*)*än* following *-ku* or *-u* (including *-u* in *-kumu* and *-omu*)

d. *-ʔo*(3ms), *-ʔom*(3mpl), *-ʔa*(3fs), *-ʔän*(2fpl) following the vowel *a* which can also be changed to *i*

I assume, (3ms), (3mpl), (3fs) and (3fpl) object suffixes are derived from *-o*, *-om*, *-a* and *-än* respectively by inserting segment *w* (to become *-w*(*w*) *o*, *-w*(*w*)*om*, *-w*(*w*)*a*, *-w*(*w*)*än* ([3fpl] respectively); by inserting *-y* (to form *-y*(*y*)*o*, *-y*(*y*)*om*, *-y*(*y*)*a*, *-y*(*y*)*än*([3fpl] respectively) and by inserting *ʔ* (to form *-ʔo* (3ms), *-ʔom* (3mpl), *-ʔa* (3fs) and *-ʔän* ([3fpl] respectively).

5.4 *Independent Pronouns in Amharic and in Tigrinya*

According to Bobaljik (2008: 226), "it is a universal and fundamental organizing principle of morphology that there are only two grammatical persons, namely first and second […]". It is indicated in Ungnad (1969: 31) that "in the strict sense of the word, Akkadian possesses personal pronouns only for the first and second singular and plural". Moreover, Ungnad (1969) believes, the Akkadian third person pronouns are anaphoric pronouns which, if used adjectivally, should be rendered as 'the aforementioned' or 'that one', as in *sinništum šī* 'that woman'.

The demonstrative **hanni* appears in Old Akkadian and Assyro-Babylonian under the form *anniu*(*m*) > *annū*(*m*). In Gafat (South Ethiopic), we have **hinni* > *iňňi* 'this', vs. *hanni* > *aňňi* 'that'. According to Lipinski (1997), there is one proto-Semitic form that functions essentially as demonstrative which is related to **hanni-* (with its variants **halli-*, *ʔulli*), and with its later syncopated form *han* > *hā-* of the West Semitic definite article. The demonstrative forms *hn-d* in Ugaritic, *hānā* in Syriac, *ʔnl/t* in Sabaic, and *ʔilli* in Tigre are used as the nearer deixis, while Mandaic *hānāt* and Mishnaic Hebrew *hallā* appear to be 'far' deictic pronouns. Moreover, Lipinski (1997) assumes the following:

a) Babylonian *near* demonstrative *agā* (masc.), *agātu* (fem.) *agannūtu* (masc.pl), *agannētu* or *agātu* (fem.pl) may be derived from **han-kā* (he assumes a partial progressive assimilation *nk* > *ng* followed by a complete regressive assimilation *ng* > *gg*);
b) The plural was usually made by adding the demonstrative *anniūtu* > *annūtu* (masc.) or *anniātu* > *annētu* (fem.) to the element *ag*(*g*) < **ang* < **hank*;

c) A parallel *far* demonstrative was formed by adding the independent personal pronoun *šū*;
d) The demonstrative *annitān* at Mari is interpreted as a frozen feminine dual which originally had the meaning 'this and that'.

According to Lipinski (1997), Punic demonstrative *hnkt* combines the deictic element *-kō* followed by the ending *-t*. Lipinski (1997) indicates Hebrew and Punic *-kō* are derived from *-kā* 'here'. In Gɨʕɨz, the element *k* occurs attaches to demonstratives like *z* 'this' as in *zɨku* 'that (m)' *ʔɨntɨku* 'that (f)', *ʔɨllɨku* 'those'.

According to Dillmann (1907: 121), *ana* 'I' is a shortened form of *anōku* or *anōki* (still preserved in Hebrew). Besides, Dillmann says *anōki* is a compound of the demonstrative *an-* and *-ōki* 'I'.

It may be possible to assume a relationship between *k* in a form like *ʔanaku/ʔanaki*^{y} and the element *ħ* as in Syriac (*ʔina*)*ħnan* 'we', Hebrew (*ʔa*) *naħnū* 'we', Classical Arabic *naħnu* 'we', Gɨʕɨz *nɨħnä* 'we' and Egyptian Arabic *ʔiħna* 'we'. Moreover, the element *ħ* in Tigrinya *nɨħna* 'we' can be related to *k* in an ancient form like *ʔanaku/ʔanaki*^{y} (we can assume *k* > *x* > *ħ* or *k* > *h* > *ħ*). According to Dolgopolsky (1999), Proto-Semitic *x/ḫ* corresponds to *ħ* in Hebrew, Phoenician and Syriac and to *x* in Ugaritic, Old Aramaic and Arabic. In Tigrinya, *x* can be an allophone of *k*. In Amharic *h* can be an allophone of *k*. Thus, we may assume the derivation of *ḫ* or *ħ* from k. We may assume an earlier form like *ʔanaḫɨn* for Tigrinya first person plural (or something related to that of Hebrew '(*ʔa*)*naħnu*' which later becomes *nɨħna* 'we'.

Moreover, it may also be possible to assume that the first person plural as the internal plural form of the first person singular in Tigrinya. The element *-a-* (< *-ā-*) in the pattern *cacācvc/cäcacvc* (< *cacācvc*) can be employed to mark nominal and verbal plurality in Semitic languages (cf. Greenberg 1955; Tesfay Tewolde 2009). Hence, it may be possible to form **ʔanahɨn* > *nɨħna* 'we' as the plural form of *ʔan-ä/ʔan-a* 'I' in Tigrinya. The element *-a-* in the last syllable of *nɨħna* in Tigrinya, may correspond to *-a-* in the second syllable in **ʔanahɨn* (which may become **ʔanaħɨn* > *nɨħna* in Tigrinya). In Semitic and Afro-Asiatic languages, *n* or *n* > *m* mark a plural number. Either the element n or the element *-a-* may be employed to mark plurality in Tigrinya, Tigre and Gɨʕɨz. However, this needs further research.

In Tigrinya and Amharic, we can use ʔɨn- to indicate a plural form. As in the case of (*ʔ*)*antä* 'you (2ms)' and (*ʔ*)*ɨnnä* (such as) + (*ʔ*)*antä* 'you (2ms)' > (*ʔ*)*ɨnnantä* 'you (pl)' in Amharic, it may be possible to assume (*ʔ*)*ɨnnä* + (*ʔ*) *ɨne* 'I' > **(ʔ)ɨnnänie* > **(ʔ)ɨnnia* > *ɨňňa* 'we' (in Amharic). It may be possible to assume a similar process in Tigrinya. We may assume something like **hin-ha-na* > *ʔɨnnɨhäna* 'here we are/we are present' which may later become *ʔanɨħna/nɨħna* 'we' (cf. also 23f).

In Tigrinya and Amharic, we have demonstrative forms related to *ha*, or *ht* which can be related to their counterparts in other Semitic languages. Amharic and Tigrinya have a form *hn* > *ʔɨn* (such as, and others). Different Semitic languages of Ethiopia and Eritrea have forms like **hinn-ha-hu* > *ʔɨnni(ɨ/ä)ho* 'here he (it) is'. In Tigrinya, we have a form like *hn* + *ha* + *k* + gender and/or number morphemes for first person singular and second person singulars and plurals, and also *hn* + *ha* + gender and/or number morphemes for the third persons. In **hini* + *ha* + *ku* > *ʔɨnni(ɨ/ä)hä(e) xu*, for instance, we have *ʔɨnni* derived from an ancient demonstrative *hn*, *ha* > *hä* (a form related or similar to Tigrinya definite article or demonstrative pronoun *ht* > *ʔt*, West Semitic definite article *ha* or (3ms) related to *ha/hä*), and *-ku* 'I'. The form *ʔɨnni(ɨ/ä)hä(e)xu* is composed of *ʔɨnni* which can be translated as (*there/here/that/this*) (cf. Lipinski 1997: 316 for the demonstrative *annitān* at Mari originally meaning '*this* and *that*', *ha* > *hä* 'is' and *-ku* 'I' and hence *ʔɨnni(ɨ/ä)hä(e)xu* 'here I am' or 'there I am' can be literarily translated as 'there (here/that/this) is I'. In the third person singulars, we have *hn* + *ha* > *ʔɨnni(ɨ/ä)hä(e)* which can be translated as 'there is' (for the masculine) and *hn* + *ha* + *t* > *ʔɨnni(ɨ/ä) hä(e)t* 'there is' (for the feminine). In the third person plurals, we have *hn* + *ha-u* > *ʔɨnni(ɨ/ä)hä(e)-wu* (for the masculine) and *hn* + *ha* > *ʔɨnnɨ(i) hä(e) -wa* (for the feminine). The final vowels *-u* and *-a* in *ʔɨnni(ɨ/ä)hä(e) wu* and *ʔɨnni(ɨ/ä)hä(e)wa* respectively are secondary masculine and feminine gender markers which can also indicate number. In the Tigrinya examples in (23a-j) first singular and second persons are marked by *k* in (1sg), (2ms), (2fs), (2mpl) and (2fpl).

(23) a. *hini-ha-ku > ʔɨnnɨhä-xu/ʔɨnnexu
'here I am /I am present'

b. *hini-ha-ka > ʔɨnnɨhäxa/ʔɨnnexa
'here you (2ms) are/you (2ms) are present'

c. *hini-ha-ki > ʔɨnnɨhäxi/ʔɨnnexi
'here you(2ms) are /you (2fs) are present'

d. *hini-ha > ʔɨnnɨ(i)hä(e)
'here it is/here he is/he is present'

e. *hin-hat > ʔɨnnɨ(i)hä(e)t
'here it is/here she is/she is present'

f. *hin-ha-na > ʔɨnnɨhäna/ʔɨnnena
'here we are/we are present'

g. *hin-ha-kum > ʔɨnnɨhä-xum/ʔɨnnexum
'here you (2mpl) are/you (2mpl) are present'

h. *hin-ha-kin > ʔɨnnɨhäxɨn/ʔɨnnexɨn
'here you(2fpl) are/ you (2fpl) are present'

i. *hin-ha-u > ʔinnɨ-hä-wu/ʔinnewu
'here they(3mpl) are /they (3mpl) are present'

j. *hin-ha-a > ʔinnɨhäwa/ʔinnewa
'here they (3fpl) are/they (3fpl) are present'

We have also said earlier that first person plural may be marked by *n* or *a* or both (though this merits further investigation). But third person can be marked by *h* (or elements derived from it) in the affixes which can be followed by gender and/or number suffixes. In the independent pronouns, however, I assume third person is indicated by *s*.

As in other Semitic languages, Tigrinya and Amharic have subject, and non-subject independent pronouns. The non-subject independent pronouns in the languages in question can be divided into object and possessive independent pronouns as in the Tables in (VI-i, VI-ii, VII-i, & VII-ii).

Pro.	Tigrinya		Amharic	
	Subject Independent Pronouns	Object Independent Pronouns	Subject Independent Pronouns	Object Independent Pronouns
1sg	ʔan-ä	nɨʔay	ɨn-e	län-e
2ms	ʔan-t-a	nɨʔaxa	an-t-ä	lan-t-ä
2fs	ʔan-t-i	nɨʔaxi	an-či	lan-či
3ms	nɨss-u	nɨʔaʔu	ɨss-u	läss-u
3fs	nɨss-a	nɨʔaʔa	ɨss-u-a	läss-u-a
1pl	nɨh-na	nɨʔana	ɨňňa	läňňa
2mp	ʔan-t-u-m	nɨʔa- x- u-m	ɨnn-antä	länn-antä
2fp	ʔan-t-ɨn	nɨʔa- x-ɨn		
3mp	nɨssat-om	nɨʔa-ʔo-m	ɨnnä- ɨssu	lännä- ɨssu
3fp	nɨss-at-än	nɨʔa-ʔä- n		

Table VI-i

Pro.	Gɨʕɨz	Hebrew	Akkadian	
	Subject Independent Pronouns	Subject Independent Pronouns	Subject Independent Pronouns	Accu./gen. Independent Pronouns

1sg	ʔan-ä	ʔān(ōk)ī	ʔanāku	yâti
2ms	ʔan-t-ä	ʔatta	ʔatta	kâti/a
2fs	ʔan-t-i	ʔatti	ʔatti	kâti
3ms	wiʔit-u	hū	šū	š(u)āti/u
3fs	yiʔiti	hī	šī	š(i)āti
1pl	niħ-nä	(ʔa)naḥnū	nīnu	niāti
2mp	ʔan-t-i-m-u	ʔattem	ʔattunu	kunūti
2fp	ʔan-t-in	ʔattēn(ā)	ʔattina	kināti
3mp	wiʔitomu	hēm(mā)	šunu	šunūti
3fp	yiʔiton	hēn(nā)	šina	šināti

Table VI-ii

In Table (VI-i), we find subject and object independent pronouns of Tigrinya and Amharic. In Table (VI-ii) we see independent subject pronouns of Hebrew and Giʕiz. In Table (VI-ii) we also find independent subject pronouns and accusative/genitive independent pronouns of Akkadian (cf. Ungnad 1969: 31, Caplice 1980: 61, Buccellati 1996, Lipinski 1997, Bennett 1998 for details on the Akkadian pronouns, and Lipinski 1997 and Bennett 1998 among others for Hebrew and Giʕiz).

In Amharic and Tigrinya first and third singular independent subject pronouns, we find a pan-Afro-Asiatic preformative *ʔan-* (that may be realized as *in* in Amharic). In the first person singular, we have a preformative *ʔan-* (which also occurs in other Afro-Asiatic languages) followed by *-ä* (< *-äy* in Tigrinya and by *-e/yä* in Amharic. In different Semitic languages, we find a first person singular independent subject pronouns with or without the element *k*. Segert (1984: 51), for instance, indicates that the first person singular appears in two forms *ank/ʔanāku* and *an/ʔanā* in Ugaritic and there is no difference in function. As we can see from Table VI-ii, Hebrew and Akkadian have the forms *ʔānō(k)ī* 'I' (cf. also Lipinski 1997: 298 for Hebrew *ʔānōkī* 'I' and *ʔănī* 'I') and *ʔanāku* 'I' respectively. In other Afro-Asiatic languages too, we have the Egyptian *ỉn-k* 'I', Rendille (Cushitic) *an(i)* and Saho (Cushitic) *anu* 'I'. According to Dillmann (1907) *ana* is a shortened form of *anōku* 'I' or *anōki* 'I'.[2] It appears to me that the first person singular prefix

[2] According to Dillmann (1907: 203), Giʕiz person, number and gender morphemes in the verbs correspond to their counterparts in the independent pronouns (cf. also Dillmann: 118-9 for the demonstrative origin of *k*). According to him, the first person singular and plural imperfective Giʕiz prefixes *ʔ-* and *n-* are shortened forms of *ʔanä* 'I' and *niħnä* 'we' respectively. Moreover Dillmann (121) argues *ana* 'I' is a shortened form of *anōku* or *anōki* (still preserved in Hebrew), a compound of the demonstrative *an-* and

of the imperfective *ʔ-* (as in *ʔɨ-barɨx* 'I bless' in Tigrinya, *ʔi-barɨk* 'I bless' in Amharic), and the possessive suffix *-y* (as in *lam-äy* 'my cow' in Tigrinya and *lam-yä* 'my cow' in Amharic) can correspond to the segment *k* in *ʔanāku* (cf. also Dillmann: 121) and to the segment *i* in *ani* 'I' or *y* in *ki* or *kiʸ* of *ʔanōkiʸ*. In Hebrew, according to Hasselbach (2004: 14), the final vowel *ū* can be dissimilated to *ī* as in *ʔanākū* > *ʔanōkū* > *ʔanōkī* > *ʔanōḵī* (1sg). As indicated in Dillmann, it may be possible to derive *ʔanä* (< *ʔana* < *ʔanōku*/ *ʔanōki*) from a form like *ʔanōki* 'I'. As the subject and non-subject pronominal elements are closely related, both *k* in *ʔanāku* 'I' (or its shortened form *ʔana* 'I'), and *y* as in Akkadian *yāʔ-um* 'mine' or *yāʔtum* 'mine' or Tigrinya *niʔ-ay* 'for me', *nat-äy* 'mine' can mark first person singular (cf. also Buccellati 1996).

Tigrinya, unlike other Semitic languages such as Gɨʕɨz, has second person independent subject pronouns composed of *nɨs-* followed by suffixes like *-u*. I assume they are formed on the analogy of third person independent subject pronouns. However, Tigrinya has also *ʔan* + *t* + suffixes like *-u* which are formally similar to their counterparts in other Semitic languages. But they are mainly used in the vocative. For the sake of simplicity, the forms *ʔanta* (2ms), *ʔanti* (2fs), *ʔantum*(*u*) (2mpl) and *ʔantɨn*(*a*) (2fpl) are selected for the analysis in this book. In the singulars, the second person element *t* is followed by primary gender markers *a* (for the masculine) and *i* (for the feminine).

In the second singular independent subject pronouns (as in other Semitic and Afro-Asiatic languages), we have a pan-Afro-Asiatic *ʔan-* followed by the second person morpheme *-t-* in both Amharic and Tigrinya. As indicated above, the element *-t-* is followed by gender markers *-a* (for the masculine) and *-i* (for the feminine). In Amharic, the masculine gender marker *a* becomes *ä* while the feminine gender marker *-i* palatalizes *t* and becomes *č*. Thus, we observe *ʔanta* > (*ʔ*)*antä* 'you (2ms)', *ʔanti* > (*ʔ*)*ančі* 'you (2ms)'.

In the second person plural independent subject pronouns, Amharic has a pan-Afro-Asiatic preformative (*ʔ*)*an-* followed by *-tä* (2ms) and preceded by (*ʔ*)*ɨnnä* as in (*ʔɨ*)*nnä* + (*ʔ*)*anta* > (*ʔ*)*ɨnnantä* 'you(2pl)' (in Amharic). In Tigrinya and in Amharic, we have the terms *ʔɨnn* and (*ʔ*)*ɨnnä* respectively with similar meanings as in *ʔɨnnɨ-yonas* 'Yonas and others' (in Tigrinya) and (*ʔ*)*ɨnnä yonas* 'Yonas and others' (in Amharic). I assume *ʔɨnn* is derived from an ancient demonstrative hn (cf. also Testen 1998 for the general sense of *h*(*ʔ*)*in*(*n*) 'thus' which develops into *yes* in different Semitic languages).

-ōki 'I'. According to Dillmann:121), the existence of the pronoun *nɨḥnä* 'we' and the affix *-ku* (in verbs) proves that *ana* 'I' is a shortened form of *anōku* or *anōki*).

In the Tigrinya second person plural independent subject pronouns, we have a preformative *ʔan-* followed by *-tum(u)* in the masculine and by *-tin(ä)* in the feminine. I assume *ʔantum(u)* and *ʔantin(ä)* are derived from *ʔantanu* (cf. Lipinski 1997: 298 among others for Proto-Semitic [2mpl] *ʔantanu*) and *ʔantina* respectively. We can simply attach *-nu* and *-na* to *ʔanta* (2ms) and *ʔanti* (2fs) respectively to get the (2mpl) and (2fpl) forms of Tigrinya. The element *n* had the original function of indicating number, while the final vowels *-u* and *-a* mark secondary gender. But we assume *n* > *m* due to the influence of final *u* as in *ʔantanu* > *ʔantum(u)*. In Berber and in Modern South Arabian languages like Mehri and ħarsusi, the vowels which distinguish gender may be lost and the m/n distinction helps to distinguish gender (cf. Arbeitman 1991: 93 for Modern South Arabian and Siddiqi 2009 for Berber). In Tigrinya too, the secondary masculine gender marker *-u* can change *n* to *m* and also *a* to *u* by regressive assimilation and may then be omitted (unless is protected by a following object suffix). Hence, the distinction between *n* and *m* can also help in making gender distinction in Tigrinya.

In Table VI-ii, we have object (accusative) and possessive (genitive) independent pronouns of Akkadian.[3] They are composed of person elements like *y* or *k* followed by *-āʔ-* (in the masculine) or *-at(t)* (in the feminine) as in *y-āʔ-um* > *yūm* 'mine', *y-āʔ-t-um* > *yattum* 'mine' (cf. Buccellati 1996 for Akkadian case forms *-um*, *-am*, *-im*). In Akkadian, the possessive pronouns, unlike the personal pronouns with which they share the same base, do not differentiate the gender of the subject (i.e., the possessor). Just as in the case of English 'mine' the possessor, a man or a woman, would say *yūm* 'mine'. The Akkadian possessive pronoun shows agreement for gender and case with the thing possessed, and no agreement with the possessor. On the other hand, pronominal suffixes show agreement for gender and case with the possessor, and no agreement with the thing possessed (cf. Buccellati). The form *-āʔ-* (which is realized as *-at(t)* in the feminine) may be an afformative (cf. Buccellati: 198). According to Garr (1985), the vowel *-a-* preceding the pronominal elements (as the vowel *-a-* in *-ahu*) is a connecting vowel, while Kaufman (1997) considers the Aramaic vowels *-a/-ā*, *-e* part of the object suffixes. Lipinski (1997) questions the assumptions that the vowel *a/ā* linking the pronominal suffix to stative/perfect in Hebrew (e.g., *qitālanī* 'he killed me') is a residue of ancient *-a* ending. The author has no intention to discuss the issue of *a/ā* in Semitic languages in general. Regarding Tigrinya and Amharic, however, it appears to me that there are morphemes indicating duality which are used outside the narrow limits of the linguistic expression of natural pairs. Comparative

[3] Observe Buccellati (1996: 2002-3) for n (number) and *āʔ* as base.

studies can show that there are dual endings *-ā* and *-ay* followed by mimation or nunation (cf. Moscati *et al.* 1964). In Tigrinya, as in Aramaic, we can form ordinal numbers and adjectives by the suffixation of *-ay* as in *sälästä* 'three' and *sals-ay* 'third' *ħamli* 'vegetable' and *ħaml-ay* 'green', *Bilen* (a name of tribe in Eritrea) *Bilen-ay* (belonging to Bilen). Moreover, we have also adjective formative suffixes such as *-am, -äyna, -äňň* as in *märzi* 'poison' and *märz-am* 'poisonous' in Tigrinya, *mälk* 'beauty' and *mälk-am* 'beautiful' in Amharic, *ħaťiʔat* 'sin' and *ħaťiʔat-äyna/ħaťiʔat-äňňa* 'sinner' in Tigrinya, *haťiʔat* 'sin' and *haťiʔat-äňňa* 'sinner' in Amharic. The Tigrinya and Amharic suffixes *-am* and *-äyna/-äňňa* can be compared to Hebrew dual ending *-ayim* and to Syriac dual ending *-ayn*. As we can see from the examples given above, the duality marking suffixes indicate some sort of relationship between two things, groups and so on.

I assume we have similar duality indicating forms in non-subject independent pronouns of Tigrinya. In Table VI-ii, we observe that in Akkadian there are genitive/accusative independent pronouns. We also see person elements like *k* followed by *-āʔ-* in the masculine or *-at*(*t*)*-* in the feminine. We observe a very striking similarity between the Akkadian gen./accus. (24bi, 24bii) and Tigrinya (24ai, 24aii) object independent pronouns as in the following:

(24)	ai.	ni-ʔa-y 'for me/to me'	bi.	y-āʔ-um 'mine'
	aii.	ni-ʔa-xa 'for you/to you(2ms)'	bii.	kāʔum > kūm 'you'

It is obvious that we see a relationship between Akkadian and Tigrinya pronominal elements. The segments *-āʔ-* and *y-* in Akkadian (24bi) correspond to *ʔa-* and *-y* in Tigrinya (24ai). The elements *k-* and *-āʔ-* in Akkadian (24bii) correspond to *-ka* > *-xa* and *-ʔa-* in Tigrinya (24aii). Moreover, Tigrinya possessive and object independent pronouns are also related among themselves and with the gen./accus. independent pronouns of Akkadian. Consider Tables VII-i and VII-ii below:

Pro. (I)	Tigrinya object ind. Pronouns (II)	posses. ind. Pronouns (III)	Tigrinya n- + -ʔ + t- (IV)	Phi-features (V)	Akkadian earlier form (Samples) (VIII)	accu./gen ind. Pro. (IX)
1sg	ni-ʔa-y	n-at-äy	ni-ʔa-t-	-äy	y-aʔ-t- >	yâti
2ms	ni-ʔa-x-a	n-at-ka	ni-ʔa-t-	-k-a	k-āʔ-t- >	kâti/a
2fs	ni-ʔa-x-i	n-at-ki	ni-ʔa-t-	-k-i	k-āʔ-t- >	kâti
3ms	ni-ʔa-ʔ-u	n- at-u	ni-ʔa-t-	-hu > -u	š-āʔ-t- >	šāti/u

3fs	nɨ-ʔa-ʔ-a	n-at-a	nɨ-ʔa-t	-ha > -a	š(i)āti	
1pl	nɨ-ʔa-na	n-at-na	nɨ-ʔa-t-	-na	n(i)-āʔ-t- >	niāti
2mp	nɨ-ʔa-x-u-m	n-at-k- u-m	nɨ-ʔa-t-	-kum	kunūti	
2fp	nɨ-ʔa-x-ɨn	n-at-k-ɨn	nɨ-ʔa-t-	-kɨn	kināti	
3mp	nɨʔaʔo-m	n-at-o-m	nɨ-ʔa-t-	-om	šunūti	
3fp	nɨʔaʔä-n	n-at-ä- n	nɨ-ʔa-t-	-än	šināti	

Table VII-i

Pro.(I)	Amharic			Akkadian accu/gen independent Pronouns	
	indipendent subj. Pronouns	ind. obj Pronouns (VI)	ind. poss. Pronouns (VII)	earlier forms (Samples) (VIII)	accu./gen./ind. Pronouns (IX)
1sg	ɨnie	län-e	yän-e	y-aʔ-t- >	yâti
2ms	antä	lan-t-ä	yan-t-ä	k-āʔ-t- >	kâti/a
2fs	anči	lan-či	yan-či	k-āʔ-t- >	kâti
3ms	ɨssu	läss-u	yäss-u	š-āʔ-t- >	šāti/u
3fs	ɨssɨwa	läss-u-a	yäss-u-a	š(i)āti	
1pl	ɨňňa	läňňa	yäňňa	n(i)-āʔ-t- >	niāti
2mp	ɨnnantä	länn-anta	yänn-anta	kunūti	
2fp				kināti	
3mp	ɨnnässu	lännä-ɨssu	yännä-ɨssu	šunūti	
3fp				šināti	

Table VII-ii

In Amharic, Tables (VI-i, VI-ii, VII-i and VII-ii) illustrate that the object and possessive independent pronouns are formed by affixing *lä-* or *yä-* to independent subject pronouns. As we can observe from the tables above, we get independent object pronouns if we put *lä-* 'to/for' before independent subject pronouns (as in *lä* + (ʔ)*anta* > *lantä* 'for you/to you'. Besides, independent possessive pronouns are formed by putting *yä-* 'of' to the independent subject pronouns as in *yä-* + (ʔ)*antä* > *yanta* 'yours' (cf. also Baye 2007/2008 (2000 E.C.) among others for object + *-n*). When we add *lä-* or *yä-* to the independent subject pronouns, we observe some phonological changes as in *lä-* + (ʔ)*ɨne* > *läne* 'mine' and *yä-* + (ʔ)*anta* > *yanta* 'yours(2ms)'.

As we can see from Table (VII-i), the non-subject independent pronouns of Tigrinya are closely related. The main difference between the independent object pronouns (column II) and the independent possessive pronouns (column III) is the presence of *t* in the latter. Table (VII-i) shows that the independent possessive pronouns (column III) are composed of *n-ʔa-t* (column IV) and the Phi-features such as *-ka* in column V.

In Akkadian, the accusative and genitive independent pronouns (which correspond to object and possessive forms indicated in Tables (VI-i, VI-ii, VII-i and VII-ii) are composed of person elements such as *k* and the forms *-āʔ-*, *-āʔ-t-* (that Buccellati 1996 calls afformative). According to Buccellati (198), the afformative *-āʔ-* is used for the masculine, while in the feminine it is realized as *-at-(t)-* (< *āʔt*). For instance, *y-āʔ-* in *y-āʔ-um*, *yūm* 'mine' (cf. Buccellati 1996 for *-um* indicating case) is used if the thing possessed is in the masculine. But the form *y-āʔ-t-um* > *yattum* 'mine' (cf. Buccellati 1996, Lipinski 1997 among others) is used if the thing possessed is in the feminine. Akkadian possessive pronouns do not differentiate the gender of the subject, i.e., possessor. In Akkadian, the possessive pronouns show agreement for gender and case with thing possessed, and no agreement with the possessor (cf. Buccellati 1996: 198).

The first and second person elements (like *k*) in Akkadian and Tigrinya are similar. Tigrinya *-ʔa-* and *-ʔat* > *-at-* correspond to Akkadian *-āʔ-* and *-āʔt-* > *-at(t)-*. If we compare the Akkadian and Tigrinya non-subject independent pronouns, however, we see the presence of *n* in the latter. The element *n* may be regarded as a shortened form of the preformative *ʔan-* (< *hn*) which occurs in Semitic independent subject pronouns. In Tigrinya, however, the element *n* can function as a preposition 'to/for'. Hence, *n* in the non subject independent pronouns may originally have the same function as Amharic *l* 'to/for' in *lä-ʔantä* > *lantä* 'to you/for you (2ms)'. But the element *n* (in Tigrinya) may (as indicated above) also be part of an earlier ʔan (*ʔan* > *n* + *ʔa*). This merits further investigation. However, it appears possible, as in Akkadian, that Tigrinya object and possessive independent pronouns had the same original form. It also seems to me that the function of the element *t* was to mark the gender (probably of the thing possessed). It seems possible that a division of labour was made later in the history of Tigrinya in that the form with *t* (like *n* + *-at-ka*) and the forms without *t* (like *n* + *-ʔa-ka-*) were used as possessive and object independent pronouns respectively.

In the literature (cf. Ungnad 1969, Buccellati 1996, Lipinski 1997), it is indicated that the older form of Akkadian non-subject independent pronouns (cf. Tables VI-i, VI-ii, VII-i and VII.i-ii) were later replaced by *attu-* + pronominal suffixes as in *attuka* 'yours'. These independent possessive pronouns composed of *attu-* followed by genitive suffixes (as in *attu-ka*) can be compared to Tigrinya *n-ʔat-* + genitive suffixes as *n-* + *ʔat-ka* > *natka* 'yours'.

In Akkadian, the possessive adjective may be understood as the independent equivalent of genitive suffix. As indicated above, Akkadian genitive suffixes are regularly added to nouns and prepositions, while accusative and dative independent pronouns may be added to prepositions. We have said earlier that the element *n* in the initial position of the non-subject independent pronouns can be a shorter form of *ʔan*. We have also said this *n* can be a preposition. In the sense of the latter view, something similar to that of Akkadian may be assumed for Tigrinya. We may assume the addition of preposition *n-* 'to/for' to a form like the Akkadian *attu-ka* 'yours'. We may assume a non-subject independent pronoun like *n-ʔat-* + genitive suffixes as in *n-* + *ʔat-ka* > *natka* (for the feminine) or *n-ʔa-* + genitive suffixes as in *n-* + *ʔa-ka* > *nɨʔaka* (for the masculine). It may be possible to assume the development of the former (*nɨʔatka* > *natka* 'yours [2ms]') into a possessive and the latter (*n-* + *ʔa-ka* > *nɨʔaka* > *nɨʔaxa* 'to you/for you (2ms)' into object independent pronouns. As we can see in our discussion below, however, the preposition *n-* and the preformative *ʔan-* may have the same origin. This merits further research. We can see similarities between Akkadian and Tigrinya pronouns indicated above. I assume the similarities are due to archaisms (cf. Lipinski 1997: 312-3 for Proto-Semitic or even Afro-Asiatic origin of possessive pronouns).

So far, we have seen the first and second person independent pronouns. We have seen above that *k/t* can mark second person. We will now see the third person independent pronouns.

According to Buccellati (1996), Akkadian independent third person pronoun forms for the nominative and the accusative are used as adjectives in an anaphoric function. The proper English gloss is 'the above-mentioned' while in practice a translation as a demonstrative 'this, that' is generally more idiomatic.

In different Afro-Asiatic and Semitic languages the elements *s/h* can indicate third person. The existence of *s* in the third person pronouns is attested in different branches of Afro-Asiatic: Egyptian-Coptic, Cushitic, Berber and Hausa. In Bedja, third person pronouns are marked by *s*. It was worth noting that Somali *hū/ū* (3ms) put side by side with *-s* of Bedja yields the two forms of Semitic pronouns (i.e., East and West Semitic) for third person singular (cf. Castellino 1962 among others for Akkadian third person singulars *-šū/šī* and Bennett 1998 among others for Syriac and Hebrew *-hū/hī*). As indicated above, Phi-features in the affixes and independent pronouns of Semitic languages are related. For instance, in Old Babylonian there are independent pronouns *šū* 'he' and *šī* 'she' which correspond to poss./obj. suffixes *-šu* (3ms) and *-ši* (3fs) respectively. In Classical Arabic, there are independent pronouns *huwa* 'he' and *hiya* 'she' which correspond to poss./obj. suffixes *-hu/-hi* (3ms) and *-hā* (3fs) respectively. Furthermore, there are independent pronouns *hw* 'he', *hy* 'she', poss./obj. suffixes *-hu* (3ms), *-h* (3fs) in Ugaritic, independ-

ent pronouns *hɨtu* 'he', *hɨta* 'she', possessive suffix -(*h*)*u* (3ms), obj. suffix -(*h*)*u*/*o* (3ms), poss./obj. suffix -(*h*)*a* (3fs) in Tigre.

Some scholars say no other Semitic language has sibilant forms of the independent pronouns and corresponding suffix forms with h. On the other hand, the person elements *h* and *s* may occur in the affixes in the same language. In the Modern South Arabian languages, we find the third person suffixes *-hɨm* (3mpl), *-sɨn* (3fpl) in Mehri, in Harsusi and in Socotri. In languages like Mehri, there is no vowel distinction between masculine and feminine (only *n*/*m* distinction). In Śḥeri, however, there are vocalic and consonantal distinctions. Hence, in Śḥeri we have *hum* (3mpl) and *sɨn* (3fpl). Moreover in Mehri, a modern South Arabian (MSA), we have independent pronouns *ha*(*h*) 'he' and *sē*(*h*) 'she', *hēm* 'they (3mpl)', *sēn* 'they (3fpl)'. In the case of Amharic and Tigrinya too, I think it is possible to assume both *s* and *h* as pronominal elements. I assume, third person is marked by *s* in the independent pronouns and by *h* in the affixes.

In the literature, it is indicated that Amharic, Tigrinya and Arogobba third person pronouns are derived from *rɨʔs* 'head', *näfsi* 'soul' and *kärs* 'belly' respectively. For instance, Lipinski (1997) assumes the phonological processes *rɨʔs-u* > (*ʔ*)*ɨrsu* > (*ʔ*)*ɨssu* 'he' for Amharic, *näfsu* > *nɨssu* 'he' for Tigrinya, and *kärsu* > *kɨssu* 'he' for Argobba.

However, we know that the elements *s* or *š* are common Afro-Asiatic third person markers. In Sabaean, the initial consonant of the third person pronoun is *h*, while in other Ancient South Arabian languages it (third person) can be indicated by *s* (cf. Murtonen 1967: 23). The sibilant *s* or *š* of third person can occur in both dependent and independent pronouns. The East Semitic and Paleosyrian sibilant third person (*s*/*š*) independent pronouns correspond to Egyptian, Bedja, Tuareg and Hausa sibilant (*s*/*š*) dependent pronouns (cf. also Huehnergard 2006: 7-8 among others).

ʔan (or its short form *n*-) is a pan-Afro-Asiatic preformative element. It (*ʔan*-) appears as *ỉn*- or *n*- in all persons of the Egyptian pronouns, as *n*- or *ɨn* in the first and third persons of the Tuareg pronouns, and in several persons of Cushitic pronouns (cf. Lipinski 1997 among others) as in *ɨnt* 'you' *ni* 'he' of Quara (Agaw).

Akkadian genitive suffixes, and also accusative and dative independent pronouns may be added to prepositions (cf. Buccellati 1996: 203). Egyptian has *ỉr*/*r* 'as to', 'if', 'to', 'towards' which is assumed to be originally the same as *ỉn*/*n* 'to', 'for' (*ỉ* in *ỉr* or *ỉr* may represent *y* or *ʔ*). Egyptian *ỉn*/*n* appears to have the same origin as Tigrinya *n* 'to', 'for', 'towards' and *ʔɨntä* 'if' (cf. Gardiner 1950, Loprieno 1995 among others for the Egyptian data). According to Gardiner (1950: 53), *ỉn* is probably demonstrative in origin. Thus, it may be possible to assume that the preposition *n*- and the preformative *ʔan*- are of the same origin. However, this merits further research.

In Tigrinya, we have third person independent subject pronouns *nɨssu* 'he', *nɨssa* 'she', *nɨss(at)om*, and *nɨss(at)än*. In Amharic, we have the third person independent subject pronouns *(ʔ)ɨrsu* > *(ʔ)ɨssu* 'he', *(ʔ)ɨrsɨwa* > *(ʔ)ɨssɨwa* 'she' and *(ʔ)ɨnnä-(ʔ)ɨrsu* > *ʔɨnnässu* 'they'. As indicated above, it is generally assumed that Amharic and Tigrinya third person independent pronouns are derived from *rɨʔs* or *ras* 'head' and *näfs(i)* 'soul' respectively. On the other hand, I believe that Tigrinya and Amharic independent subject pronouns are composed of *n* (probably a short form of *ʔan-*) + *s* in the case of the former and *ʔɨn* + *s* > *(ʔ)ɨn* + *s* > *(ʔ)ɨr* + *s* (Amharic *(ʔ)ɨn* > *(ʔ)ɨr* can be compared to Egyptian *ỉn* > *ỉr* indicated above) in the case of the latter. Let us first see the third person independent pronouns of Tigrinya:

(25) a. n + s-u > nɨssu 'he' Tigrinya

b. n + s-a > nɨssa 'she'

c. n + s-(at)-anu > nɨss-(at)-om > nɨss(at)om 'they (3mpl)'

d. n + s-(at)-ina > nɨss-(at)-än > nɨss(at)än 'they(3fpl)'

As indicated above, the element *n* is, I assume, a short form of the preformative *ʔan-*. The element *s* can be regarded as a person morpheme. In the singular forms, we see *-u* and *-a* which are similar to secondary gender markers (cf. Lopriano 1995 among others for Proto-Egyptian **-su* [3ms], **-si* [3fs], **-sina* [3pl]). As in other Semitic or Afro-Asiatic languages, the element *n* or *m* in the plural forms in (25c-d) can mark number. None the less, the plural form *-at* may also be added. My assumption is that the function of the form without *-at* was, originally, to indicate plural. Later in the history of the language, however, the form without *-at* started to indicate plurality and respect and the plural form *-at* was then added to indicate plurality. The elements *n* + *s* in the masculine and feminine third person independent subject pronouns in (25c-d) are followed by *anu* and *ina* respectively. According to Lipinski (1997: 301), the original form of the second person masculine plural attested in Paleosyrian, at Ebla is *an-tá-nu*. The second vowel *a* is changed to *u* in almost all Semitic languages, but the original vowel did not disappear completely as it occurs in Neo-Assyrian plural form *attanū-ni*. As indicated above *ʔantum(u)* and *ʔantɨn(ä)* can be derived from *ʔantanu* (cf. Lipinski 1997: 298 among others for Proto-Semitic 2mpl *ʔantanu*) and *ʔantina* respectively. We can simply attach *-nu* and *-na* to *ʔanta* (2ms) and *ʔanti* (2fs) respectively to get the (2mpl) and (2fpl) forms of Tigrinya. The element *n* in *-nu* and *-na* of *ʔantanu* and *ʔantina* had the original function of indicating number, while the final vowels *-u* and *-a* mark secondary gender. But we assume *n* > *m* due to the influence of final *u* as in

ʔantanu > *ʔantum*(*u*). In Berber and in Modern South Arabian languages like Mehri and ħarsusi, the vowels which distinguish gender may be lost and the *m*/*n* distinction helps to distinguish gender (cf. Arbeitman 1991: 93 for Moderns South Arabian, Siddiqi 2009 for Berber). In Tigrinya too, the secondary masculine gender marker *-u* can change *n* to *m* and also *a* to *u* by regressive assimilation and may then be omitted (unless it is protected by a following object suffix). Hence, the distinction between *n* and *m* can also help in making gender distinction in Tigrinya.

