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DP Internal Agreement in Amharic
A Reverse Agree Solution

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Abstract

The main objective of this thesis is demonstrating that the DP internal functional elements in Amharic are the lexicalizations of the agreement between the functional projections in higher positions with the lexical elements in the c-command domains of these functional projections. The complex distribution of the functional elements such as the gender, number, definiteness and case markers is argued to be derived via the same mechanism—Multiple/Reverse Agree.

Describing the lexical and functional elements, the thesis starts from sketching the basic framework of the DP structure in the language. Emphasizing on the striking similarities the functional elements exhibit, it then goes to propose that these functional elements are the reflexes of the same syntactic operation—Multiple/Reverse Agree—established between the functional heads (K, D, C and Num) and the lexical heads in the c-command domains of these functional heads. By focusing on many of the issues that escaped attention in the literature such as the dependency of the adjectival agreement on the definiteness article, the thesis comes with a strong claim that the ϕ features (specifically the gender feature) merge on D, rather than on the head noun—contra to the standard assumption. Arguing that Multiple/Reverse Agree is an obligatory operation in definite noun phrases, the apparent optionality of the functional elements on the modifiers is also analyzed to be an effect of a feature incorporation operation on the PF (interface) domain of the grammar.

The placement of the traditionally dubbed ‘complementizer’ element, *yä*, is also derived in the same way to other agreement elements. Assuming that all the *yä-phrases*, such as relative clauses, possessives and complement phrases are headed by null C-head, the thesis derives the complicated distribution of the particle *yä* in all the *yä-phrases* in a uniform fashion. *Yä* is taken to be, just like the rest of the functional elements in the DP, the reflex of the Multiple/Reverse Agreement between the C and the lexical heads in the c-command domains of C.

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Abbreviations

1	First person
2	Second person
3	Third person
Acc	Accusative case marker
Ben	Benefactive
CM	Comparative
Def	Definite article
Dem	Demonstrative
Dim	Diminutive
Fem	Feminine gender marker, nominal
F(f)	Feminine agreement marker, verbal
Foc	Focus
Gen	Genitive
IO	Indirect Object
Loc	Locative
M(m)	Masculine
Mal	Malifactive
Neg	Negation
O	Object
pl	Regular plural
Poss	Possessive
perf	Perfective
RC	Relative Clause
S	Subject
s	Singular

Chapter 1

Introduction

In Amharic, whenever the head noun takes no preceding modifier, the functional elements such as the definite article, the number, gender and case markers occur on the head noun itself. In example (1), the head noun *lijj* is marked by the gender marker and the definite article.

- (1) *lijj-it-u*
child-Fem-Def
'the girl'

Whenever the head noun is preceded by a modifier, however, the functional elements shift from the head noun to the preceding modifier. In (2), the gender marker and definite article occur on the preceding adjective—*räjjim*, and in (4) again the definite article, the gender and case markers occur on the finite verb of the relative clause. Whenever two or more modifiers precede the head noun, as illustrated in (3), the first of the modifiers carries the nominal clitics obligatorily and the rest of them do optionally.

- (2) *räjjim-it-u lijj*
tall-Fem-Def child
'the tall girl'
- (3) *bät'am tatari-it-u räjjim-(it-u) lijj*
very diligent-Fem-Def tall-(Fem-Def) child
'the very diligent tall girl'

- (4) *tinant yä-mät'a-čč¹-u-n lijj*
yesterday YÄ-come-f-Def-Acc child
'the girl who came yesterday'(accusative)
- (5) *yä-räjjim-it-u lijj bet*
YÄ-tall-Fem-Def child house
'the tall girl's house'

The same can be said for example (5). The head noun couldn't carry the clitics in the presence of a preceding possessor phrase. The possessor phrase, however, is different from the former examples in that the definite article and the gender marker are not assigning definiteness and gender value for the head noun. The examples presented in (4) and (5) are also marked by another element—*yä*. *Yä* is one of the most prevalent elements in the DP.