In the same manner, I assume *n* + *s*-(*at*)-*anu* > *nɨss*-(*at*)-*om* > *nɨss*(*at*)*om* 'they (3mpl)' and *n* + *s*-(*at*)-*ina* > *nɨss*-(*at*)-*än* > *nɨss*(*at*)*än* 'they (3fpl)'. We can expect the changes of *a* > *o* (by partial distant regressive assimilation) and *n* > *m* under the influence of the vowel *u* in *-omu* which can be deleted and become *-om* (2mpl). The last vowels *-u* and *-a* in morphemes like *-kumu* (2fpl), *-kɨna* (2fpl), *-omu* (3mpl) and *-äna* (3fpl can be deleted unless they are protected by other morphemes following them. Moreover, we also expect the change of *i* > *ä* (by partial distant regressive assimilation) under the influence of the final vowel *a* which is later deleted (cf. Knudsen 1991: 876 and Lipinsski 1997: 308 among others for Hebrew suffix *-aho* > *-au* > *-aw*/*ō*, Arbeitman 1991: 94 for the derivation of *-om* [in Tigre and Tigrinya] from *-ämu*).

In Amharic too we have third person independent subject pronouns composed of (*ʔ*)*ɨr* (< *ʔn* < *hn*) + *s* + suffixes as in (26):

(26) a. (ʔ)ɨrsu > ʔɨssu 'he'

b. (ʔ)ɨrsɨwa > (ʔ)ɨssɨwa 'she'

c. (ʔ)ɨnnä + (ʔ)ɨrsu > (ʔ)ɨnnässu 'they'

As illustrated above, the Amharic third person pronouns are, I assume, composed of the form **hn* > *ʔɨn* > (*ʔ*)*ɨr* followed by the person element *s* and also the elements *u* (for the masculine) and *-wa* (for the feminine). Number is indicated by (*ʔ*)*ɨnnä* (and others). Amharic does not distinguish gender in the plural.

5.5 *Comparing Phi-features in Verbs, Nouns and Pronouns*

Tigrinya and Amharic have type A, type B and type C verbs. The different perfective, imperfective, imperative and jussive affixes indicated in Tables II-III and also gerundive suffixes indicated in Table V are added to the different verb types of the languages in question. In Table V, we also see possessive suffixes that can be affixed to nouns.

Tigrinya has the affixes like *-ka*, or *tɨ---i* as in *qätäl-ka* 'you (have) killed (2ms)' (in the perfective) or *qätil-ka* 'you (have) killed (2ms)' (in the gerundive) *tɨ-qätl-i* 'you kill (2fs)' (in the imperfective). Amharic has the affixes like *-k/-h* as in *wässän-k/h* 'you (have) decided' *nägr-äh* 'you (2ms) telling' and *tɨ-nägr-i* 'you (2fs) tell'. As we can observe in Tables II-VII, the Phi-features attached to verbs (verbal affixes) and nouns (possessive suffixes) and independent pronouns can be related. Consider Table VIII for Tigrinya (cf. also Table IX for Amharic):

Pronouns	Verbal Affixes of Tigrinya		Gerundive or possessive Affixes of Tigrinya		obj. Suffixes of Tigrinya	Independent Pronominal Suffixes of Tigrinya		
	perfect	impf.	ger.	poss.	obj. suf.	subject	object	possessive
1sg	-ku	ʔɨ-	-ä	-äy	-ä-ni	-ä	-äy	-äy
2ms	-ka	tɨ-	-ka	-ka	-ä-ka	-ta	-ka	-ka
2fs	-ki	tɨ…i	-ki	-ki	-ä-ki	-ti	-ki	-ki
3ms	-ä	yɨ…	-u	-u	-o < -ä-hu	-su	-ʔu < -hu	-u < -hu
3fs	-ät	tɨ...	-a	-a	-a	-sa	-ʔa < -ha	-a < -ha
1pl	-na	nɨ…	-na	-na	-ä-na	-na	-na	-na
2mpl	*-kanu > -kum(u)	tɨ...u	*kanu > -kum(u)	*-kanu > -kum	-ä- kum	-tanu > -tum	*-kanu > -kum	*-kanu > -kum
2fpl	-kɨn(a)	tɨ…a	-kina > -kɨn(a)	-kina > -kɨn	-ä-kɨn	-tina > -tɨn	-kina> -kɨn	-kina > -kɨn
3mp	-u	yɨ…u	-om(u)	*-hanu > -om	-om	*-sanu > -som	-ʔom	-om
3fpl	-a	yɨ…a	-än(a)	*-hina > -än	-än	*-sina > -sän	-ʔän	-än

Table VIII

As indicated above, we have independent pronouns in different Semitic and Afro-Asiatic languages. We find, for instance, *ʔanä* 'I' in Giʕiz, *ʔana* 'I' in Egyptian Arabic *ʔanāku* 'I' in Akkadian, *ʔinā* 'I' in Syriac, *ʔan* 'I' or *ʔanāku* 'I' in Ugaritic,[4] *ʔān(ōk)ī* 'I' in Hebrew (cf. Bennett 1998 among

[4] See Arbeitman (1991: 86) for Ugaritic 1sgc. *an* and *ank* to mean *ʔan(ī/ā)* and *ʔanâk(ī/ā)* respectively also Segert (1984: 47) for Ugaritic *ʔanā* and *ʔanāku* 'I'.

others). In different Afro-Asiatic languages, we have *anu* 'I' in Saho, *ìnk* 'I' in Egyptian, *nɨk* 'I' in Tuareg, *an(i)* 'I' in Rendille (cf. Lipinski 1997 among others). According to Buccellati (1996: 201-205), there are person affixes *k* 'I', *n* 'we', *t* 'you', *š/Ø* 'he, she, they' for the subject and the person affixes *y, n, ʔ* 'me', *n* 'us', *k* 'you' and *š* 'him, her, them' for the object in Akkadian. In Table VIII, we can see that we have *-ku* (1sg) in the perfective, and *ʔ* (1sg) in the imperfective which can correspond to *-k* in a form like *ʔanaku*. Moreover, we have *-ay* > *äy* as a possessive suffix which occurs attached to nouns and to object and possessive independent pronouns. We also see *-ay* > *äy* > *ä* (in Tigrinya, the loss of word final *y* as in *yɨstäy* > *yɨstä* 'let him drink' is common) as a suffix in the gerundive and in the first person subject independent pronoun. Besides, we have *ni* in the case of the first person singular object suffix. In short, we have *-k, ʔ-, -äy* > *-ä, -i* (in *ni*)/*-y*(in *-äy*) as first person affixes (cf. also Buccellati 1996 for Akkadian related data). In the first person singular, we may assume the elements *k, ʔ, y* as person markers (in Tigrinya). In Lipinski (1997: 301), the vowel *a* (which corresponds to *ä*) is indicated as a first person marker. It appears to me that *a* > *ä* is a kind of preformative or ancient dual element which occurs attached to person elements like *y*. But when the person element *y* is deleted, it may function as a person marker. According to Buccellati (1996), *n* can be interpreted as 'me', 'we' or 'us'. According to Levin (1995), the elements *n/m* can mark first person. In the case of the languages under discussion, however, we may find different elements (cf. 28, 29, 30 and the discussion related to them).

As indicated above, *n* marks plurality in Semitic and Afro-Asiatic languages. We have also seen that *(ʔ)ɨnn(ä)* indicates plurality in Amharic and in Tigrinya. In Amharic, second and third person independent pronouns form their plurals by adding *(ʔ)ɨn-* to their singulars. We may assume the formation of first person plural pronoun in the same manner. As in the case of second and third person plurals, we may assume *n* as a short form of *(ʔ)ɨn* to indicate plurality which can also function as a person marker in the first person plural.

It is indicated in the literature that first person plural is not a true plural of the first person singular (cf. Bobaljik 2008: 225). As we have seen above, North Abyssinian Semitic languages like Tigrinya and Tigre have a pattern *cäcacvc/cacācvc* to indicate plural forms of verbs and nouns. As suggested earlier, the plurality of the first person plural may be marked by the vowel *ā* > *a* or ā in the pattern *cäcacvc/cacācvc*.

As we suggested above, it may be possible to assume a relationship between *k* in a form like *ʔanaku/ʔanaki*^{y} and the element *ħ* as in Syriac *(ʔina) ħnan* 'we', Hebrew *(ʔa)naħnū* 'we', Classical Arabic *naħnu* 'we', Gɨʕɨz *nɨħnä* 'we' and Egyptian Arabic *ʔɨħna* 'we' (we can assume *k* > *x* > *ħ* or *k* > *h* > *ħ*). Moreover, the element ħ in Tigrinya *nɨħna* 'we' can be related to *k* in an ancient form like *ʔanaku/ʔanaki*^{y} (cf. Greenberg 1955 for the plurality marking

a and Tesfay Tewolde 2009 for internal plurals). Hence, it may be possible to form something like *ʔanaḥin > niḥna 'we' from a pattern *cacācvc* in an early form of the languages in question. The element *-a-* in the last syllable of *niḥna* in Tigrinya, may correspond to *-a-* in the second syllable in *ʔanaḥin (which may become *ʔanaḥin > niḥna in Tigrinya). In Semitic and Afro-Asiatic languages, *n* or *n* > *m* mark a plural number. Either the element n or the element *-a-* may be employed to mark plurality in Tigrinya, Tigre and GiʕƗz. However, the formation of the first plural pronoun needs further research.

As in other Semitic languages, second person is, in Tigrinya, marked by *k* or *t*. Primary (or main) gender is marked by *a* in the masculine and by *i* in the feminine. Secondary gender is marked by *u* in the masculine and by *a* in the feminine. In Akkadian, the primary gender marker is represented by short vowels throughout, except for third singular and the first plural independent subject pronouns. As indicated above, Tigrinya second person primary gender markers are, I assume, short vowels. However, those of the third singular independent subject nouns merit further research. A secondary gender marker may change the primary gender marker and the number marker preceding it as in *-kanu* > *-kumu* > *-kum* and may be deleted unless it is protected by a morpheme following it.

In the literature, it is assumed that third person independent subject pronouns are derived from *kärs* 'belly' > *kɨss-* in Argobba, *rɨʔs* 'head' > *ʔɨrs* > *ʔɨss-* in Amharic, *näfs* 'soul' > *nɨss* in Tigrinya followed by morphemes like *-u*. But, why do the languages choose to derive their third person pronouns only from nouns which have *s*? As far as I could understand, there is no convincing answer for such a question. On the other hand, we get the following observations from related literature.

27i. Pronouns are in general, least affected by obscuring changes and can show etymological relationship among languages (cf. also Hodge 1969 among others); ii. Pronouns are relatively prominent among the key etymologies. Pronouns perpetuate themselves through the many generations of speakers. A strongly felt need to change or borrow a pronoun would seldom arise in a language and only under somewhat special circumstances (cf. Levin 1995 among others); iii. Different Semitic and Afro-Asiatic languages mark third person by *s/š*; iv. The Semitic languages spoken in Eritrea and Ethiopia preserve a lot of archaisms. In fact, Hetzron (1977) and Appleyard (2002) believe that Semitic languages of Eritrea and Ethiopia have given up less of some of the 'typical' traditional Semitic features than say, Modern East Aramaic (Modern Syriac);

Hence, in the independent subject pronouns, I assume Tigrinya third person is, as in the case of several Semitic and Afro-Asiatic languages, marked by *s*.

In the second person masculine plural, the element *k* or *t* can be followed by the primary gender marker *a* (for the masculine) and *n* > *m* (plural morpheme) and a secondary gender marker *u* (for the masculine). As in the case

of second person masculine plural, we assume a process of assimilation and deletion in the third person masculine plural. Hence, we assume *sanu* > *som*.

In the third person feminine plural too, the element *s* can be followed by the primary gender marker *i* (for the feminine) followed by *n* (plural morpheme) and a secondary gender marker *a* (for the feminine). As in the case of second person feminine plural, we assume processes of assimilation and deletion. Hence, we assume *sina* > *sän*. If we add the preformative *n* < *ʔn* (that I assume is derived from *hn*) to *-som* and *-sän* we get *nɨssom* 'they (3mpl)/he (respect)' and *nɨssän* 'they (3fpl)/ she (respect)' respectively. If we add the preformative *n* < *ʔn* to *s* + *at* + *om* and *s* + *at* + *än*, we get *nɨssatom* 'they (3mpl)' and *nɨssatän* 'they (3fpl)' respectively (observe earlier discussion on double plural forms).

In the case of affixes and non-subject independent pronouns, however, third person is marked by *h* (or forms derived from or related to it).

As we can observe from related literature, third person can overlap with demonstratives (cf. Levin 1995 among others). For instance, third person singulars *hwt* 'his/him', *hyt* 'her (s)' in Ugaritic, *hūʔ*(*a*) (3ms), *hīʔ*(*a*) (3fs) in Hebrew correspond to far demonstratives *hnk*/*hwt* in Ugaritic and (*ha*)*hūʔ* (in the masculine) and (*ha*)*hīʔ* (in the feminine) in Hebrew respectively. In Sabaic, the genitive/accusative (3ms) form *hwt*/*hyt* corresponds to far demonstrative form *hwt*/*hyt* in that language (cf. Segert 1984, Bennett 1998, Lipinski 1997 among others). Tigrinya far demonstrative *ht* > *ʔɨt-* is etymologically related to Ugaritic *hyt* /*hiyat-* and Sabaic *hyt* far demonstratives.

As indicated in Table VIII, Tigrinya gerundive and possessive suffixes are similar. But the first person element *y* is deleted in the gerundive. It is illustrated above that in the third person singular of object and possessive independent pronouns, we have *-u* (3ms) and *-a* (3fs) in the latter and also *-ʔu* (3ms) and *-ʔa* (3fs) in the former. In both gerundive and possessive forms, we have *-u* (3ms) *-a* (3fs) which can be derived from *-hu* and *-ha* respectively. It appears obvious that Tigrinya *-hu* > *-u* (his) and *-ha* > *-a* (her[s]) are related to forms like Ugaritic *-hu* (his) and *-ha* (hers) (cf. Segert 1984 among others). It also appears to me that the non-subject independent pronouns of the third person singular elements *-hu* > (*-ʔ*)*u* (3ms) *-ha* > (*-ʔ*)*a* (3fs) are different from the elements *-u* and *-a* in the imperfective forms *tɨ*…*-u* (2mpl), *tɨ*..*-a* (2fpl), *yɨ*..*-u* (3mpl) and *yɨ*..*-a* (3fpl). In the former, they indicate gender (as in **-kanu* > *-kumu* (2mpl), **-kina* > *-kɨna* (2fpl), **-hanu* > **-homu* > *-omu* (3mpl) and **-hina* > **-häna* > *-äna* [3fpl]). In the imperfective forms, however, the elements *-u* and *-a* in *tɨ*…*-u* (2mpl), *tɨ*..*-a* (2fpl), *yɨ*..*-u* (3mpl) and *yɨ*..*-a* (3fpl) mark also plurality.

Moreover, I assume the perfective suffixes *-u* (3mpl) and *-a* (3fpl) are originally secondary gender markers which are related to the secondary gender markers in the imperfective forms. But they also mark person and plural number.

In Old Akkadian, there is a demonstrative **hanni* which later becomes a definite article *ha* (the) (*hanni* > *han* > *ha*) in West Semitic languages (as in Hebrew *ha*[the]). In the related literature, we see that demonstratives and third person pronouns can be related. It may be possible to assume the derivation of the suffixes *-a* > *ä* (3ms) and *-at* > *ät* (3fs) in the perfective stem from forms like *ha* (the) (as in Hebrew), *ha*(*h*) (he) (as in Mehri), *hyt/hiyat/* (her[s]) (as in Ugaritic), *hɨtu* (he) (as in Tigre), *hwt* (3ms) and *hyt* (3fs) (as in Ugaritic and Sabaic), *hwt* (that) (as in Ugaritic), *hwt/hyt* (that) (as in Sabaic). In (23) above, we have seen *hä* (he/it) *hät* (she/it) together with *ʔɨnni* (thus, yes) as in *ʔɨnnihä* (here he (it) is) and *ʔɨnnihät* (here she (it) is). Hence, I assume the 3ms element *a* > *ä* (as in *qätäl-ä* [he (has) killed]) and the 3fs element *a* > *ät* (as in *qätäl-ät* [she (has) killed]) which occur attached to the perfective verb stems (like *qätäl-*) in Abyssinian Semitic languages are derived from **ha* > *hä* and **hat* > *hät* respectively. However, further research is needed.

In the imperfectives, third person masculine and feminine singulars are marked by *yɨ-* and *tɨ-* respectively. The prefix *yɨ-* (3ms) corresponds to third person element *h*. I assume the prefix *tɨ-* (3fs) corresponds to a form like *ht* indicated in (23) above. In the case of third person masculine and feminine plurals of the imperfectives, we have *yɨ..-u* (3mpl) and *yɨ-..-a* (3fpl). The element *y* (cf. Segert 1997: 177, 184) for *h* > *y*) marks third person while *-u* and *-a* are secondary gender markers which also show plurality.

In the third person plural of independent subject pronouns of Tigrinya, we assumed a phonological process like *sanu* > *sämu* > som (for the masculine plural) and *sina* > *säna* > *sän* (for the feminine plural). In the third person plural of independent non-subject pronouns, object suffixes and possessive suffixes of Tigrinya too, we can assume a similar phonological process like *hanu* > *hämu* > *hom*(*u*) (for the masculine plural) and *hina* > *häna* > *än*(*a*) (for the feminine plural).

The object suffixes are similar to those of possessive suffixes. But in the first person singular of the former, we have *-ni* (instead of *-ay* > *-äy* in the possessive). Moreover, the person element in the former is preceded by *-a-* > *-ä-*. In Tigrinya, a phonological process *-äw* > *-o* is common. For instance, we have *yɨʔtäw* > *yɨʔto* 'let him enter' (*yɨʔtäw* [let him enter] is formally similar to a form like *yɨsbäx* [let him preach]). As a consequence, we observe the object suffix *-ä-hu* > *äw* > *o* (3ms) which is formally different from the possessive suffix *-hu* > *u* (3ms). In the third masculine plural, however, we have *-om* (3mpl) as an object suffix or as a possessive suffix. This is because there is a primary gender marker *a* > *ä* in both of them. Hence, we assume **ahanu* > *ähänu* > *om*(*u*) for the object suffix and **ahanu* > **ahänu* > *om* for the possessive suffix.

As indicated above, Amharic (as in Tigrinya) has type A, type B and type C verbs. The different perfective, imperfective, imperative and jus-

sive affixes indicated in Table III and also gerundive suffixes indicated in Table V are added to the different verb types of the language in question. In Table V, we also see possessive suffixes that can be affixed to nouns.

Amharic has the affixes like *-k/-h* as in *wässän-k/h* 'you (have) decided' *nägr-äh* 'you (2ms) telling' and *ti-nägr-i* 'you (2fs) tell'. As we can observe in Tables I-VI, the Phi-features attached to verbs (i.e., verbal affixes), the possessive suffixes and also the independent pronouns can be related (cf. also Table IX).

As indicated above, we have *ʔana* 'I' in Gɨʕɨz, *ʔana* 'I' in Egyptian Arabic, *ʔanāku* 'I' in Akkadian, *ʔinā* 'I' in Syriac, *ʔan* 'I' or *ʔanāku* 'I' in Ugaritic, *ʔān*(*ōk*)*ī* 'I' in Hebrew (cf. Bennett 1998 among others). In different Afro-Asiatic languages, we have *anu* 'I' in Saho, *ìnk* 'I' in Egyptian, *nɨk* 'I' in Tuareg, *an*(*i*) 'I' in Rendille (cf. Lipinski 1997 among others). According to Buccellati (1996: 201-205), there are person affixes *k* 'I', *n* 'we', *t* 'you', *š/Ø* 'he, she, they' for the subject and the person affixes *y, n, ʔ* 'me', *n* 'us', *k* 'you' and *š* 'him, her, them' for the object. In Table IX, we can see that we have *-hu/-ku* (1sg) in the perfective, and *ʔɨ* or *ʔɨ* > *ɨ* (1sg) in the imperfective which can correspond to *-k* in a form like *ʔanaku* (this, however, merits further research). In Ugaritic, the pronominal suffix for first person singular has preserved the old inherited form with two allomorphs: *ī* after a consonant (and noun in nominative singular) and *-ya* after a vowel and *y* (cf. Knudsen 1991: 875 for Ugaritic *liya* [for me]).

In Amharic, we have *-yä* > *e* as a gerundive suffix and as a possessive suffix which occurs attached to nouns. We also see *-yä* > *e* in Amharic first person singular independent pronoun *ʔɨn-yä* > *ʔɨn-e*. Besides, we have *-ň* < *ni* in the case of the first person singular object suffix. In short, we have *-k/-h, ʔ-, -yä/-yä* > *-e* as first person subject affixes, *-yä/-yä* > *e* as a possessive suffix and *-ň* as an object suffix (cf. also Buccellati 1996 for Akkadian related data). The element *-i* (or *y*) in *-ni* is absorbed into *-ň* (i.e., *-ni* > *-ň*). In the first person singular, we may assume the elements *k, ʔ*, y as person markers and the latter two can be derived from an original *k*. In Lipinski (1997: 301), the vowel *a* is indicated as a first person marker. In Amharic, however, it appears to me that the element *e* in *ʔɨn-e* is derived from *yä-* as in *ʔɨnyä* > *ʔɨn-e*. (cf. Levin 1995 for the elements *n/m* which can mark first person, Buccellati 1996 for the element *n* which can be interpreted as *me, we* or *us*). Moreover, it also appears to me that the element *n* is reanalysed as a person marker for the first person plural in Amharic. In the case of the first person plural, we may say the person marker is *n*.

As in other Semitic languages, second person is, in Amharic, marked by *k, h* (< *k*) or *t*. Primary (or main) masculine gender marker which occurs following the person element in other Semitic languages is deleted in Amharic and hence *k* or *k* > *h* can mark second person masculine. Besides, the primary feminine gender marker *i* assimilates with the person marker. Thus, we see *ki* > *š* and the element *š* marks second

person feminine singular. In several Semitic languages, including Tigrinya, secondary gender is marked by *u* in the masculine and by *a* in the feminine. In Amharic, however, there is no gender distinction in the plural and the number element *n* is substituted by *-at*. In Tigrinya, as in several other Semitic languages, we have *-kum* (2mpl) and *kina* > *kɨn* (2fpl). In Amharic, we have *aččɨhu* (2pl) which, I assume, is derived from at + *kumu* as in *at* + *humu* > *aččɨhu* (you [pl]). Hence, the Semitic external plural suffix *-at* and the second person suffix plural together form *aččɨhu* (you[pl]).

Scholars usually assume that third person independent subject pronouns are derived from *kärs* (belly) > *kɨss-* in Argobba, *rɨʔs* (head) > *ʔɨrs* > *ʔɨss-* in Amharic, *näfs* (soul) > *nɨss* in Tigrinya followed by morphemes like *-u*. But, why do the languages choose to derive their third person pronouns only from nouns which have *s*? As indicated above I do not see any convincing answer for such a question. On the other hand, third person is marked by *s* or *š* in different Semitic and Afro-Asiatic languages (cf. also the discussion above on Tigrinya third person pronouns).

Hence, in the independent subject pronouns, I assume Amharic third person (as its counterpart in Tigrinya) is, as in the case of several Semitic and Afro-Asiatic languages, marked by *s*.

In the independent subject pronouns of the third person masculine and feminine singulars, the element *s* can be followed by *-u* for the masculine and *-wa* (for the feminine). The elements *s* + *u* and *s* + *wa* can be preceded by (*ʔ*)*ɨn* > (*ʔ*)*ɨr* (cf. Gardiner 1950 among others for *ỉn* > *ỉr* in Egyptian) which can become (*ʔ*)*ɨssu* (he) and (*ʔ*)*ɨswa* (she) respectively.

In Amharic, both the second and third person independent subject pronouns form their plurals by adding (*ʔ*)*ɨnnä* to their second and third person masculine singulars. Hence, we have (*ʔ*)*ɨnnantä* (you[2pl]) and (*ʔ*)*ɨnnässu* (they) derived from (*ʔ*)*ɨnnä* + (*ʔ*)*antä* (you[2ms]) and (*ʔ*)*ɨnnä* + (*ʔ*)*ɨssu* (he) respectively.

In the case of affixes and non-subject independent pronouns, however, third person is marked by *h* (cf. Segert 1984 among others for Ugaritic *-h* /*-hu*/ [his],*-h* /*-ha*/ [hers]).

As illustrated above, *lä-* and *yä-* are added to independent subject pronouns in order to form the non-subject independent pronouns. In the gerundive and possessive forms, we have *-o* (3ms) and *-wa* (3fs) which, I assume, are derived from *-ähu* and *-hu* + *a* respectively. It appears obvious that Amharic *-hu* > *-u* (his) and *-hu* + *a* > *-wa* (her) are related to forms like Ugaritic *-hu* (his) and *-ha* (hers) (cf. Segert 1984, Bennett 1998 among others). As in the case of Tigrinya, it may be possible to assume that the third person plural element *-hu* > *u* (3ms) is different from the element *-u* in the imperfective forms *tɨ*…*-u* (2pl) and

yi..-u (3pl). In the case of Amharic, however, we do not see gender distinction in the plurals. In Amharic, I assume the latter are originally gender markers which indicate plural number (observe the discussion above for Tigrinya). Moreover, the perfective suffix *-u* (3mpl) is, I assume, originally secondary gender marker which indicates third person and plural number in Amharic. However, further research may be needed.

In Old Akkadian, there is a demonstrative **hanni* which later becomes a definite article *ha* (the) (*hanni* > *han* > *ha*) in West Semitic languages (as in Hebrew *ha* [the]). In the related literature, we see that demonstratives and third person pronouns can be related. As illustrated above, it may be possible to assume the derivation of the suffixes *-a* > *ä* (3ms) and *-at* > *ät* (3fs) in the perfective stem from forms like *ha* (the) (as in Hebrew), *ha*(*h*) (he) (as in Mehri), *hyt*/*hiyat*/ (her[s]) (as in Ugaritic), *hitu* [he] (as in Tigre), *hwt* (3ms) and *hyt* (3fs) (as in Ugaritic and Sabaic), *hwt* (that) (as in Ugaritic) *hwt*/*hyt* (that) (as in Sabaic) and *hä* (3ms) *hät* (3fs) (as in Tigrinya) indicated in (23) above. However, further research is needed.

In the imperfectives, third person masculine and feminine singulars are marked by *yi-* and *ti-* respectively. The prefix *yi-* (3ms) corresponds to third person element *h,* while the prefix *ti-* (3fs) probably corresponds to a form like *ht* (cf. the examples in 23). As indicated earlier, *-o* (3ms) and *-a* (3fs) in Amharic gerundives can be related to original *-ä* + *-hu* > *o* (3ms) and *-a* + *-ha* (3fs) respectively in other Semitic languages. In the possessive suffix, *-u* (his) corresponds to *-hu* (his) in languages like Ugaritic. I also assume *-wa* (her) is related to *hu* + *ha* (i.e., *hu* + *ha* > *wa*) and the elements *-hu* and *-ha* may indicate a definite article *-hu* (the) and a third person feminine singular (3fs) respectively.

In the case of third person masculine and feminine plurals of the imperfectives, we have *yi..-u* (3pl). The element *y* (cf. Segert 1997: 177, 184) for *h* > *y*) marks third person while *-u* is originally a secondary gender marker which shows plurality.

The object suffixes are related to those of possessive suffixes (see Table V). But in the first person singular of the former, we have *-ň* (instead of *-ya* > *-yä* > *e* in the possessive) and *-i* occurs assimilated with *n*. Moreover, the first person element *y* in the possessive suffix (cf. the discussion above for Tigrinya) is, I assume, followed by *a* > *ä* as in (*y* + *ä*). In the Gerundive stem of Amharic verbs, we have suffixes related to those of possessive suffixes. However, we see the vowel *-a* > *-ä* preceding the person elements in the former (i.e., gerundive) and hence we can observe *ä* + *hu* > *o* (3ms) which is formally different from the possessive suffix *-hu* > *u* (3ms). In the third masculine plural too, we have *-äw* (3pl) as a gerundive suffix and *-ačč̌äw* (3pl) as a possessive suffix. We can as-

sume phonological processes like *ähanu* > *ämu* > *äw* (cf. Murtonen 1967 for similar views) in the former and something like at + *hanu* > at + *ämu* > ač + *äw* > *ačč̈äw* in the latter. Consider Table IX below.

Pronouns	Verbal Affixes of Amharic		Gerundive or possessive Affixes of Amharic		obj. Suffixes of Amharic	Independent pronominal Suffixes of Amharic		
	perfect	impf.	ger.	poss.	obj. suf.	subject	object	possessive
1sg	-ku/hu	(ʔ)ɨ-	-e < yä	-yä	-ä(ɨ)ň	-yä > e	-yä > e	-yä > e
2ms	-k/h	tɨ-	-äh < aka	-ih	-ih	-tä	-tä	-tä
2fs	-š	tɨ…i	-äš < aki	-iš	-iš	-či	-či	-či
3ms	-ä	yɨ…	-o < ahu	-u	-äw	-u	-u	-u
3fs	-äčč	tɨ...	-a < aha	-ua	-at	-ua	-ua	-ua
1pl	-n	(ʔ)ɨn-	än < ana	ačč̈in	-än	-ň (< n)	-ň (< n)	-ň (< n)
2mp	-ačč̈ihu	tɨ...u	-ačč̈ihu	- ačč̈ihu	-ačč̈ihu	(ʔ)ɨn-..tä	(ʔ)ɨn-..tä	(ʔ)ɨn-..tä
2fpl	-ačč̈ihu	tɨ…u	-ačč̈ihu	-ačč̈ihu	-ačč̈ihu	(ʔ)ɨn-..tä	(ʔ)ɨn-..tä	(ʔ)ɨn-..tä
3mp	-u	yɨ…u	-äw	- ačč̈äw	- ačč̈äw	(ʔ)ɨn-.su	(ʔ)ɨn-.su	(ʔ)ɨn-.su
3fpl	-u	yɨ…u	-äw	-ačč̈äw	- ačč̈äw	(ʔ)ɨn-.su	(ʔ)ɨn-.su	(ʔ)ɨn-.su

Table IX

5.5.1 *Identification of the Phi-features in Tigrinya and in Amharic*

As illustrated above, we have independent subject and non-subject pronouns of Amharic and Tigrinya. These independent pronouns have Phi-features (person, number and gender markers). We have also Phi-features (person, number and gender morphemes) attached to nouns and verbs. The Phi-features which occur attached to verbs can indicate subject or object. As in other Semitic or Afro-Asiatic languages, Amharic and Tigrinya Phi-features indicated above are related.

5.5.1.1 *Person Markers in Amharic and in Tigrinya*

Buccellati (1996: 200) divides the Akkadian person elements into set I and set II which are used for subject and non-subject respectively as in the following:

(28)		Set I	Set II
	First person singular	k 'I'	y, n, ʔ 'me'
	First person plural	n 'we'	n 'us'
	Second person	t 'you'	k 'you'
	Third person	š, Ø 'he, she, they'	š 'him, her, them'

I assume we can divide the person elements of Amharic and Tigrinya into two sets, in a way similar to those of Akkadian. As we can see from our discussion above, I assume Tigrinya has the following person elements:

(29)		Set I	Set II
	First person singular	k, ʔ, y, ä (< -äy) 'I'	y, (n)i 'me'
	First person plural	n 'we'	n 'us'
	Second person	t/k 'you'	k 'you'
	Third person	s, h > y, h 'he, she, they'	h 'him, her, them'

As we can see from (29) above, I assume first person singular can be marked by *k* or elements related to or derived from it. The first person elements *ʔ* and *y* can be related to or derived from *k*. Moreover, we may assume *äy* > *ä*. In the literature (cf. Levin 1995 among others) *n* is regarded as a first person element. But this element (i.e., *n*) is followed by *i* (and we have the form *-ni*). It may be possible to assume *i* (or *y*) as the real first person marker (whose origin could be related to *k*). In the first person plural, we may suggest the derivation of *ħ* in *niħna* from *k* in an earlier form like *ʔanāku* (I). The element *ħ* may be assumed as a person marker in the first person plural. On the other hand, we do not see *ħ* indicating person in the affixes attached to verbs and nouns. In fact, we see *n* marking first person plural[5] in affixes attached to nouns and verbs and also in subject and object independent pronouns of Tigrinya. As indicated above, *a* or *ā* in the second syllable of *cäcacvc/cacācvc* pattern can show plurality. Besides, the element *a* following *n* may show plurality. I assume first person plural can be marked by *n or by n and a*. But, this merits further research.

[5] In the literature, it is indicated that first person plural is not a true plural of the first person singular (cf. Bobaljik 2008: 225).

The second person (in Tigrinya) is indicated by *-t/-k-*(in the subject) and by *k* (in the non-subject). Tigrinya has *s*, *h* or elements derived from them to mark third person. Tigrinya independent subject pronouns have a morpheme *s* which marks third person. In the affixes and in the non-subject independent pronouns, however, third person can be marked by *h* or by morphemes developed from *h*. In the imperfective subject affixes, we have *y* (< *h*) to mark third person. Moreover, we can see from our discussion above (cf. also Table VIII) that *-hu* > *-u* (3ms), *-ha* > *a* (2fs), *-ähu* > *-o* (3ms), *-hänu* > *-omu/-om*(3mpl), *-hina* > *-äna/-än* (3fpl) are assumed. In the perfective forms, the elements that we can assume were originally secondary gender marking vowels indicate also person and number. Thus, the vowels *-u* and *-a* indicate third person masculine plural and third person feminine plural respectively. As suggested above *-ä* (3ms) *-ät* (3fs) can be related to *-hä* and *-hät* respectively (cf. also examples in 23). However, I also assume this merits further research.

Furthermore, we can have Amharic person elements as in the following:

(30)

	Set I	Set II
First person singular	k/h, ʔ/ɨ, l, e (< -yä) 'I'	e (< yä)/yä, *ni > ň 'me'
First person plural	n/ň 'we'	n/ň 'us'
Second person	t/k, k > h 'you'	k, k > h 'you'
Third person	s, h > y, h 'he, she, they'	h 'him, her, them'

As in the case of Tigrinya, the first person elements *ʔ*, *y* and l can be related to or derived from k. In Amharic, *k* > *h* is a common phonological change. Furthermore, we may assume *-yä* > *e*. In the literature (cf. Levin 1995 among others) *n* is regarded as a first person element. But the element *n* is assimilated with *i* and we have the form *-ň*. I assume the person marker *y* or *i*, *while n* + *i* form *ň*.

In Amharic, I suggested that (ʔ)*ɨnn*(*ä*)- (such as) is added to (ʔ)*ɨnyä*/(ʔ)*ɨne* to form (ʔ)*ɨňňa* (we). In the first person plural pronoun (ʔ)*ɨňňa* (we), we do not see an overt first person marking element *y*. But I assume it is assimilated with *n* to form *ň*. Syncretism can be defined as the representation of different combinations of morphosyntactic values by the same form. In (ʔ)*ɨňňa*, I assume *ň* can mark 1pl in independent pronouns. But *ň* can mark 1sg in object suffixes. Moreover, first person plural can be marked by *ň* in independent pronouns and by *n* in the suffixes and prefixes.

In Amharic, as in Tigrinya, *-t-* marks second person in independent pronouns. Besides, second person subject prefixes can be indicated by *t-*, while *k*/*h* can mark second person in the perfective and gerundive subject suffixes and in the possessive suffixes. The element k (as in the case of Tigrinya) or *k* > *h* can mark second person singular in the suffixes. In Amharic, however, we observe *ki* > *š* and *ka* > *k*. Hence, in Amharic, the primary gender markers are not overtly seen. In the former, *š* indicates second person and feminine gender and in the latter *k*/*h* marks second person and masculine gender. In second person plurals too, Amharic does not distinguish gender, while number is indicated by *-at* (external plural marker). Thus, we can have a phonological process like *-at* + *-kumu* > *-at* + *-huwu* >*-aččihu* (you [pl]). In the plural forms, *-k-* and *-h-* can mark second person and third person respectively (cf. also the discussion above).

Furthermore, Amharic independent subject pronouns, as in the case of Tigrinya, have a morpheme *s* which marks third person. In the affixes, however, third person can normally be marked by morphemes developed from *h* (or together with other vowels preceding or following it). In the imperfective subject suffixes, we have *y* (< *h*). Moreover, we can see from our discussion above (cf. also Table IX) the changes *-hu* > *-u* (3ms), *-ha* > *a*(2fs), *-ähu* > *-o* (3ms). In the third person plurals too, Amharic does not make gender distinctions and the external plural element *-at* is added to mark plurality. Hence, we can assume a process like *-at* + *-hänu* > *-at* + *-häwu* > *-aččäw* (3pl). In the perfective forms, the element that we could assume was originally secondary gender marking vowel indicates person and number. Thus, the vowel *-u* indicates third person masculine plural and third person feminine plural.

In Amharic, we can say *yɨhä-w* 'here it is') which can be derived from *yɨh-hä-hu* (this it the/that it is) (lit). Besides, we can say *ʔɨnnäho* derived from *ʔɨnnä* (such as), *hä* (it) and *hu* '3ms/the'. Thus, I assume, as in Tigrinya, *-ä* (3ms) and *-äč*(*č*) (3fs) can be related to *-ha*/*hä* and *-hat*/*hät* respectively. As indicated above, however, this merits further research.

5.5.1.2 *Number Markers in Tigrinya and in Amharic*

In different Semitic and Afro-Asiatic languages, number can be marked by *n*. In Akkadian, for instance, the marker of the plural is *n* and occurs affixed immediately after the main (primary) gender marker. The Akkadian secondary gender markers immediately follow the plural marker as in *š-i-n-āti* (them [fem.]) and *š-u-n-ū-ti* (them [masc.]). They consist of the vowel *ā* for the feminine and the vowel *ū* for the masculine (as in the case of *ā* in *š-i-n-āti* and *ū* in *š-u-n-ū-ti*).

In Tigrinya, the marker of the plural in the second and third persons is *n* (or its variant *m*). In -kina, for example, *k* indicates second person, *i* indicates primary feminine gender, *n* marks number, while *a* indicates secondary gender. As in Akkadian, Tigrinya number marker *n* occurs between the primary and the secondary gender markers. In some cases, the secondary gender marker can mark person, gender and number. For example, Tigrinya secondary gender markers *-u* and *-a* can indicate third person masculine plural and third person feminine plural respectively in the perfective stem. In forms like *tɨ-..-u* and *tɨ-..-a*, however, the secondary gender marker may indicate number and gender and not person. For instance, *-kum-u* (2mpl) in *mähar-kumu-ni* (you [2mpl] taught me) and *-kɨn-a* (2fpl) in *mähar-kɨn-a-ni* (you [2fpl] taught me) correspond to *tɨ-..-u* in *tɨ-mɨhr-u-ni* and *tɨ-..-a* in *tɨ-mɨhr-a-ni* respectively. The person marker *k* in the former corresponds to the person marker *t* in the latter. The secondary gender vowels *-u* in *kum-u* and *-a* in *kɨna* (< *kina*) correspond to *-u* in *tɨ-..-u* and *-a* in *tɨ-..-a* respectively. In *-kumu* and *-kɨna*, number is marked by n/m. In *tɨ-..-u* and *tɨ-..-a*, however, the secondary gender vowels mark both gender and number (not person). In the third plurals of Tigrinya, we have *-om-u* (3mpl) and *-än-a* (3fpl) which, I believe, are derived from *-han-u* (as in *-han-u* > *-häm-u* > *-om-u*) and *-hin-a* (as in *-hin-a* > *-hän-a* > *-än-a).* The person element *h* in earlier forms (i.e., *h* in **hanu* and **hina*) correspond to *y-* in *yɨ-..-u* (3mpl) and in *yɨ-..-a* (3fpl). As in the second plurals, the secondary gender vowels *-u* and *-a* in *yɨ-..-u* (3mpl) and *yɨ-..-a* (3fpl) correspond to *-u* in *om-u* and *-a* in *än-a* respectively. In *-om-u* and *-än-a*, number is marked by *m* and *n* respectively, while in *yɨ-..-u* and *yɨ-..-a*, the secondary gender markers *-u* and *-a* mark both gender and number.

As in Tigrinya, the originally secondary gender marker *-u* of Amharic can show person and number (as in *säbbär-u* [they broke]) in the perfective. As in Tigrinya, Amharic *tɨ-..-u* (3pl) and *yɨ-..-u* (3pl) indicate person and number. The morpheme *t* (which corresponds to *-k* [2ms]) is a second person element. The morpheme *y-* (which corresponds to the original *h*) is a third person element. As Amharic does not make differentiation for gender, the originally secondary gender element *-u* in the perfective, as in *säbbär-u*, indicates person and plural number and not gender.