Though the patterns presented in examples (1) to (3) have received little attention in the literature, Kramer (2010, 2009) recently conducted a detailed study couched in the Minimalist framework. Focusing on the definite article, she specifically argues that its distribution is a result of a post-Spell-Out morphological operation called Local Dislocation. Assuming the modifier phrases and the noun phrase as phases, she maintains that the attachment of the definite article on the head noun in the presence of preceding modifiers is prohibited due to Phase Impenetrability Condition applying in the PF domain.

The distribution of *yä* in relative clauses and possessor phrases, as exemplified in (4) and (5) respectively also has been analyzed recently by Den Dikken (2007). He argues that relative clauses and possessor phrases in Amharic are inverted predicates, and that *yä* is the by-product of the process of predicate inversion. Analyzing *yä* as a LINKER, an element that emerges as a by-product of head movement across a phase boundary, he claims that its distribution can be explained by this inversion/movement operation.

In this thesis, I will argue that, though appealing, Kramer's and Den Dikken's analysis can not be maintained. Relying exclusively on the morphological operation, Kramer's DM analysis fails to address the sensitivity that the nominal clitics, specifically the definite article, exhibit to the syntactic & semantic properties of their host elements. Coordinate constructions non-trivially challenge Den Dikken's analysis.

¹The canonical nominal gender marker *it* has been syncretized into the verbal gender marker- *čč*. In some dialects, *it* itself can appear—as in *yä-mät'a-čč-it-u*—though we don't need to worry about it at this point.

In addition to the specific difficulties each of the studies face, neither of them manage to capture the striking convergence all the functional elements exhibit in their distributions. Let's look at some of the patterns we have seen above more closely.

- | | |
|--|--|
| <p>(6) <i>lijj-it-u-n</i>
 child-Fem-Def-Acc
 ‘the girl’ (accusative)</p> | <p>(7) [<i>yä-lijj-it-u-n</i>] bet
 YÄ-child-Fem-Def-Acc house
 ‘the girl’s house’ (accusative)</p> |
|--|--|

(6) is a regular noun phrase whereas (7) is a possessor phrase. In the regular noun phrase, all the functional elements occur on the head noun. In the same manner, in the possessor phrase, not only the nominal clitics but also *yä* occur on the possessor noun. In other words, the unmodified lexical heads of the projections (the possessor in the possessor phrase and N in the noun phrase), carry all the functional elements. Now look at the following examples where the heads are preceded by a modifier.

- | | |
|---|---|
| <p>(8) <i>räjjim-it-u lijj-(*it)-(*u)-(*n)</i>
 tall-Fem-Def child-(Fem)-(Def)-(Acc)
 ‘the tall girl’ (accusative)</p> | <p>(9) [<i>yä-räjjim-it-u (*yä)-lijj-(*it)-(*u)</i>] bet
 YÄ-tall-Fem-Def (YÄ)-child-(Fem)-(Def) house
 ‘the girl’s house’</p> |
|---|---|

In (8), the head noun, *lijj*, is preceded by an adjective. In this case, all nominal clitics such as the definite article, the gender marker and the case marker do not occur on the head noun itself. They all shift to the preceding adjective. The possessor phrase in (9) is also preceded by an adjective. Again, in a similar pattern, not only the nominal clitics but also *yä* shift to the modifier of the possessor noun. None of the functional elements can occur on the possessor noun in (9), nor do they on the head noun in (8). There are still more similarities between the two groups of functional elements.

- (10) *tatari-it-u räjjim-(it-u) lijj*
 diligent-Fem-Def tall-(Fem-Def) child
 ‘the diligent tall girl’

- (11) *yä-tatari-it-u (yä)-räjjim-(it-u) lijj bet*
 YÄ-diligent-Fem-Def (YÄ)-tall-(Fem-Def) child house
 ‘the diligent tall girl’s house’

Again compare the possessive phrase in (11) with that of the regular noun phrase in (10). In both of the phrases, the heads are preceded by two adjectives. In this case, the functional elements occur obligatorily on the highest (left most) adjective and optionally on the lower one. The pattern is true not only for the nominal clitics but also for *yä*. Finally look at the following phrases.