In Amharic, we have indicated above that the form *(ʔ)ɨnnä* marks plurality in the independent pronouns. The Semitic and Afro-Asiatic plural morpheme *n* is not overtly seen in forms like *-ačč ɨhu* (2pl). In Semitic languages, the form *-at* also shows plurality. I think *-at* is affixed to second and third person plurals that we find in other Semitic languages. In Amharic second and third plurals, we have *-ačč ɨhu* (2pl), *-äw* (3pl) and *-ačč äw* (3pl). I assume phonological processes like *-at* + *-kumu*

> *-at + -humu > -aččihu*, *-hanu > -ämu > -äw*, and *at + -hanu > at + -ämu > -aččäw*. As the original number morpheme is highly lexicalized, *-at* is added to indicate plurality in Amharic (cf. Jensen 1990 for double plural forms in English).

5.5.1.3 *Gender Markers in Amharic and in Tigrinya*

As in other languages like Akkadian, differentiation for gender occurs only for second and third persons in Tigrinya. We have two sets of gender markers in Tigrinya, a primary or main gender marker occurring in both singular and plural and a secondary one occurring in the plural after the number marker (cf. Buccellati 1996: 201 for Akkadian). In the first singular and plural, Amharic and Tigrinya do not draw distinction for gender and all forms of the first person are ambivalent. Besides, Amharic does not show gender distinction in the plurals.

According to Buccellati (1996: 201) a primary gender marker in Akkadian is represented by a short vowel throughout, except for the third singular and the first plural. Akkadian secondary gender markers are also considered long throughout in Buccellati (202).

In language*s* like Tigrinya, I assume a primary gender marker is represented by a historically short vowel throughout. Hence, we see a germinated consonant of the object suffix which comes after primary vowel (as in mähar + *-ka* + *-äni* > *mäharkanni* 'you (2ms) taught me', *mähar* + *-ki* + *-äni* > *mäharkɨnni* 'you (2fs) taught me' and ungeminated consonant of the object suffix which comes after a secondary gender marker (as in *mähar* + *kina* + *-äni* > *mäharkɨnani* 'you (2fpl) taught me'). It appears to me that Tigrinya secondary gender markers correspond to historically long vowels. In the second singulars and plurals and also in the third plurals, Tigrinya has primary gender markers *-a* (for the masculine) and *-i* (for the feminine). Moreover, Tigrinya has the secondary gender markers *-u,* for the masculine, and *-a*, for the feminine (cf. Buccellati 1996, Lipinski 1997 for primary and secondary gender markers in Akkadian). Regarding the third singulars, however, we find *-u* as in *wäsidu* (he took/he has taken) (for the masculine) and *-a* as in *wäsida* (she took/she has taken) (for the feminine) in the perfective form of Tigrinya (and I assume these merit further research).

In Amharic, we indicated above that plural forms do not differentiate for gender. In the singulars, however, Amharic makes gender distinctions. But Amharic primary gender markers *-a* and *-i* are not seen on the surface. In the case of the perfective, the primary gender is deleted in the former (*-ka* > *-k*/*-h*) and assimilated to the person element in the latter (*-ki* > *-š*).

5.5.2 *Archaisms in the Phi-features*

Linguists divide the Semitic languages spoken in Eritrea and Ethiopia into southern and northern groups. Amharic and Tigrinya belong to the former and to the latter groups respectively. The Amharic and Tigrinya Phi-features indicated above are related. But there are no common innovated features and their relationship is due to archaisms.

The majority of the scholars (cf. Lipinski 1997 among others) assume that the Semitic languages currently spoken in Eritrea and in Ethiopia and which later split into North and South groups, are derived from a single Semitic language.

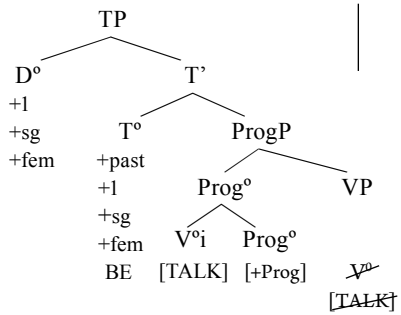
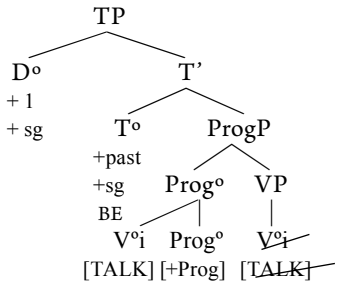
On the other hand, there are scholars who believe that the geographical location of the ancient people speaking Proto-Semitic dialects must be what is nowadays called Ethiopia, Eritrea or the Horn of Africa (cf. Murtonen 1967, 1991; Hudson 1977; Rogers 1991 among others). As the differences and similarities among the languages in question can be as archaic as those within other Semitic languages, the proposal of the first group of scholars seems to be less plausible. In fact, Faber (1997) says there is virtually no linguistic evidence for such a common linguistic stage. However, the author has no intention to dwell upon this issue.

5.5.3 *Syncretism and Beyond*

Syncretism can be defined as the representation of different combinations of morphosyntactic values by the same form. In English, for instance, (1sg) and (3sg) of verb *to be* syncretize, and so do (2sg), (1pl) and (3pl). For the (1sg) and (3sg), we find *was* as the past tense form of the verb to be. For the (2sg), (1pl) and (3pl) too, we observe *were* as the past tense form of the verb *to be*. In Distributed Morphology (DM) terms, syncretism occurs when a single vocabulary item (e.g. gender element *u*) realizes more than one combination of features in a syntactic terminal node (cf. Harley 2008).

According to Williams (1994), dative and ablative case, in Latin, always synchronize in the plural, regardless of what the actual suffix is. In English, as indicated above, the 1sg, 3sg and others syncretize. Harley (2008: 251) provides a DM derivation of the surface form of the sentence *I was talking*, so that the reader can understand the realizational nature of the theory, as well as the relationship between the syntactic derivation and the surface form. Observe (31a-e) taken from Harley:

(31) A Distributed Morphology Derivation.

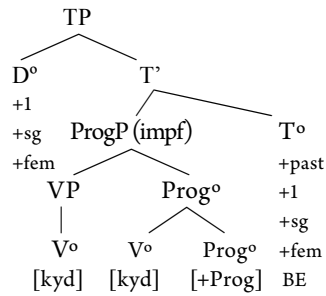
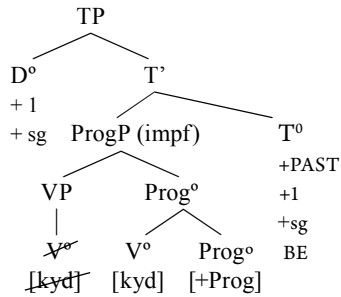
	Operation	Output
a.	Syntax: Construct Numeration by selecting feature (bundle)s.	{BE, [+ 1 + sg + fem] D, [+ past] T TALK, [+ prog]}
b.	Syntax: Construct interpretable sentence structure by Merge, Move of feature (bundle)s (according to Harley 2008, the output of this step is sent to LF for semantic interpretation and to PF for Spell Out).	
c.	Morphology: Manipulate makeup of terminal bundle(s) to conform to language-specific requirements (e.g. by impoverishment, on which more anon).	
d.	Morphology: Realize (or "discharge") the terminal nodes of the syntactic tree by inserting Vocabulary Items into them, giving them phonological content.	[[/aj/] D [[/wʌz/] Tº [[/tɑk/] v [/ɪŋ/] prog] prog] T'] TP
e.	Phonology: Make morphological and phonological alternations to input as necessary to arrive at the optimal phonological form.	[ˈajwəzˈtʰɑkin]

(Harley 2008: 252)

In (31), we see an example taken from Harley. In (32) a DM derivation of the surface form of the sentences *ʔanä ʔi-xäyyid* (< *ʔi-käyid*) *näyrä* (I (fem) was going) in Tigrinya and *(ʔ)ine (ʔ)i-hed* (< *ʔi-käyid*) *näbbär* (I (fem) was going) in Amharic are provided, so that we can have a better

understanding of the (i) realizational nature of the theory, and (ii) the relationship between the syntactic derivation and the surface form (cf. also Harley 2008).

(32) A Distributed Morphology Derivation (adopted from Harley 2008)

	Operation	Output
a.	Syntax: Construct Numeration by selecting feature (bundle)s.	{BE, [+ 1 + sg + fem] D, [+ past] T kyd, [+ prog]}
b.	Syntax: Construct interpretable sentence structure by Merge, Move of feature (bundle)s. (According to Harley 2008, the output of this step is sent to LF for semantic interpretation and to PF for Spell Out).	
c.	Morphology: Manipulate makeup of terminal bundle(s) to conform to language-specific requirements. (e.g. by impoverishment, on more anon).	
d.	Morphology: Realize (or "discharge") the terminal nodes of the syntactic tree by inserting Vocabulary Items into them, giving them phonological content.	[[/ʔanä/] D [[[/ʔikäyɨd/] v [impf] Prog] Prog [/näbär-ku/] Tº] T'] TP (Tigrinya) [[/ʔɨne/] D [[[/ʔikäyɨd/] v [impf] Prog] Prog [[/näbbär-ku/] Tº] T'] TP (Amharic).
e.	Phonology: Make morphological and phonological alternations to input as necessary to arrive at the optimal phonological form.	[ʔanäxäyyɨdnäbär-ku/] (Tigrinya) [ɨnehednäbbär] (Amharic)

According to Harley (2008), the outputs of step (31b) and step (32b) are sent to LF for semantic interpretation and to PF for Spell Out.

According to Arregi and Nevins (2012), Spell Out is labelled as the entire path of derivational modules from the conclusion of syntax, through the postsyntactic component, to the onset of phonological computation. Moreover, they assume Vocabulary Insertion constitutes the final stage of the postsyntactic component. After Vocabulary Insertion, phonological rules begin to apply on the underlying representations of exponed terminals (cf. Arregi and Nevins (2012) for more details). In this work, I prefer to adopt the views of Arregi and Nevins (2012). However, the views related to this issue merit further considerations and research.

According to Harley (2008), the English verb to be is put in T^0 as in (31). I assume, the verb to be is in T^o in Amharic and Tigrinya too (32). But I assume, unlike that of English in (31), the verb to be is put to the right of the main verb in Amharic and Tigrinya (cf. Adger 2003: 329-333 for related German examples). In Amharic and in Tigrinya, the imperfective form with the vowel pattern *-ä-ɨ-/-ä-ɸ-* (derived from an older vowel pattern *-a-i-*) can correspond to English progressive form. In the examples given above, the imperfective vowel pattern is inserted into the verb root *kyd* to form the imperfective verb stem. The imperfective verb shows something like habitual, repeated or continuous actions. Moreover, the verb to be indicates present or past tense (observe the next chapter for more discussion on aspect and tense).

As indicated above, syncretism can be defined as the representation of different combinations of morphosyntactic values by the same form. In English, for instance, 1sg and 3sg of verb *to be* and also 2sg, 1pl and 3pl of verb *to be* syncretize. For the 1sg and 3sg, we have *was* as the past tense form of the verb to be.

According to Williams (1994), dative case and ablative case in Latin always syncretize in the plural. For instance, the singular dative case suffix *-ae* and the singular ablative case suffix *-a* of class I desinences (nominal) have the form *-is* in the plural. Moreover, Latin has *-o* (dative) and *-o* (ablative) in class II, *-i* (dative) and *-e* (ablative) in class III, *-ui* (dative) and *-u* (ablative) in class IV and also *-ei* (dative) and *-e* (ablative) in class V case desinences in the singular. In the plural, however, Latin has *-is* for dative and ablative forms in class II, *-ibus* for dative and ablative forms in class III, *-ibus* for dative and ablative forms in class IV, and also *-ebus* for dative and ablative forms in class V(cf. also Harley 2008 for details). As indicated in Harley (2008), this is a metaparadigm. Metaparadigm is a generalization over the shape of a given type of paradigm within a language. A syncretism that holds in a metaparadigm is, according to Harley, metasyncretism. It is a syncretism which, regardless of the particular forms or affixes used in any particular instance of the syncretism, holds for a particular set of features in a language. Hence, the plural ablative/dative syncretism in Latin case endings are, according to Harley (2008), apparently metasyncretism.

In the literature (cf. Adger and Harbour 2007: 24-5 among others), it is indicated that π (person) dominates ш (number), and the former is extrinsically more marked than the latter. In some languages (e.g. Hebrew finite verbs), the verb forms agree for person, number, and gender, while in other languages the verb forms agree for number and gender without person. However, it is indicated in Harbour (2008) and others that none agrees for person without number and gender. According to Harbour (2008:194), one cannot have person without number, just as one cannot have C without T (cf. Miyagawa 2012 among others for different views regarding C and T). Moreover, he says, it is possible for number to project without person. However, Adger and Harbour (2008) indicate that number and gender distinctions are frequently lost with respect to person, but in opposite fashions. If a language makes number distinctions for some persons only, they will be either first persons or first and second persons. If, on the other hand, a language makes gender distinctions for some persons only, they will be third persons or second and third persons. In the Semitic languages in question, however, such distinctions do not appear to help much.

In the case of Amharic and Tigrinya, we have seen above that the verb forms and the independent pronouns mark their second person by *k/h* and *t*. Moreover, we can also see that number is indicated by ʔɨnnä in the case of Amharic independent pronouns and by *n* or *n* > *m* in the case of their counterparts in Tigrinya. Nonetheless, Amharic verb forms and independent pronouns do not have morphemes to make gender distinctions in the second and third person plurals. As illustrated in Table III and in Tables V-VII, Amharic verb forms and independent pronouns do not distinguish between second person masculine and feminine plurals and also between third person masculine and feminine plurals. In the case of Tigrinya, however, gender distinctions can be made. But we can find an amalgam of number and gender (cf. Tables III-VII). In the perfective form, second person is marked by *k*, while gender is marked by primary gender markers *-a* (for masculine) and *-i* (for feminine). In the plural (perfective), we see the forms *-kum* and *-kɨn*. The forms *-kum* and *-kɨn* are also realized as *-kumu* and *-kɨna* respectively whenever they are followed by object suffixes (cf. Tesfay Tewolde 2002 for details). Hence, we can see that the secondary gender markers can be surfaced whenever they come before object suffixes. As we know, Proto-Semitic short *i* can correspond to *ɨ* in Eritrean and Ethiopian Semitic languages. Thus, it is obvious that Tigrinya *-kɨn*(*a*) corresponds to *kina* "you (2fpl)" in other Semitic languages. Taking other Semitic languages into account (as in the case of kanu > kunu (2mpl) for Akkadian and kanu (2mpl) for Ugaritic), I assume *-kanu* > *-kunu* (by regressive assimilation which is very common in Tigrinya) and *kunu* > *kumu* (*n* > *m*) and finally *kumu* > *kum*/*kumu*. To summarize, we see that in the perfective, second person is marked by *k;*

while number is indicated by *n* or *m*. The secondary gender markers *-u* (masculine), and *-a* (feminine) may not always be overtly seen. However, the primary gender markers may serve the purpose.

Unless additional explanations are given, the terms imperfective and perfective in this section refer to a simple imperfective and to a simple perfective forms (a perfective form with *-ä-ä-* vowel pattern) respectively. In the perfective form, the φ-features are suffixes. But in the imperfectives, we have suffixes and prefixes. The prefix *t-* indicates second person and corresponds to second person marker *k* in the perfectives. In the second person masculine singular (in the imperfective), the primary gender marker *-a,* which corresponds to primary masculine gender marker in the perfective, is deleted. However, the primary feminine gender marker *-i* occurs in *tɨ--i* 'you(2fs)'. The morpheme *t-* marks second person while *-i* shows feminine gender which corresponds to primary gender marker *-i* in the perfective. In the plural imperfective second person affixes too, we have *t-* which indicates second person. However, gender and number are marked by the originally secondary gender markers. The originally masculine secondary gender marker *-u* and the originally feminine gender marker *-a* indicate both gender and number. Hence, *tɨ--u* and *tɨ--a* mark (2mpl) and (2fpl) respectively. Hence, we find an amalgam of number and gender in the imperfective forms. The originally secondary gender marker is used to indicate both gender and number. But there is no number marker different from that of gender. In the imperfective, Tigrinya appears impoverished in that the form which marks plural number is deleted. I assume it is deleted via impoverishment rule. The impoverishment rule is followed by syncretism. The form for the plural number feature is deleted via impoverishment rule and number syncretizes with gender. I assume this is morphological impoverishment - not deeply syntactic (numeration bundling restrictions). In the second and third person plurals, Tigrinya syncretizes number with gender in the imperfective. Moreover, Tigrinya syncretizes number and person with gender in the perfective third person plurals.

We have seen above that Amharic plural agreement affixes appear underspecified for gender. As such a widespread syncretism cuts across different vocabulary items (VIs), it may be regarded as metasyncretism. In Amharic, number syncretizes with an originally gender marking element in the imperfective second and third person plurals. I assume a morphological impoverishment (similar to that of Tigrinya illustrated above) for Amharic imperfective plurals too.

In the perfective third person plural, a feature bundle containing person and number syncretize in Amharic. The gender feature is deleted while person and number are marked by the originally gender (secondary) marking element. I assume a feature bundle containing (syncretized) person, number (pl) and gender is reduced to no gender feature by impoverishment which, I assume, is morphological.

As indicated in the literature, underspecification can predict syncretism created by a single VI's features. If syncretism cuts across different VI's features of a language, however, underspecification becomes a description, not an explanation, of the pattern (cf. Harley 2008 among others).

Bobaljik (2001) taking Russian examples into account argues that impoverishment is an already-existing tool within DM that allows the theory to capture metasyncretism. In the literature (cf. Harley 2008), impoverishment rules are assumed to be language-specific rules that manipulate terminal nodes as they come out of the syntax by deleting certain features ("impoverishing" the terminal bundle) in the environment of other features. Impoverishment can be regarded as a mechanism whose function is to reduce the complexity of forms reaching the PF interface. It is indicated in Harley (2008) that one only has to posit a single feature-deleting Impoverishment rule in order to, for instance, capture the Russian metasyncretissm.

As illustrated in the above examples, Amharic does not show gender distinction in the plurals. As in the case of Russian and other languages, we may only have to posit a single feature-deleting Impoverishment rule to capture the Amharic metasyncretism. As in the case of Russian, for instance, this rule will apply to all syntactic feature bundles before VI insertion even occurs. We can assume a particular Impoverishment rule active in Amharic as in the following:

(33) [+ plural + {masculine, feminine}] ⟶ [+ plural]

Harley (2008) uses an impoverishment rule similar to (33) for Russian. In (33), a feature bundle in the syntax which contains both a plural number feature and any gender feature is reduced to a bundle with no gender feature. The gender feature is deleted from the structure by impoverishment. We can assume the application of this rule to all Amharic feature bundles that match its structural description before spellout. As a consequence, we assume that no gender features are present in the plural by the time vocabulary items are inserted, and thus no plural VI could ever be conditioned by them. Moreover, no singular gender-specific VI could ever be in competition for the plural node. Impoverishing the Amharic feature bundle in such a way could mean that, in this subset of forms, there is only one form for every distinct feature bundle and there is no underspecification of VIs at all. Furthermore, this removes the competition-ordering problem noted in the literature (cf. Harley 2008 among others). As in the case of Russian and other languages, we can think of Impoverishment in Amharic, as a mechanism whose function is to minimize the complexity of forms reaching the PF interface.

It is, however, possible to have another hypothesis. It may be possible to assume that Amharic has no feature bundles that contain plural and gender in the numeration. It may be regarded as a deep fact of Amharic syntax that gender features are not present in plural bundles. Amharic metasyncretism can give a clue that something is going on before VI insertion takes place; whether it is Impoverishment (purely morphological) or numeration bundling restrictions (deeply syntactic) merits further research. However, the former appears to be more probable.

5.6 *Conclusion*

Both Tigrinya and Amharic are Semitic languages. The languages in question have subject and non-subject independent pronouns and pronominal affixes. In both Amharic and Tigrinya, we observe that the elements which indicate person, number and gender in the independent pronouns and pronominal affixes are related.

Moreover, the morphemes which indicate these Phi-features are also related to their counterparts in other Semitic languages. We can see from (28), (29) and (30) that the elements (*i*) *k*, *ʔ*, *y* can indicate first person singular (ii) *t*/*k* can mark second person (iii) *n* (and also *ň* in Amharic) can indicate first person plural in Akkadian, Tigrinya and Amharic. However, the role of *a* in indicating first person plural may also be considered. The element *s* marks third person in the subject independent pronouns in Amharic and in Tigrinya. In the affixes of Tigrinya and Amharic and in the non-subject independent pronouns of Tigrinya, however, third person can be marked by elements derived from *h* (and at times by *h* itself). The languages under discussion appear to be closer to East Semitic in the former and to West Semitic in the latter. We have illustrated that Amharic and Tigrinya independent pronouns and pronominal affixes are related. Their relationships, however, are due to archaisms.

In this chapter, an attempt was made to look into the ancient forms indicating the person, number and gender. The analyses of these forms can help in the understanding of syncretism and fission of VIs and also epenthetic elements that can be inserted within the VIs.

Syncretism can be defined as the representation of different combinations of morphosyntactic values by the same form. We have seen above that Amharic plural affixes appear underspecified for gender. As such a widespread syncretism cuts across different vocabulary items, I assume it is metasyncretism. In the second and third person plurals, Tigrinya syncretizes number with gender in the simple imperfective. In the third person plural, Tigrinya syncretizes number and person with gender in the perfective. Unlike Tigrinya, Amharic does not have a gender marker in the plural. In Amharic second and third person plurals, number syncretizes with an

originally secondary masculine gender marker in the simple imperfective. In the third person Amharic perfective plural, number and person syncretize with an originally secondary masculine gender marker.

In Tigrinya simple imperfective form indicated above, the plural number feature is deleted by impoverishment rule. In the simple perfective form of Tigrinya too, the person feature and the number feature are deleted by impoverishment rule. The number feature in the imperfective second and third person plurals of Tigrinya and also the number and the person features in the perfective third person plural of Tigrinya syncretize with Semitic secondary gender markers. I assume this is a morphological impoverishment.

In Amharic second and third person plurals, the plural number feature (in the simple imperfective) and also the plural number and person features (in the simple perfective) syncretize with a Semitic secondary masculine gender marker which Amharic does not currently use to distinguish gender.

6

TENSE AND AUXILIARIES IN THE CONTEXT OF ERITREAN AND ETHIOPIAN SEMITIC (EES) LANGUAGES

6.1 *Introduction*

Gallego (2010: 37) quoting Chomsky (2000, 2001) argues Agree is parasitic on Match, but not vice versa. As indicated in the literature, the operation Agree has two subcomponents: Match and Valuation. According to Gallego (2010), Valuation requires Match, but not every Match is followed by valuation (cf. also Adger 2003: 167-9 for matching requirement, checking requirement and Agree and value). The ϕ-feature bundle of the Probe and that of the Goal may match. But the match may not be followed by valuation (cf. Gallego 2010: 37 for examples where the object is matched twice, by v and T, but only establishes Agree proper with the latter).

In Travis (2010: 5) it is indicated that "VP is a label used for disparate constituents within the current literature".[1] Such arguments show the complexity of the situation. In this book, several key positions championed by the anti-lexicalist framework of distributed Morphology are adopted (cf. Harbour 2008; Pfau 2009; Siddiqi 2009; Arregi and Nevins 2012 among others). This chapter concerns tense and auxiliaries in the context of Abyssinian (Eritrean and Ethiopian) Semitic languages. The chapter is organized as follows. In section (6.2), we have the background which may serve as a theoretical outline for the discussion in

[1] Öztuk (2005: 14) argues that there is no vP in Turkish and TP is not the provider of structural case. According to Öztuk, this implies Turkish is a language in situ which lacks case-driven Agree to with higher functional projections. There are scholars who argue that the verb which is already completed in the lexicon must somehow be "rubber-stumped" or checked as a "good word". The affixes are already part of whatever moves to a functional category; for instance, any given verb is already specified in the lexicon for AgrO, T, and AgrS morphology and the movement to AgrO, T and AgrS may raise questions which are so far unresolved (cf. Lasnik and Uriagereka 2005: 75-76). Several scholars assume that there are no direct relation between case checking and agreement relation (cf. Fuß 2005: 84-87 for examples taken from Georgian and French). I believe such issues need further investigation.

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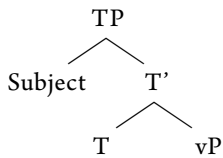
the chapter. The section in (6.3) deals with auxiliaries and tense in Tigrinya and in Amharic. In section 6.3.1, auxiliaries and tense in Tigrinya are examined. In (6.3.1.1 - 6.3.1.2), Tigrinya unaccusatives, unergatives, passives and their subjects are dealt with. In section (6.3.2), auxiliaries and tense in Amharic are examined. In (6.3.2.1. - 6.3.2.2) Amharic unaccusatives, unergatives, passives and their subjects are discussed. In section (6.4), we have a conclusion.

6.2 *Background*

According to Adger (2003), sentences have a core consisting of the projections of a lexical category (the verbal cluster) surmounted by a series of other categories, which project but do not assign θ-roles. One of these categories is T. T is assumed to be the most important of these categories which hosts the tense features for the whole sentence. In the literature, linguists such as Adger (2003) indicate that sentences are really projections of T, with the subject in the specifier of TP, and the vP as the complement of T as in (1).

(1)



(Adger 2003: 155)

The verb phrase consists of a 'little' v and a 'big' V. According to Adger (2003) and others, the former assigns the Agent θ-role, while the latter is responsible for assigning Theme and Goal roles. As indicated above, Adger (2003) and others assume that 'big' V raises and adjoins to 'little' v.

Furthermore, languages can haveiliaries. Auxiliaries are a small set of specialized verbs which perform restricted semantic functions. In English, auxiliaries include *modal* verbs, the verb *to be* and also the verbs *to have* and *do*. The verbs *can, may, shall, will* and *must* are called modal verbs and semantically signify notions such as obligation, possibility, permission, futurity and so on. In the literature, it is indicated that modal expressions show the attitude of the speaker towards the proposition. It occurs in different flavours (deontic, epistemic etc.). The deontic interpretations of modals, which express notions such as duty or obligation, evaluate a proposition corresponding to some moral code. The epistemic interpretations of modals comment on the degree to which the speaker is committed to the truth of the proposition (cf. also Musan & Rathert 2011: 1-2). Observe also the following English modal verbs:

(2)

Present	Past
may	might
can	could
shall	should
will	would
must	

As we can see from 2, the word *must* is assumed to have no past form. The other modals, however, seem to have past forms. On the other hand, the meanings of the past tense modals appear to be different from those we might expect.

Modals and emphatic auxiliary *do* are assumed to have a specific structural position to appear. According to Adger (2003: 158), this position is outside the VP but after the subject. Adger (2003) assumes that tense can be marked directly on verbs like free (3a). When there are modals and emphatic do in the sentence, however, the tense features are marked on these auxiliaries (3c). The sentences in (3a-b) are correct while (3c) is out:

(3) a. Simon freed the slaves.

b. Simon did free the lions.

c. *Simon do freed the lions.

In languages like English, these facts can indicate that the tense feature of the sentence can be syntactically marked on a position outside the vP. According to Adger (2003), this is the position where the emphatic do and modal verbs appear. We have said above that in languages like English the tense features can reside in a position outside vP. As indicated in Adger (2003), this idea is backed up by the vP fronting. In vP fronting, the lexical verb complex (consisting of little v and big V together) and its complement move to a position in front of the subject as in (4b) below:

(4) a. Simon said he freed the lions and [free the lions] he did

b. Free the lions he did (free the lions)

In the literature, we also see another argument to the same effect on the basis of vP-ellipsis construction where the verb is simply omitted as in the following:

(5) Simon loved Lily and Bini did [ ] too

The square brackets signal the missing or elided material. The elided material can be filled in from the context immediately preceding. Nonetheless, what could be filled in is just the bare VP with no tense marking. It can be observed that the tense is again carried by the auxiliary do.

English has another element which supports the idea that there is a position outside the vP associated with syntactic tense and this is the word *to*, which appears in infinitival sentences (a certain type of sentences). In English, infinitival sentences usually occur as embedded sentences. The following is an example:

(6) She wanted [to eat cake].

(Adger 2003: 163)

We can see that the verb in the bracketed clause should be in the untensed form. The verb *want* assigns two θ-roles: one to the subject, another to the bracketed clause. It is also indicated in the literature that in English, *to* occurs in complementary distribution with the modals (cf. Adger 2003 for more details on the issue).

In Semitic languages like Arabic, the base consists of root consonants (e.g. *k-t-b*) and the stem vowels *a-a* express the active perfect, while the stem vowels *u-i* express the passive perfect. Thus, we get *katab-a* 'wrote' in the active perfect and *kutib-a* 'was written' in the passive perfect (cf. Haspelmath 2002).

As indicated in Arad (2005), Hebrew has verbal patterns or *binyanim*. Moreover, Arad (2005) divides Hebrew nouns into two groups: *mišqalic* and *non-mišqalic*. In the former, a consonantal root that combines with a nominal pattern, *mišqal*, forms a noun. While mišqalic nouns are made of consonantal roots, non-mišqalic nouns are made of syllabic roots, i.e., a string of consonants and vowels. According to Arad (2005), many of the non-mišqalic nouns are borrowings, which entered the language at an early age. In Hebrew, Arad (2005) says both binyanim and mišqalic are based on the same small set of prosodic templates: CVCVC, VCCVC, and CVCCVC. Both have internal vowels. However, Arad (2005) argues *mišqalim* have their internal vowels specified, while binyanim have vowel slots, but lack the vowels themselves.

In Tigrinya and Amharic, we have (a) syllabic roots which can correspond to those of Hebrew (b) nominal roots which are made of consonants (c) verb roots which consist of consonants (usually 3).

The category-neutral root becomes an actual word if combined with word creating morphology or patterns. The root is a lexical and phonological core which receives a semantic and a phonological incarnation in the environment of the (vowel) patterns. The root has a semantic core shared by all the words it creates (e.g., words which share the meanings of writ-

ing, written signs, writer etc.). The verb roots are unpronounceable on their own. The verbal patterns contain vowel slots to be inserted by vowels inherent to each pattern. Tigrinya and Amharic verbs are divided into verbs of type A, B and C. Prefixes, suffixes or both prefixes and suffixes can be added to the verb types.

In Hebrew, Arad (2005: 191-4) argues, Hebrew verbal patterns or binyanim are inserted under v (which appears to correspond to V in this work) and for each v there is a choice of only five exponents: CVCVC, nVCCVC, CVCCVC, hVCCVC and hitCVCCVC. Arad says the templates in the binyanim provide vowel slots and these slots, in turn, are the context for the insertion of voice.

The verb types in Tigrinya and Amharic can be compared to Hebrew binyan (the verbal pattern). The verb types in the languages in question have perfective, imperfective, gerundive, imperative and *jussive* patterns inserted into their consonant roots. For instance, the stem qätäl- is a type A verb stem with *qätäl-ä* 'he (has) killed' in the perfective, *yɨ-qätl-u* 'they (have) killed' in the imperfective, *qätil-u* 'he (has) killed' in the gerundive, *yɨ- qtäl* 'let him kill' in the jussive and *qɨtäl* 'you kill' in the imperative.

As indicated above, Arad (2005: 192-5) argues binyanim are inserted under the node v (that appears to correspond to V in this book), while the vowel melody is inserted under voice head (that appears to correspond to v in this book).

Regarding Tigrinya and Amharic, however, I assume the mechanism underlying the verb-formation may be sketched as in the following:

a) The consonantal root is inserted under the root node (cf. Arad 2005 for Hebrew).
b) The pattern for the verb type (e.g. CVCVC- for the active perfective form of type A) is inserted under the node V.
c) The vowel melody for the verb type is inserted under the Asp node which occurs between VP and vP. It appears to me that the v node in Arad (2005), corresponds to V in Adger 2003 among others and also in this work, while the voiceP in Arad (2005) appears to correspond to vP in Kandybowicz (2008) and in Travis (2010) among others and in this work.

Tigrinya and Amharic have *tä-* as a passive marker. Besides, Tigrinya has an internal passive form for the imperfective. Thus, voice can be spelled out by vowel melody in Tigrinya. In the active verbal form of type A in the imperfectives of Amharic and Tigrinya, we find the pattern *-ä-ɨ-*. But in the internal passive of the imperfective of Tigrinya, we have the pattern *-ɨ-ä-*. In the perfective (active) of type A, both Tigrinya and Amharic have the pattern *-ä-ä-*. In the majority of cases, the vowel melody does not dis-

tinguish between active voice and passive voice. The root fills in the consonant slots and the vowels which correspond to each verb type fill in the vowel slots. I assume the passive marker *tä-* is inserted in v.

If the root selects CVCVC- as the active verbal form of type A in the perfective, consonant and vowel slots can be filled by consonant radicals of the roots and by vowels respectively, while *tä-* can be put as a prefix to form *tä-qätäl-* (as in *tä-qätäl-ä* 'he was killed').

MacDonald (2010) argues an aspectual projection (AspP) occurs between vP and VP in English eventives. According to Travis (2010), aspect (Asp) occurs between vP and VP and also above vP (cf. also Jelinek 2002). In the compound tense construction of Egyptian Arabic, Jelinek (2002: 77) argues that agreement appears both on the auxiliary *kwn* 'be', where tense is marked, and on the main verb, where aspect is marked. According to Kown (2009: 158), "BE" served as a tense marker, forming compound retrospective tenses" in Slavic languages. Kwon argues (1) the verbs *can, could, may, might, will, would, shall* were full verbs (cf. also Lohndal 2009 for similar views; (2) Russian data sheds light on the understanding of relevant changes, i.e., from copulas to pronouns and vice versa; (3) the tense marker BE can become clitized to a verb head in Slavic languages (cf. Kwon 2009 for examples). Moreover, Lohndal (2009) argues (1) in Modern Hebrew pronouns are reanalyzed as copulas; (2) Hebrew triliteral verbal copula *h-y-y* disappears and a new copula *hu* develops from a pronoun; (3) demonstratives and pronouns can develop into copulas; (4) historical demonstrative pronouns can become synchronic tense markers; (5) existentials can develop into copulas; (6) full verbs may develop into copulas as in the case of the past form of the English verb *to be* from *wes* meaning 'to stay, to remain'; (7) a copula can develop into an auxiliary; (8) the copula is merged in PrP (according to Lohndal 2009: 210, Pr is a functional category where the external argument or the subject sits in the specifier) and moved to IP (in order to get inflected for tense and other agreement properties), while the auxiliary is directly merged in IP. As indicated in the literature, *be* can be regarded as a version of little v with the subject in its specifier and the PP, NP or AP as its complement (cf. Adger 2003: 196-7). In the literature, we can observe that the verb *have* has a number of functions in present-day English as in the case of perfective auxiliary (e.g. *I have eaten bananas*) and its use to signify possession (e.g. *I have a house*) (cf. also Adger 2003: 199 among others). In different languages, copulas can emerge from demonstratives and pronouns or from verbs which may further develop into auxiliaries and affixes. In Tibeto-Burman languages like Chantyal a simplex verb such as *ci* 'sit' can function as a copula. In Chantyal, the copula *mu-* is derived from a verb meaning 'to sit/stay'. This copula further develops into an auxiliary verb and non-past suffix on verbs. According to van Gelderen (2013) pronouns vary enormously among languages and can occupy specifier or head positions.

According to Lohndal (2009: 221), demonstratives can become both complementizers and copulas in that an element in Spec,CP can become a complementizer, while an element in Spec,PrP may become a copula.

In the Semitic languages of Eritrea and Ethiopia, as in other Semitic languages, perfective and imperfective aspect is indicated by inserting different vowel patterns into the base which consists of root consonants (cf. Tesfay Tewolde 2002 among others). But what is the role of the so called auxiliaries on tense marking in EES languages? Are there similarities in the development of auxiliaries in different languages indicated in the literature and in EES? What is the position of these EES auxiliaries in the tree structure? An attempt will be made to answer these questions.

Adger (2003) proposes that tense is not necessarily associated with the verb. It is rather marked higher up in the structure. In certain creole languages (like Mauritanian creole), the verbs themselves do not mark for tense. In such languages, tense and aspect distinctions are indicated by the use of particles placed before the verb and after the subject (cf. Adger: 2003: 166-7). According to Adger (2003: 166), modals, emphatic *do* and infinitival *to* are T heads and occur outside VP but after the surface position of subject. According to Manzini and Savoia (2007), however, such assumptions cannot be applicable to all languages. According to Aelbrecht (2012: 4-6) Dutch modals (a) are raising verbs (b) are not auxiliaries like in English (c) are not base generated as inflectional heads like English ones (d) are simply V heads that select an infinitival complement. Besides, he argues the infinitival complement of a Dutch modal is at least a vP, as it has to contain the base position of the raised object. Moreover, Remberger (2011) says the following:

> a) English modal verbs are commonly interpreted as auxiliary verbs in the structure under the IP/T (and hence in a monoclausal structure);
> b) German modals are less auxiliary-like than English modal verbs;
> c) Italian modals are like full verbs. However, they have restructuring properties. Thus, they can appear in both monoclausal and biclausal structures.

The aim in this section is to see the structural position and the tense marking role of auxiliaries of Abyssinian or Eritrean and Ethiopian Semitic (EES henceforth) languages (represented here by Amharic and Tigrinya).

6.3 *Auxiliaries and Tense in Tigrinya and in Amharic*

Tigrinya and Amharic do not have auxiliaries which look exactly like those of English. However, there are forms which may function as auxiliaries and some of them can be marked for tense.

6.3.1 *Tigrinya Auxiliaries and Tense*

In Tigrinya, we have forms which may correspond to English auxiliaries. These are *käʔal-ä* 'can/was able to (3ms)', *tä-gäbbä-ʔä* 'must (3ms)', *kon-ä* 'became (3ms)', *ʔall-o* 'exists (3ms)', *ʔallo* + Appl 'have' and *ʔɨyy-u* 'is (3ms)' and their different conjugated forms. In English, Adger (2003: 172-180) assumes the auxiliaries always come in a particular order: Modal > Perfect > Progressive > v > V. Modals, emphatic *do* and the infinitival *to* are assumed to be T heads, while perfect and progressive auxiliaries may occur above vP in the tree structure. In Tigrinya, however, there is no such distinction between the modals and the rest of the verbs we may call auxiliaries. For instance, the verb *konä* (< *kwn*) can be used as a verb to be in the negative (in the present) and in the past. But the verb *konä* is also used as a modal in the imperfective. The verb *käʔal-ä* can be used as a modal and as a main verb. The verb ʔallo (derived from *hlw*, i.e., *hälläw-ä* > *hallo* > ʔallo) 'exist' can serve as a verb to be. But when the third person form of the verb ʔallo is followed by applicative (henceforth Appl) affixes, we get the meaning 'have' (cf. Boneh 2003: 63-77 and Jung 2011: 1-2 for related data in Modern Hebrew and Russian respectively). Let us first see the Tigrinya forms in (7):

(7)	no	Perfect	Imperfect
	1	käʔal-ä 'was able to (3ms)'	yi-xiʔil 'can(3ms)'
	2	kon-ä 'became(3ms)'	yɨxäwwɨn 'may(3ms)'

The verb *käʔal-ä* (7), can have perfective and imperfective forms in a way similar to other main verbs like *färäd-ä* '(has) judged (3ms)' and *yɨfärrɨd* 'judges (3ms)'. Unlike other simple verbs, however, it may have other meanings. Let us see the following:

(8) a. (nissu) makkina mi-ziwwar kiʔil-u Tigrinya
he car to-drive was able to- 3ms
'He (has) learned how to drive a car'

b. (nɨssu) makkina mɨ-zɨwwar yi-xiʔil
he car to-drive 3ms is able to
'He knows how to drive a car'

c.	(nɨssu)	makkina	kɨ-hɨb	yɨ-xɨʔɨl
	he	car	comp-give	3ms-was able
	'He has the ability to give or donate a car'			
d.	(nɨssu)	makkina	kɨ-hɨb	yɨxɨʔɨl
	he	car	comp-give	may/can 3ms
	'He may/can give or donate a car'			

Tigrinya is a pro drop language and the independent 3rd person pronoun in (8a-d) may optionally be omitted. In (8a-b), we have perfective and imperfective forms respectively. In (8c) and (8d) too, we have the imperfective forms. But they have different meanings. The former (8c) and the latter (8d) express ability and probability respectively. In (8c-d), we have two verbs. These are *kɨ-hɨb* and *yɨxɨʔɨl*. The imperfective form of *kʔl* in (8b-c) has the meaning 'can/able to' (to express ability). But in (8d), this imperfective form (i.e. *yɨ-xɨʔɨl*) has the meaning 'may'. As indicated above, the imperfective form of *kʔl* can be used as a modal *may* or *can* (to express probability).