- (12) *ijig bät’am räjjim-it-u-n lijj*
 extremely very tall-Fem-Def-Acc child
 ‘the very very tall girl’ (accusative)
- (13) *tämari-u-n ijig bät’am kifunña yä-gäraf-ä-u mämhär*
 student-Def-Acc extremely very badly YÄ-flog-3ms-Def teacher
 ‘the teacher who flogged the boy very very badly’

Here the comparison is between an AP and a relative clause. In (12) the head noun is modified by an AP, and the head of the AP, which is the adjective *räjjim*, is further intensified by two elements—*ijig* and *bät’am*. As we can see from the example, only the lexical/syntactic head of the adjectival projection, the adjective, carries the clitics. The two intensifiers, being non-heads of the AP, are skipped from the inflectional marking. The same is true for *yä*. As demonstrated in (13), both *yä* and the definite article occur only on the finite verb of the relative clause. They skip non-heads elements (of the verbal projection) such as adverbs.

In general, each pair of examples reveals that all the functional elements including the definite article, the gender, number and case markers as well as *yä* are persistently similar in their distributions. These all similarities across the functional elements are too many to take them as simple coincidences. A proper linguistic study should be able to capture this prevailing pattern. Capturing this persistent pattern is the main goal of this thesis. In this thesis I propose that the DP internal clitics and *yä* can be derived using the same mechanism. To the best of my knowledge, no proper attempt has ever been made to give a unified analysis of all the clitics in the DP domain though efforts have been exerted to derive each of the elements in different ways. I will analyze the distribution of the functional elements in the DP from the point of view of narrow syntax. I claim that the distribution of the functional elements in the DP domain is

a reflection of agreement relations between the functional projections and the lexical heads in the c-command domains of these functional projections.

Hence, in this thesis, an attempt will be made to illustrate that the surface realizations of the various functional elements such as the definite article, the gender, number, case markers of nouns and their modifiers as well as *yä* of the relative clauses, possessive and complement phrases could be derived in the same fashion using the recent technologies developed in the Minimalist program (Chomsky 2000, 1998). I specifically propose that *Multiple Agree* of the type proposed by Hiraiwa (2001)² and Zeijlstra (2004, 2010) can be used to capture the distribution of DP internal agreement elements as well as *yä*. Multiple Agree can explain the distribution of the functional elements across adjectives, demonstratives, quantifiers, nouns, possessive phrases, relative clauses and complement phrases. I will demonstrate that the functional elements are reflexes of the agreement between their respective null heads with the lexical heads in the c-command domains of these null heads. The definite article, for instance, is the realization of the agreement between the null D head and the lexical heads in the c-command domain of D. In the same manner, I also assume *yä* to be the reflex of the agreement between null C-head and lexical heads in the CP projection. If multiple lexical heads merge into the derivation, Multiple Agree relationship established between the null functional heads and the multiple lexical heads realizes the multiple copies of the agreement clitics and *yä* on these lexical heads.

The second objective of this thesis is drawing the basic architecture of Amharic DP. Since a direct immersion to the analysis of the functional elements might leave us without context for the dialogue and hence haziness of the matter, and since there are few studies on the basic structure of Amharic DP lately, I am compelled to allocate some space for the descriptive work. The next two chapters of the thesis are dedicated to this task.

DP internal substantive (lexical) elements such as demonstratives, adjectives, quantifiers and the head noun will be briefed in chapter 2. In that chapter, I will introduce the morpho-syntactic properties and the relative order of each of the lexical elements in the DP domain. The functional elements such as the definite article, the number, gender and case markers, and their interaction with the lexical elements will be discussed in chapter 3. Introducing *yä* and *yä-phrases* (such as possessives, relative clauses and relational phrases) and addressing some issues related them is the main enterprise that will be accomplished in the 4th chapter. The 5 chapter of the thesis is dedicated to a brief summary of the prominent previous accounts of the issue under consideration. The main analysis of the thesis is in chapter 6. Taking the descriptions and some

²Strictly speaking, the agreement system I am proposing here, as will be clear in latter sections, is slightly different from Hiraiwa's, but very similar to Zeijlstra's.

of the generalizations made in the first few chapters of the thesis as a point of departure, I will analyze the distribution of each of the functional elements in that chapter. The core findings will be revised, and the paper will be concluded finally in the 7th chapter.