The verb *konä* 'became/has become (3ms)' has the root *kwn* and *konä* is derived from *käwän-ä*. The imperfective form of *kwn* is *yɨxäwwɨn* (when the ungeminated *k* is not preceded by a vowel we see *k* > *x*). Thus, the consonant *w* reveals in the imperfective form. Tigrinya auxiliary verb *kwn* corresponds to the auxiliary verb *kwn* in Egyptian Arabic (cf. Jelinek 2002: 74).

The present form of the verb to be *ʔɨyy-a* (9a) becomes *kon-ät* in the negative form (9b) of verb to be. In (9c), we have a perfective form of *kwn*. In (9d), the imperfective form of *kwn* can be used as *may*:

(9)					
	a.	ʔaster	näwwaħ	ʔɨyy-a	Tigrinya
		aster	tall	is -3fs	
		'Aster in tall			
	b.	ʔaster	näwwaħ	ʔay-kon-ät-ɨn	
		aster	tall	neg is -3fs-ɨn	
		'Aster is not tall'			
	c.	ʔaster	näwwaħ	kon-ät	
		aster	tall	become (perf)-3ms	
		'Aster has become/became tall'			

d. binyam käyd-u yi-xäwwɨn
binyam went-3ms 3ms-may
'Binyam may have left'

We have indicated earlier that the imperfective form of Tigrinya *kʔl* in (8b-c) and (8d) has the meanings 'able to' or 'can' and 'may' respectively. In (9d, 10a-c), the imperfective form of Tigrinya *yɨ-xäwwɨn* has the meaning 'may/might':

(10) a. (nissu) makkina mi-zɨwwar kɨʔil-u yi-xäwwɨn
he car to-drive was able to- 3ms 3-may
'He might know how to drive a car'

b. ʔɨti säbʔay nab roma käyd-u yi-xäwwɨn
the man to Rome went-3ms 3-may
'The man might have gone to Rome'

c. (nissu) makkina mi-zɨwwar yi-xɨʔil yi-xäwwɨn
he car to-drive 3ms is able to 3-may
'He might know how to drive a car'

As indicated above, the imperfective form of Tigrinya *kwn* can be used as a modal *may* or *can*. But the perfective form of *kwn* can be used as verb to *be* . We have also said above that Tigrinya uses ʔallo 'exists (3ms)' (derived from *hlw*) and *ʔɨyy-u* 'is (3ms)' (derived from *hwy/hyw*) as the verb to be in the present forms (cf. Lohndal 2009: 221 for Hebrew verbal copula *h-y-y*). The negative form of Tigrinya *ʔɨyy-u* is *kwn*. Furthermore, the past form of ʔallo and *ʔɨyy-u* is *nbr* (cf. also 12a, 12h, 15c-e). Let us see the following Tigrinya examples:

(11) a. bini läbbam ʔɨyy-u
Bini wise is-3ms
'Bini is wise'

b. bini läbbam ʔay kon-ä-n
Bini wise neg-is-3ms-neg
'Bini is not wise'

c. bini läbbam näbär-ä
Bini wise was-3ms
'Bini was wise'

d. bini läbbam ʔay-näbär-ä-n
Bini wise neg was-3ms neg
'Bini was not wise'

e. ʔab ʔɨta gäza säb ʔallo
in the house man is
'There is a person in the house'

f. ʔab ʔɨta gäza säb y-ällo-n
in the house man neg is neg
'There is no one in the house'

g. ʔab ʔɨta gäza säb näbär-ä
in the house man was-3ms
'There is no one in the house'

h. ʔab ʔɨta gäza säb ʔay-näbär-ä-n
in the house man neg was 3ms-neg
'There was no one in the house'

In the above examples, we have the verb *ʔɨyy-u* (11a) whose negative form is *ʔay-konä-n* (11b). In the past tense, (11a) and (11b) have the forms (11c) and (11d) respectively. Furthermore, we have *ʔallo* 'exist/there is' (11e) which functions as the verb to be in the present. The negative form of *ʔallo* (11e) is *yällo-n* (11f). We can also see from the examples above that the verb to be *ʔallo* 'is' in (11e) and its negative form in (11f) have the forms *näbär-ä* (11g) and *ʔay-näbär-ä-n* (11h) respectively in the past. It seems to me that the present and past forms of the verb to be are the words which express tense in Tigrinya (cf. also Jelinek 2002: 74 for Egyptian Arabic *kwn*). Let us also see the following examples:

(12) a. säb yɨ-zäwwɨr ʔallo Tigrinya
man 3-walk exist/is
'A man is walking'

b. säb yɨ-zäwwɨr näyr-u
man 3-walk was-3ms
'A man was walking'

c. säb yɨ-zäwwɨr ʔɨyy-u
man 3-walk is-3ms
'A man can walk/walks'

d. säb yɨ-zäwwɨr näyr-u
man 3ms-walk was-3ms
'A man was walking'

e. ʔɨti säb kɨ- yɨ-zäwwɨr ʔɨyy-u
the man ?- 3-walk is-3ms
'The man will walk'

f. ʔɨti säb mɨ-zorä näyr-u
the man ?-walk- was-3ms
'The man would walk'

g. nɨssɨxa ʔɨntä tɨ-ħawwi ʔanä mɨ-täħagos-ku näyr-ä
you if 2-heal I ?- happy-1s was-1s
'If you (2ms) became healthy, I would be happy'

h. ʔɨti säbʔay kɨ-yɨ-särrɨħ ṣäniħ-u
the man ?-3-work stay (perf.)-3ms
'The man was working'

i. ʔɨti säbʔay yɨ-särrɨħ näyr-u
the man 3-work was-3ms
'The man was working'

As we can see from the examples, *ʔallo* (12a) and *ʔɨyy-u* (12c) have the forms in (12b) and (12d) respectively in the past. In fact, the examples reveal that (12a) and (12c) have the same form in the past. Moreover, we can see from (12e) that in Tigrinya, the form *kɨ-* (which looks like a complementizer) + the imperfective form (*zwr* in this case) + the verb *to be* (*ʔɨyy-*) indicate fu-

turity. In Tigrinya, we have the particle *mi-* + a perfective form + *nbr* (the past form of the verb *to be*) which express a hypothetical situation. However, such hypothetical sentences are frequently preceded by an embedded clause preceded by the complementizer *ʔintä* 'if' (see also 12f-g). In (12h), we have a form of a verb to be which express a situation in the past. (12i) refers to a situation before the time of utterance in general. But (12h) indicates a situation not far away from the time of utterance.

According to Arregi and Nevins (2012: 31), Basque sentences can have functional projections AspP, TP and CP above vP. But MacDonald (2008: 207) argues aspectual projection (AspP) occurs between vP and VP (cf. also Armon-Lotem 2008 for Hebrew). In Hebrew, Armon-Lotem (2008: 235-239) puts the VP as a complement of Asp. Moreover, Armon-Lotem argues that aspect is the first grammatical notion marked by children because it is learned together with the verb, being part of its meaning. Semitic languages derive verb stems (actual verbs with specific meanings) from consonant roots and vowel patterns are inserted to indicate perfect/imperfect aspect and active/passive voice (cf. also Roark and Sproat 2007: 41). In EES languages, we see that the root consists of usually 3 or 4 consonants, while the stem vowels express the perfective and imperfective stems (cf. also Baye 2007/2008 (2000 E.C.); Haspelmath 2002; Tesfay Tewolde 2002 among others). Jelinek (2002: 74-6) argues that tense in Egyptian Arabic is expressed in a separate word, the auxiliary verb *kwn*. According to Jelinek, agreement appears both on the auxiliary *kwn* and on the main verb in compound constructions. It is indicated that in Egyptian Arabic auxiliary *kwn*, tense is marked. But on the main verb aspect is marked (cf. Jelinek 2002: 77). In Tigrinya, as in the case of other Semitic languages, aspect is expressed by different vocalic patterns inserted into the root of main verbs. However, tense is marked on some particular verbs which function as the verb *to be* (which may be indicated as BE to refer to auxiliary verbs like *ʔiyy-u* 'is (3ms)' and ʔallo 'exists/there is', *näbär-ä* 'was [3ms]').

In the literature, it is indicated that the primary use of tense is to locate the situation in a particular time where situation refers to states, actions, processes or whatever is described in the phrase or sentence (cf. Huddlestone 1988 among others). Present tense primarily locates the situation in present time whereas past and future tenses refer to past and future times respectively. Aspect concerns the ways the verbal action is expressed. It shows whether the action indicated by the verb is regarded as complete, incomplete, durative or momentaneous etc. Moreover, mood relates the verbal actions with conditions such as certainty, possibility, obligation necessity, etc. (cf. also Chung and Timberlake 1985; Schachter 1985; Tesfay Tewolde 1997, 2002 among others).

In Tigrinya, as indicated above, the different consonant-vowel patterns of the main verb indicate aspect. In the examples below (13-21) we can observe that auxiliaries like *yɨxäwwɨn* 'may (3ms)' and forms like *kɨ-* show

mood and/or modalities (cf. also Tesfay Tewolde 1997, 2002). In Tigrinya, tense is marked on the verb to be *ʔɨyy-* (as in *ʔɨyy-u*), *kwn*, ʔallo. These verbs are different from main verbs. They indicate tense and not aspect. The main verb provides the semantic content of the clause, while the verb *to be* accompany the main verb and may even occur attached to the verb. Furthermore, if these verbs (i.e. *be*) are used in the past, tense is marked on nbr. In the literature, English modals, emphatic auxiliary do and infinitival *to* are assumed to have a specific structural position to appear. According to Adger (2003: 158), this position is outside the VP but after the subject. In the literature, we observe that modals are T heads, while copula directly merges in a position between vP and TP (cf. Adger 2003; Lohndal 2009 among others) and moves to TP in order to get inflected for tense and other agreements (cf. Lohndal 2009). But in languages like Tigrinya, I assume the verb to be may merge in T.

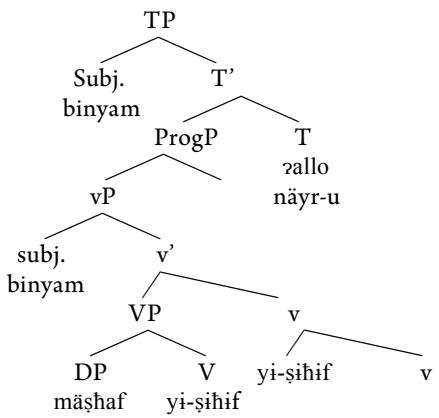
In Tigrinya, we have sentences with main verbs like *yi-ṣiħif* and the verb to be like *ʔallo* or *näyr-u*. As indicated above, *ʔallo* (13a) becomes *näyr-u* (13b) in the past:

(13) a. binyam mäṣħaf yi-ṣiħif ʔallo Tigrinya
Binyam book 3-write is-3ms
'Binyam is writing a book'

b. binyam mäṣħaf yi-ṣiħif näyr-u
Binyam book 3ms-write was-3ms
'Binyam was writing a book'

In Tigrinya, we may assume to have the structures of (13a-b) in (14):

(14)



In the literature (cf. Lohndal 2009), we can see that (i) full verbs may develop into copulas as in the case of the past form of verb *to be* from *wes* meaning 'to stay, to remain' in English, (ii) a copula can develop into an auxiliary (iii) the copula is merged in vP and moves to TP (in order to get inflected for tense and other agreement properties), while the auxiliary (modal) is directly merged in TP. According to Adger (2003: 191-7), *be* can be regarded as a version of little v with the subject in its specifier and the PP, NP or AP as its complement. Regarding the Tigrinya structure in (14), however, we may assume the merging of *ʔallo* and *näyr-u* in TP. As we can observe from (14), we can have a verb to be and a main verb forming one sentence (cf. the discussion below).

As indicated above, aspect/aspectuality, mood/modality and tense can be expressed by different forms of the verbal stem, modal verbs and auxiliaries. Observe the following:

(15) a. binyam mästä yi-fättu ʔiyy-u Tigrinya
Binyam drink 3-like is-3ms
'Binyam likes (has a habit of) drinking'

b. binyam mästä yi-fättu näyr-u
Binyam drink 3-like was-3ms
'Binyam liked (had a habit of) drinking'

c. binyam mäṣḥaf yi-ṣiḥif ʔallo
Binyam book 3ms-write is-3ms
'Binyam is writing a book'

d. binyam mäṣḥaf yi-ṣiḥif näyr-u
Binyam book 3ms-write was-3ms
'Binyam was writing a book'

e. binyam mäṣḥaf ki-yi-ṣiḥif ṣäniḥ-u
Binyam book ?-3ms-write stay (perf)-3ms
'Binyam was writing a book'

f. binyam siwwa ki-yisätti ʔinkä ʔall-o…
Binyam local beer ?- drink ? exist-3ms
'While Binyam is/was drinking local beer...'

g. binyam sɨwwa kɨ-yɨsätti ʔɨnkä ʔall-o ti-rɨʔy-o ʔallo-xa
Binyam local beer ?-drink ?-exist-3ms(impf) 2ms-see-3ms present-2ms
'While Binyam drinks local beer you are looking at him'

h. binyam sɨwwa kɨ-yɨsätti ʔɨnkä ʔall-o rɨʔyi-xa-yyo
Binyam local beer ?- drink ? exist-3ms saw-2ms-3ms
'While Binyam was drinking local beer you saw him'

The imperfective verbal form can correspond to English simple present. The meaning of the imperfective + *ʔɨyy-* (15a) can also have a meaning similar to that of the imperfective form without *ʔɨyy-* 'is', or *ʔallo* 'is'. In the examples above, the imperfective form *yɨ-fättɨw* is commonly realized as *yɨfättu* (i.e., *ɨw* > *u*). In (15b), the verb *näyr-u* in *yɨ-fättu näyr-u* is a past form of *ʔɨyy-* in *yɨ-fättu ʔɨyy-u* (15a). Moreover, in (15d) the verb *näyr-u* in *yɨ-ṣɨħɨf näyr-u* is also a past form of *ʔall- in yɨ- ṣɨħɨf ʔallo* (15c). The verb *ṣäniħ-u* in *yɨ-ṣɨħɨf ṣäniħ-u* (15e) may appear as a past form of *ʔall-* in *yɨ-ṣɨħɨf ʔallo* (15c). However, this may depend on the meaning of the stem *ṣäniħ-* 'stay' and not necessarily because it is a past form of *ʔall-* or *ʔɨyy-*. The sentences in (15e) and in (15d) may mean the same. But at times they show some kind of distinction. The difference between (15d) and (15e) could be that the latter may indicate a situation closer to the moment of speech (present time) or time of utterance. Nonetheless, we can also observe that there is a particle *kɨ-* in (15e). The sentence in (15f) with the verb to be *ʔallo* shows a continuous action. But if the main verb in the matrix clause is an imperfective (15g), the sentence indicates a present action. If, on the other hand, the main verb in the matrix clause is in the perfective (15h), the sentence shows a past action. The examples in (15a-f) above can illustrate that the present and past forms are distinguished by the verb to be and exist and also their suppletive forms in the past tense.

In (16a), *kɨ-* + imperfective + *ʔɨyy-* express futurity. Adger (2003: 170-175) proposes that modals are T heads (cf. also Lohndal 2009: 231-4 for similar views). In (16a), I assume *kɨ-* does not function as a complementizer. Moreover, we can observe that *ʔɨyy-*, in (16a), does not indicate present tense. I believe *kɨ-..ʔɨyy-* indicate possibility (and hence mood/modality). Thus, it may be possible to propose *kɨ-…ʔɨyy-* as T heads in Tigrinya (though this merits further investigation). Hence, we see in (16a) an imperfective verb preceded by *kɨ-* and followed by *ʔɨyy-* (cf. Adger 2003: 330-1 for verbs raising from T to C). In (16b), *kɨ-* + imperfective + *have* (i.e., ʔallo + applicative suffixes *become have*) express obligation or duty. In (16c) kɨ-imperfective (e.g. *kɨ-* + *ʔɨ-sätti*) + *yɨ-gɨbbaʔ* + applicative suffixes (e.g. -anni) + *ʔɨyy-* + *-u* show obligation or duty. Moreover, the forms without applicatives and verb to be as in (16d) can also show obligation. We can also see from (16e-h) that a complementizer *kɨ-*, an

imperfective form of a verb and modal verbs can express different degrees of probabilities or possibilities. Observe the following:

(16) a. binyam siwwa ki-yi-sätti ʔiyy-u Tigrinya
Binyam local beer ʔ-3-drink is-3ms
'Binyam will drink local beer'

b. binyam may ki-yi-sätti ʾʔallo-wo
Binyam water comp.-3-drink exist-3ms (Appl.)
'Binyam has to drink water'

c. ʔanä may ki-ʔi-sätti yi-gibbaʔ-anni ʔiyy-u
I water comp.-1sg-drink 3-must-1sg(Appl) is-3ms
'I must drink water'

d. nissixa säb ki-tä-xibbir yi-gibbaʔ
you(2ms) person comp.-2-respect 3-must
'You must respect people'

e. nissixa säb ki-t-ħiggiz ti-xiʔil
you(2ms) person compl-2-help 2-can
'You can help people'

f. nissixa säb ki-t-ħiggiz ti-xiʔil ti-xäwwin
you(2ms) person compl-2-help 2-can 2-become
'You might probably help people'

g. nissixa säb ti-ħiggiz ti-xäwwin
you(2ms) I person 2-help 2-can
'You might help people'

h. nissa ki-t-mäṣṣiʔ ti-xiʔil ʔiyy-a
she compl-2-come 2-can is-3fs
'She may come'

In Italian, Adger (2003: 226) says T lacks EPP, or that it is satisfied by a phonologically null expletive. Furthermore, we can see in Adger (2003: 317-

20) that subject to subject raising (or just raising) is possible in languages like English. In such raising, the subject first moves from the specifier of little v (i.e. specifier of vP) to the specifier of the embedded non-finite T. Then, the subject moves from this position to the specifier of the matrix T.

In the examples in (16e-f) above, we find embedded and matrix clauses with similar subjects. It may be possible to assume a phonologically null expletive or the raising of the subject of the embedded clause to the position of the subject of the matrix clause (cf. also the discussion below.

Tigrinya embedded clauses, matrix clauses and past forms of auxiliaries can form conditional sentences as in the following:

(17) a. ʔanä may ki-ʔɨ-sätti mɨ-tägäbbäʔa(nni) näyr-u
I water compl-1sg-drink ? must -3ms(-1sg) was-3ms
'I should have drunk water'

b. ʔanä may kɨ-ʔɨ-sätti yɨ-gɨbbaʔ(anni) näyr-u
I water compl-1sg-drink 3- must (1sg) was-3ms
'I ought to have drunk water'

c. nɨssa kɨ-t-mäṣṣɨʔ tɨ-xɨʔɨl näyr-a
she compl-2-come 2-can was-3fs
'It could have been possible for her to come'

The sentences in (17a-b) are conditional sentences. In (17c), we may assume the raising of the subject of the embedded clause to the corresponding subject position of the matrix clause. In (17a-b), however, the embedded and the matrix clauses have different subjects. The verb *näyr-u* (17a-b) can be regarded as a past form of *ʔɨyy-u*.

Furthermore, perfective verbal forms and different auxiliaries refer to different situations in the past as in the following:

(18) a. binyam sɨwwa säty-u Tigrinya
Binyam local beer drink-3
'Binyam drank (has drunk) local beer'

b. binyam sɨwwa säty-u ʔɨyy-u
Binyam local beer drink-3 is-3ms
'Binyam drank (has drunk) local beer'

c. binyam sɨwwa säty-u ʔall-o
Binyam local beer drink-3 exist.3ms
'Binyam has drunk local beer'

d. binyam sɨwwa säty-u näyr-u
Binyam local beer drink-3 was-3ms
'Binyam drank local beer'

e. binyam sɨwwa säty-u ṣäniḥ-u
Binyam local beer drink-3 was-3ms
'Binyam has drank local beer'

f. binyam mäṣiʔ-u näyr-u
Binyam came-3ms was-3ms
'Binyam came'

g. binyam sɨwwa säty-u yɨ-xäwwɨn
Binyam local beer drink-3 3-may
'Binyam might have drunk local beer'

h. binyam sɨwwa mɨ-sätäy-ä yɨ-xäwwɨn
Binyam local beer ?- drink-3ms 3-may
'Binyam could have drunk local beer'

i. binyam sɨwwa mɨ-sätäy-ä näyr-u yɨ-xäwwɨn
Binyam local beer ?- drink-3ms was-3ms 3-may
'Binyam could have drunk local beer'

l. binyam sɨwwa säty-u käyd-u
Binyam local beer drink-3ms went-3ms
'Binyam has drunk local beer and went'

As indicated in Tesfay Tewolde (1997, 2002), different verb stems, complementizers, modal verbs and auxiliaries locate aspect, mood, modal and aspectual situations. The examples in (18a-l) are composed of perfective stems, particle *mɨ-*, auxiliaries, and modal verbs. In (18a), we see a completion of some action indicated by the verb. The perfective verb

stem and the verb *to be* in (18b) can correspond to English simple past or present perfect. Moreover, (18a) may also function as (18b). (18c) can correspond to English present perfect while (18e) can be used as a past form of (18c). (18d) can also function as a past form of (18c). However, (18d) and (18e) may not be exactly the same in that the former may refer to a relatively remote situation in comparison to the latter. In addition to this, a perfective verbal stem and a modal verb as in (18g), a particle *mɨ-*, a perfective verb stem and a modal verb as in (18h), a particle *mɨ-*, a perfective verb stem, a verb *to be* and a modal verb as in (18i) can express different conditional or hypothetical expressions. In (18i), we have a complex sentence (with two perfective verbs) which may correspond to English past perfect.

According to Adger (2003), modals are in a position associated with tense features and this position is outside vP, but follows the surface position of the subject. As can be illustrated from the examples in (18), in Tigrinya we have auxiliary verbs like *ʔɨyy-*, the particle *mɨ-* and modal verbs like *yɨ-xäwwɨn* which, I assume, occur in a position between vP and the surface position of the subject. I assume they occur in T. I assume modal verbs like *yɨgɨbbaʔ* in (16d) functions like normal verbs, while modal verbs like *yɨxäwwɨn* (cf. 18g-h above), and also particles like *kɨ-* (16a) and *mɨ-* (18h) occur, as in the case of English modals, in T. Moreover, I assume Tigrinya *to be* such as *ʔɨyyu* 'is (3ms)' (15a) or *ʔallo* 'is (3ms)' (15c) occur, unlike those of English, in T. The Tigrinya verb ʔallowo (16b), composed of verb to be and applicative affixes, may function like English *must* and occurs in T. Unlike the English *must*, however, this verb can have present (e.g. ʔallowo) and past (e.g. *näyruwwo*) forms. Thus, Tigrinya verbs like ʔallowo are different from the modals and the verb *to be* in English.

Modal verbs may occur in their passive forms. As illustrated in (19), the verb *tä-gäbbä-ʔä* is composed of a passive particle *tä-* and a possible stem **gäbbä-ʔä*. The latter (i.e. **gäbbä-ʔä*) is formally similar to verb stems like *wäddä-ʔä* '(has) completed (3ms)' which becomes *tä-wäddä-ʔä* 'was (has been) completed (3ms)' in the passive. However, **gäbbä-ʔä* is only possible and not actual. The actual form is only in the passive.

As indicated above, the passive form of the possible perfective stem **gäbbäʔ-ä* is the actual form *tä-gäbbäʔ-ä*. In the perfective, Tigrinya has the passive particle *tä-*. In the imperfective forms of type A and type B verbs, however, Tigrinya has the internal passive form. Thus, the internal passive form of *yɨwɨddɨʔ* 'he finishes/completes', which is the imperfective form of *wäddäʔ-ä* 'he (has) completed (3ms)', is *yɨwɨddaʔ*. In the same way, the passive form of the possible imperfective verb stem **yɨgɨbbɨʔ* (the possible imperfective of the possible perfective **gäbbäʔ-ä* which occurs only as a possible stem) is *yɨgɨbbaʔ*. In (19a), we have the imperfective passive form *yɨ-gɨbbaʔ* 'must'. We can also see that in

(19a) we have the embedded clause (*nɨssɨxa*) *kɨ-t- käyyɨd* and the matrix clause *yɨ-gɨbbaʔ*. The subject of the latter appears to be (3ms) which may correspond to English *it*. The meanings of (19a) and (19b) are almost the same. However, we have the applicative form *akka* in (19b) which indicates that (2ms) has an obligation for something. If we compare (19a) and (19b), it appears to me that there is more emphasis on the latter. In the case of (19b), it may be interpreted as "you have an obligation to go". The meaning of (19c) can be more or less related to (19b). However, tense is not indicated in the latter. Hence, (19b) may show a general truth as in (19e). The sentence in (19b) may also indicate habitual actions, something related to wisdom or common sense as in (19f). In (19c-d), on the other hand, time is indicated by different forms of the verb *to be*. The present form of the verb to be *ʔɨyy-u* 'is' shows present time while the past form of the verb to be *näyr-u* 'was' shows past time.

(19) a. [[(nɨssɨxa) kɨ-t- käyyɨd] yɨ-gɨbbaʔ] Tigrinya
you (2ms) comp. 2ms-go 3-must
'You (2ms) need to go/you must go'

b. [[(nɨssɨxa) kɨ-t- käyyɨd] yɨ-gɨbbaʔ-akka]
you (2ms) comp. 2ms go 3-must-2ms (appl.)
'You (2ms) must go/it is necessary that you go'

c. [[(nɨssɨxa) kɨ-t- käyyɨd] yɨ-gɨbbaʔ-akka ʔɨyy-u]
you (2ms) comp. (2ms) go 3- must (2ms) (appl.) is
'You (2ms) must go/it is necessary that you go'

d. [[(nɨssɨxa) kɨ-t- käyyɨd] yɨ-gɨbbaʔ-akka näyru]
you (2ms) comp. 2ms go 3 must 2ms (appl.) was
'It was necessary that you go/you ought to have left'

e. [[ʕasa ʔab may kɨ-yɨ-näbbɨr] yɨ-gɨbbaʔ]
fish at water comp-3-live 3 must
'Fish must live inside water'

f. [[säb kab gegaʔ-u kɨ-yɨ-mmähar] yɨ-gɨbbaʔ]
man from mistake-his comp -3- educated 3- must
'A man must get a lesson from his mistakes'

As indicated above, the subjects of the passive Tigrinya verbs like *yi-gibbaʔ*, *yi-gimmät* 'it can be assumed or estimated'; *yiʔimmän* 'it is believed'; *yifillät'* 'it is known' may be different from the subjects of the embedded sentences as in (20) fromTigrinya:

(20) a. ʔanä may ki-ʔi-sätti yi-gibbaʔ
I water compl-1sg-drink 3- must
'I must drink water'

b. nissatom ni-roma zi-yi-xäd-u yi-mäsl-änni
they (3mpl) to-Rome comp.-3- go-mpl 3 appear -1sg
'It appears to me that they are leaving for Rome'

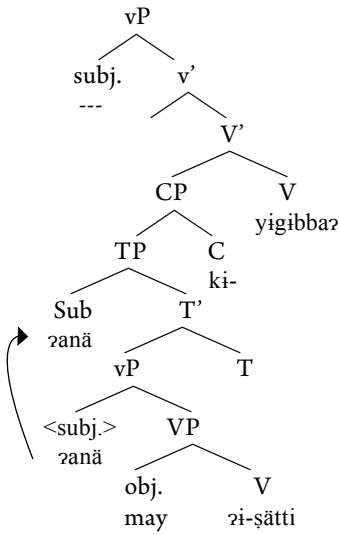
c. nissatom ni-roma kämzi-yi-xäd-u yi-fillät'
they (3mpl) to-Rome comp.- 3-went-mpl 3 known
'It is known that they left for Rome'

In the examples in (20a, c), the verbs of the matrix clauses are in the passive form. We can also see that the subjects of the matrix verbs are indicated by a third person subject indicating prefix *yi-* as in *yi-gibbaʔ* (20a), *yi-mäsl-änni* (20b) and *yi-fillät'* (20c). The subjects of each of the matrix clauses appear different from the subjects of the embedded clauses. In (20a-c), the subjects of the embedded clauses are *ʔanä* 'I' (20a), *nissatom* 'they' (20b) and *nissatom* 'they' (20c). But how do we know the real subjects of the matrix clauses? Let us see the discussion on (6.3.1.1) below.

6.3.1.1 *Unaccusatives, Unergatives and Passives of Tigrinya and their Subjects*

As indicated above, verbs like *yi-gibbaʔ-akka* and *yi-mäsl-änni* can take applicative suffixes. We have indicated above that the subjects of the main clauses look like English expletive *it*. One may argue that they are not overtly seen but correspond to English expletive *it*. Such types of empty subjects appear to be limited to verbs (of the main clause) such as those indicated in (20a-c) above. If we assume there is a phonologically null expletive in Tigrinya, we can assume a tree structure of (20a) in (21) below:

(21)



However, we can have the following discussion related to passives, unaccusatives and unergatives. An unaccusative verb can be associated with a little verb v projection which *lacks a specifier* or the light verb heading vP can be *become*. The lack of accusative case with these predicates gives their name: unaccusative. According to Adger (2003), there is no intervening subject between the EPP feature of T, and the N feature of the Theme. As a consequence, Adger says the Theme should be able to undergo movement to the specifier of TP to satisfy EPP on T. Finite T is assumed to have [nom] case. Thus, the single argument of unaccusatives is able to agree with T in case features too. Let us see the English example *arrive*. In English, the unaccusative verb *arrive* takes a single argument (as in, for instance, *Bini arrives*) and merges with it projecting a VP (we may call this step 1). Then the output of step 1 combines with the version of little v which lacks a specifier (cf. Pfau 2009 for an alternative view) and [accu]; the verb *arrive* raises to this v (we may call this step 2). T is merged with the output of step 2 and [nom] on T values case on Bini (in the case of *Bini arrives* indicated above). Hence, even though this NP is merged in object position, it receives nominative case from T. In the case of unergative verbs like *run*, we may have a derivation which on the surface looks identical to those of unaccusative verbs like *arrive*. However, unaccusatives and unergatives should display syntactic differences which can be tied down to the distinct positions of the verb's single argument. Unergative predicates have a single Agent argument which appears as the daughter of vP. Unaccusative predicates have a single Theme argument

which appears as the NP daughter of VP. We move an underlying object to a surface subject position in the latter and an underlying subject to a surface subject position in the former. In Tigrinya, we have unergative verbs like *gʷäyäy-ä* 'ran(3ms)', *säħax'-ä* 'laughed(3ms)' *zäläl-ä* 'jumped(3ms)' whose structures could mean something like *X is the cause of an event of running, laughter* or *jumping* respectively. Tigrinya has unaccusatives like *wädäx'-ä* 'fell(3ms)', *ʕanäw-ä* 'collapsed(3ms)'. The unaccuasatives could roughly be paraphrased as something like *X undergoes an uncaused falling event, collapsing event* etc.

The subjects of unaccusatives are treated in the same way as the objects of transitives since they are both merged in the same position (cf. Adger 2003 for more details). Passives are regarded as alternants of simple sentences (i.e. their active counterparts) where the subject is demoted in importance. Moreover, the object comes to be in the structural subject position in passives. Passives are akin to unaccusatives in that (a) they do not appear to have a thematic subject (b) they do not assign accusative case to their objects. As a consequence, the object checks [nom] case with [nom] on T and raises to the specifier of TP. As we can see later in this section, I assume this works for Tigrinya. However, Tigrinya passive formation is not similar to that of English. As indicated above, Tigrinya stems can be made passive by a passive morpheme *tä-* and by internal passive forming vowel patterns inserted into the verbal root.

Many languages have structures which involve the juxtaposition of a verb with a special particle or auxiliary marking causation. It is indicated in the literature that even English has structures something related to this. For instance, the English *show* may be roughly paraphrased as *cause to see* (cf. Adger 2003: 133). The paraphrases involving *cause* are very much like the basic structure that *merge* produces for ditransitives. According to Adger and others, the VP-shell analysis for three place predicates (which I assume include also verbs with a causativizer *ʔa-*) puts the Agent of the predicate in the specifier of little v, and the Theme in the specifier of VP. In Tigrinya, we have the causativizer *ʔa-*. It can be prefixed to intransitive and transitive verbs to form transitive and ditransitive verbs respectively. We have said earlier that Tigrinya, as in the case of Amharic and other Semitic languages, has the passive morpheme *tä-* which can be prefixed to the stems as in (22e-g). Moreover, Tigrinya has an internal passive form as in (22b):

(22)	a.	säb	siga	yɨ-bälliʕ	Tigrinya
		man	meat	3- eat (imperf.)	
		'Man eats meat'			

b. sɨga yɨ-bɨllaʕ
meat 3-eat (imperf.)
'Meat can be eaten'

c. siga ni-kalʔot *yɨ-ʔa-bɨlliʕ > yäbɨlliʕ
meat to others 3- ʔa- eat (imperf.)
'He makes others eat meat'

d. nɨss-u sɨga yɨ-blaʕ
he meat 3-eat (juss.)
'Let him eat meat'

e. sɨga *yɨ-t-bälaʕ > yɨbbälaʕ
meat 3-pass.- eat (juss.)
'Let meat be eaten'

f. ʔɨt-om säbat tä-x'atil-om
the-3mpl men tä- kill (redup.)-3mpl
'The men kill each other'

g. ʔɨtom säbat ni-kalʔot säbat *ʔa-t-qatil -om >ʔaqqatilom
the-3mpl men to other men ʔa-t- kill (redup.) -3mpl
'The people made other people kill each other'

In the examples above, we have a simple active imperfective form in (22a). The simple passive imperfective form in (22b) is a passive counterpart of (22a). The active form in (22a) has become passive (22b) by inserting vowel patterns into the root consisting of the consonants *blʕ*. In (22c), the causativizer *ʔa-* is prefixed to the stem. But the prefix ʔa- follows the third person prefix *yɨ-*. In (22d), we have the active jussive form *yɨblaʕ*, while in (22e), we find the passive jussive form **yɨ-t-bälaʕ* which becomes *yɨbbälaʕ*. The jussive form in (22e) is a passive counterpart of the active jussive form in (22d). As in the case of causative morpheme ʔa-, the passive morpheme *t-* (the vowel ä in *tä-* is deleted) occurs between the simple stem *-bälaʕ* and the third person marker *yɨ-* in (22e). In (22f), we see the frequentative stem *-qatil-* preceded by the passivizer *tä-*. Hence, (22f) is a frequentative passive form. The causative form of the frequentative stem in (22f) is the causative verb form in (22g). In (22g), the passive morpheme *t-* (the vowel *ä* in *tä-* is deleted) is a prefix. But it occurs following the causative morpheme ʔa-. However, we can also notice that the passive

and causative morphemes can be assimilated with neighbouring sounds. Thus, we observe **yi-ʔa-billiʕ > yäbilliʕ* in (22c), **yi-t-bälaʕ > yibbälaʕ* in (22e) and **ʔa-t-qatil-om > ʔaqqatilom* in (22g).

According to Adger (2003) an unaccusative verb is associated with a little verb v projection which lacks a specifier (cf. also Pfau 2009 for an alternative view) and there is no intervening subject between the EPP feature of T, and the N feature of the Theme. As a consequence, Adger (2003) says the Theme should be able to undergo movement to the specifier of TP to satisfy EPP on T. The same holds for passives. As in the case of unaccusatives, finite T can be assumed to have [nom] case. Thus, the single argument of passives or unaccusatives is able to agree with T in case features too. Hence, even though this NP is merged in object position, it receives nominative case from T. Each of the unaccusative and passive predicates have a single Theme argument which appears as the NP daughter of VP. We move an underlying object to a surface subject. As indicated above, the subjects of unaccusatives are treated in the same way as the objects of transitives since they are both merged in the same position (cf. Adger 2003 for more details). Passives are regarded as alternants of simple sentences (i.e. their active counterparts) where the subject is demoted in importance. Moreover, the object comes to be in the structural subject position in passives. As we have seen above, passives are akin to unaccusatives in that (a) they do not appear to have thematic subjects (b) they do not assign accusative case to their objects. As a consequence, the object checks [nom] case with [nom] on T and raises to the specifier of TP.

As indicated above, intransitive and transitive verbs of Tigrinya take applicative objects (cf. also Tesfay Tewolde 2010). In the case of passives and unaccusatives, I assume the applicative objects undergo movement to higher spec positions. Take, for instance, the examples in (19a-d, 20a-c) repeated here as (23a-g):

(23) a. [[(nɨssɨxa) kɨ-t- käyyɨd] yɨ-gɨbbaʔ] Tigrinya
you (2ms) comp. 2ms go 3- must
'You (2ms) need to go/you must go'

b. [[(nɨssɨxa) kɨ-t- käyyɨd] yɨ-gɨbbaʔ-akka]
you (2ms) comp. 2ms go 3 must 2ms (appl.)
'You (2ms) must go/it is necessary that you go'

c. [[(nɨssɨxa) kɨ-t- käyyɨd] [yɨ-gɨbbaʔ-akka ʔɨyy-u]]
you (2ms) comp. 2ms go 3- must 2ms (appl.) is
'You (2ms) must go/it is necessary that you go'

d. [[(nɨssɨxa) kɨ-t- käyyɨd] yɨ-gɨbbaʔ-akka näyru]]
you (2ms) comp. 2ms go 3 must 2ms (appl.) was
'It was necessary that you go/you ought to have left'

e. ʔanä may kɨ-ʔɨ-sätti yɨ-gɨbbaʔ
I water compl-1sg-drink 3- must
'I must drink water'

f. nɨssatom nɨ-roma zɨ-yɨ-xäd-u yɨ-mäsl-änni
they (3mpl) to-Rome comp.-3- go-mpl 3 appear -1sg
'It appears to me that they are leaving for Rome'

g. nɨssatom nɨ-roma kämzɨ-xäd-u yɨ-fɨllät'
they (3mpl) to-Rome comp.- went-mpl 3 known
'It is known that they left for Rome'

h. nɨʔay nɨssatom nɨ-roma zɨ-yɨ-xäd-u yɨ-mäsl-änni
for me they (3mpl) to-Rome comp.-3- go-mpl 3 appear -1sg
'It appears to me that they are leaving for Rome'

i. *ʔanä* nɨssatom nɨ-roma zɨ-yɨ-xäd-u yɨ-mäsl-änni
I they (3mpl) to-Rome comp.-3- go-mpl 3 appear -1sg
'It appears to me that they are leaving for Rome'

In (23a), we have an embedded clause with its subject *nɨssɨxa* and a matrix clause with its phonologically null subject. (23a) is similar to (23b). But there is an applicative suffix attached to the matrix verb in the latter. In (23f), we have an embedded clause with its subject *nɨssatom* 'they (3mpl)' and a matrix clause with its 1st person singular applicative suffix attached to the matrix verb *yɨ-mäsl* (i.e., *yɨmäsl* + *-änni*). Moreover, the applicative argument *nɨʔay* 'for me' which corresponds to the applicative suffix -änni can be phonologically realized. Thus, the native speaker can use both (23f) and (23h). The fact that the applicative object is not overtly seen in (23f) is because (a) Tigrinya is a pro drop language (b) there appears to be more emphasis in (23h). Moreover, the native speakers can use (23i) instead of (23h). As the subject (in the embedded) is indicated by *yɨ…u* in (23i), we expect the subject of embedded clause to be a (3mpl) (third person masculine plural) in that clause (i.e., in 23i). Since the applica-

tive object suffix is *ännі* in (23i), we assume the applicative object of that clause (i.e., in 23i) to be *nɨʔay* 'for me' as in (23h). But, in (23i), we can observe that the argument in higher position is *ʔanä*.

As indicated above, passives can be treated in the same way as unaccusatives in that they do not assign accusative case to their objects and do not appear to have thematic subjects. As a result, the object checks [nom] case with [nom] on T and raises to the specifier of TP (cf. Adger 2003 for more details). I assume such things are also valid for Tigrinya passives and unaccusatives. Unlike languages such as English, however, Tigrinya transitive and intransitive verbs can have applicative objects. Moreover there is a difference between passive/unaccusative objects and affected objects in that the former are indicated by subject affixes suffixed to the verbs (cf. 22f above), while in the latter the affixes which occur suffixed to the verbs are related to object suffixes and correspond to applicative arguments. I assume the affected (applicative) objects may raise to higher positions. Applicative arguments may be focused or topicalized and thus may move to spec positions between TP and CP or to a spec-CP position. Hence, we can assume the movement of the applicative object *nɨʔay* 'for me' in (23h) and *ʔanä* in (23i) to somewhere above the subject position. It may be possible to assume the movement of *nɨʔay* 'for me' (23h) to a position between TP and CP which can be raised to spec-CP position in (23i) and realized as *ʔanä* 'I' (cf. Tesfay Tewolde 2010). None the less, this needs further research.