Chapter 2

The Lexical Elements

2.1 Introduction

As in the rest of the Semitic languages, the noun phrases in Amharic have complex forms and constituents. The noun phrase could be composed of a single nominal element or a string of modifiers headed by a nominal. Some instances of the noun phrases:

- | | | |
|-----|---|---------------------------|
| (1) | esu
'he' | (pronoun) |
| (2) | and lijj
'a boy' | (bare/indefinite noun) |
| (3) | lijj-u
boy-Def 'the boy' | (definite noun) |
| (4) | yä-hisab tāmari-u
YÄ-math student-Def
'the student of Math' | (Complement + noun) |
| (5) | yä-lijj-u wändim
YÄ-boy-Def brother
'the boy's brother' | (Possessor phrase + noun) |

- (6) *tinant yä-ay-än-ä-u lijj* (relative clause + noun)
yesterday YÄ-saw-1plS-3msO-Def child
‘the boy who we saw yesterday’
- (7) *tinant yä-ay-än-ä-u tillik’-u lijj* (relative clause + adjective + noun)
yesterday YÄ-saw-1plS-3msO-Def big-Def child
‘the big boy who we saw yesterday’

The head of the noun phrase could be a pronoun as in (1), a bare noun as in (2), a definite noun as in (3). Noun phrases may also have complement phrases as in (4).

An NP also can optionally take one or more modifier(s). Adjectives, relative clauses, possessive phrases, quantifiers, and/or demonstratives may modify the head noun. Sentences (5)–(7) have phrases taking possessives, relative clauses and adjectives as the modifier of the head noun. Virtually all the modifiers are prenominal.

2.2 Demonstratives

Like many languages in the world, Amharic has both distal and proximal demonstratives. Demonstratives could be speaker oriented or hearer oriented. Speaker oriented demonstratives are those used to refer entities taking the speaker as a point of reference. Proximal demonstratives are generally speaker oriented. The distal ones could be either speaker oriented or hearer oriented. Here are some of the demonstratives.

Table 2.1: Demonstratives

	Proximal	Distal	
	Speaker Oriented	Speaker Oriented	Hearer Oriented
SM	yih	ya	isu
SF	yih-čč	ya-čč	isu-a
PL	innä-zi-yih	innä-zi-ya	innä-isu

Demonstratives have different morphology from the regular modifiers. The canonical number and gender markers, *očč* and *it* respectively, couldn’t occur on them. They take the verbal morpheme, *čč* for the gender and a group-like marker, ‘*innä*’ for number. They also couldn’t be marked by the definite article though the two determiners (the demonstratives and the definite article) may co-occur in the same DP.

- (8) ya-čč(*-wa) k'onjo-wa lijj mät'a-čč
 that-f(*-Def) beautiful-Def.Fem child came-f
 'That beautiful girl came.'

2.3 Locatives

Locatives are other elements in the DP. They are preposition-like items marked by the locative morpheme-*ññ*¹.

- (9) lay-iñña-u bet
 up-CM-Def house
 Lit. 'the upper house'

Yimam (1987) seems to group them with demonstratives². Even if they are similar in specifying an object (referent) in its spacial position, they are different in certain aspects. In specifying an object, locatives refer neither from the speaker's nor from the hearer's point of reference. They rather specify the referent with reference to other similar (near by) referents. In (9), the house is in 'upper' position in comparison to other houses, not from the addresser's or addressee's point of view. Demonstratives have either deixis or anaphoric interpretation—either they indicate the referent (individual) directly from the speaker's or hearer's point of view, or they refer it from already introduced discourse. In (8) above, the speaker could be referring to 'that girl' from the discourse if the girl has already been introduced in the discourse. Alternatively, it could be that the speaker is pointing to 'the girl', referring to her directly. Locatives do not indicate the individual directly; rather with presupposed contrast with other similar entities. They are also different in that they may host the definite article while demonstratives couldn't, as illustrated in (9) and (8).

If the demonstratives are marked by (*ä/i*) *ñña*, they can also have a comparison (rhematic) interpretation. In this case, they may also be able to host the definite article.

¹ The morpheme (*ä/i*) *ñña* apparently is a derivational morpheme for it derives locatives from demonstratives, and ordinal numerals from cardinals. It has comparative (rhematic) sense almost always. Hence, I will call it comparative marker(CM).

² See Bruge (2002) for non-standard English, Bosnian, Norwegian and Finnish.

- (10) ya-čč-ñña-wa lijj
 that-f-CM-Def.Fem child
 ‘that girl (not the other one)’

In their linear order, demonstratives precede locatives.

2.4 Quantifiers

Quantifiers can be grouped into three classes: numerals, universal quantifiers, and vague quantifiers.

2.4.1 Numerals

Amharic has both cardinal and ordinal numerals. Ordinal numerals are derived by the morpheme (*ä/i*) *ñña* from cardinal numerals. As already mention, the function of this morpheme is giving comparison or rhematic interpretation. In the following example, for instance, the number *sost* indicates the atomic number, or exact quantity of entities, while the derived ordinal numeral *sost-äñña* refers to number in comparison with other entities.

- (11) sost →sost-äñña
 three →three-CM
 ‘three’→‘third’

Both kinds of numerals can inflect for case, number and definiteness. Gender is underspecified in plural nouns; hence, cardinal numerals can not be marked with gender except number ‘one’, which is also the indefinite article. Ordinals can inflect for gender.

- (12) ya-čč sost-äñña-it-u räjjim-it-u lijj
 that-Fem three-CM-Fem-Def tall-Fem-Def child
 ‘the third tall girl’

Both the cardinals and ordinals can occur together; in this case, ordinals precede cardinals as in (13). Both types of numerals (ordinal & cardinal) appear after demonstratives and before regular adjectives, as in (14).

- (13) innä-zi-ya hulät-ännä-očč-u sost(očč)(-u) lij-j-očč
 PL-zi-that two-CM-pl-Def three(pl)(-Def) child-pl
 ‘the second (group of) three children’
- (14) innä-zi-ya hulet-ännä-očč-u sost räja jim lij-j-očč
 PL-zi-that Two-CM-pl-Def three tall.pl child-pl
 ‘the second (groups of) three tall children’

2.4.2 Vague Quantifiers

Vague quantifiers such as *bizu* (‘many’, ‘much’), *t’ik’it* (‘a few’), *tinjš* (‘some’, ‘a few’), *and-and* (‘some’) and *ayale* (‘a lot’, ‘several’) modify plural nouns. The first three can also modify mass nouns. Morphologically, they behave as numerals mentioned above. They may inflect for number, case, and definiteness.

- (15) bizu-očč-u-n tämari-očč mämhir-u gäräf-ä-aččäw
 many-pl-Def-Acc student-pl teacher-Def flog-3msS-3plO
 Lit. ‘the teacher flogged the many students’

Vague quantifiers cannot co-occur with cardinal numerals, (16), while they are compatible with ordinal numerals.

- (16) innä-zi-ya sost-ännä-očč-u t’ik’it(očč)(-u) lij-j-očč
 PL-zi-that three-CM-pl-Def few(pl)(-Def) child-pl
 Lit. ‘those the third (group of) few children’

2.4.3 Universal Quantifiers

Universal quantifiers such as *hulu* (‘all’), *mulu* (‘full’, ‘whole’, ‘all’) and *bičča* (‘only’) are unique in that they do not inflect for number and gender. In addition, unlike all other quantifiers, they may appear both in the pre-nominal and post-nominal positions³

³In addition to these quantifiers, some possessors may occur in post-nominal positions.