The sentence in (23f) is commonly used while those in (23h) and (23i) are usually used for emphasis.

In (23g), we have an embedded clause with its subject *nɨssatom* 'they (3mpl)' and a matrix clause with its verb *yɨ-fɨllät'* 'it is known'. The subject of the matrix clause is phonologically null. In Tigrinya, it appears to me that phonologically null subjects can be permitted.

Furthermore, tense can be indicated by forms of the verb *to be*. The difference between (23c) and (23d) is that in the former we have the present form of the verb *to be* while in the latter we get the past form of the verb *to be* which indicate present and past tenses respectively. However, we can also observe that the present and the past tense forms of the verb *to be* are two different lexical items.

In the literature, we can see that control clauses selected by verbs in the try class have PRO (subject of an embedded clause) controlled by the matrix subject as in, for instance, *Bini tried* [*to PRO poison his enemy*]. However, we also see a PRO (subject of an embedded clause) controlled by the matrix object as in, for instance, *Bini persuaded* [*Miriam*] [*PRO to desert her family*] (cf. Adger 2003: 304-326 for PRO and ECM). Moreover, we can observe subject raising in languages. Languages like Engish allow raising from non-finite clauses; in particular from the subject position of clauses with infinitive verb forms as in the case of *John seems to have left*

(that can be compared with *it seems that John left*) or *Simon seems to have bought a sheep*. In the case of Ethiopian and Eritrean Semitic languages, however, scholars have different views. According to Baye (1990), the grammar of Amharic differs significantly from that of English or Italian. According to him, the raising constructions of Amharic involve raising out of finite clauses and noun clauses. On the other hand, Girma and Lumsden (2011) do not accept Baye's explanation of Amharic raising. According to them, the only example of NP raising we find in Amharic is that of passive construction. They also argue that there are no examples of raising from embedded clauses because all Amharic clausal constructions have case marked positions. According to Girma and Lumsden (2011), Amharic verbal derivation combines the consonants of a verbal root with syllabic template that defines the aspectual class of the expression. They believe this syllabic template includes the syllabic base for the morphology Subject/verb agreement and hence Case assignment becomes obligatory.

According to Zagona 2007 (quoted in Zagona 2008), modals can be divided as root and epistemic modals and their inflectional feature (proposed to be [person] determines their positions). The relevant inflectional feature was proposed to be [person].

There are scholars who assumed that epistemic modals merge outside vP, and root modals internal to vP. They assumed that a modal that lacks a person feature could only be merged above TP. Moreover, they believed that a modal that lacks a person feature could not be merged within vP since without person feature the person feature of Tense could not be valued leading to a crash (cf. also Lumsden and Halefom 2011 for similar views).

But Zagona (2008: 288) believes the distinction between root and epistemic modals are due to the type of features: interpretable and uninterpretable. Zagona proposes modals can have either valued or unvalued Tense features. According to Zagona, a modal can be analogous to V which has an Interpretable feature like [-PAST] and this feature can value the uninterpretable feature of v. Zagona argues V and v have valued (interpretable) features and unvalued features respectively which are proposed as the source of the difference between root and epistemic modals. Root and epistemic readings follow from different probe-goal relations between Tense and its complement.

Zagona believes a modal whose features are interpretable can be regarded as a main verb. On the epistemic reading, as indicated in Zagona (2008), the predication relation is established via the probe-goal relation triggered by C and the tense features of both the modal and v are valued by C. In the case of epistemic modals, Zagona (2008: 288) assumes: "The absence of an interpretable (valued) tense feature on the modal may block the modal from valuing Case of DP, so DP is not an active goal of the modal".

As indicated earlier, there are scholars who assume that agreement is postsyntactic. As we have said earlier, Arregi and Nevins (2011) adopt a two-step process agreement: one syntactic and another post-syntactic. According to Arregi and Nevins, inflectional morphology is a reflection of what occurs in the syntax that necessarily follows the establishment of feature copying relations.

According to Girma and Lumsden, the syllabic base for the morphology of Subject/verb agreement which is directly related to raising is included in the syllabic template. Zagona (2008) suggests the distinction between root and epistemic modals is not due to category to the particular modal inflectional features that the modal bears but to the character of its features. Zagona believes the alternation between interpretable and uninterpretable features affects both the temporal evaluation of the modal and the syntactic predication (i.e. the subject/non-subject orientation of the modal).

In the case of Eritrean and Ethiopian Semitic languages, I assume we have verbs which correspond to root modals or main verbs and to epistemic modals (see also the discussion above). As we can observe from our examples above (see also the discussion below), the former can have phonetically null subjects etc. But I assume the question of raising merits further investigation.

6.3.1.2 *More on Subject Positions, Mood and Tense Marking in Tigrinya*

In (6.3.1.2), we will have more discussion on subject positions, mood and tense marking in Tigrinya. As indicated earlier, we can see in the literature that Middle English modal verbs like *can, could, may, might, will, would, shall* were full verbs. Latin verbs like *stare* 'stand' became copula *estar* 'to be (somewhere, temporarily)' in Spanish (cf. Lohndal 2009). According to Lohndal (2009: 232), this Latin verb later developed into the auxiliaries *estoy* in Spanish (e.g. *estoy cantando* 'I am singing') and *sto* in Italian (e.g. *sto cantando* 'I am singing'. Kwon (2009) and others argue that BE auxiliaries serve as tense markers. According to Lohndal (2009) an auxiliary is directly merged in IP. Lohndal (2009) also indicates the past forms of verb *be* (in English) are derived from *wes* 'to stay, to remain'. In Turkish, there is a copular suffix *-Dir* which is derived from a verb 'to stand' (cf. Lohndal 2009: 238). In the literature, we can also see that copulas can emerge from existentials. In a language called Chalcatongo Mixtec, the existential *žoo* 'there is' develops into a copula (cf. Lohndal 2009: 228).

In Eritrean and Ethiopian Semitic languages, we have verbs which can function as modals and as full verbs. We have also verbs like *ʔall-o* 'he existed/there is' (derived from *halläw-ä* 'he existed/lived') which can function as full verbs, copulas or auxiliaries.

As indicated in Tesfay Tewolde (1997, 2002), different stems of verbs can mark aspect and mood. In the literature (cf. Tesfay Tewolde 1997, 2002 among others), distinctions can be made between mood and modality. For the sake of simplicity, however, the term mood can refer to both mood and modality in this book. In the examples above, we can see that the verbs which function as verb to be and as modal verbs can indicate tense and mood respectively. In our earlier Tigrinya examples, we can see embedded and matrix clauses as in the case of the sentences in (8a-c). But the subject of the matrix clause in such sentences may also look like the subject of the embedded clause. Can we assume the raising of the subject from the subject position in the embedded clause to the subject position in the matrix clause? In the sentences in (10a-c), I assume *yɨxäwwɨn* indicates mood/modality. In (11a-h), tense is indicated by different forms of the verb *to be*. In (12a-f), we have a subject, a main verb and a verb *to be* in each of the sentences. Tense is indicated by the verb *to be* in (12a-f). In the sentences in (12g, 12i) too, tense is marked by the suppletive forms of the verb *to be* which occur in sentence final position in each of the sentences. In (12g), we have two clauses. We have the clause, *nɨssɨxa ʔɨntä tɨ̈ḫawwi*, and another clause, *ʔanä mɨtäḫagosku näyr-ä* in (12g). I assume *mɨ-* and *näyr-u* (verb *to be*) occur between vP and the subject surface position in TP.

In (16d), we find *nɨssɨxa* as the subject of the embedded clause while the subject of the matrix clause is phonologically null. We have the (3ms) subject prefix *yɨ-* attached to the verb stem *-gɨbbaʔ* in *yɨ-gɨbbaʔ* (16d). Thus, we know that the subject of the matrix clause refers to a third person which may correspond to the English *it*.

In the Tigrinya examples in (24a-c), we can observe that (24a) is almost the same as (24b). *ʔɨyy-u* is a present form of the verb *to be*, while *näyr-u* functions as its past form. The presence of *ʔɨyy-u* in (24a) indicates that the speaker must drink water at present. Thus, the presence of the verb *to be* (24a) or its absence (24b) can indicate present situations. However, the latter may show habituality or some related situations. (24c) indicates an action in the past; the idea is that the speaker ought to have drunk water sometime in the past. The important thing worth noting here is that we have the first person singular applicative morpheme -änni attached to the verb *yɨgɨbbaʔ*.

(24) a. ʔanä may kɨ-ʔɨ-sätti yɨ-gɨbbaʔ-anni ʔɨyy-u
I water compl-1sg-drink 3-must-1sg(Appl) is-3ms
'I must drink water'

b. ʔanä may kɨ-ʔɨ-sätti yɨ-gɨbbaʔ-anni
I water compl-1sg-drink 3-must-1sg(Appl)
'I must drink water'

c. ʔanä may kɨ-ʔɨ-sätti yɨ-gɨbbaʔ-anni näyr-u
I water compl-1sg-drink 3-must-1sg(Appl) was
'It was necessary for me to drink water'

In (24b), we have *ʔanä may kɨ-ʔɨ-sätti* and *yɨ-gɨbbaʔ-anni*. In the first clause, the subject is *ʔanä* and the affix which corresponds to the subject (i.e., *ʔanä*) is *ʔɨ-* preceded by the complementizer and followed by the verb as in *kɨ-ʔɨ-sätti*. In the second one (i.e., *yɨ-gɨbbaʔ-anni*), the verb is followed by an object suffix. The object which corresponds to *-anni* is *nɨʔay*. Normally, we expect a subject affix which corresponds to a subject and an object suffix which corresponds to an object. In (24b), however, we do not see an overt subject which corresponds to *yɨ-* and an overt object which corresponds to *-anni* (cf. also (23a-i) and the discussion related with these examples). It may be possible to assume the following:

a) Raising of the embedded subject *ʔanä* to the next higher matrix subject position.
b) Raising of the matrix applicative object *nɨʔay* to the matrix subject position which can later be realized as *ʔanä* (after getting nominative case) by T of higher CP.

None the less, we need to see other Tigrinya examples such as the following:

(25) a. ʔɨti gäza nɨʔay yɨ-gɨbbaʔ-anni (ʔɨyy-u)
the house to me 3-must-1sg (Appl) (is-3ms)
'The house belongs to me'

b. ʔɨti gäza nɨʔanna yɨ-gɨbbaʔ-anna (ʔɨyy-u)
the house to us 3-must-1pl (Appl) (is-3ms)
'The house belongs to us'

c. ʔɨti gäza nɨʔaxa-atkum yɨ-gɨbbaʔ-akkum (ʔɨyy-u)
the house to you (2mpl) the house 3-must-2mpl (Appl) (is-3ms)
'The house belongs to you (2mpl)'

d. ʔɨti gäza nɨʔaxi yɨ-gɨbbaʔ-akki (ʔɨyy-u)
the house to you(2fs) 3-must-2fs (Appl) (is-3ms)
'The house belongs to you (2fs)'

e. ʔanä ʔiti gäza yi-gibbaʔ-anni (ʔiyy-u)
I the house 3-must-1sg (Appl) (is-3ms)
'The house belongs to me/I must own the house'

f. niħna ʔiti gäza yi-gibbaʔ-anna (ʔiyy-u)
we the house 3-must-1pl (Appl) (is-3ms)
'The house belongs to us/we have to possess the house'

g. nissixa-at-kum ʔiti gäza yi-gibbaʔ-akkum (ʔiyy-u)
you (2mpl) the house 3-must-2mpl (Appl) (is-3ms)
'The house belongs to you(2mpl)/ you (2mpl) must possess the house'

h. nissixi ʔiti gäza yi-gibbaʔ-akki (ʔiyy-u)
you (2fs) the house 3-must-2fs (Appl) (is-3ms)
'The house belongs to you(2fs)/ you have to own the house'

i. [e [ʔab roma kämzi-näbär-ku] yi-fɨllät' ʔiyy-u]
in roma comp-was-1sg 3-know is-3ms
'That I was in Rome is known (clear)'

j. [*e* [ʔab roma kämzi-näbär-ku] fɨlut' ʔiyy-u]
in roma comp-was-1sg known is 3ms
'That I was in Rome is clear'

k. [e [ʔab roma kämzi-näbär-ka] yi-fɨlät' ʔiyy-u]
in roma comp-were-2ms 3-know is-3ms
'That you were in Rome is known (clear)'

l. [*e* [ʔab roma kämzi-näbär-ka] fɨlut' ʔiyy-u]
in roma comp-were-2ms known is-3ms
'That you were in Rome is clear'

In (25i-l), we can see that the subject of the matrix clause is *e* (see also 25a-h). The examples in [25i-l] may be compared to the English sentence [[*that the world is round*] *e is clear*] and to the Italian sentence [*è chiaro* [*che il mondo è rotondo*]]. Adger (2003: 226) says in Italian, T lacks EPP or that it is satisfied by phonologically null expletive. EPP (Extended Projection Principle)

can be paraphrased as the requirement that each clause must have a subject (cf. Danckaert 2012: 36). There is a generally accepted view among linguists that the subject is base generated in Spec,vP. In languages like English, it obligatorily moves to some specifier position in TP. If, however, it remains in a lower position, the EPP requires an expletive to be present as a dummy place holder in the 'canonical' subject position (cf. Danckaert 2012). But I assume the situation in Tigrinya is not similar to that of English. Tigrinya, as in the case of Italian and others, may be satisfied by phonologically null expletive (Scf. 25i-l).

In (25a), *yɨ-* (refers to 3ms) corresponds to the subject *ʔɨti* gäza 'the house' and *-anni* 'to me' corresponds to the object *nɨʔay* 'to me'. In (25b-d) too, similar observation can be made in that the subjects are indicated by subject affixes, objects are indicated by object suffixes and the verb *to be* can optionally be put for reasons discussed above. As indicated above, the presence or absence of the present forms of the verb *to be* can indicate present situations or habitual actions, while the past forms of the verb *to be* show some situations in the past. The sentences in (25a-d) correspond to the sentences in (25e-h) respectively. In the latter, however, we find the subject pronouns instead of object pronouns. Let us also see the sentences in (26a-d) from Tigrinya:

(26) a. ʔɨti gäza nɨʔay yɨ-gɨbbaʔ(anni)
the house to me 3-must (1sg appl)
'The house belongs to me'

b. nɨʔay ʔɨti gäza yɨ-gɨbbaʔ(-anni)
for me the house 3-must (1sg appl)
'The house belongs to me'

c. ʔanä ʔɨti gäza yɨ-gɨbbaʔ-anni
I the house 3-must (1sg appl)
'I must own the house'

d. *ʔanä ʔɨti gäza yɨ-gɨbbaʔ
I the house 3-must
'I must own the house'

(26a-c) are acceptable sentences with more or less the same meaning. But there is less emphasis in (26a). I assume (26b) is derived from (26a). The applicative object *nɨʔay* in (26a) is moved to the front position in (26b) for

some sort of emphasis. I also assume (26c) is derived from (26b). *nɨʔay* in (26b) is raised to a higher position and become *ʔanä* again for some kind of emphasis. The sentence in (26d) is out. We cannot have the subjects *ʔanä* 'I' and *ʔɨti gäza* 'the house' in the same simple sentence. (26c) is acceptable while (26d) is not. The difference between (26c) and (26d) is the obligatory presence of applicative affix *-anni* in (26c) which indicates *ʔanä* is actually an object in a structurally higher position. In (26a-b), the sentences are acceptable even without the applicative object suffix *-anni*. In (26d), however, the sentence without *-anni* is not acceptable. Let us also observe the following examples from Tigrinya:

(27) a. nɨssɨxa käm-ti-ʕɨwwät lɨbb-äy yɨ-ʔammɨn
you (2ms) as 2ms win heart-my 3ms believe
'I am convinced (lit. my heart believes) that you will win'

b. nɨssɨxa käm-ti-ʕɨwwät lɨbb-äy yɨ-ʔamn - älläy
you (2ms) as 2ms win heart-my 3ms believe appl(1sg)
'I am convinced (lit. my heart believes) that you will win'

c. nɨssɨxa käm-ti-ʕɨwwät lɨbb-äy nɨʔay yɨ-ʔamn - älläy
you(2ms) as 2ms win heart-my for me 3ms believe appl(1sg)
'I am convinced (lit. my heart believes) that you will win'

d. ʔanä nɨssɨxa käm-ti-ʕɨwwät lɨbb-äy yɨ-ʔamn - älläy
I you(2ms) as 2ms win heart-my 3ms believe appl(1sg)
'I am convinced (lit. my heart believes) that you will win'

In (27a-d), we have sentences with more or less the same meaning. In the sentences in (27a-d), we have the matrix clause *lɨbb-äy yɨ-ʔammɨn* with or without the applicative affixes (with the subject *lɨbbi* 'heart' and with the verb *yɨ-ʔammɨn*). In *yɨʔammɨn*, *yɨ indicates* subject. The sentences in (27a-d) are acceptable. The sentences in (27c-d) are not common. But they are not out. In fact, the difference between (27b) and (27c) is the presence of an overt applicative object *nɨʔay* 'for me/ to me' in the latter. None the less, the applicative object is indicated by *älläy* (1sg) in (27b-d). In (27d), the applicative object moves to a topic position (though not common, it is not out) for emphasis and becomes *ʔanä* 'I'.

In Tigrinya we have different complementizers. Some of these are *kɨ-* (28b) and Ø (28a).

(28) a. ʔanä may Ø-mɨ-stay yɨ-gɨbbaʔ-anni
I water compl-to drink 3-must-1sg(Appl)
'I must drink water'

b. ʔanä may kɨ-ʔɨ-sätti yɨ-gɨbbaʔ-anni
I water compl-1sg-drink 3-must-1sg(Appl)
'I must drink water'

In (28a) and (28b), we find embedded and matrix clauses. These complex sentences have more or less the same meaning. In (28a-b), we have the embedded clauses with *Ø-* and *kɨ-* as complementizers. The only difference between (28a) and (28b) is that there is *Ø-* + non-finite verb in the former and *kɨ-* + imperfective verb in the latter. The complementizer *Ø-* is prefixed to an infinitive (non-finite verb) form. The complemntizer *kɨ-* is prefixed to an imperfective (finite verb) form. The complementizer *Ø-* prefixed to a non-finite verb corresponds to a complementizer *kɨ-* prefixed to an imperfective verb (cf. Adger 2003 for the complementizer *Ø* before infinitives in embedded clauses). As indicated in Adger (2003: 326), the interpretation of the embedded subject (in, for instance, Jason persuaded Margaret to desert her family) is controlled by the matrix object. In Tigrinya such issues may need further investigation. In our examples above, however, I assume the objects such as *nɨʔay* in (25a) have got the form of subjects like *ʔanä* 'I' in (25a). In the examples in (25a-h), we have tried to show how objects like *nɨʔaxatkum* (25c) moved to a higher position and look like a subject as in the case of *nɨssɨxatkum* (25g).

According to Schäfer (2008: 108-113), dative causers are introduced by applicative heads and not by Voice/little v and this can be supported by the fact that the dative causer construction is possible with pure unaccusatives which do not license canonical external arguments. Besides, it is indicated in the literature that in high applicatives (as in Tigrinya), dative argument is external to the predication relation between the verb and the subject (cf. also Adger 2003; Cuervo 2003; Lomashvili 2011).

Furthermore, we can also see that Tigrinya transitive and intransitive verbs can have applicative objects. The applicative objects can raise to a position higher than that of the subject (cf. Lomashvili 2011: 109-114 for similar analysis). According to Lomashvili (2011: 110), the applicative argument occurs in a position higher than that of the subject in languages like Spanish.

We have indicated that the applicative objects of passive verbs could move to a position higher than that of the subject. Besides, we have seen in our earlier discussion that applicative suffixes and the verb *ʔallo* 'exist' can form the verb *to have* and the applicative object of the verb *to exist/have* can move to a position higher than the subject position. The applicative argu-

ments of unaccusatives like *moytu* 'died' + applicative suffixes and passives + applicative suffixes as in *täfällit'u-nni* 'I felt it', *täsämiʃu-kka* 'you felt it' and *täbäliʃukki* 'something was eaten (regarded as a disadvantage for the 2fs)' raise to positions higher than their subject positions. I assume this position is somewhere above TP or the spec of CP and can be regarded as the topic (cf. also Adger 2003: 329-333 for the proposal that German triggers movement of topics to the specifier of CP).

As indicated earlier, modal verbs and their arguments form clauses. In Tigrinya, I assume modal verbs may function as modals or as main verbs. But where do we put the verb *to be*? Let us see (29a) and (15b-c) repeated here as (29b-c). Do we have embedded and matrix clauses in each of the sentences in (29a-c)?

(29) a. nɨssɨxa mästä tɨ-fättu ʔɨx-a Tigrinya
you(2ms) drink 2ms-like is-2ms
'You (2ms) like (have a habit of) drinking'

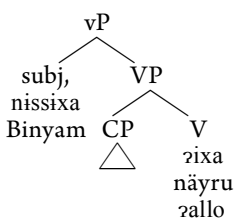
b. binyam mästä yɨ-fättu näyr-u
Binyam drink 3-like was-3ms
'Binyam liked (had a habit of) drinking'

c. binyam mäṣḥaf yɨ-ṣɨḥɨf ʔallo
Binyam book 3ms-write is-3ms
'Binyam is writing a book'

We can consider *nɨssɨxa* 'you (2ms)' in (29a), and Binyam in (29b-c) the subjects of the clauses (cf. also the structure in (30) below).

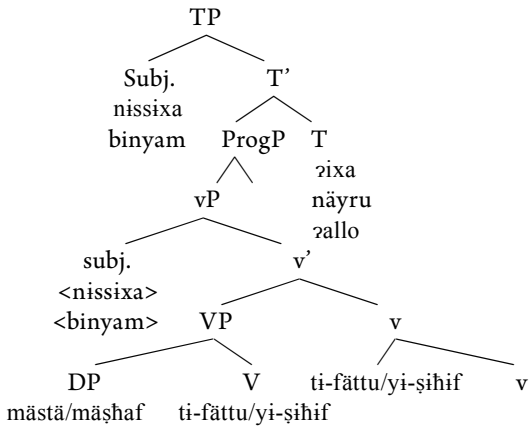
Tigrinya verb *to be* may appear to have a structure similar to main verbs. If that is the case, we can assume the structure in (30) for the sentences in (29a-b) above and the words *nɨssɨxa* and Binyam can be regarded as subjects of the embedded and the matrix sentences. If the embedded and the matrix clauses have similar subjects, one of them may normally be expected not to be overtly seen.

(30)



In the languages in question, however, we have seen that tense is indicated by special forms of verbs with different roots. In (24a and 24c), the sentences with and without the verb *to be* are almost the same in meaning. However, (24a) and (24c) are different because they show present and past tenses respectively and this is due the verb *to be*. Moreover, the verb *to be* can occur attached to the main verb. Hence, it may be more convincing to assume the position of the verb to be as in (31) (cf. also Adger 2003 for structures in English and in German). I assume the structure in (31) for the Tigrinya sentences in (29a-c).

(31)



Different forms of the verb *to be* may be put in v (cf. Lohndal 2009 among others) and the raising of *be* to T may be assumed.

According to Arregi & Nevins (2012), finite auxiliary in Basque is traditionally referred to as *have* or *be* in sentences. Arregi & Nevins (2012: 31-39) argue the root of the auxiliary (tense/agreement morpheme) is the realization of a T head which is specified as present or past tense encoded in terms of feature [± past]. The tense/agreement morpheme (the root of the auxiliary) indicated in Arregi & Nevins (2012) is T. Arregi & Nevins (2012) claim the root of the tensed auxiliary is not v and movement of v to T does not occur. Moreover, they say the realization of this morpheme clearly depends on features typically associated with a T node that is an Agree Probe. I assume such views can be useful for our discussion on the Tigrinya verb *to be*. None the less, this merits further investigation.

According to Zagona 2007 (quoted in Zagona 2008), modals can be divided as root and epistemic modals and their inflectional feature proposed to be [person] determines their positions. The relevant inflectional feature was proposed to be [person]. It is claimed that epistemic modals merge outside vP, and root modals internal to vP. Some people assume that a modal that lacks a person feature could only be merged above TP.

As indicated in Zagona (2008: 285), some people believe that a modal that lacks a person feature could not be merged within vP since without person feature the person feature of Tense could not be valued leading to a crash (cf. also Lumsden and Halefom 2011 for related views). Furthermore, they assume that root modals value any features of v and T, like any finite verb, while epistemic modals lack these features (cf. Zagona: 283-8). According to Zagona (286-7), however, the distinction between modals as fully "lexical" elements and quasi-functional elements is not due to category or to the particular inflectional features that the modal bears, but to the character of its features. Zagona (288) believes the distinction between root and epistemic modals are due to the type of features: interpretable and uninterpretable. The modal could be analogous to V (with interpretable feature) which values the uninterpretable feature of v, which in turn is deleted. In case the modal has only an uninterpretable feature, the only source of an interpretable temporal feature is C (cf. Zagona 2008: 287). Root and epistemic readings follow from different probe-goal relations between Tense and its complement. On the epistemic reading, as indicated in Zagona (2008), the predication relation is established via the probe-goal relation triggered by C and the tense features of both the modal and v are valued by C. In the case of epistemic modals, Zagona (2008: 288) assumes: "The absence of an interpretable (valued) tense feature on the modal may block the modal from valuing Case of DP, so DP is not an active goal of the modal". On the root reading, Zagona (2008) believes, the modal is predicated of DP and the predication relation is established via the probe-goal relation that values phi-features and case. Moreover, Zagona (2008: 288) says: "A modal whose features are interpretable is in relevant respects like a (displaced) main verb, and can be syntactically predicated of the subject".

In the case of Eritrean and Ethiopian Semitic languages too, I assume, as indicated above, we have verbs which correspond to root modals or main verbs and to epistemic modals.

6.3.1.3 *Summary*

Aspect is indicated by inserting different vowel patterns into the roots of base stems of verbs in Tigrinya. Moreover, Tigrinya can also indicate mood/modality by different vowel patterns inserted into the roots or by modals. But Tigrinya indicates tense by different forms of the verb *to be* in the matrix sentence (cf. Jelinek 2002 for related analysis in Egyptian Arabic). The present and past tense forms of the verb *to be* are different words. Tigrinya has the auxiliary *hyy* as present tense marker in affirmative sentences, while in the negative it has *kwn*. Moreover, Tigrinya has the form *ʔall-* 'exist/there is' derived from *hlw* 'live/ exist' which functions

as an auxiliary. In the past tense, we have the form *nbr* as in *näbär-ä* 'he was' or *näbär- u* 'they were'. As far as I can see, we cannot derive the past tense from the present forms of the verb *to be*.

In Tigrinya, matrix and embedded clauses can have different or the same subjects. In the case of the latter, one of the subjects may not be not overtly seen. However, the subject of matrix clauses may also be phonologically null. When the verb of the matrix clause is passive as in the case of (25i) and (25k), we can observe that the subject could be phonologically null.

Furthermore, we can also see that Tigrinya transitive and intransitive verbs can have applicative objects. The applicative objects can raise to a position higher than that of the subject (cf. Lomashvili 2011: 109-114 for similar analysis in languages like Spanish).

In the literature, it is assumed that the structure that contains the nominative subject is a CP and the C selects the T. It is also assumed that T inherits formal features (including nominative case) from C (cf. Miyagawa 2012: 8, 126, 131, 134, 146). In the case of Tigrinya, the applicative objects that can raise to a position higher than that of the subject may get a nominative case.

6.3.2 *Auxiliaries and Tense in Amharic*

As indicated earlier, Tigrinya and Amharic do not have auxiliaries which look exactly like those of English. However, there are forms which may function as auxiliaries and some of them can be marked for tense.

In Amharic, we have forms which may correspond to English auxiliaries. These are *čal-* 'can/may' as in *čal-ä* 'was able to (3ms)', *tä-gäbb-* 'must' as in *tägäbba* 'must (3ms)', *hon-* 'become/may' as in *hon-ä* 'became (3ms)', *all-* 'exist' as in *all-ä* 'exists (3ms)', third person forms of the verb *all-* 'exist' + object suffixes which function as applicative affixes as in *all-ä-h* 'there is (exists) for you/you have' and *nä-* as *näw* 'is (3ms)' (cf. also Baye forthcoming) and their different conjugated forms. As indicated in Baye, *ĵämmär-* as in *ĵämmär-ä* 'started/began(3ms)' can be treated as an auxiliary.

In English, Adger (2003: 172) assumes the auxiliaries always come in a particular order: Modal > Perfect > Progressive. Modals , emphatic do and the infinitival *to* are assumed to be T heads, while perfect and progressive auxiliaries may occur above vP in the tree structure. In Amharic, however, there is no such distinction between the modals and the rest of the verbs we may call auxiliaries. For instance, the verb *honä* (< *kwn*) can be used as a verb *to become* which corresponds to a copula in different related languages as in *wn*(*n*) 'to be, exist' in Egyptian (cf. Gardiner 1950, Lipinski 1997;), *kwn* 'be' in Egyptian Arabic (cf. Jelinek 2002), Saho *kinni* 'to be' or *ine* 'to be (present)' (cf. also Banti and Vergari 2005). But as we can see from the examples below, the verb *honä* is also used as a modal in the imperfective.

The verb *čal-ä* can be used as a modal and as a main verb. The verb *all-ä* (derived from *hlw*, i.e., *hälläw-ä* > *hall-ä* > *all-ä*) 'exist' can serve as a verb *to be*. But it can have the meaning 'have' when followed by applicative (henceforth Appl.) affixes (cf. Boneh 2003: 63-77 and Jung 2011: 1-2 for related data in Modern Hebrew and Russian respectively). Let us first see the Amharic forms in (32):

(32)		Perfect	Imperfect
	a.	čal-ä 'was able to (3ms)'	yɨ-ččɨlal 'can (3ms)'
	b.	hon-ä 'became (3ms)'	yɨhonal 'may (3ms)'

The Amharic verb *čal-ä* (32), can have perfective and imperfective forms in a way similar to other main verbs like *fäťťär-ä* '(has) created (3ms)' and *yɨfäťral* 'creates (3ms)'. Unlike other simple verbs, however, it may have the meanings indicated in (33a-d):

(33) a. (ɨssu) mä-rramäd čal-ä Amharic
he to walk was able to- 3ms
'He was able to walk'

b. (ɨssu) mä-rramäd yɨ-ččɨlal
he to walk 3ms is able to
'He can walk'

c. (ɨssu) makkina li-säť-ɨh yɨ-ččɨlal
he car comp-give-2ms 3ms-was able
'He has the ability to give (or donate) you a car'

d. (ɨssu) makkina li-säť-ɨh yɨ-ččɨlal
he car comp-give-2ms 3ms-was able
'He may give (or donate) you a car'

Amharic is a pro drop language and the 3rd person subject pronoun in (33a-d may optionally be not overtly seen. In (33a-b), we have perfective and imperfective forms respectively. In (33c) and (33d) too, we have the imperfective forms. But they have different meanings. The former (33c) and the latter (33d) express ability and probability respectively. The imperfective form of *yɨ-ččɨlal* in (33b-c) has the meaning *can/able to* (to express ability). But in (33d), this imperfective form (i.e. *yɨ-ččɨlal*) has the meaning *may or can*. As indicated above, the imperfective form of čal- can be used as a modal *may* or *can* (to express probability).

The Amharic verb *hon-ä* 'became/has become (3ms)' has the root *hwn* < *kwn* (the verb *hon-ä* is derived from **häwän-ä* < **käwän-ä*). The imperfective form of *hwn* is *yɨhonal* as in the following:

(34) a. binyam wäfram nä-w Amharic
Binyam fat is -3ms
'Binyam is fat'

b. aster räjjɨm ay-däll-äčč-ɨm
aster tall neg ? -3fs-ɨn
'Aster is not tall'

c. binyam wäfram hon-ä
Binyam fat become (perf)-3ms
'Binyam has become/became fat'

d. binyam hed-o yɨ-honal
Binyam went-3ms 3ms-may
'Binyam may have left'

As indicated above, Amharic has the present form of the verb *to be nä-w* 'is' (*hu* > *w*) (34a). We have seen earlier that the verb *to be* in different Semitic and Afro-Asiatic languages can be related to Amharic verb *to be* (34a) and to become (34c). In (34c), we have a perfective form of **hwn* (*hn* < **hwn* < *kwn*). In (34d), the imperfective form of **hwn* can be used as *may*. As in other imperfective forms of Amharic, we see the form *al* derived from *all-* 'exist' attached at the end of this imperfective form. Let us also observe the following Amharic sentences:

(35) a. (issu) mäkina mä-ndat čɨl-o yɨ-honal
he car to-drive was able to-3ms 3-may
'He might know how to drive a car'

b. säw-ɨyyä-w wädä roma hed-o yɨ-honal
man the to Rome went-3ms 3-may
'The man might have gone to Rome'

c.	(ɨssu)	mäkina	mä-ndat	yɨ-ččɨl	yɨ-honal
	he	car	to-drive	3ms-is able to	3-may
	'He might know how to drive a car'				

We have indicated earlier that the imperfective form *yɨ-ččɨlal* in (33b-c) and (33d) has the meanings 'able to' or 'can' and 'may' respectively. In (34d, 35a-c), the imperfective form *yɨ-honal* has the meaning 'may/might'. As indicated above, the imperfective form *yɨhonal* can be used as a modal *may* or *can*. But the perfective form of *kwn* can be used as the verb *to become*.

We have also said above that Amharic uses *all-* as in *all-ä* 'exists (3ms)' (derived from *hlw*) and *nä-* (as in *nä-w* 'is [3ms]') as the verb *to be* in the present forms. Furthermore, the verb *näbär* can be used as the past form of *all-ä* and *nä*-w (cf. also 37a-e, 40a-f). Let us see the following examples:

(36)

a.	bini	lɨbbam	nä-w			Amharic
	bini	wise	is-3ms			
	'Bini is wise'					
b.	bini	lɨbbam	ay-dällä-m			
	bini	wise	neg-?-3ms-neg			
	'Bini is not wise'					
c.	bini	lɨbbam	näbbär-ä			
	bini	wise	was-3ms			
	'Bini was wise'					
d.	bini	lɨbbam	'al-näbbär-ä-m			
	bini	wise	neg was-3ms neg			
	'Bini was not wise'					
e.	ɨ-bet-u		wɨsṭ'	säw all-ä		
	in house-the		inside	man is-3ms		
	'There is a person in the house'					
f.	ɨ-bet-u		wɨsṭ'	säw yäll-ä-m	(< *ay-all-ä-m)	
	in house-the		inside	man	neg. is-3ms-neg	
	'There is no one in the house'					

g. ɨ-bet.u wɨsť säw näbbär-ä
in house-the inside man was-3ms
'There was a person in the house'

h. ɨ-bet-u wɨsť säw al-näbbär-ä-m
in-house-the inside man neg was 3ms-neg
'There was no one in the house'

In the above examples, we have the verb *nä-w* (36a) whose negative form is *ay-dällä-m* (36b). In the past tense, (36a) and (36b) have the forms (36c) and (36d) respectively. Furthermore, we have *all-ä* 'exist/there is' (36e) which functions as the verb *to be* in the present. The negative form of *all-ä* (36e) is *yällä-m* (36f) which, I assume, is derived from **ay-all-ä-m*. We can also see from the examples above that the verb *to be all-ä* 'is' in (36e) and its negative form in (36f) have the forms *näbbär-ä* (36g) and *al-näbbär-ä-m* (36h) respectively in the past. It seems to me that the present and past forms of the verb *to be* are the words which express tense in Amharic (cf. also Jelinek 2002: 74 for Egyptian Arabic *kwn*). Here are examples from Amharic:

(37) a. lɨj-u mäṣhaf-u-n yɨ-anäbb-al (allä>al) Amharic
child the book-his- 3ms-read- is
'The child reads (is reading) his book' (present prefect)
'The child will read (reads) his book' (future)

b. lɨj-u mäṣhaf-u-n yɨ-anäbb näbbär(-ä)
child the book-his- 3ms-read- was (3ms)
'The child read (was reading) his book'

c. lɨj-u mäṣhaf-u-n anɨbb-o-w-al (allä>al)
child the book-his- 3ms read-3ms is
'The child (has) read his book'

d. lɨj-u mäṣhaf-u-n anɨbb-o näbbär(-ä)
child the book-his- 3ms read- 3ms-was (-3ms)
'The child had read his book'

e. lɨj-u mäṣhaf-u-n lɨ-yɨ-anäbbb nä-w
child the book-his- comp-3ms-read- is 3ms
'The child will read his book'

As we can see from the examples, *all-* in (37a) and in (37c) has the form *näbbär-*(ä) in (37b) and (37d) respectively in the past. In (37a), we have the imperfective form *yɨ-anäbb-al*. In the majority of the Amharic dialects and in the standard Amharic, we can observe *allä* > *al*. In (37c), we have the gerundive form *anɨbb-o* followed by *-al* (*allä* > *al*) and the element *w* is inserted to break the impermissible sequence of vowels *o* + *a* (sequence of two consecutive vowels is not permitted in the language). The past form of *-al* (< *allä*) in (37a) and (37c) is *näbbär*(-ä) in (37b) and in (37d) respectively. As far as I could understand, Amharic speakers may accept the overt realization of 3ms *ä* in (37b, 37d).

We can see from the above examples that (37e) indicates futurity. Moreover, (37a) may indicate actions in the present or in the future.

MacDonald (2008: 207) argues aspectual projection (AspP) occurs between vP and VP (cf. also Armon-Lotem 2008 for Hebrew). In Semitic languages, (vowel) patterns are inserted to indicate perfect/imperfect aspect and active/passive voice (cf. Roark and Sproat 2007: 41). In EES languages, we see that the root consists of usually 3 or 4 consonants, while the stem vowels express the perfective and imperfective stems (cf. Baye 2007/2008 (2000 E.C.); Haspelmath 2002; Tesfay Tewolde 2002 among others). Jelinek (2002: 74-6) argues that tense in Egyptian Arabic is expressed in a separate word, the auxiliary verb *kwn*. In Hebrew, Armon-Lotem (2008: 235-239) puts the VP as a complement of Asp. Moreover, Armon-Lotem argues that aspect is the first grammatical notion marked by children because it is learned together with the verb, being part of its meaning. According to Jelinek, agreement appears both on the auxiliary *kwn* and on the main verb in compound constructions. It is indicated that in Egyptian Arabic auxiliary *kwn*, tense is marked, while on the main verb aspect is marked (cf. Jelinek 2002: 77). In Amharic and Tigrinya, as in the case of other Semitic languages, aspect is expressed by different vocalic patterns inserted into the root of main verbs. However, tense is marked on some particular verbs which function as the auxiliary *be*.

According to van der Aurera, Kehayov & Vitterant (2009: 273-5), modals like *may* can be put to a non-modal use while verbs like get may have a modal use. In the case of Amharic (as in Tigrinya) modals and auxiliaries, I assume we can have auxiliaries which function as main verbs (cf. also Adger 2003 for auxiliaries in English).

In the literature, it is indicated that the primary use of tense is to locate the situation in a particular time where situation refers to states, actions, processes or whatever is described in the phrase or sentence (cf. Huddlestone 1988 among others). Present tense primarily locates the situation in present time whereas past and future tenses refer to past and future times respectively. Aspect concerns the ways the verbal action is expressed. It shows whether the action indicated by the verb is regarded as complete, incomplete, durative or momentaneous etc. Moreover, mood relates the verbal actions with conditions such as certainty, possibility, obligation, necessity, etc. (cf. also Chung and Timberlake 1985; Schachter 1985; Tesfay Tewolde 2002 among others).

In Amharic, as indicated above, the different consonant-vowel patterns of the main verb indicate aspect. In the examples above, we can observe that auxiliaries like *yiħonal* 'may (3ms)' and a particle like *lɨ-* show mood and/or modalities. However, Amharic tense is marked on the auxiliary *be* verbs like *nä-* (as in *na-w*), *kwn* and *all-* (as in *all-ä*). Furthermore, if these verbs (i.e. *be*) are used in the past, tense is marked on *nbr* (cf. the examples in 36 and 37 above). In the literature, English modals, emphatic auxiliary do and infinitival *to* are assumed to have a specific structural position to appear. According to Adger (2003: 158), this position is outside the VP but after the subject surface position.