- (i) k’alä Igziyabher
 Word God
 ‘Word of God’

bičča is specifically restricted to the post nominal positions whereas the first two may occur both in prenominal and post-nominal positions, (17-a). *Mulu* can appear both in prenominal and post nominal positions, (18-a) & (18-b).

- | | | | |
|------|---|------|--|
| (17) | a. and tāmari bičča
one student only
'only a student' | (18) | a. k'än mulu
day whole
'the whole day' |
| | b. ??and bičč atāmari | | b. mulu k'än |

Hulu can appear in prenominal positions only when it is focus marked, (19). Otherwise, it must appear in post-nominal positions, (20-a) & (20-b).

- | | | | |
|------|---|------|---|
| (19) | hulu-m tāmari-očč
all-Foc student-pl
'all the students' | (20) | a. tāmari-očč-u hulu
students-pl-Def all
'all the students' |
| | | | b. *hulu tāmari-očč-u |

As is well-known in the literature, universal quantifiers and vague quantifiers differ from numerals for they do not limit the exact quantity of the quantified object. Vague quantifiers in their pre-nominal position can not co-occur with cardinal numerals. Ordinal numerals seem to have no problem in occurring with any of quantifiers.

In terms of precedence, vague quantifiers appear before adjectives and after ordinal numerals.

Taking these few elements as point of departure, one might argue that Amharic has post-nominal modifiers. These structures are, however, are not truly of Amharic. They are rather residues of Geez construct states. They have a restricted use in modern Amharic. They are usually used by the people have a special affinity with Ethiopian Orthodox Church, who have a chance to study Geez as it is still the official language of the church. They are not that much productive in modern Amharic. Hence, I won't take them seriously in my analysis. See Gelderen & Lohndal (2008) for a similar case in Modern Norwegian, where modifiers are predominantly prenominal, some constructions, which are remains of Old Norse, occur in post-nominal position.

- (ii) Olav den hellige
Olav Def holy
'the holy Olav'

Though the question is outside the scope of the present paper, obviously, it needs an explanation why the descendants of head-initial languages turn into head-final (pre-nominal modification). Note that most Ethio-Semitic languages, which are descendants of the classical Semitic languages, have pre-nominal modifiers while the latter group have post-nominal modifiers. See § 4.6 on page 52 for more discussion.

- (21) innä-zi-ya t'ik'it-očč-u addis-očč-u bet-očč
 PL-zi-that few-pl-Def new-pl-Def house-pl
 'those few new houses'

In summary, universal quantifiers are different from other types of quantifiers for the fact that they may appear in post-nominal positions. In their prenominal distribution, they are like the vague quantifiers and cardinals, except *hulu*, which is restricted to focus contexts. In the unmarked reading, they all appear after ordinals and before relative clauses. Therefore, for sake of simplicity, I will treat all these elements, vague, numerals and universal quantifiers in the same fashion. I simply call them *quantifiers* unless I found it necessary to make a distinction.

2.5 Adjectives

Amharic has very few primary adjectives.

- (22) bic'a ('yellow')
 däg ('good')
 dida ('dumb')

Most of the adjectives are derived from other categories such as verbs, nouns and even adjectives themselves. They can be derived by affixing discrete derivational morphemes, inserting varieties of vowels in the verb roots (as is well-known for Semitic verbs), or with no any visible material (zero morphemes).

All the adjectives, whether derived or underived, always precede the head noun. They occur closer to the head noun than other modifiers such as numerals, quantifiers, and relative clauses.

The relative order of adjectives is unclear. The strict order of adjectives of the kind documented for Germanic and Romance languages does not seem to hold for Amharic. [Cinque \(1994\)](#) and other subsequent works, notably [Scott \(2002\)](#), propose the linear order of adjectives cross-linguistically to be:

- (23) quality - size - shape - color -provenance

In Amharic however, as [Hetzron \(1978\)](#) observed, color and size adjectives can freely exchange their order, (24); color adjectives can precede shape adjectives, (25); provenance adjectives can precede quality adjectives, (26) and so on.