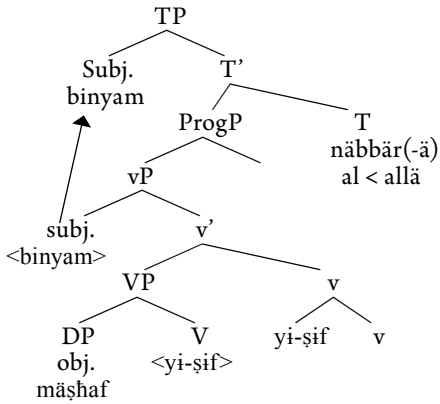
In (38a-b), we have Amharic main verb *yɨ-ṣɨf* followed by *-al* in (38a) and by *näbbär* in (38b). The forms *-al* and *näbbär-* are derived from *allä* 'there is/is present' and *näbbärä* 'existed/was present' respectively. In (38a-b), however, the former marks present tense, while the latter shows past actions. As we can see from the Amharic examples in (38a-b), *-al* occurs attached to the verb (38a), while *-ä* (3ms) in *näbbär-ä* (38b) may be omitted:

(38) a. binyam mäṣħaf yɨ-ṣɨf al (al < all-ä)
Binyam book 3-write is
'Binyam is writing a book'

b. binyam mäṣħaf yɨ-ṣɨf näbbär
Binyam book 3ms-write was
'Binyam was writing a book'

I assume the structure for the sentences in (38a-b) can look like the following (39):

(39)



In (39), *all-ä* and *näbbär-ä* (auxiliary *be*) occur in T. In (39), as in the case of Tigrinya, VP, vP and TP are taken to be right headed (cf. Adger 2003: 331 for similar situations in German), and the auxiliary verbs like *all-ä* are put in T (for the sake of simplicity subject/object marking affixes may be put together with verb stem). As illustrated above, tense is indicated by the auxiliary verb be. As indicated earlier, the verb *to be* may be put in v and the raising of *be* to T may be assumed, while the other auxiliary verbs are directly merged in TP (Lohndal 2009 among others). But Arregi and Nevins 2012: 33) do not appear to accept such views. In fact, they argue that "the root of the auxiliary is the realization of a T head specified for tense and agreement". According to Arregi and Nevins (2012), the auxiliary forms in Basque are traditionally referred to as *be* and *have* verbs. The term "auxiliary" in Arregi and Nevins (2012: 30-40) can correspond to the verb *to be* in languages like Amharic and Tigrinya. I assume "the realization of tense in T" can be adopted from Arregi and Nevins (2012: 33-38) for the languages in question. None the less, this merits further investigation.

Amharic has the perfective and imperfective forms. The imperfective (as in 40a) and the gerundive forms (as in 40c) can take *al* to indicate the simple present tense/future tense and present perfect tense respectively. We may call the Amharic imperfective verbal form as in (40a) as a non-past. It can correspond to English future tense or simple present tense. In the examples above, *-al* is put following the imperfective form *yi-wädd-* to indicate either simple present or future tense. In (40b), we have the verb *näbbär* following the imperfective form *yi-wädd-* to show the past form. Moreover, in (40c) the gerundive form *ṣif-o-* is followed by *-al* to indicate the present perfect. But in (40c) *näbbär* follows the gerundive form of the verb to show past tense. Thus, *yi-wäddal* and *yiwädd näbbär* indicate non-past and past actions. Moreover, *ṣifowal* and *ṣifo näbbär* indicate present

perfect tense and past tense respectively. The difference between past (40b) and non-past (40a) and also the past (40d) and the present perfect (40c) is due to *al* and *näbbär*. The difference between present perfect (40c) and past tense (40d) is that the former can correspond to English present perfect and may indicate a situation closer to the moment of speech (present time) or time of utterance. The examples in (40a-f) and also (36a-h) above can illustrate that the present and past forms are distinguished by the verb *to be* and exist and also their suppletive forms in the past tense. The words *nä-* as in *nä-w*, *-al* (< *all- ä*) and *näbbär*(*-ä*) are, according to Amharic grammarians, known as *räddat gɨssočč* 'helping verbs' (cf. Baye 2007/2008 (2000 E.C.): 142-150). The suffix indicating person (such as ä-) may be omitted as we can observe from the examples in (40a-f):

(40) a. binyam mäťäť yɨ-wädd-al Amharic
Binyam drink 3-like - is
'Binyam likes (has a habit of) drinking'

b. binyam mäťäť yɨ-wädd näbbär
Binyam drink 3-like was
'Binyam liked (had a habit of) drinking'

c. binyam mäṣḥaf ṣɨf-o-w-al
Binyam book write-3ms- is
'Binyam has written a book'

d. binyam mäṣḥaf ṣɨf-o näbbär
Binyam book write-3ms was
'Binyam had written a book'

e. sami ɨ-bet all-ä
Sami at- home exist-3ms
'Sami is at home'

f. sami ɨ-bet näbbär
Sami at house was
'Sami was at home'

Let us also see the Amharic examples in (41a-h) so that we can understand the situation better:

(41) a. binyam ťälla li- + yɨ- + ťäťť-a nä-w
Binyam local beer ?- 3-drink -3ms is-3ms
'Binyam will drink local beer'

b. binyam wɨha Ø- mä-ťäťťat all-ä-bb-ät
Binyam water comp- to drink exist-3ms-appl-3ms
'Binyam has to drink water'

c. ɨne wɨha Ø-mä-ťäťťat yɨ-ggäbba-ňň-al
I water comp to-drink 3-must-1sg(Appl) exist
'I must drink water'

d. anta säw li-ti- akäbɨr yɨ-ggäbb-al
you (2ms) person comp-2-respect 3-must-exist
'You must respect people'

e. anta säw li-tɨ- räda tɨ-ččɨl-all-äh
you (2ms) person comp-2-help 2-can exist-2ms
'You can help people'

f. anta säw li- ti- räda tɨ-ččɨl yɨ-hon-al
you (2ms) person comp-2-help 2-can 3- may-exist
'You might probably help people'

g. anta säw tɨ- räda yɨ-hon-al
you (2ms) person 2-help 3-may exist
'You might help people'

h. ɨssuwa li-tɨ-mäťa tɨ-ččɨl-all-äčč
she compl-2-come 2-can- exist-3fs
'She is able to come'

In (41a), *lɨ* + imperfective + *nä-w* express futurity. In (41a), I assume *lɨ-* does not function as a complementizer. Moreover, we can observe that *näw*, in (41a), does not indicate present tense. I believe *lɨ-…*nä-w indicate possibility, i.e., mood/modality (cf. Adger 2003: 170-175 for modals as T heads). Thus, I assume *lɨ-…nä-* occur in a T head position in Amharic (though this merits further investigation).

In (41b), we have the embedded clause and the matrix clause verb *alläbbät* 'has to/must' (i.e., *allä* + applicative suffixes become *have*) which can express obligation, duty or advice. In (41c), we find the embedded clause and the verb *yɨggäbbaňňal* (**yɨ-tgäbba* > *yɨggäbba* + applicative suffix *-ňň* + *al*) which can show obligation or duty. In Tigrinya, we have seen earlier that the forms without applicatives and verb *to be/exist* such as in (16d) can also show obligation. But in Amharic, the forms with out *-al* (derived from verb *to be/exist*) which correspond to Tigrinya sentences such as (16d) are out and the verbs *to be* or *to exist* must occur following the verbs like *yɨggäbba*. Several of the sentences in (41), have embedded and matrix clauses. But in (41a, 41g), I assume we do not find embedded and matrix clauses. In (41g), for instance, *yɨhon-al* functions as a modal verb and not as a main verb.

In Italian, Adger (2003: 226) says T lacks EPP, or that it is satisfied by a phonologically null expletive. Furthermore, we can see in Adger (2003: 317-20) that subject to subject raising (or just raising) is possible in languages like English. In such raising, the subject first moves from the specifier of little v (i.e. specifier of vP) to the specifier of the embedded non-finite T. Then, the subject moves from this position to the specifier of the matrix T.

In the examples in (41) above, there are embedded and matrix clauses which have similar subjects. One may assume the raising of the subject of the embedded clause to the subject position of the matrix clause. As we can see in our later discussion, however, it appears to me that there are no conditions for raising. In case the subjects of the embedded and the matrix clauses are the same, we expect that one of them is not overtly seen. Consider the following Amharic sentences in (42a-c):

(42) a. ɨ-ne wɨha lɨ-ɨ-ťäťťa bä-tä-gäba-ňň näbbär
I water comp-1sg-drink ?-pas. must -1sg(appl) was
'I should have drunk water'

b. ɨ-ne wɨha lɨ-ɨ-ťäťťa yɨ-ggäbba-ňň näbbär
I water comp-1sg-drink 3- must -1sg(appl) was
'I ought to have drunk water'

c. ɨssua li-ti-mäṫ'ṫ'a ti-ččɨl näbbär
she comp-2-come 2-can was
'It could have been possible for her to come'

The sentences in (42a-b) are clauses with related meanings. I assume *tägäbbaňň* and *bä…näbbär* occur in V and in T positions respectively. Each of the clauses in (42a-b), have different subjects. As indicated above, the subjects of the embedded and the matrix clauses may be the same. In (42c), for instance, the subject of the embedded and the matrix clauses is *ɨssuwa* 'she' while *näbbär* shows some possible actions in the past. In (42c), *ti-ččɨl* can indicate ability and (not probability). Hence, we can consider it a main verb (not a modal) and as a consequence, we can have two subjects. We expect that one of them is not overtly seen and this is due to minimize exponence constraint. As indicated in Siddiqi (2009), the essence of this constraint is that the best utterance is the one that conveys the most amount of information with the least effort measured in number of morphemes to be pronounced.

Furthermore, perfective verbal forms and different auxiliaries refer to different situations in the past as in the following:

(43) a. binyam ṫälla ṫäṫt-o-wal Amharic
Binyam local beer drink-3-exist
'Binyam has drunk local beer'

b. binyam ṫälla ṫäṫt-o näbbär
Binyam local beer drink-3 was
'Binyam drank (had drunk) local beer'

c. binyam ṫälla ṫäṫt-o yɨ-hon-al
Binyam local beer drink-3 3-may-exist
'Binyam might have drunk local beer'

d. binyam ṫälla ṫäṫt-o hed-ä
Binyam local beer drink-3ms was-3ms
'Binyam had drunk local beer and went'

The examples in (43a-d) are composed of gerundive stems (which function as perfectives) followed by verb *to be*, modal verbs or main verbs. In

(43a), we see a completion of an action indicated by the verb. The gerundive verb stem and the verb *to be* (43a) can correspond to English present perfect tense. The gerundive verb stem and *näbbär-(ä)* (43b) may, more or less, correspond to English past/past perfect tense.

Moreover, the gerundive verb stem and the imperfective form *yɨhon + al* (43c) can indicate probability. In (43d), we can see that the action of drinking is completed before the action of going.

As illustrated above, the verb *tä-gäbba* is composed of a passive particle *tä-* and a possible stem **gäbba*. The latter (i.e. **gäbba*) is formally similar to the verb stems like *bälla* 'ate(3ms)' which becomes *tä-bälla* 'was eaten(3ms)' in the passive. However, **gäbba* is only possible and not actual. The actual form is only in the passive. Observe the Amharic examples in (44a-e):

(44) a. [[(antä) lɨ-t- hed] yɨ-ggäbba-al]
you (2ms) comp. 2ms-go 3-must-exist
'You (2ms) need to go/you must go'

b. [[(antä) lɨ-t- hed] yɨ-ggäbba-h-al]
you (2ms) comp.2ms go 3-must-2ms (appl.)-exist
'You (2ms) must go/it is necessary that you go'

c. [[[(antä) lɨ-t-hed] yɨ-ggäbba-h] näbbär]
you (2ms) comp. 2ms go 3 must 2ms(appl.) was
'It was necessary that you go/you ought to have left'

d. [[asa wɨha wɨsṭ' lɨ-yɨ-nor] yɨ-ggäbba-al]
fish water inside comp-3-live 3 must -exist
'Fish must live inside water'

e. [[säw kä-sɨhtät-u lɨ-yɨ-mmar] yɨ-ggäbba-al]
man from mistake-his comp -3- educated 3- must
'A man must get a lesson from his mistakes'

As indicated above, the passive form of the possible perfective stem **gäbba* is the actual form *tä-gäbba*. In the perfective, Amharic has the passive particle *tä-*. In the imperfective forms too, Amharic has the passive particle *tä* inserted between the person prefix like *yɨ-* and the stem *gäbba*. In the imperfective, however, the passive marker is assimilated with the first radical (consonant) of the root. Thus, in (44a), we have the imperfective passive form *yɨ-t-gäbbal* > *yɨ-ggäbbal* 'must'.

We can also see that in (44a) we have the embedded clause (*antä*) *li-t-hed* and the matrix clause *yi-ggäbbal*. In the Amharic sentences like (44a), present tense is marked by *al*. The word *yi-ggäbbal* is composed of the verb *yi-ggäbb* and *al* (< *allä*). As indicated earlier, the history of different languages show that verbs can develop into modal verbs, auxiliaries or affixes which indicate tense. In the case of Amharic, I assume *-al* in forms like *yi-ggäbb-al* is developed from the verb root *hlw.* The element *al* indicates some events in the present. The subject of *yi-ggäbbal* appears to be 3ms which may correspond to English *it*. The meanings of (44a) and (44b) are almost the same. However, we have the applicative *-h-* in (44b) which indicates that 2ms has an obligation for something. In the case of (44b), it may be interpreted as "you have an obligation to go". The element *-al* in (44b) which indicates present tense corresponds to *näbbär*(-ä) in (44c) which indicates past tense. Moreover, the imperfective form followed by *-al* can show a general truth as in (44d) or indicate habitual actions, something related to wisdom or common sense as in (44e). As indicated above time is indicated by different forms of the verb *to be/exist* (44a-c). The present form of the verb *to be/exist* can indicate present time while past form of the verb *to be näbbär* 'was' shows past time.

We have indicated above that the subjects of the embedded and main clauses may not be the same. The subjects of Amharic passive verbs like *yi-ggäbbal*, *yi-ggämmätal* 'it can be assumed or estimated', *yittammänal* 'it is believed', *yittawwäqal* 'it is known' may be different from the subjects of the embedded sentences. Observe the Amharic sentences in (45):

(45) a. antä wiha li-ti-ťäťťa yi-ggäbba-al
you (2ms) water compl-2ms-drink 3- must exist
'You must drink water'

b. innässu wädä roma yäm-yi-hed-u yi-mäsl-äňň-al
they(3pl) to-Rome comp.-3- go-pl 3 appear -1sg-exist
'It appears to me that they are leaving for Rome'

c. innässu wädä roma indä-hed-u yi-tta wwäq-al
they (3pl) to-Rome comp-went-3pl 3 known -exist
'It is known that they left for Rome'

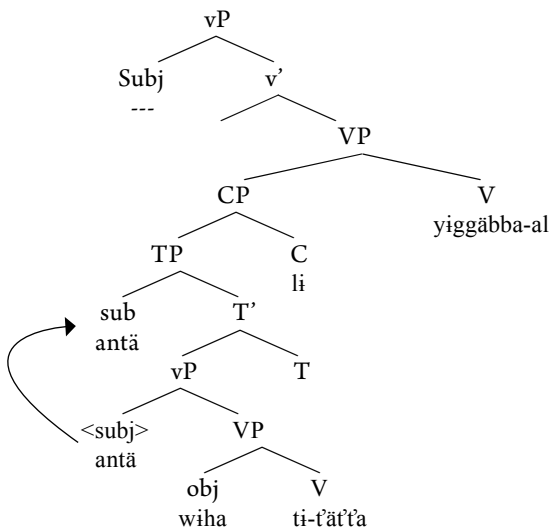
In the Amharic examples in (45a, 45c), the verbs of the matrix clauses are in the passive form. We can also see that the subjects of the matrix verbs in (45) are indicated by a third person subject indicating prefix *yi-* as in *yi-ggäbbal* (45a), *yi-mäsl-äňň-al* (45b) and *yi-fillät'* (45c). The subjects of

each of the matrix clauses appear different from the subjects of the embedded clauses. In (45a-c), the subjects of the embedded clauses are *antä* 'you' (45a), *ɨnnässu* 'they' (45b) and *ɨnnässu* 'they' (45c). But how do we know the real subjects of the matrix clauses? Let us see the discussion on (6.3.2.1) below.

6.3.2.1 *Unaccusatives, Unergatives and Passives of Amharic and their Subjects*

As indicated above, verbs like *yɨ-ggäbba-h-al* (44b) and *yɨmäsläňňal* (45b) take applicative suffixes. The subjects of the main clauses such as those in (44b, 45b) look like English expletive *it*. One may argue that they are not overtly seen but correspond to English expletive *it* or to non-pronounced subject in languages like Swedish (cf. Platzack 2013). Such types of empty subjects appear to be limited to verbs (of main clauses) such as those indicated in (45a-c) above. If we assume there is a phonologically null expletive in Amharic, we can assume a tree structure of (45a) in (46).

(46)



In the structure in (46), *-al* is put together with the matrix verb. However, we will see in our later discussion that it occurs in the T head position.

According to Adger (2003), an unaccusative verb can be associated with a little verb v projection which lacks a specifier. According to Pfau (2009), such a light verb heading vP must be *become* with no agentive external argument in SpecvP. The lack of accusative case with these predicates gives their name: unaccusative. According to Adger (2003), there

is no intervening subject between the EPP feature of T, and the N feature of the Theme. As a consequence, Adger says the Theme should be able to undergo movement to the specifier of TP to satisfy EPP on T. Finite T is assumed to have [nom] case. Thus, the single argument of unaccusatives is able to agree with T in case features too. Let us see the English example *arrive* (cf. Adger 2003). In English, the unaccusative verb *arrive* takes a single argument (as in, for instance, *Bini arrives*) and merges with it projecting a VP (we may call this step 1). Then the output of step 1 combines with the version of little v which lacks a specifier and [accu]; the verb *arrive* raises to this v (we may call this step 2). T is merged with the output of step 2 and [nom] on T values case on Bini (in the case of *Bini arrives* indicated above). Hence, even though this NP is merged in object position, it receives nominative case from T. In the case of unergative verbs like run, we may have a derivation which on the surface looks identical to those of unaccusative verbs like arrive. However, unaccusatives and unergatives should display syntactic differences which can be tied down to the distinct positions of the verb's single argument. Unergative predicates have a single Agent argument which appears as the daughter of vP. Unaccusative predicates have a single Theme argument which appears as the NP daughter of VP. We move an underlying object to a surface subject position in the latter and an underlying subject to a surface subject position in the former. In Amharic, we have unergative verbs like *roṭ'ä* 'ran (3ms)', *saq-ä* 'laughed (3ms)', *zälläl-ä* 'jumped (3ms)' whose structures could mean something like "X is the cause of an event of running, laughter or jumping" respectively. Amharic has unaccusatives like *wäddäq-ä* 'fell (3ms)', *färräs-ä* 'collapsed (3ms)'. The unaccuasatives could roughly be paraphrased as something like "X undergoes an uncaused falling event, collapsing event" etc.

The subjects of unaccusatives are treated in the same way as the objects of transitives since they are both merged in the same position (cf. Adger 2003 for more details). Passives are regarded as alternants of simple sentences (i.e. their active counterparts) where the subject is demoted in importance. Moreover, the object comes to be in the structural subject position in passives. Passives are akin to unaccusatives in that (a) they do not appear to have a thematic subject (b) they do not assign accusative case to their object. As a consequence, the object checks [nom] case with [nom] on T and raises to the specifier of TP. As we can see later in this section, this may work for Amharic. However, Amharic passive formation is not similar to that of English. As indicated above, Amharic stems can be made passive by a passive morpheme *tä-*.

Many languages have structures which involve the juxtaposition of a verb with a special particle or auxiliary marking causation. It is indicated in the literature that even English has structures something related to this. In English, for instance, the word *show* may be roughly paraphrased

as "cause to see" (cf. Adger 2003: 133). The paraphrases involving *cause* are very much like the basic structure that *merg*e produces for ditransitives. In the literature, we observe different views regarding VP. As indicated in the literature, the VP-shell analysis for three place predicates (which can include also verbs with a causativizers *ʔa-/a-* or *as-*) puts the Agent of the predicate in the specifier of little v, and the Theme in the specifier of VP (cf. also Adger 2003 among others). In Amharic, we have the causativizer *a-* or *as-*. These causativizers can be prefixed to intransitive and transitive verbs to form transitive and ditransitive verbs. We have said earlier that Amharic, as in the case of Tigrinya and other Semitic languages, has the passive morpheme *tä-* which can be prefixed to the stems as in (47e-g):

(47) a. säw asa yɨ-bälal Amharic
man fish 3- eat (imperf.)
'Man eats fish'

b. asa yɨ-bbällal (< yɨtbällal)
fish 3-eat (imperf.)
'Fish can be eaten'

c. lel-occ̆-ɨn asa y-a-bäl-al (< *yɨ-a-bäla-al)
other-pl-to fish 3- a- eat (imperf.)-exist
'He makes others eat fish'

d. ɨss-u asa yɨ-bla
he fish 3-eat (juss.)
'Let him eat fish'

e. asa yɨ-bbäla (< yɨ-t-bäla)
fish 3-pass.- eat (imp.)
'Let fish be eaten'

f. säw-occ̆-u tä-gaddäl-u
man-pl-the tä- kill-3pl
'The men killed each other'

g. säw-očč-u leločč-ɨn (säw-očč) a-ggaddäl-u (< *a-t-gaddäl-u)
man-pl-the others to (men) a- kill -3pl
'The people made other people kill each other'

h. anbäsa fɨyyäl bält-o-b-ɨňň-al
lion goat ate-3ms-appl-1sg-exist
'A lion ate a goat (for my disadvantage)'

*i. ɨne anbäsa fɨyyäl bält-o-b-ɨňň-al
I lion goat ate-3ms-appl-1sg-exist
*'I a lion ate a goat (for my disadvantage)'

j. lä-ɨne zämäd tamm-o-b-ɨňň-al
to-I relative ill-3ms-appl-1sg-exist
'A relative is ill (for my disadvantage)'

l. ɨne zämäd tamm-o-b-ɨňň-al
I relative ill-3ms-appl-1sg-exist
'A relative is ill (for my disadvantage)'

In the examples above, we have a simple active imperfective form in (47a). The simple passive imperfective form in (47b) is a passive counterpart of (47a). The active form in (47a) has become passive (47b) by inserting a passive morpheme *t* between *yɨ-* and the stem. In (47c), the causativizer *a-* is prefixed to the stem. But the prefix *a-* follows the third person prefix *yɨ-*. In (47d), we have the active jussive form *yɨbla*, while in (47e), we find the passive jussive form **yɨ-t-bäla* which becomes *yɨbbäla*. The jussive form in (47e) is a passive counterpart of the active jussive form in (47d). As in the case of causative morpheme *a-*, the passive morpheme *t-* (the vowel *ä* in *tä-* is deleted) occurs between the simple stem *-bäla* and the third person marker *yɨ-* in (47e). In (47f), we have the frequentative stem *-gaddäl-* preceded by the passivizer *tä-*. Hence, (47f) is a frequentative passive form. The causative form of the frequentative stem in (47f) is the causative verb form in (45g). In (4g), the passive morpheme *t-* (the vowel *ä* in *tä-* is deleted) is a prefix. But it occurs following the causative morpheme *a-*. However, we can also notice that the passive and causative morphemes can be assimilated with neighbouring sounds. Thus, we observe **yɨ-a-bälal* > *yabälal* in (47c), **yɨ-t-bäla* > *yɨbbäla* in (47e) and **a-t-gaddäl-u* > *aggaddäl-u* in (47g).

We have indicated earlier that an unaccusative verb is associated with a little verb v projection which lacks a specifier and there is no intervening subject between the EPP feature of T, and the N feature of the Theme. As a consequence, Adger (2003) says the Theme should be able to undergo movement to the specifier of TP to satisfy EPP on T. The same holds for passives. As in the case of unaccusatives, finite T can be assumed to have [nom] case. Thus, the single argument of passives or unaccusatives is able to agree with T in case features too. Hence, even though this NP is merged in object position, it receives nominative case from T. Unaccusative and passive predicates have a single Theme argument which appears as the NP daughter of VP. We move an underlying object to a surface subject. As indicated above, the subjects of unaccusatives are treated in the same way as the objects of transitives since they are both merged in the same position (cf. Adger 2003 for more details). Passives are regarded as alternants of simple sentences (i.e. their active counterparts) where the subject is demoted in importance. Moreover, the object comes to be in the structural subject position in passives. The object checks [nom] case with [nom] on T and raises to the specifier of TP.

According to Adger (2003), featural properties of T trigger movement of an argument from inside vP to the specifier of TP. Adger (2003: 228) says: "When there is only a single argument, then this argument raises". Thus, the single argument which is the sister of V, rather than the specifier of little vP, raises obscuring the structural difference between unaccusatives and unergatives (cf. Adger 2003: 228).

In the examples in (45a-c), we have seen passive Amharic verbs of the matrix clauses. Lumsden and G. Halefom (2011: 139-141) believe (i) there are no examples of raising from embedded clauses in Amharic; (ii) passive construction is regarded as the only example of NP raising in Amharic.[2] We may leave the issue open for further investigation. In the case of Amharic examples in (47h-i), the applicative affix corresponds to the applicative object *lä-ɨne* 'to me'. The applicative object cannot be realized as ɨne and hence the sentence in (47i) is out. In (47j-k), the applicative affix corresponds to the applicative object *lä-ɨne* 'to me' and to ɨne 'I'. (47k) correctly rules in since the applicative object can be realized as ɨne.

[2] According to Lumsden and G. Halefom (2011: 140-141), "the only example f NP raising in Amharic is found in the passive construction. There are no examples of raising from embedded clauses because all Amharic clausal structures have Case-marked subject positions". According to them this is because of the nature of Amharic morphology (cf. Lumsden and G. Halefom for more discussion on the issue). However, I assume the issue of Amharic NP raising merits further investigation.

In Hebrew, Adger (2003: 227-8) argues possessor datives like *le-Rani* 'to-Rani' are unable to associate with arguments (that originate) in the specifier of vP.

As indicated above, intransitive and transitive verbs of Amharic take applicative objects (cf. also Tesfay Tewolde 2010). In the case of passives and unaccusatives, I assume the applicative objects undergo movement to higher spec positions. Take, for instance, the examples in (48a-g) from Amharic:

(48) a. [[(antä) li-t-hed] yi-ggäbb-al]
you (2ms) comp. 2ms go 3- must-exist
'You (2ms) need to go/you must go'

b. [[(antä) li-t-hed] yi-ggäbba-h-al]
you (2ms) comp. 2ms go 3 must 2ms (appl.)-exist
'You (2ms) must go/it is necessary that you go'

c. [[[(antä) li-t- hed] yi-ggäbba-h] näbbär]
you (2ms) comp. 2ms go 3 must 2ms (appl.) was
'It was necessary that you go/you ought to have left'

d. ine wiha li-i-t'ät't'a yi-ggäbb-al
I water compl-1sg-drink 3- must-exist
'I must drink water'

e. innässu wädä roma yäm-yi-hed-u yi-mäsl-ăňň-al
they (3pl) to-Rome comp.-3- go-pl 3 appear -1sg-exist
'I think they are leaving for Rome'

f. innässu wädä roma indä-hed-u yi-ttawwäq-al
they (3pl) to-Rome comp.- went-3pl 3-pas. known -exist
'It is known that they left for Rome'

g. lä-*ine* innässu wädä roma yam- yi-hed-u yi-mäsl-ăňň-al
for me they(3pl) to-Rome comp.-3- go-pl 3-appear -1sg-exist
'It appears to me that they are leaving for Rome'

h. ine innässu wädä roma yäm-yi-hed-u yi-mäsl-ăňň-al
I they (3pl) to-Rome comp.-3- go-pl 3 appear -1sg-exist
'It appears to me that they are leaving for Rome'

i. [[anta wädä roma yäm-ti-hed] yi-mäsl-äňň-al]
you to Rome comp. 2ms-go 3-appear 1sg-exist
'It appears to me you (2ms) are leaving for Rome'

In (48a), we have an embedded clause with its subject *antä* and a matrix clause with its phonologically null subject. (48a) is related to (48b). But there is a suffix *-h-* attached to the matrix verb in the latter. In (48e), we have an embedded clause with its subject *ɨnnässsu* 'they' and a matrix clause with its 1st person singular object suffix attached to the matrix verb *yɨ-mäsl* (i.e., *yɨmäsl* + *-äňň-al*). Moreover, the argument *lä-ɨne* 'for me' which corresponds to the suffix *-äňň* can be phonologically realized. Thus, the native speaker can use both (48e) and (48g). We can also observe that the verb of the matrix clause is not transitive and the object *lä-ɨne* is an applicative object. The fact that the applicative object is not overtly seen in (48e) is because (a) Amharic is a pro drop language (b) there appears to be more emphasis in (48g). Moreover, the native speakers can use (48h) instead of (48g). As the subject of the embedded clause is indicated by *yɨ…u* in (48g-h), we expect the subject of the embedded clause in this sentences to be *ɨnnässu* 'they'. As indicated above, the applicative object suffix is *äňň* in (48g-h). We also expect the applicative object in (48g) to be *lä-ɨne* 'for me'. But, in (48h), we can observe that the argument in higher position is ɨne 'I'.

As indicated above, passives can be treated in the same way as unaccusatives in that they do not assign accusative case to their objects and do not appear to have thematic subjects. As a result, the object checks [nom] case with [nom] on T and raises to the specifier of TP (cf. Adger 2003 for more details). We can assume that such things are also valid for Amharic passives and unaccusatives. Unlike languages such as English, however, Amharic transitive and intransitive verbs can have applicative objects. Moreover there is a difference between passive/unaccusative objects and affected objects (as in, for instance, 48g) in that the former are indicated by subject affixes suffixed to the verbs while in the latter the affixes which occur suffixed to the verbs are related to object suffixes (and correspond to applicative arguments). I assume the affected (applicative) objects may raise to higher positions. Applicative arguments may be focused or topicalized and thus may move to spec positions between TP and CP or to a spec-CP position. Hence, I assume the applicative object *lä-ɨne* 'for me' in (48g) and ɨne in (48h) raise to somewhere above the subject position. It may be possible to assume the movement of *lä-ɨne* 'for me' (48g) to a position between TP and CP which can be raised to spec-CP position in (48h) and realized as *ɨne* 'I'

(cf. Tesfay Tewolde 2010). None the less, this needs further research. The sentence in (48e) is commonly used while those in (48g) and (48h) are usually used for emphasis.

In (48f), we have an embedded clause with its subject *ɨnnässu* 'they' and a matrix clause with its verb *yɨ-ttawwäqal* 'it is known'. The subject of the matrix clause is phonologically null (cf. also 48i). In Amharic, as in the case of Tigrinya, it appears to me that phonologically null subjects can be permitted.

Furthermore, tense can be indicated by forms of the verb *to be*. The difference between (48b) and (48c) is that in the former we have the present form of the verb *to be* while in the latter we get the past form of the verb *to be* which indicate present and past tenses respectively. However, we can also observe that the present and the past tense forms of the verb *to be* are two different lexical items.

6.3.2.2 *More on Subject Positions, Mood and Tense Marking in Amharic*

As indicated in Tesfay Tewolde (1997, 2002), different stems of verbs can mark aspect and mood (cf. also Baye 2007/2008 (2000 E.C)). In the examples in (48) above, we can see that the verbs which function as the verb *to be* and as modal verbs can indicate tense and mood/modality respectively.

In our earlier examples in (6.3.2), we have seen that we can have embedded and matrix clauses. But the subject of the matrix clause may also appear similar to the subject of the embedded clause.

Mood/modality is indicated by modal verbs and/or particles in the sentences. Moreover, tense is indicated by different forms of the verb *to be*. In (37a-d), for instance, we have a subject, a main verb and the verb *to be* in each of the sentences and tense is marked by the suppletive forms of the verb *to be* which occur in sentence final position in each of the sentences.

As indicated in the examples above, the subject of the matrix clause may be similar to the subject of the embedded clause. However, we have also seen that the subjects of matrix and embedded clauses may also be different. In (48i), for instance, we have the subject of the embedded clause *anta* 'you' and the subject of the matrix clause 3ms indicated by the prefix *yɨ-*. In (41d), we have *antä* as the subject of the embedded clause while the subject of the matrix clause is phonologically null. We have the 3ms subject prefix *yɨ-* attached to the verb stem *-gäbbal* in *yɨ-gäbbal* (41d). Thus, we know that the subject of the matrix clause refers to a third person which may correspond to English *it* or to a non-pronounced subject in languages like Swedish (cf. Platzack 2013 for Swedish). Observe also the following Amharic sentences:

(49) a. ɨne wɨha lɨ-ɨ-ťäťťa yɨ-ggäbba-ňň-al
I water compl-1sg-drink 3-must-1sg (appl) is-3ms
'I must drink water'

b. ɨne wɨha lɨ-ɨ-ťäťťa yɨ-ggäbba-ňň näbbär
I water compl-1sg-drink 3-must-1sg (appl) was
'It was necessary for me to drink water'

c. bet-u (lä-ɨne) bäťam ťäbbäb-ä-ňň
house-the (to I) very narrow-3ms-1sg (appl)
'The house is too small for me'

d. ɨne bet-u bäťam ťäbbäb-ä-ňň
I house-the very narrow-3ms-1sg (appl)
'The house is too small for me'

e. lä-ɨne rab-ä-ňň
to-I hungry-3ms-1sg (appl)
'I feel hungry'

f. ɨne rab-ä-ňň
I hungry-3ms-1s (appl)
'I feel hungry'

In (49a), *yɨggäbbaňňal* is a passive imperfective form followed by applicative suffix *-ňň* and the particle *-al* and can show a future or a present situation, while *näbbär* (49b) functions as a past form of the verb *to be*. In (49b), the idea is that the speaker ought to have drunk water sometime in the past. The important thing worth noting here is that we have the first person singular applicative morpheme *-äňň/-ňň* inserted between the verb *yɨggäbba* and the particle *-al*. The suffix -äňň/-ňň is an object suffix. In Amharic, object suffixes can be preceded by *-l-* or *-b-* to function as applicative affixes. However, I assume, object suffixes alone too can function as applicative suffixes. In clauses like *šämiz-u säffaňň* 'the shirt is too big for me', we can see that the object suffix is used as an applicative object suffix. In *ťäbbäb-ä-ňň* (49c), *-ä-* and *-ňň-* correspond to subject *bet* 'house' and to the applicative object *lä-ɨne* 'to me' respectively. In (49e), *-ä-* indicates the non-overt subject while *-ňň* shows an applicative object. However, (49f) appears more common than (49e). I also assume (49c) can be realized as (49d).

In (49a), we have *ɨne wɨha lɨ-ɨ-ťäťťa yɨ-ggäbba-ňň-al*. In the embeded clause, the subject is ɨne and the affix which corresponds to the subject (i.e., *ɨne*) is *ɨ-* preceded by the complementizer and followed by the verb as in *lɨ-ɨ-ťäťťa*. In the matrix clause (i.e., *yɨ-ggäbba-ňň-al*), the verb is followed by an object suffix. The object which corresponds to *äňň/ňň* is *lä-ɨne*. Normally, we expect a subject affix which corresponds to a subject and an object suffix which corresponds to an object. In (49a), however, we do not see a subject which corresponds to *yɨ-* and an object which corresponds to *-äňň/ňň* is not overtly seen. It may be possible to assume the (1) raising of the embedded subject ɨne to the next higher matrix subject position; (2) the raising of the matrix applicative object *lä-ɨne* to the matrix subject position which can be realized as *ɨne* (after getting nominative case).

None the less, we need to see other examples. The examples in (50a-h) from Amharic may help to have a better idea of the situation.

(50) a. bet-u (lä-ɨne) yɨ-ggäbba-ňň-al
house-the (m) (to me) 3-must-1sg (appl)-exist
'The house belongs to me'

b. bet-u (lä-ɨňňa) yɨ-ggäbba-n-al
house-the(m) (to us) 3-must-1pl (appl)-exist
'The house belongs to us'

c. bet-u (lä-ɨnnnantä) yɨ-ggäbba-ččɨhu-wal
house-the (m) (to you (2pl)) 3-must-2pl (appl)-exist
'The house belongs to you(2pl)'

d. bet-u (lä-anči) yɨ-ggäbba-š-al
house-the (m) (to you (2fs)) 3-must-2fs (appl)-exist
'The house belongs to you (2fs)'

e. ɨne bet-u yɨ-ggäbba-ňň-al
I house-the(m) 3-must-1sg (appl)-exist
'The house belongs to me/I must own the house'

f. ɨňňa bet-u yɨ-ggäbba-n-al
we house-the(m) 3-must-1pl (appl)-exist
'The house belongs to us/we have to possess the house'

g. ɨnnantä bet-u yɨ-ggäbba-ččɨhu-wal
you (2pl) house-the (m) 3-must-2pl (appl)-exist
'The house belongs to you (2pl)/you (2pl) must possess the house'

h. anči bet-u yɨ-ggäbba-š-al
you (2fs) house-the (m) 3-must-2fs (appl)-exist
'The house belongs to you (2fs)/you (2fs) have to own the house'

i. *e* [roma wɨsť ɨndä-näbbär-ku] yɨ-ttawwäqa-al
roma in comp-was-1sg 3-know-exist
'That I was in Rome is known (clear)'

j. *e* [roma wɨsť ɨndä-näbbär-ku] ɨwq nä-w
roma in comp-was-1sg known is 3ms
'That I was in Rome is clear'

k. *e* [roma wɨsť ɨndä-näbbär-k] yɨ-ttawwäq-al
roma in comp-were-2ms 3-know-exist
'That you were in Rome is known (clear)'

l. *e* [roma wɨsť ɨndä-näbbär-k] ɨwq nä-w
roma in comp-were-2ms known is-3ms
'That you were in Rome is clear'

In (50i-k), we can see that the subject of the matrix clause is *e* (see also 50a-i). Let us compare the examples in (50i-k) to the English sentence "[[that the world is round] e is clear]" and to the Italian sentence "[è chiaro [che il mondo è rotondo]]". Adger (2003: 226) says in Italian, T lacks EPP or that it is satisfied by phonologically null expletive. This appears to hold for Amharic. As in the case of Italian, Amharic may be satisfied by phonologically null expletive.

In (50a), *yɨ-* (refers to 3ms) corresponds to the subject *bet-* 'house' and *-ňň-* 'to me' corresponds to the object *lä-ɨne* 'to me'. In (50b-d) too, similar observation can be made in that the subjects are indicated by subject affixes while the objects are indicated by object suffixes. In Amharic, the imperfective forms obligatorily take the verb *to be* which may be realized as *-al* as in (cf. 50a-i). In the past tense, the Amharic imperfective form takes *näbbär* (cf. also 48a-c). The sentences in (50a-d) correspond to the sentences in (50e-h) respectively. In the latter, however, we find the forms of subject pronouns instead of object pronouns. Let us see also the sentences in (51a-d) from Amharic:

(51) a. bet-u lä-ɨne yɨ-ggäbba-(ňň)-al
house-the (m) to me 3-must-1sg (appl))-exist
'The house belongs to me'

b. lä-ɨne bet-u yɨ-ggäbba (-ňň)- al
for me house-the (m) 3-must-1sg (appl))-exist
'The house belongs to me'

c. ɨne bet-u yɨ-ggäbba-ňň-al
I house-the (m) 3-must-1sg (appl)-exist
'I must own the house'

d. * ɨne bet-u yɨ-ggäbbal
I house-the(m) 3-must-exist
'I must own the house'

(51a-c) can be regarded as acceptable sentences with more or less the same meaning. It appears to me that there is less emphasis in (51a). I assume (51b) is derived from (51a). The applicative object *lä-ɨne* in (51a) is moved to the front position in (51b) for some sort of emphasis. I also assume (51c) is derived from (51b). The object *lä-ɨne* in (51b) is raised to a higher position and became *ɨne* again for some kind of emphasis. The sentence in (51d) is out. We cannot have the subjects *ɨne* 'I' and *bet-u* 'the house' in the same simple sentence. (51c) is acceptable while (51d) is not. The difference between (51c) and (51d) is the obligatory presence of applicative affix *-ňň-* in the former (i.e. 51c) which indicates *ɨne* is actually an object in a structurally higher position. In (51a-b), the sentences are acceptable even without the applicative object suffix *-ňň-*. In (51d), however, the sentence without *-ňň-* is not acceptable. I assume the following Amharic sentences can help in illustrating the issue:

(52) a. wɨha Ø- mä-ťäťťat yɨ-ggäbba-ňň-al
water comp-drink 3-must-1sg (appl)-exist
'I must drink water'

b. wɨha Ø- mä-ťäťťat lä-ɨne yɨ-ggäbba-ňň-al
water comp-drink for me 3-must-1sg (appl)-exist
'I must drink water/it is necessary for me to drink water'

c. lä-ɨne wɨha Ø- mä-ʻäʻʻat yɨ-ggäbba-ňň-al
to me water comp-drink 3-must-1sg (appl)-exist
'I must drink water/it is necessary for me to drink water'

d. ɨne wɨha Ø- mä-ʻäʻat yɨ-ggäbba-ňň-al
I water comp-drink 3-must-1sg (appl)-exist
'I must drink water/it is necessary for me to drink water'

e. antä ɨndäm-tɨ-aššännɨf lɨbb-e yɨ-amn-al
you (2ms) as-2ms-win heart-my 3ms- believe-exist
'I am convinced (lit. my heart believes) that you will win'

f. anta ɨndäm-tɨ-aššännɨf lɨbb-e yɨ-amn-ɨlliňň -al
you (2ms) as-2ms win heart-my 3ms- believe appl (1sg)-exist
'I am convinced (lit. my heart believes) that you will win'

g. anta ɨndäm-tɨ-aššännɨf lɨbb-e lä-ɨne yɨ-amn-ɨlliňň -al
you (2ms) as-2ms win heart-my for me 3ms believe 1sg (appl)-exist
'I am convinced (lit. my heart believes) that you will win'

h. ɨne antä ɨndäm-tɨ-aššännɨf lɨbb-e yɨ-amn-ɨlliňň -al
I you (2ms) as 2ms win heart-my 3ms believe 1sg (appl)-exist
'I am convinced (lit. my heart believes) that you will win'

i. *lɨbb-e antä ɨndäm-tɨ-aššännɨf ɨne yɨ-amn-ɨlliňň -al
heart-my you (2ms) as 2ms win I 3ms believe 1sg (appl)-exist
'I am convinced (lit. my heart believes) that you will win'

The sentences in (52a) and (52d) are acceptable sentences. But (52b) (52c) are, as far as I know, less common (though may not be incorrect). Nonetheless, (52a) and (52d) are related to (52b) and (52c) respectively. The applicative object suffix *-ňň-* in (52b) corresponds to the applicative object *lä-ɨne* in the same sentence. But *lä-ɨne* is not overtly seen in (52a). Though this may merit further research, it appears possible to assume the raising of the applicative object *lä-ɨne* (52c) to a higher position in (52d). In (52e-h), we have sentences which may be expected to have similar or related meanings. In the sentences in (52e-h), we have the matrix clause *lɨbb-e yɨ-amnal* (with or without the applicative affixes) with the subject

lɨbb 'heart' and with the verb *yɨ-amn-al*. *yɨ* in y*ɨ-amn-al* indicates the subject. (52e-f) are acceptable sentences. It appears to me that (52g-h) are not common. But it also seems to me that they are not out. In fact, the difference between (52f) and (52g) is the presence of an overt applicative object *lä-ɨne* 'for me/to me' in the latter. The applicative object is indicated by *ɨlliňň* "1sg" in (52f-h). In (52h), I assume the applicative object moves to a topic position (though not common, it may not be out) for emphasis and becomes *ɨne* 'I'. However, (52i) is not acceptable.

In Amharic we have different complementizers and some of these are indicated above. I assume Amharic has Ø complementizer as in (53b):

(53) a. ɨne wɨha Ø-mäťäťťat yɨ-ggäbba-ňň-al
I water compl-to drink 3-must-1sg (appl)-exist
'I must drink water'

b. ɨne wɨha l-ɨ-ťäťťä yɨ-ggäbba-ňň-al
I water compl-1sg-drink 3-must-1sg (appl)-exist
'I must drink water'

In (53a) and (53b), we find embedded and matrix clauses. These complex sentences have more or less the same meaning. In (53a-b), we have the embedded clauses with Ø- and *lɨ-* as complementizers. The difference between (53a) and (53b) is that there is Ø- + non-finite verb in the former and *lɨ-* + imperfective verb in the latter. The complementizer Ø- is prefixed to an infinitive (non-finite verb) form. The complemntizer *lɨ-* is prefixed to an imperfective (finite verb) form. The complementizer Ø- prefixed to a non-finite verb corresponds to a complementizer *lɨ-* prefixed to an imperfective verb (cf. Adger 2003 for the complementizer Ø- before infinitives in embedded clauses). As indicated in Adger (2003: 326), the interpretation of the embedded subject can be controlled by the matrix object. In our examples above, however, we have argued that it is the object *lä-ɨne* in (52b-c) that is being interpreted as *ɨne* 'I' in (52d). Let us observe the following English (54a) and Spanish (54b) examples taken from Adger (2003) and Lomashvili (2011: 110) respectively:

(54) a. Jason persuaded Medea [PRO to desert her family] Spanish

b. a Daniela le gustan los gatos
Daniela dat cl.dat like pl the cats
'Daniela likes the cats'

(Lomashvili 2010: 110)

In (54a), Medea is a matrix object which controls the subject (i.e. PRO) of the embedded clause. The interpretation of the embedded subject is controlled by the matrix object (i.e. Medea). It is Medea that is being interpreted as at least intending to desert her family. In (54b), we have a dative DP a Daniela. The predication relation holds between the verb and the DP "cats" while the dative argument is 'external' to this relation (cf. Lomashvili (2011).

In the literature (cf. Adger 2003; Lomashvili 2011 among others), we can observe the following:

a) Italian, like Icelandic expletive constructions, allows subjects to remain in their position (cf. Adger 2003);
b) In Italian, T lacks EPP, or that it is satisfied by a phonologically null expletive;
c) In Hebrew, possessor datives are unable to associate with arguments (that occur) in the specifier of vP.

In Amharic, we have seen earlier that applicative objects, objects of unaccusatives and passive arguments may raise to a higher position in the structure. The following examples may help in illustrating the point better:

(55) a. ɨnnässu lä-antä gänzäb säťt-äw-lɨh-al Amharic
They to you money gave -3pl-2ms (appl)-exist
'They have given money to someone for your advantage'

b. ɨnnässu lä-ɨnnat-ačč ɨn gänzäb säťt-äw-lɨh-al
They to mother-our money gave -3pl-2ms (appl)-exist
'They have given money to our mother (for your [2ms] advantage)'

c. antä (lä-ɨnnat-ačč ɨn) gänzäb täsäťt-o-llɨh-al
you (2ms) (to mother-our) money given -3ms-2ms (appl)-exist
'Money has been given (to our mother) (for your [2ms] advantage)'

In (55a), the applicative object and the applicative suffix are *lä-anta* 'you' and *-lɨh-* respectively. In (55b), the receiver is ɨnnat 'mother'. The applicative object in (55b) is not overtly seen. But it is indicated by *-lɨh-*. In (55c), the applicative object which is indicated by *-lɨh-* is realized as *antä*.

The object *gänzäb* in (55a-b) moved to a subject position in (55c). It appears to me that the applicative objects such as *lantä* 'to you (2ms)' in

(55a) could move to a position higher than that of the subject and become *antä* 'you (2ms)' in (55c). Besides, applicative suffixes and the verb (ʔ)*allä* 'exist' can form the verb to have and the applicative object of the verb to have (< the verb to exist + applicative affixes) can move to a position higher than the subject position. I assume the applicative arguments of unaccusatives like *motä* 'died' + applicative suffixes and the applicative arguments of passives + applicative suffixes such as *tawwäqä-ňň* 'I felt it', *täsämma-h* 'you felt it' and *täbält-o-bbɨh-al* 'something was eaten' (regarded as a disadvantage for the 2ms) raise to positions higher than their subject positions. It is possible that this position could be the spec of CP, spec of TP or some position above TP and can be regarded as the topic (cf. also Adger 2003: 329-333 for the proposal that German triggers movement of topics to the specifier of CP).

In Amharic, as in Tigrinya, I assume modal verbs can function as main verbs. As indicated above, the words that we call modals in Amharic may function as English modals or as main verbs. When the Amharic modals function as main verbs, they do not have structural positions similar to their counterparts in English.

We have seen earlier that auxiliary *be* verbs indicate tense. But where do we put the *be* auxiliaries? Let us see (40a-c) repeated here as (56a-c).

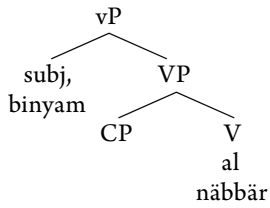
(56) a. binyam mäťäť yɨ-wädd-al Amharic
binyam drink 3-like - is
'Binyam likes (has a habit of) drinking'

b. binyam mäťäť yɨ-wädd näbbär
binyam drink 3-like was
'Binyam liked (had a habit of) drinking'

c. binyam mäṣḥaf ṣɨf-o-wal
binyam book write-3ms- is
'Binyam has written a book'

Do we have embedded and matrix clauses in each of the sentences in (56a-c)? Binyam in (56a-c) is the subject of the clauses and the prefix *yɨ-* refers to Binyam. Some people may regard the verb *to be* in Amharic as a head of the clause (just as any other verb in the language). In that case, we may assume the structure in (57) for the sentences in (56a-c) above and the clauses may have the subject Binyam (overt in one and covert in the other).

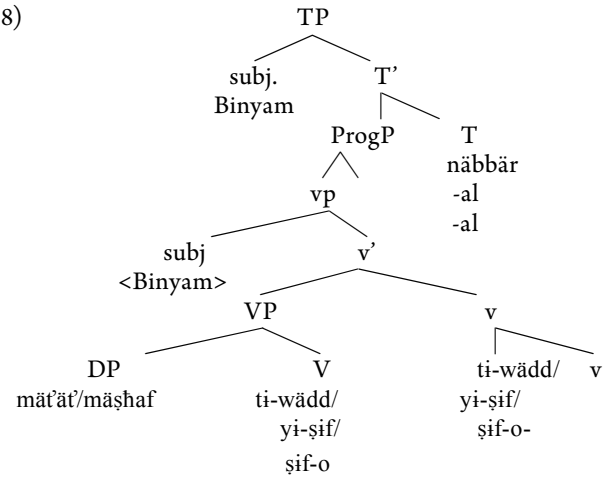
(57)



However, it appears to me that it is more convincing to have the structure in (58) for the sentences in (56a-c) above. The verb *-al* 'to be' occurs attached to the verb. The items *näbbär* and *-al* mark past and non-past. In (56a-c), the latter and the former are derived from *allä* and *näbbär-ä* respectively. The forms *näbbär-ä* and *allä* can have the meanings 'existed' and 'exist' respectively. However, their meanings change when they occur attached to different conjugations of verbs as in *yɨ-ggäbba-ňň-al* 'it belongs to me' and *yɨ-ggäbba-ňň-näbbär* 'it belonged to me'.

According to Arregi & Nevins (2012), finite auxiliary in Basque is traditionally referred to as have or be in sentences. Arregi & Nevins (2012: 31-39) argue the root of the auxiliary (tense/agreement morpheme) is the realization of a T head which is specifid as present or past tense encoded in terms of feature [± past]. The tense/agreement morpheme (the root of the auxiliary) indicated in Arregi & Nevins (2012) is T. Arregi & Nevins (2012) claim the root of the tensed auxiliary is not v and movement of v to T does not occur. Moreover, they say the realization of this morpheme clearly depends on features typically associated with a T node that is an Agree Probe. I assume such views are important for the discussion in Amharic verb *to be*. In Amharic, I assume, the structure in (58) for the sentences in (56a-c).

(58)



As can be observed in (58) above, I assume, the Amharic form of verb to be occurs as a T head (cf. Arregi & Nevins (2012), Zagona (2008)).

6.3.2.3 *Summary*

As in the case of Tigrinya, aspect and mood are indicated by inserting different vowel patterns into the roots of base stems of verbs in Amharic. Amharic, as in the case of Tigrinya, indicates tense by different forms of the verb *to be* in the matrix sentence (cf. Jelinek 2002 for related analysis in Egyptian Arabic). The present and past tense forms of the verb *to be* are different words. We find forms like *-al* in the present tense. In the past tense, we have the form *nbr* as in *näbbär-ä* 'he was' or *näbbär- u* 'they were'. As far as I can see, we cannot derive the past tense from the present forms of the verb *to be*.

In Amharic, matrix and embedded clauses can have different or the same subjects. In the case of the latter, one of them may not be overtly seen. However, the subject of matrix clauses may also be phonologically null. When the verb of the matrix clause is passive as in the case of (50i) and (50k), we can observe that the subject could be phonologically null.

Furthermore, we can also see that Amharic transitive and intransitive verbs can have applicative objects. The applicative objects may raise to a position higher than that of the subject (cf. Lomashvili 2011: 109-114 for similar analysis in languages like Spanish).

According to Schäfer (2008: 108-113,), dative causers are introduced by applicative heads and not by Voice/little v and this can be supported by the fact that the dative causer construction is possible with pure unaccusatives which do not license canonical external arguments. Besides, it is indicated in the literature that in high applicatives (as in Amharic), dative argument is external to the predication relation between the verb and the subject (cf. also Adger 2003; Cuervo 2003; Lomashvili 2011).

In the literature, it is assumed that the structure that contains the nominative subject is a CP and the C selects the T. It is also assumed that T inherits formal features (including nominative case) from C (cf. Miyagawa 2012: 8, 126, 131, 134, 146). In the case of Amharic, I assume the applicative objects that can raise to a position higher than that of the subject may get a nominative case.

6.4 *Conclusion*

The data we have seen so far can illustrate that in languages like Tigrinya and Amharic, modals (unlike those of English) may not appear "outside the VP and after the subject" position. Amharic and Tigrinya do not have

forms equivalent to emphatic *do*. Unlike that of English infinitival *to*, Tigrinya and Amharic infinitive forms may not be in complementary distribution with the forms we may call "modals". The criteria used to show the structural position of modal verbs in English do not seem to have much value for Tigrinya and Amharic (cf. also Manzini and Savoia 2007 for Italian dialects and Albanian).

Tigrinya and Amharic verbs can indicate aspect or mood. As illustrated above, we can indicate aspect and mood by inserting different vowel patterns into the roots of base stems of verbs in Amharic and Tigrinya (cf. also Leslau 1995; Tesfay Tewolde 1997, 2002; Baye 2007/2008 (2000 E.C.) among others). But tense is indicated by special type of verbs.

According to Lohndal (2009: 222-3), the function of the Hebrew triliteral copula *h-y-y* in the present tense disappears and a new copula *hu* develops from a pronoun. In Egyptian Arabic, tense is marked in the auxiliary *kwn* (cf. Jelinek 2002: 77). In Panare (a language in Venezuela), two historical demonstrative pronouns have become synchronic present tense and past tense markers (cf. Lohndal 2009: 224-5). In English, different normal verbs developed into auxiliaries.

In Tigrinya and Amharic, tense and mood/modality are marked by auxiliaries and modals respectively which may also function as normal verbs. The verb *to be* (ʔ) *all-* 'is' marks present tense and is derived from the verb root *hlw* 'exist'. The verb *to be näb*(*b*)*är-ä* 'was' marks past tense and is derived from *nbr* 'lived/was' which may have the function of any other verb. But our examples so far illustrate that the meanings of the tense indicating the verb *to be* are different from the original meanings of the terms. Forms like Amharic *all-* occur attached to verbs as affixes. In the languages in question, tense can be marked by different forms of verb *to be* in the matrix sentence (cf. Jelinek 2002 for related analysis in Egyptian Arabic). The present and past tense forms of the verb *to be* are different words which can be derived from different roots.

The languages in question have matrix and embedded clauses which can have different or the same subjects. In the case of the latter, one of them may not be overtly seen and this could be due to minimize exponence constraint. As indicated in Siddiqi (2009), the essence of this constraint is that the best utterance is the one that conveys the most amount of information with the least effort measured in number of morphemes to be pronounced.

However, the subject of matrix clauses may also be phonologically null. When the verb of the matrix clause is passive as in the case of (25i) and (25k), (50i) and (50k), we can observe that the subject could be phonologically null.

In the literature, it can be observed that featural properties of T trigger movement of an argument from inside vP to the specifier of TP. When there is only a single argument, then that argument raises. If there are more than one argument inside vP, the closest one raises (cf. Adger 2003).

Furthermore, we can also see that Tigrinya and Amharic transitive and intransitive verbs can have applicative objects. It is indicated in the literature that possessor datives are unable to associate with arguments that originate in the specifier of vP (cf. Adger 2003). As we can see from the examples above, the applicative objects can raise to a position higher than that of the subject (cf. Lomashvili 2011: 109- 114 for similar analysis in languages like Spanish). According to Schäfer (2008: 108-113,), this is because Dative causers are introduced by applicative heads and not by Voice/little v and this can be supported by the fact that the dative causer construction is possible with pure unaccusatives which do not license canonical external arguments. Besides, it is indicated in the literature that in high applicatives, dative argument is external to the predication relation between the verb and the subject (cf. also Adger 2003; Cuervo 2003; Lomashvili 2011). I assume this holds for high applicative objects in Tigrinya and Amharic.

In the literature, it is assumed that the structure that contains the nominative subject is a CP and the C selects the T. It is also assumed that T inherits formal features (including nominative case) from C (cf. Miyagawa 2012: 8, 126, 131, 134, 146). In the case of Languages like Tigrinya and Amharic, it may be possible to assume the raising of an applicative object to a higher position and get a nominative case.

7

INTERNAL PLURALS AND MINIMIZE EXPONENCE IN NORTH ABYSSINIAN SEMITIC (NAS) LANGUAGES

7.1 *Introduction*

As indicated in Tesfay Tewolde (2009), I assume that there is no direct relationship between the internal plurals of the plural forms and the singular forms of verbs and nouns in North Abyssinian Semitic (that can be abbreviated as NAS) languages (cf. also Tesfay Tewolde 2003). This can be observed from examples like *ʔawalɨd* ʿgirls' and *gʷal* ʿgirl' or *därahut/därawɨh* ʿhens' and *därho* ʿhen' (cf. also Siddiqi 2009 for the discussion on root allomorphy). On the other hand, Tesfay Tewolde (2009) compares both nominal and verbal plural patterns of the languages in question and observes the following:

> a) The variant plural forms such as *därawɨh* and *däräwwɨh* (nominal plurals) can be compared to stem III and stem II (verbal plurals) respectively;
> b) The reduplication of the second radical in *säbabär-ä* ʿbroke (3ms) repeatedly' corresponds to the reduplicated consonant in *tamamɨn* ʿsnakes' (plural of *tämän* ʿsnake') and insertion of *w* in *därawɨh* ʿhens' (plural of *därho* ʿhen'). As indicated in Tesfay Tewolde (2009), the segments *w*, *y*, *t* and *ʔ* are, I assume, inserted to fill c-slots in the pattern. In quadriliterals (as in *mänťäl-ä* ʿhe snatched' and *mänaťäl-ä* ʿhe snatched repeatedly') and in nouns with four consonants, (as in *mänbär* ʿchair' and *mänabɨr* chairs'), the addition of new consonantal segments are not needed. However, the infixation of *a* following the second consonant occurs in the nominal plurals and in the reduplicative forms (verbal plurals) of triradical and quadriradical verbs.

Thus, *cäcacvc* (< *cacācvc*)/*cacācvc* can be the internal plural pattern common for both nominal and verbal forms in North Abyssinian Semitic languages (cf. Tesfay Tewolde 2009, 2003 for the different vowels inserted in *v* of the last syllable in the languages in question and McCarthy 1982 for the [basic] prosodic template of Arabic which is very much similar to the internal plurals we observe in North Abyssinian Semitic languages).

Tesfay Tewolde Yohannes, *DPs, Phi-features and Tense in the Context of Abyssinian (Eritrean and Ethiopian) Semitic Languages. A Window for Further Research*, ISBN (online) 978-88-6453-329-2, ISSN (online) 2420-8361, CC BY-NC-ND 4.0 IT, 2016 Firenze University Press

According to Siddiqi (2009: 29-31), root allomorphy comes in two groups. One variety of the root allomorphy are, according to Siddiqi, known as irregular allomorphy. In this group (e.g. *eat* and *ate*, *mouse* and *mice*, *sleep* and *slept*), there is some common phonology between the singular and the plural forms. In the second group, we have the suppletive allomorphy where the two forms (e.g. *go* and *went*, *good* and *better*, *bad* and *worst* and also *person* and *people*) cannot be derived from each other by some sort of phonological processes.

Siddiqi believes DM does not need the use of one set of operation for roots and another set for functional morphemes. According to Siddiqi, we have to use the same mechanisms in the analysis of root allomorphy and the allomorphy of functional morphemes. In fact, Siddiqi shows a functional application of Minimize Exponence. In order to satisfy Minimize Exponence, Siddiqi proposes that the functional heads projected above the root has to fuse with the root. In this chapter, this approach will be adopted.

The chapter is organized as follows. Section (7.2) offers an overview of Distributed Morphology. In section (7.3), I explore Minimize Exponence and internal plurals of verbs and nouns in the languages under discussion. In section (7.4), I conclude that the common use of internal plurals is due to an economy constraint on the grammar.

7.2 *Distributed Morphology*

According to Halle and Marantz (1993) and others, the term "Distributed Morphology" was chosen to emphasize the fact that the machinery of what has been traditionally called morphology is distributed among several components of the grammar and is not concentrated in a single component (cf. also Pfau 2009). The grammar within Distributed Morphology (DM) is divided into two parts. In the first part, several distinct repositories contain listed information: a morpheme list, a vocabulary, and an encyclopaedia. In the second part, we have a generative engine consisting of the syntax proper and various post-syntactic mechanisms such as impoverishment and linearization. The morphemes in the morpheme list contain no phonological features. It is left to vocabulary items to relate phonological exponents to morphemes and to detail the contextual conditions on the insertion of these exponents while encyclopaedia entries relate interpretations and structured linguistic expressions that may be words or phrases (cf. Noyer 2006: 743). Furthermore, we find the following in the literature on DM:

a) in the syntax, the terminal nodes are purely abstract which are composed of only abstract roots (√root) and features that actually play a role in the syntactic computation (cf. Pfau 2009: 66-81);

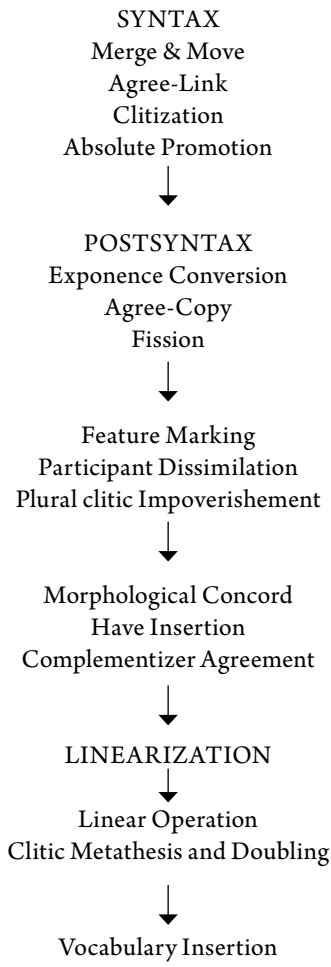
b) the term morpheme properly refers to a syntactic or morphosyntactic terminal node and its content and not to the phonological expression of that terminal (cf. Pfau 2009: 66-81 among others);
c) at MS (Morphological Structure), an interface between syntax and phonology, various operations may change the structure and/or number of terminal nodes;
d) after syntax at the level of Phonological Form (PF), phonological expressions known as Vocabulary items are inserted in a process called spell-out. Hence, vocabulary insertion is also called "late insertion";
e) for a given Vocabulary item to be inserted in some terminal node at PF, none of its morphosyntactic features is expected to be in conflict with a morphosyntactic feature present in that node;
f) morphemes are of two kinds. (a) Root which represents an open class item of indeterminate category whose categorical features are determined by its syntactic contexts. (b) Various others representing functional categories of syntax like tense, v, C, D (cf. Noyer 2006);
g) roots are considered acategorial in that their syntactic category is contextually specified by combining with category-defining functional heads such as v, n and a. For instance, the root √*destr* is realized as the noun destruction under nominalization environment and as the verb destroy under verbalizing environment (Sato 2010: 16-19);
h) a verb is a root whose nearest c-commanding f-morpheme (or licenser) is v (the light verb), aspect, or tense. In contrast to that, a noun is a root whose nearest c-commanding f-morpheme is a determiner (or put it differently a noun is a root which is locally licensed by a determiner) (cf. Pfau 2009: 66-81).

According to Pfau (2009), the light verb head is a functional head with a very limited inventory of meanings. The v may have three different specifications, namely *be* (stative), *cause* and *become* (cf. also Harley 1995). As a consequence, we can have transitive and intransitive verbs. Pfau (2009) illustrates the role of the light verb by the German verb pair *senken* 'to lower' (transitive) versus *sinken* 'to drop, to sink' (intransitive and unaccusative). In Abyssinian Semitic languages, the causativizer *ʔa-* and a light verb and also the passivizer *tä-* and a light verb can have functions similar to those of German examples indicated above (cf. also Adger 2003: 131-133 among others).

There are scholars who assume that all agreement is post-syntactic (cf. Marantz 2000; Bobaljik 2008b). As we can from (1), this view is not shared by all.

As indicated in Arregi and Nevins (2012), DM adopts the basic Y Model of grammar. In this Model of grammar, syntactic structure-building creates hierarchical relations in a tree structure that is then independently interpreted by separate modules of Logical Form (LF), and Phonetic Form (PF). Observe the following:

(1)



(Arregi and Nevins 2012: 4)

In the above structure, we find a syntax section followed by a Morphological Structure referred to as a post-syntactic component. DM adopts a model of grammar in which syntactic computation precedes the Module of grammar that Arregi and Nevins call a post-syntactic component.

As outlined above, Arregi and Nevins (2012) adopt a two-step model agreement: Agree-Link (in syntax) and Agree-Copy (in the Exponence Conversion module). They argue that in the former a Probe establishes an Agree relation (they call it a link or "a contract to copy features") in

the syntax, while in the latter (the initial post-syntactic module labelled as Exponence conversion component) the actual φ-feature values of the goal are copied onto the Probe (cf. also the discussion on chapter 5).

According to Arregi and Nevins the syntactic computation has the function of enacting Merge, Agree, and Re-merge operations. The syntactic computation does not directly operate on phonological content. It also does not contain statements of linear order – only of sisterhood and dominance. Thus, Spell-out to PF has two major functions. It converts (a) morphosyntactic features into phonological content (b) hierarchical dominance relations into relations of linear precedence. The latter is accomplished by the procedure of Linearization. Arregi and Nevins assume Metathesis may reorder the sequence that results from Linearization. It is indicated in the literature that Vocabulary Insertion is the most important process during Spell-out. It is the one that literally trades morphosyntactic features for phonological content. It is a process that occurs at the unit of the terminal node. Furthermore, Arregi and Nevins assume that:

> a) spell-out refers to the entire path of derivational modules from the conclusion of syntax, through the post-syntactic component, to the onset of phonological computation. They use spell-out and post-syntactic component to refer to the sequence or procedure of derivational steps and to the modules that follow syntax and precede phonology respectively; b) inflectional morphology is a reflection of what occurs in the syntax that necessarily follows the establishment of feature-copying relations; c) post-syntactic components are given the task of converting abstract morphosyntactic features like [-past, -singular] into phonological content such as suffixes and prefixes and this conversion process is known as Spell-out.

According to Arregi and Nevins (2012), lexical items such as verbs pick up abstract inflectional features through a mechanism of Agree (that is a feature value-copying relation). They believe that under Agree an item like T (that they call Probe) has unvalued φ-features (like person, number, and gender) and initiates a search. The Probe finds the closest noun phrase under c-command (known as Goal), and copies the φ-feature values to itself. These feature values are assumed to be abstract binary features with values like [+ participant], and [+ feminine].

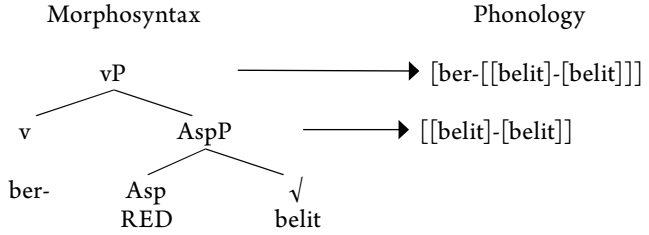
Moreover, Arregi and Nevins (2012) assume, terminals can enter the syntax with certain features unvalued and obtain values for these features as a result of the operation Agree. However, they also argue that certain terminals enter syntax with features valued. For instance, pronouns or noun phrases referred to as DPs enter syntax with their features for [± author], [± participant], [± plural], [± feminine] already specified, while tense node enters with its value for [± past] already specified.

7.3 *Minimize Exponence and Internal Plurals*

According to Siddiqi (2009) and others, roots (such as √CAT) are abstract morphemes linked to a basic concept. Words like feet and mice are assumed to be stem allomorphs of foot and mouse respectively.[1] As indicated above, Siddiqi divides allomorphy into suppletive (as in *go/went*, *person/people*) allomorphy and irregular (as in *eat/ate*, *mouse/mice*) allomorphy (cf. Siddiqi). In this chapter, an attempt will be made to adopt Siddiqi and see if the verbal and nominal internal plural forms of North Abyssinian Semitic languages can be treated in the same way as English words like *foot/feet* or *go/went* (cf. Siddiqi among others for details on allomorphy).

We have said earlier that the internal verbal plurals in the languages in question are reduplicated forms. Let us now see some reduplicated (RED) forms from Sato (2010). Sato pursues a non-lexicalist (within DM) analysis of the reduplication in Indonesian as in (2).

(2)



(Sato 2010: 31)

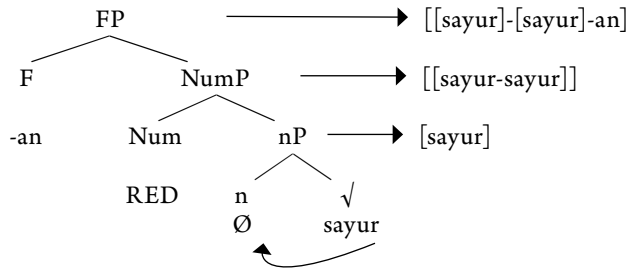
According to Sato (2010), the Asp head merges with the acategorial *belit* 'twist'. According to Sato (31), "the object that results from this merger is phonologically realized as the reduplicated form [[belit] [belit]]". This is because the only stem that the RED (reduplication) morpheme in the Asp head triggers copying of is the root *belit* on its local c-commanding environment. Sato argues the Asp head further merges with the verbalizing prefix *ber-* and as a consequence, the complex morphosyntactic object is interpreted at the syntax-external phonological component as [ber-[belit] [belit]]. We can see that the reduplicative morpheme intervenes between

[1] Noyer (2006: 734) argues the exponents of root morphemes are inserted in syntax. Noyer believes the derivation of feet involves (a) the insertion of the vocabulary item /fʊt/ in a root position in the context of plural, (b) insertion of a zero exponent into the plural morpheme (c) morphological readjustment of the stem. Noyer (2006) argues it is not correct to assert that either /fēt/ or the process of changing /ʊ/ to /ē/ spells out [+plural].

the v head and the root in this derivation. As indicated in Sato the root is included for reduplication because it is in the c-commanding domain of the RED morpheme.

Moreover, Sato says, simplex nominal stems can directly merge with the Num (or RED) head as in (3) from Indonesian.

(3) Morphosyntax Phonology

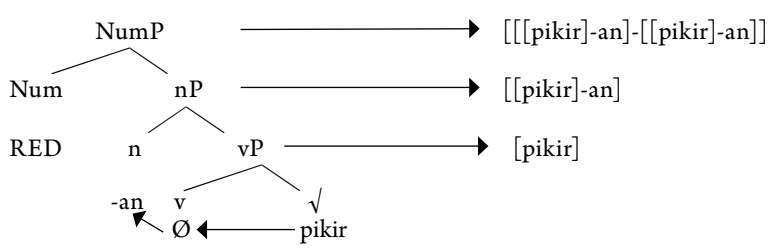


(Sato 2010: 33)

According to Sato, *-an* may yield the reading that can be roughly "many types of" (cf. Sato 2010: 34-35 for other meanings of *-an*). The above structure shows the stem reduplication with derivational suffix *-an* as in *sayur* 'vegetable' which becomes ([sayur-sayur]-an) 'many types of vegetables'.

In (3), we observe a stem (only) reduplication. However, there are also stem-affix reduplication forms. The following is an Indonesian example taken from Sato (2010: 33)

(4) Morphosyntax Phonology



In the structure above, we have the verb *pikir* 'think' and the noun *pikir-an pikir-an* 'thoughts'. The verbs like pikir are nominalized by the suffix *-an* before they can merge with the Num head. As a result *pikir-an* is reduplicated as *pikir-an pikir-an*.

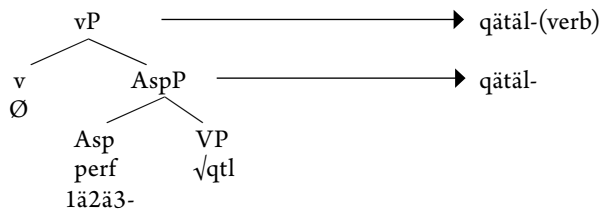
As indicated in our discussion above, we have reduplicated plural forms in North Abyssinian Semitic languages. These North Abyssinian Semitic verbal and nominal plurals have the pattern *cäcacvc* (< *cacācv(v̄)c)/cacācv(v̄)c* as in the case of *qätäl-ä* ʿ(has) killed (3ms)ʾ and its reduplicated/frequentative form *qätatäl-a* ʿ(has) killed repeatedly (3ms)ʾ, *qɨtäl* ʿyou killʾ and its reduplicated/frequentative form *qätatɨl* ʿyou killʾ; *mäftɨħ* ʿkeyʾ and *mäfatɨħ* ʿkeysʾ, *därho* ʿhenʾ and därawɨħ ʿhensʾ. The words in Abyssinian Semitic languages have, as in other Semitic languages, roots which consist of consonants. Each root has a set of consonants which contain the basic meaning of the word. These roots are acategorial. It is assumed that their syntactic category is contextually specified by combining with category-defining functional heads such as v, n, and a (cf. Siddiqi 2009 among others). According to Kandybowicz (2008: 10-11) and others, v (the head of vP) introduces the external argument, while V (the head of VP) provides the root with verbal features. In Pfau (2009) and others, a split VP approach is assumed. According to Pfau, (a) agentive arguments are base generated in the specifier of little verb phrase (vP) which is projected from a lower basic VP, (b) the light verb has very limited inventory meanings. Moreover, Pfau (2009) quotes H. Harley (1995) who maintains that v may only have three different specifications, namely *be* (stative), *cause* and *become*.

I assume, V provides the root with verbal features and the internal argument is base generated within VP, while v introduces the external argument (cf. Kandybowicz 2008, Pfau 2009 among others). Furthermore, I assume, following Pfau and others, v may only have the specifications *be cause* and *become*. Hence, I assume a verb stem combines with v to become transitive or intransitive and produce the final verbal form. I assume, a verb combines with v to get its causative, passive, unaccusative or ergative forms. Different researchers may have different views regarding the position of AspP in the structure. Sato (2010) puts AspP below vP. Moreover, Travis (2010) says there is an AspP above vP. Travis argues there is an AspP position between vP and VP which can house aspectual information.

According to McCarthy (1982: 200-230), a root can be derived from another root if the latter bears idiosyncratic semantic, phonological or morphological information. It may be possible to assume stems like *qätäl-* or *qätil-* as roots derived from other roots as long as they bear semantic, phonological or morphological idiosyncrasies.

The details will not be discussed here. But in the figures below, we see stems derived from consonantal roots. Let us observe the following example from Tigrinya:

(5) Morphosyntax Phonology

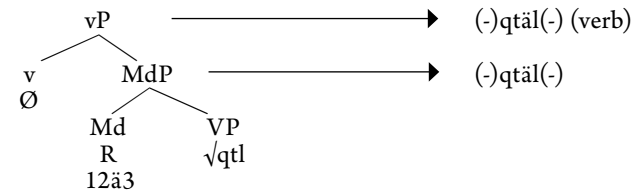


In (5), it appears to me that the root *√qtl* develops into the stem *qätäl-*. The vowels *-ä-ä-* are inserted into the root *√qtl* to form *qätäl-*. Pfau (2009: 69) argues "a verb is a root whose nearest c-commanding f-morpheme (or licenser) is v (the "light" verb), Aspect, or Tense".

The numbers 1, 2, 3 designate the root consonants which can also show the position of the vowels. A stem like *qätäl-* combines with v and can then take verbal affixes as in the case of *qätäl-ä* "he killed", *qätäl-ka* ʿyou (2ms) killedʾ etc. In the same way, it is possible to derive type A imperfective form by inserting the vocalic pattern *-ä-i-* into the root. For instance, we can insert *-ä-i-* into Tigrinya root *qtl* to form *-qätil-* and then produce a final verbal form by zero-derivation. Different subject and/or object affixes can be added to the final verbal stem.

Furthermore, I assume we can derive actual or realis (R) mood and non actual or irrealis (IR) mood (Md) from *qtl*, a root in Tigrinya, as in (6).

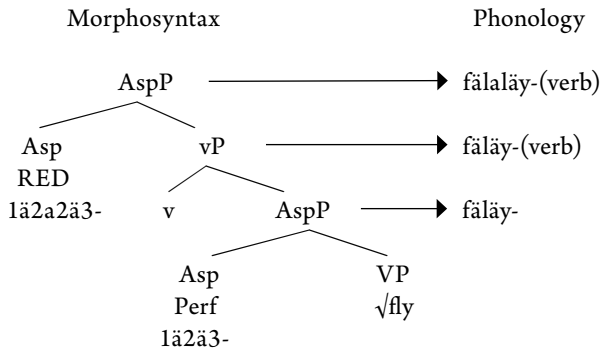
(6) Morphosyntax Phonology



In (6), I assume the root *√qtl* develops into the form *qtäl-*. The vowel *-ä-* is inserted into the root *√qtl* to form *qtäl-*. The form *qtäl-*, as in (6), undergoes zero-derivation to produce a final verb form which can take inflectional affixes. The numbers 1,2,3 designate the root consonants which also show the position of the vowels. As a verb, the stem *qtäl-* can take verbal affixes as in the case of *qitäl-u* ʿyou (2mpl) killʾ in the imperative or *yi-qtäl-u* ʿlet them killʾ in the jussive.

The perfective, imperative, jussive and gerundive verbal forms have similar reduplicative or internal plural forms. Let us see the reduplicative form of the perfective stem *fäläy-* from Tigrinya as in the following:

(7)



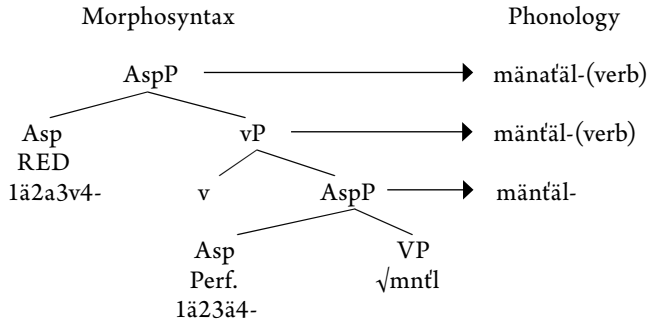
We can derive the perfective verb form like *fäläy-ä* 'he separated' and a reduplicative verb form like *fälaläy-ä* 'he divided into different parts' from the root fly. I assume we derive *fäläy-* from the lower AspP and *fälaläy-* from the higher AspP.

As we can see from (7), *fäläy-* gets its final verb form by zero-derivation. This verb can develop into a reduplicated form by reduplicating the penultimate radical and inserting *a* between the reduplicated form. We insert a (or ā in Tigre) to form *fälaläy-*. In (7), the numbers 1, 2, 2, 3 in *1ä2a2ä3-* represent the consonants *f-l-l-y* in *fälaläy-*. We can add different verbal affixes to the verb *fälaläy-* and hence we can have forms like *fälaläy-a* 'they (f) divided into different parts'.

According to Pfau (2009: 69), a verb is a root which is locally licensed by v (the "light" verb), Aspect or tense, or put differently, a root whose nearest c-commanding f-morpheme or licenser is a v, Asp, or Tense is a verb. In the languages in question, a root (l-morpheme) first combines with V, and Asp and then with v to produce the final verb. However, I think we need further research for details.

As illustrated in (7) above, a reduplicative form can be derived from a triliteral root such as √*fly-*. However, a reduplicated form can also be derived from a quadriliteral form like *mänťäl-* by inserting the vowel *a* (or *ā* in Tigre) before the penultimate radical. Observe the following example from Tigrinya in (8):

(8)



In quadriliteral verbs as in (8), the first, second, third and fourth consonants correspond to 1, 2, 3 and 4 in *1ä2a3v4-*. In (8), the numbers 1, 2, 3, 4 in *1ä2a3ä4-* represent *m*, *n*, *ť*, *l* in *mänaťäl*. In the example above, v in *1ä2a3v4* (which may correspond to a long vowel *v̄* in Tigre) indicates a vowel. In triliteral verbs, we have seen that the middle radical is reduplicated to fill the empty slot. In quadriliteral verbs, however, we only insert the vowel a (or *ā* in Tigre) before the penultimate radical. This vowel is an Afroasiatic nominal and verbal plural marker *a* which is inserted before the penultimate radical.

In the reduplicative form of verbs, the vowel after the first consonant is *a* if the preceding consonant is a glottal or pharyngeal or *ä* (which corresponds to short *a* in Tigre) in the environment of other consonants. But, the vowel before the last radical can be realized as *ä* (or short *a* in Tigre) in the perfective, *i* > *ɨ* (or short *i* in Tigre) in the imperfective, imperative and jussive and also *i* (which corresponds to long *i* or *ī* in Tigre) in the gerundive (which functions as a perfective in the affirmative form).

In this derivation (8), the higher Asp head merges with the verb *mänťäl-*. The object that results from this merger is phonologically realized as the reduplicative form [*mänaťäl-*] with the cv pattern *cäcacvc* (or *cacācv(v̄)c* in Tigre).

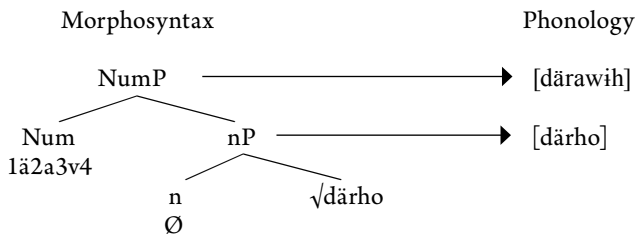
In syntax, Pfau (2009: 67) argues, terminal nodes are purely abstract which consist of abstract roots (√root) and features that actually play a role in the syntactic computation. It is assumed that the roots which are manipulated in the syntax must contain some sort of information. Even though it is not clear what type of information that might be, such information must have a role in the insertion of correct vocabulary item at PF (cf. Pfau 2009 for details).

External argument (agentive) is base generated in the specifier of vP which is projected from lower basic VP. Presumably, the internal argument is base generated within VP (cf. Kandybowicz 2008; Siddiqi 2009 among others for authors who use labels such as TransP instead of VP). In the case of unaccusatives, we can assume a light verb heading vP *(become)* with no agentive external argument in SpecvP (cf. Pfau 2009 among others). In the derivation a stem combines with little v to produce the final verbal form.

The different inflectional morphemes can be affixed to the verb stems at MS by merger. The combination of verb stems and their inflectional affixes occur post-syntactically prior to vocabulary insertion. Inflectional affixes can be added to causative, passive and reduplicative verb stems.

As indicated above, the verbal reduplicative forms and nominal internal plurals have similar cv patterns. Consider the internal plural of Tigrinya *därho* 'hen' in (9):

(9)



In (9), the numbers 1, 2, 3 and 4 correspond to the first, second, third and fourth consonants in the pattern. In *1ä2a3v4* (9), the vowel *v* in the pattern can be realized as *i, ä, u, ɨ,* or *a* in Tigrinya and GɨʕɨZ and *ī, ā, i, a,* or *ū,* in Tigre. In Tigrinya, this v can be a vowel v (which may originally be a short or a long vowel *v*), while in Tigre it can correspond to a short vowel *v* or to a long vowel *v̄*. In North Abyssinian Semitic languages, nouns have external and internal plurals.

In this chapter, we are dealing with the latter whose consonant-vowel patterns are similar to those of the verbs. As indicated in Siddiqi (2009), the most economical derivation is the one that needs to be realized using the fewest words possible and this is known as Minimize Exponence. In North Abyssinian Semitic languages, nominal internal plurals are very common. Instead of a noun and external plurals (i.e. stem and an affix), internal plurals are commonly used in the languages in question. Unlike the irregular plurals in languages like English, however, the speakers do not need to memorize two different words for the singular and for the plural. The consonants (Tesfay Tewolde 2009, 2003 for details on internal plurals) in the singular and the elements *ʔ, w/y,* and *a,* are inserted in the *1a2ā3v(v̄)4* > *1ä2a3v4/1a2ā3v(v̄)4* nominal internal plural pattern (cf. McCarthy 1982 for the insertion of similar elements in Arabic internal plural patterns).

If there are four consonants in the singular nouns, the first, second, third and fourth consonants in the singulars correspond to 1, 2, 3 and 4 in *1ä2a3v4-/1a2ā3v4* of the nominal internal plural form. We simply insert the Afroasiatic plural morpheme *ā,* or *a* < *ā* before the penultimate consonant to form the internal plural (cf. also Tesfay Tewolde 2009, 2003 for the phonological changes in the process). If, however, the singular forms have less than four consonants, there are different ways to fill the empty slot as in the following:

a) reduplicate the middle consonant and insert the Afroasiatic verbal and nominal plural marker *ā* > *a* as in Tigrinya (or *ā* in Tigre)[2] between them, i.e., before the penultimate consonant, as in for instance *ħɨlum* ʿvalley' and *ħalalum* ʿvalleys' (*ä* > *a* following glottals and pharyngeals), *tämän* ʿsnake' and *tämamɨn* ʿsnakes';
b) put *ʔa-* at the initial position and insert *a* (or *ā* in Tigre) before the penultimate consonant as in *käwħi* ʿrock' and *ʔaxawɨħ* ʿrocks' (*k* > *x* when ungeminated and preceded by a vowel);
c) insert *w* or *y* and put the Afroasiatic plural morpheme *ā,* or *a* < *ā* before the penultimate consonant as in *därho* ʿhen' and *därawɨh* ʿhens', *ʕamil* ʿclient' and *ʕamawil* ʿclients', *makkina* ʿcar' *mäxayin* ʿcars'.

As in the case of verbs, the Afroasiatic nominal (and verbal) plural marker *ā* (or *ā* > *a)* is inserted before the penultimate consonant. Besides, reduplication and insertion processes are used to fill the empty slots in the nominal internal plural pattern. In the nominal internal plural form, the vowel after the first consonant is always *a* or *a* > *ä*. Regarding the vowel in the last syllable, however, we can only speak of some tendencies. In Tigrinya, the vowel in the last syllable of the plural is often realized as *ɨ*. Moreover, the vowel in the last syllable of the plural can correspond to the vowel in the last syllable of the singular as in the case of *i* in *miʔti* ʿhundred' and *ʔamaʔit* ʿhundreds', and *u* in *ħɨlum* ʿvalley' and *ħalalum* ʿvalleys'.

In (9), the acategorial form √*därho* (i) becomes a noun by zero-derivation (ii) nP merges with Num to form *därawɨh* ʿhens' (with the *cäcacvc* pattern) in Tigrinya. Both verbs and nouns have similar internal plural forms. The verbal (reduplicative) and the nominal (internal) plurals have a *cäcacvc/cacācv(v͡)c* pattern in North Abyssinian Semitic (cf. Tesfay Tewolde 2003, 2009 for other internal plurals which derive from *cäcacvc/cacācv(v͡)c*).

In this section, I assume perfective aspect, imperfective aspect and reduplicative/frequentative forms can be treated under aspect. As indicated earlier, the causative morpheme *ʔa-* is treated within vP (cf. Adger

[2] The long vowel *ā* and the short vowel *a* in Tigre correspond to the vowel *a* and the vowel *ä* respectively in Tigrinya, Giʕiz and other Abyssinian Semitic languages.

2003 among others for similar views). A stem can combine with v to get causative, passive, ergative or unaccusative forms and then become a reduplicated form. According to Pfau (2009) and other scholars, the light verb head is a functional head with a very limited specifications, namely *be* (stative), *cause* and *become*. Pfau (2009), illustrates this issue by the German verb pair *senken* ʿto lower' versus *sinken* ʿto drop, to sink'. The former is transitive. But the latter one is intransitive and unaccusative. The agent argument occupies the specifier position of vP in the former, while in the latter the light verb heading vP must be BECOME with no agentive external argument in SpecvP. Hence, the same vocabulary item may surface in different morphological categories depending on the syntactic context in which the corresponding root appears (cf. Pfau 2009). In Abyssinian Semitic languages, we have a causativizer *ʔa-* and a passivizer *tä-* which occur prefixed to verb stems together with person, number and gender features (in Tigrinya, we have also internal passive forms as in *yisäbbir* "he breaks" and *yisibbär* ʿis broken'). In words like the morpheme *ʔa-* in (10b) follows the 3fs prefix *ti-* and precedes the stem *-mihir-* (<*mähir-*).

In the following examples, the causative morpheme ʔa- and a passive morpheme *tä-* occur as in the following:

(10) a. ti-mihir (<ti-mähir) Tigrinya
3fs-teach
'She teaches'

b. tämhir (<ti-ʔa-mähir)
3fs-caus. teach
'She makes others teach'

(11) a. käfäl-ä 'he divided' Tigrinya

b. tä-käfäl-ä 'it was divided'

c. tä-käfafäl-ä 'it was divided into pieces'

d. ʔakfäl-ä 'he made others pay/he made others divide'

e. *ʔat-käfafäl-ä >ʔakkäfafäl-ä 'he distributed some pieces among others'

In the examples above, (11a) has a passive form in (11b) and a causative form in (11d). Moreover, (11c) and (11e) are reduplicative forms of (11a). As we can see from the verb *räʔay-ä* ʿhe saw' and *ʔa-rʔayä* ʿhe showed' (and other verbs like it), a verb with the causativizer *ʔa-* can be treated like a simple ditransitive verb (cf. Adger 2003: 131-5). I assume the stems with

the passive morphemes and the reduplicative verb stems can be treated within the projection of vP and hence we can have structures similar to the above indicated examples. Many scholars assume that there is also a vP in unaccusatives. However, the head of this vP can be semantically non-causal, and hence does not have an agent in its specifier (cf. Adger 2003) or the light verb heading vP must be BECOME, with no agentive external argument in SpecvP (cf. Pfau 2009).

As indicated in Tesfay Tewolde (2002, 2003, 2009), Abyssinian languages like Tigrinya have different internal plural forms which can be derived from the form *cäcacvc/cacācv(v̄)c*. For instance, instead of *därawɨh* 'hens', we can say *därahut* 'hens', *därahu* 'hens', *därhut* 'hens' and *därhu* 'hens'. Some of the elements in the plural forms like *därahut* are deleted. We have *därahut* > *därhut* (a deletion of *a*), *därahut* > *därahu* (deletion of *t*), *därahut* > *därhu* (deletions of *a* and *t*).

Moreover, we have seen earlier that some varieties of the internal plurals have *a* and *u* (which correspond to long vowels in Tigre) in their last syllables. The following are examples from Tigrinya:

(12) a. biʕray 'ox' Tigrinya

b. ʔabaʕur 'oxen' or ʔabaʕur > ʔabʕur 'oxen'

(13) a. bɨtäy 'calf'

b. *ʔabatay > ʔabtay 'calves'

(14) a. bäx'li 'mule'

b. ʔabax'ɨl 'mules' or *ʔabaqal > ʔabqal 'mules', *ʔabax'ɨlti > ʔabqɨlti 'mules'

(15) a. täxli 'plant'

b. ʔataxɨlti 'plants' or ʔataxɨlti > ʔatkɨlti 'plants'

(16) a. färäs 'horse'

b. *ʔafaras > ʔafras 'horses'

(17) a. kälbi 'dog'

b. ʔaxalib 'dogs', or *ʔaxalab > ʔaxlab 'dogs', ʔaxlab-at 'dogs'

In (12a-17a), we have the singular forms, while in (12b-17b) we have their plural forms.

In (13b and 16b) and also in one of the internal plural forms in (17b), the plural morpheme *a* is deleted and its function is, I assume, substituted by the vowel *a* in the last syllable. In (12b), the plural morpheme *a* is optionally deleted. As indicated in Tesfay Tewolde (2002, 2003, 2009), the morphemes *-ti* and *-at* are external plural morphemes. In examples like (14b), (15b) and (17b), these external plural morphemes may occur attached to the internal plurals. As they form double plurals, the plural morpheme *a* may be deleted. The component that Arregi and Nevins (2012) call Feature Markedness module is, I assume, responsible for such deletion processes.

In our earlier discussion, we have said something on minimal exponence. I think we need to say more on plurals, minimal exponence and vocabulary insertion. Phonology is provided by the vocabulary and individual items within the vocabulary are called vocabulary items (VI).[3] These VIs represent the basic sound/meaning correspondence of a language. The vocabulary contains entries which link formal feature or features to sounds that realize the feature(s). According to Siddiqi (2009) and others, these entries are known as Vocabulary Items (VIs). Consider the following:

(18) a. The vocabulary entry for -ed
[PAST] -ed
/-d/

b. The vocabulary entry for cat
√CAT cat
/cæt/

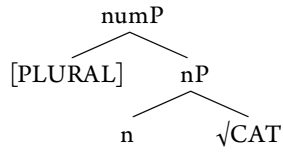
(Siddiqi 2009: 31)

The above examples show that we have entries for abstract or f-morphemes (18a) and l-morphemes (18b). VIs realizing abstract morphemes as in

[3] In DM, morpho-syntactic abstract features such as [PLURAL] and [PAST] are selected from a fixed list of abstract features or feature bundles. In a given derivation, each terminal node is composed of one or more interpretable features. In order to be pronounceable, the terminal nodes need phonology which is provided by a component of grammar called vocabulary. The vocabulary is a static list of items and its function in the grammar is to provide phonology to realize the interpretable features contained in the terminal nodes of a derivation and as a result the derivation can be pronounceable. Individual items within the list are called vocabulary items (VIs). Vocabulary items (VIs) represent the basic sound/ meaning correspondences of a language. The vocabulary is regarded as the inventory of signs available to the language. Scholars believe that the vocabulary contains entries linking a (formal) feature to a series of sounds which realize that feature. Each terminal node must be spelled out by some VI or other. In English, for instance, the verbal inflectional morpheme, *-s*, realizes three features [PRESENT] [SINGULAR] [3RD PERSON] in a terminal node (cf. Siddiqi 2009 among others).

(18a) are specified for features like [PAST]. The VI seen in (18b) can only be inserted into a terminal node containing the specific root √*CAT* (and cannot be inserted into a node containing √*DOG*). Let us also observe the structure in (19) (cf. also 22 below)

(19)

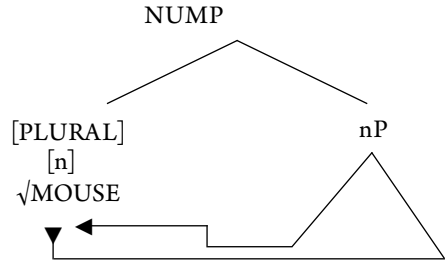


The node containing feature [PLURAL] is realized by the Vocabulary Item (VI) *-s*.

Since the root, √*CAT,*[4] is expected to be a noun, its VI is licensed for insertion by the feature little *-n*, which is realized by a null morpheme. The root itself is realized as cat. Linearization of the morphemes result in cats.

If we have irregular forms, however, we can have a different kind of derivation as in (20).

(20)

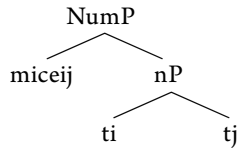


(Siddiqi 2009: 46)

In (20), we have the fusion account of root allomorphy. According to Siddiqi (2009), the root and [n] both move to [PLURAL] and fuse. Siddiqi argues while the traditional DM account contains one overt head and two null morphemes, the fusion account contains only one overt head and two traces as in (21):

[4] It is assumed that VIs must be specified for the morphosyntactic features that they realize. Scholars assume that VIs realizing abstract morphemes are specified for formal features such as [1st] or [PAST]. However, it is also assumed that VIs that realize roots are also specified. For instance, the VI for cat is specified for realizing the core meaning of cat which according to DM would be √CAT. It is assumed that the numeration includes (1) the formal features to be manipulated by syntax (2) the formal concepts that can be interpreted by the encyclopaedia. Hence, cat can be specified to realize a formal instantiation of the concept of cat-ness that can be manipulated by the syntax (cf. Siddiqi 2009 among others).

(21)



(Siddiqi 2009: 46)

In (20-21), we see the fusion account of root allomorphy. But we have to avoid the realization of wrong forms. Forms like cat (which take regular forms) must not be inserted into a node where the [PLURAL] feature had fused with the root resulting in no overt realization of the [PLURAL] morpheme. The solution appears to lie in specifying the VI (in this case cat) for an incompatibility with the feature [PLURAL]. This ensures that the VI will not be inserted into the node containing that feature (cf. Siddiqi 2009 for more details). Let us observe (22) adapted from Siddiqi (2009):

(22) Vocabulary Entry for cat

√CAT	cat
[n]	/cæt/
¬[PLURAL]	

As there is no form of cat which designates the root √*CAT* and the plural, it seems possible to specify √*CAT* with the specification ¬[PLURAL] (read: "not plural"). This appears in agreement with the views indicated by Siddiqi (2009). Siddiqi uses this notation to show that the Vocabulary Item *cat* is incompatible with the feature [PLURAL]. This is to say that *cat* cannot be inserted into a node containing the feature [PLURAL]. Hence, *cats* (i.e., √*CAT* followed by *PLURAL*) can be the most economic derivation possible because realization of the root √*CAT* and the *PLURAL* by only one (fused) word is not possible.

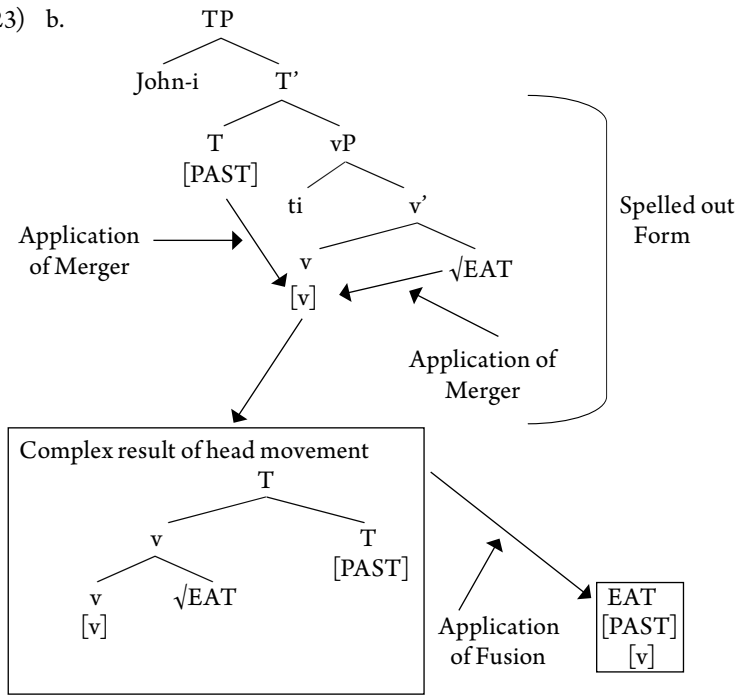
We can see similar situations in the case of verbs. In (23), we have a structure taken from Siddiqi. According to Siddiqi the root first undergoes head movement to adjoin to the functional head above it. Then, the resulting complex head undergoes a fusion process. As a consequence, all features of the complex head (including the root) are incorporated into one simplex head. According to Siddiqi and others, the resulting head after fusion contains a root, a functional verbal element and a tense feature. As we can see from (23b), Siddiqi believes the application of head movement and fusion to the complex verbal structure results in a single simple node containing the formal features of the entire structure.[5]

[5] According to Pfau (2009), little v, little n or little a (adjectival) determine the edge of a cyclic domain at which a derivation is shipped off to PF and LF. In Armon-Lotem (2008), AspP is regarded as phase. According to Arad (2005), the binyan form of a

Let us see the structure in (23b) which corresponds to John ate in (23a):

(23) a. John ate (cf. Siddiqi 2009: 52 for *ate* with no object).

(23) b.

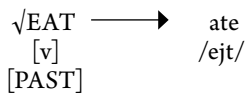


(Siddiqi 2009: 52)

In the derivation in (23b), [PAST] has fused with √*EAT*. The vocabulary entry for ate (24) can be inserted into the node created in (23). As indicated above, the simplex head (23b) created after fusion contains a root, a functional verbal element and a tense feature. This node is a target node for insertion. The VI in (24) looks directly at the target node and can be inserted into the node created in (23b). This is because the features that the VI in (24) is specified for are a subset of those appearing in the node in (23b). Observe the following:

Hebrew verb is inserted under the v node or the voice (above vP) node. In the case of the languages in question, I assume the verb is inserted under the v node or Asp node.

(24) Vocabulary Entry for *ate*

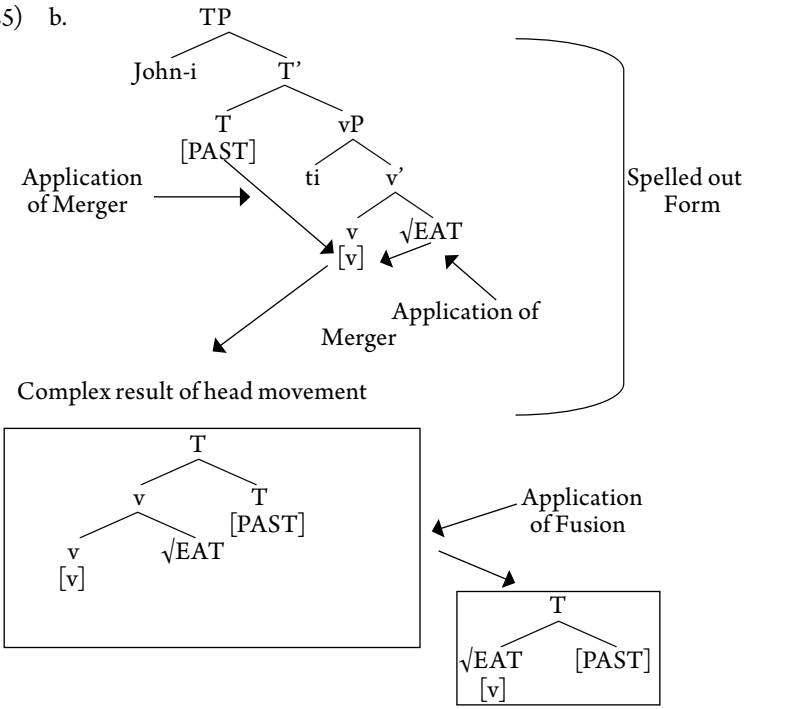


In (24), we have a vocabulary entry for ate which is compatible for insertion into the node created in (23b). As we can see from our example above, the VI for ate requires two different functional features, i.e., [PAST] and [v]. The specification for [v] identifies that it is a verb, while the specification for [PAST] sets it apart from eat.

However, in (25), we find a different structure. In this structure, the node containing *√EAT* has not fused with the feature [PAST]. Siddiqi (2009: 52) argues even if eat is specified as indicated above that specification will not stop it (i.e., *eat*) from being inserted because the past tense is in another node. Hence, we can have two possible utterances, John ate (as in 23) above and *John eated as in (25) below.

(25) a. *John eated

(25) b.



(Siddiqi 2009: 53)

On the other hand **John eated* crashes. But why does it crash? According to Siddiqi (2009), this is because of an economy constraint on the grammar called MINIMIZE EXPONENCE. The one realized by the fewest Vocabulary Items is the most economical derivation. More frequently used forms are realized by one VI and this reduces time and energy. In *John ate*, √*EAT* and [PAST] are realized by one VI. In **John eated*, √*EAT* and [PAST] are realized by two VIs, eat and *-ed*. As far as MINIMIZE EXPONENCE is concerned John ate is more economical derivation than **John eated*.

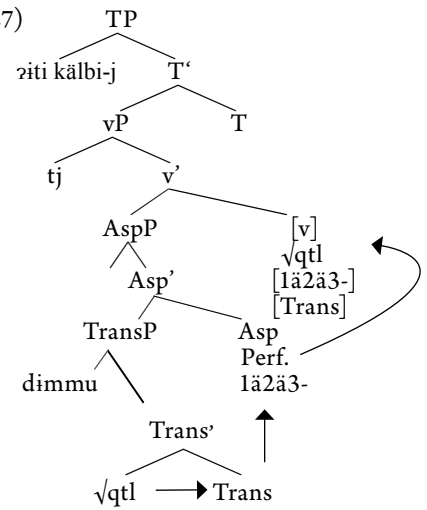
Languages may tend to maximize the number of forms like ate which capture both roots and formal features. On the other hand, this may mean a much larger inventory of stored words which is also inefficient. Thus, languages can make a compromise. They have fused forms like ate for the most frequently used words. But the less frequently used words can have regular morphological processes.

In North Abyssinian Semitic languages, tense is indicated by forms of the verb to be. Moreover, North Abyssinian Semitic languages mark mood and aspect by different vowel patterns inserted into the roots of the base stem. Hence, North Abyssinian Semitic languages may not be expected to have tree structures exactly similar to (23) and (25) above. In the languages in question, verbs normally occur in sentence final positions and we can have a structure like (27) for the sentence in (26):

(26)	ʔɨti	kälbi	dɨmmu	qätäl-ä	Tigrinya
	The (m)	dog	cat	kill-3ms (perf.)	
	'The dog (has) killed a cat'				

(26) may have a structure like the following (but observe also the structure in (34) and the discussion below):

(27)



In (27), (1) AspP is put below vP (cf. Sato 2010), (2) light verb (little-v) is assumed to be the locus of the meaning CAUSE (cf. Siddiqi 2009; Pfau 2009; Kratzer 2002 among others), (3) the theme argument is projected by a functional head indicated as Trans (cf. Siddiqi 2009; Jelinek 1988 and others), (4) the theme argument is projected in the specifier position, while the functional head takes the root as its sister (cf. Siddiqi 2009 among others), (5) argument features move up the tree through normal head movement, (6) the head movement causes the root to move up the tree and collect the *c*-commanding formal features into a complex head (cf. Siddiqi 2009 among others), (7) the language is verb final.

As we can observe from (27), *√qtl* moves to v through Trans and Asp. As *√qtl* moves, the features of each head that the root (*√qtl*) is attached to are added to the complex head structure through head adjunction (cf. Siddiqi 2009). As indicated above, *√qtl* is a root which occurs as a sister to Trans. I assume this root takes *-ä-ä-* in Asp and becomes *qätäl*. I assume some kind of fusion process applies to the complex head resulting in the simplex head in (27). This simplex head carries the formal features [v], [Trans], [Perf.] and [*√qtl*]. As a verb, *qätäl-* can take inflections like *-ä* (3ms), *-ka* (2ms).

This simplex node becomes a candidate for vocabulary insertion and the discharge of its features by only one VI. The VI *qätäl-* can be inserted into the node created in (27), *ʔɨti kälbi dɨmmu qätäl-ä*. But how can we determine the specification of a VI? We understand from the insertion of *qätäl-* in this context that it specified for some subset of features that occur in that node. The subset of features must be equal to or less than the features contained in the (target) node. If the VI contains features that do not occur in the node, the insertion must be blocked. The VI can compete with other VIs. A VI can lose a competition for reasons like the following: (1) if there is a better specified candidate (2) if it contains a conflicting feature or is specified for a feature that is not present in the node (3) if it is specified for incompatibility with a feature present in the target node. Consider (28) from Tigrinya:

(28) Possible Competition for *qätäl-ä*:

node that qätäl- is allowed in			
			not possible (overspecified)
(28)	a.	←	..-qätäl-: √qtl [v] [Perf] [Trans] [IO]
			not possible specification (conflicting feature)

√qtl [v] [Perfective] [Trans]	(28)	b.	←	.-qätɨl-: √qtl [v] [Imperf] maximum possible specification
	(28)	c.	←	qätäl-: √qtl [v] [Perf] [Trans]

In (27), there is a target node. This is a node where *qätäl-* is allowed to be inserted. In (28a-b), we have possible specifications for *qätäl-*. The specification in (28a) is over-specified. It contains an extra feature. In (28b), we find a conflicting feature since we have a possible specification for imperfective, not perfective. In (28c), we have the maximum possible specification for *qätäl-*. Thus, we have a Vocabulary entry for *qätäl-*:

(29)	√qtl [v] [Trans] [Perf.]	qätäl- /qätäl-/	Tigrinya

We see the maximum possible specification for VI *qätäl-*. Siddiqi (2009) and others assume that stems are inserted before affixes. I also assume the insertion of affixes like *-ka* after the insertion of stems like *qätäl-*.

Languages have direct and indirect objects as in the case of (30i-iv) below. As indicated in Siddiqi (2009), people used to assume the transformation of an oblique indirect argument into a double object construction. Siddiqi and others argue that this is not the case. Consider the following English examples:

(30) a. Jack sent Julie a message.

b. Jack sent a message to Julie.

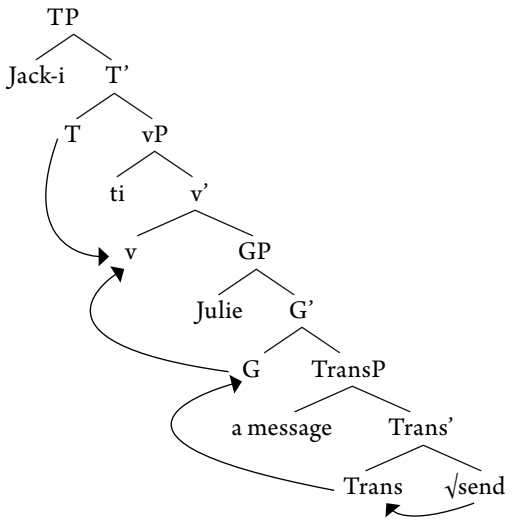
c. Julie sent the package to France.

d. *Julie sent France the package.

Siddiqi (2009) argues, the interpretation of the sentences like (30a-b) above are so close that they give rise to the intuition that they are related. This happens when a person is the DP in the locatum/goal alternation such as in (30a-b). If the locatum/goal DP in the alternation is a place rather than a person as in (30c-d) above, however, only one of the structures is possible. This shows the arguments are not the same. A person is a "good" goal and a "good" location, while a place is a "good" location and not a "good" goal (cf. Siddiqi 2009: 94-6). Observe the following structures in (31b and 32b) which, according to Siddiqi (96-7), correspond to the sentences in 31a and 32a respectively:

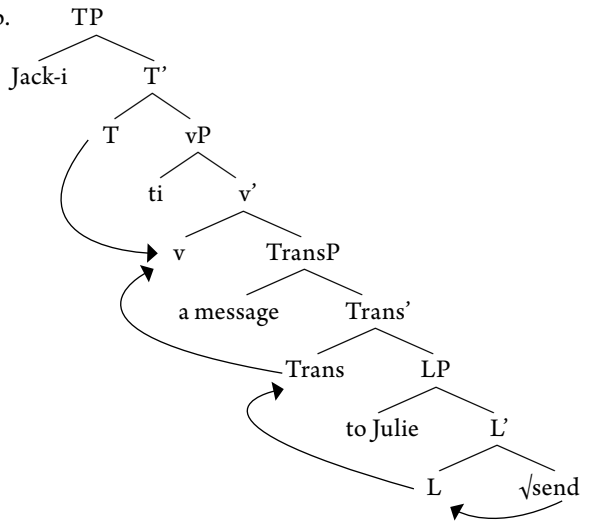
(31) a. Jack sent Julie a message

(31) b.



(32) a. Jack sent a message to Julie

(32) b.



In the derivation above, Siddiqi calls the head that projects the goal argument G differentiating it from the locative (L). Siddiqi assumes both of them are different and together with the assumption of two different heads comes two different derivations. We do not find goal and locative arguments in both the structures in (31b) and (32b). In (32b), the "to dative" contains a locative argument and a locative head that projects it (but not goal). But in (31b), we find a goal argument and thus a goal head that projects it (not locative).

Can this view be adopted for Abyssinian Semitic di-transitive verbs? Consider the following:

(33) a. yonas nɨ-yohannɨs mälʔɨxti sädid-u — Tigrinya
Yonas to Yohannes message sent-3ms
'Yonas sent Yohannes a message'

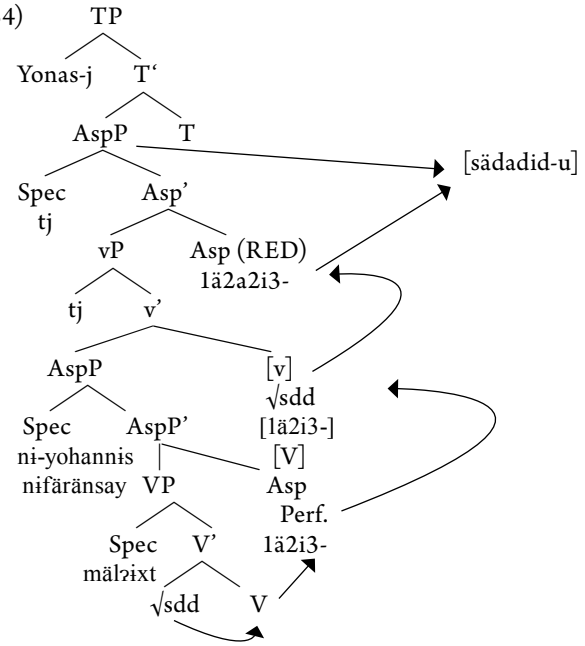
b. yonas mälʔɨxti nɨ-yohannɨs sädid-u
Yonas message to Yohannes sent-3ms
'Yonas sent a message to Yohannes'

c. yonas mälʔɨxt nɨ-färänsay sädid-u
Yonas message to France sent-3ms
'Yonas sent a message to France'

d. yonas nɨfäränsay mälʔɨxti sädid-u
Yonas to France message sent-3ms
'Yonas sent a message to France'

We have seen earlier that it is possible to say "Julie sent the package to France (30c)" in English. But *"Julie sent France the package (30d)" is not an acceptable English sentence. In Abyssinian languages like Tigrinya, however, all the sentences in (33a-d) are acceptable. Nonetheless, we can find a difference of emphasis between (33a) and (33b) and also between (33c) and (33d). Taking the data from different languages into account, I assume the structure in (34) for the languages in question. In the structure, we can have two AspPs: one above vP and the other above VP (cf. Kandybowicz (2008), Sato (2010); Travis (2010) among others). Observe the structure in (34) for the sentence *yonas nɨ-yohannɨs mälʔɨxti sädid-u* in (33a) and for the sentence in (33d):

(34)



It appears to me that (34) can be the structure for the sentences in (33a, 33d). I believe we can form sentences like (33b, 33c) by raising the lower arguments (e.g. *mälʔixti* in (33a) and (33d)) to a higher position above vP for some kind of emphasis.

In the example in (34), *√sdd* moves to v through V and lower Asp. As it moves, the features of each head that *√sdd* is attached to are added to the complex head structure. The verb can move to a higher Asp to form a verbal plural, a reduplicative form which has the same cv pattern as the nominal internal plural.

7.4 *Conclusion*

The verbs and nominals have the pattern *cäcacvc/cacācv(v̄)c* to indicate plurality. In order to fit into the *cäcacvc/cacācv(v̄)c* pattern, the words like *qätilu* have become *qätatilu* (frequentative/reduplicative/intensive), while the plurals of *saʔni* ‘shoe’, *därhu* ‘hen’, *mänbär* ‘chair’ are *ʔasaʔin* ‘shoes’ *därawih* ‘hens’ and *mänabir* ‘chairs’ (words like *mänbär* are originally participles). As indicated earlier, singular nouns with two or three consonants in the singular can have the *cäcacvc/cacācv(v̄)c* pattern in the plural.

As in the case of other languages, Abyssinian Semitic stems with causative and passive morphemes can be treated within the projection of vP.

Moreover, different vowel patterns are inserted into the consonants of a root to form perfective and imperfective aspect and also realis and irrealis mood. The perfective aspect, imperfective aspect, realis mood and irrealis mood have simple stems, causative stems and passive stems with the same verbal plural pattern. In the verbs, the higher Asp head merges with vP to form the internal verbal (reduplicative) plural. As the example in (9) can illustrate, we can see that in the nouns, Num(ber) head merges with nP to form the internal nominal plural.

As in the case of (27) above, a VI like *qätäl-* can be inserted into a node created in the structure. The features of the VI to be inserted must be equal to or less than the features in the node. Insertion does not take place if the VI contains features not present in the terminal node. If several VIs meet the conditions for insertion, items that match the greatest number of features specified in the terminal node must be selected.

Verbal plurals (reduplicative) are very common in Abyssinian Semitic languages. In North Abyssinian Semitic languages, verbal and nominal internal plurals are commonly used. This is due to MINIMIZE ECONOMY: an economy constraint on the grammar.

8

CONCLUDING SUMMARY

Currently, Eritrea and Ethiopia are two independent countries. However, the term *Habesha* 'Abyssinian' may mean either Eritrean or Ethiopian. Moreover, Abyssinian Semitic languages are Semitic languages spoken in either Eritrea or Ethiopia.

In each of these countries, we find languages which belong to Afro-Asiatic or Nilo-Saharan families. In each of the countries in question, we find Cushitic and Semitic languages which belong to the Afro-Asiatic Group. There are about 30 Ethiopian, Eritrean and Modern South Arabian Semitic languages (cf. Hetzron 1972 among others). The diversity of languages in these two countries is striking. Almost all discussions on Semitic subgrouping assume a single Semitic language later split into North and South Abyssinian Semitic. However, there is no linguistic evidence for such a common Ethio-Eritrean or Abyssinian stage (cf. Faber 1997). In Abyssinian Semitic languages, we observe archaisms more than any other Semitic language in the world today (cf. Hetzron 1972, Appleyard 2002 among others).

The countries we now know as Eritrea and Ethiopia are very rich in history. In spite of all these, however, not many scholars did commit themselves to research in the region and the study of languages in question appears neglected (cf. Hetzron 1972, 1977, Appleyard 2002 among others). As a consequence, the Abyssinian Semitic languages did not make their due contribution to the study of comparative and/ or general linguistics.

In this book, DPs, Phi-features and Tense in the context of Abyssinian Semitic languages are discussed. However, the author is aware of the incompleteness of this work. According to Adger and Harbour (2008: 27), "[…] at this early age, where Phi-Theory is merely emergent, not fully fledged, incompleteness is inevitable". On top of this, there are undeniable personal limitations. If I am successful in stimulating research into the issues raised here, it is really an achievement (cf. Adger and Harbour 2008 for related views).

In chapter 1 (i) some introductory points are raised regarding the Abyssinian Semitic languages and their speakers, (ii) some observations are made regarding the ancient history of the region we now call Eritrea and

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Ethiopia, (iii) some theoretical and methodological preliminaries are discussed. As many of the issues raised and discussed in this book appear to be in the early stages of formation, it may be useful to take the views and assumptions of different scholars into account.

In chapter 2 the demonstratives and definite articles of Tigrinya and Amharic are discussed. As indicated in van Gelderen (2013) and others, the discussion on the changes on demonstratives and definite articles can help in the understanding of the currently used forms. To this end, I tried to see the demonstratives and definite articles of the languages in question in comparison to their counterparts in other related languages.

In the literature, we see different views regarding the positions of demonstratives and definite articles (cf. Giusti 1997, Ihsane 2003, Roehrs 2009 among others). In our discussion above, we have seen some of these views so that the readers can have their own judgements. In the case of Amharic and Tigrinya, however, I assume something related to that of van Gelderen (2013) and Fuß (2005) can be adopted.

Chapter 3 concerns possessive DPs. They are regarded as complex DPs. In the languages in question, the possessor and the head noun occur as daughters of NP and can remain in situ. But in the construct state, the latter moves and attaches to n.

Chapter 4 deals with Saho (Cushitic) and Tigrinya (Semitic) Phi-features. The two languages in question belong to two Afro-Asiatic languages. The fact that the two languages in question belong to different Afro-Asiatic groups clearly helps in the identification of the Phi-features. If data from different related languages are taken into consideration, I assume we can have a better understanding of syncretism, impoverishment etc.

Chapter 5 tries to explore Tigrinya and Amharic Phi-features. Different Phi-features of the languages in question are identified. In order to have a better understanding of the person, number and gender features of Tigrinya and Amharic, diachronic data are also taken into account (cf. Fuβ 2004: 88, van Gelderen 2013 and others for similar views). In this chapter, syncretism is also discussed.

Chapter 6 deals with tense and auxiliaries in the context of Abyssinian (Ethiopian and Eritrean) Semitic languages. As in the case of languages like Arabic, the different forms of verb *to be* indicate tense in Tigrinya and Amharic. The modal verbs indicate mood/modality. But several of the modal verbs also function as main verbs.

Chapter 7 focuses on minimize exponence and internal plurals in North Abyssinian Semitic languages (Tigre, Tigrinya and Gi$\S$iz). In these languages, the verbs and nouns have the pattern *cäcacvc/cacācv*(v^{-})*c* to indicate plurality. In the languages in question, verbal and nominal internal plurals are commonly used. This is due to MINIMIZE ECONOMY: an economy constraint on the grammar.

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