- | | | | |
|------|---|------|--|
| (24) | a. bic'a tillik' jaket
yellow big jacket | (25) | and kib k'äy wänbär
one round red chair |
| | b. t'ilik' bic'a jaket | | |
| (26) | and amerikawi räjjim lij
one American tall boy | | |

As these examples illustrate, apparently, there is little or no restriction on the relative order of the adjectives⁴.

What rather seems more important for the order of the adjectives is their derivational sources. As already mentioned, the adjectives are either primary or derived. Primary adjectives are small in number ([Yimam 1987](#)). For ease of illustration, I call them *group a* adjectives.

Group b adjectives are those derived adjectives with the regular derivational morphemes. Most of the adjectives in the language belong to this group. Many derivational morphemes derive adjectives from nouns, verbs, and even other adjectives⁵. The derivational morpheme *ama*, for example, derives adjective from noun roots.

- (27) dīngay + ama = dīngayama
'stone +ama =stony'

Some other adjectives are derived, according to [Leslau \(1995\)](#), by the well-known morphine-*yä*. *Yä*-derivative adjectives are two types: ordinal and relational. I call the first ones *group c* and the latter ones *group d*.

This classification of adjectives based on their derivation source is important for getting the adjectives in order, in the DP hierarchy.

⁴Even if the adjectives obviously have free order in most cases, certain categories of adjectives preferably precede other categories at least in neutral reading. In (26), for instance, the quality adjective preceding the nationality adjective seems more unmarked than the other way round. A careful study of the order of adjectives might reveal at least some systematic orders. I will leave the question open for future studies.

⁵ ([Leslau 1995](#)) for a long list of derivational morphemes.

Table 2.2: The class of adjectives

primary (group a)	derived		
	regular derivatives (group b)	yā-derivatives	
		ordinals (group c)	relational (group d)
dīda ('dumb') bic'a ('yellow')	dīngay-ama ('stony') mīdr-awi ('earthly')	yā-mājāmāriya ('first') yā-māc'ārāšša ('last')	yā-t'or ('military') yā-kātāma ('urban')

2.5.1 Ordinals

Ordinal *yā* adjectives (*group c*) appear higher in the DP. They precede quantifiers and all other adjectives.

- (28) yā-mājāmāriya-očč-u sost rājajīm lijj-očč
 YĀ-first-pl-Def three tall.pl child-pl
 'the first three tall children'

Ordinal *yā*-derivative (*group c*) adjectives are those that modify the referent of the noun in reference to other objects. They have a relationship with ordinal numerals since both groups of modifiers refer to the order of objects in reference to certain other objects. They are also in complementary distribution with each other.

- (29) yā-mājāmāriya-očč-u sost lijj-očč (30) hulet-āñña-očč-u sost lijj-očč
 YĀ-first-pl-Def three child two-CM-pl-Def three child-pl
 'the first three children' 'the second three children'
- (31) a. ??yā-mājāmāriya-očč-u lay-iññ-očč-u lijj-očč
 YĀ-first-pl-Def up-CM-pl-Def child-pl
 'the first upper (group of) children'
 b. *yā-mājāmāriya-očč-u hulet-āñña-očč-u lijj-očč
 c. ??lay-inn-očč-u hulet-āñña-očč-u lijj-očč

As we can see from (29) and (30), each of ordinal adjectives and ordinal numerals can occur with cardinal numerals. But the two ordinals cannot co-occur, as is depicted in (31-b). Locatives also may not co-occur with ordinal numerals, as in (31-c), nor with ordinal adjectives, as in (31-a).

Locatives and ordinal numerals have another common property: both groups are derived from other categories by the (derivational) morpheme-*ñña*. Locatives derive from proposition-like elements (32) and from demonstratives, (33), while ordinal numerals derive from cardinal numerals (34).

	<i>Preposition</i>	→	<i>Locative</i>
(32)	lay		lay- ñña-u
	‘on’		‘the upper’

	<i>Demonstrative</i>	→	<i>Locative</i>
(33)	ya		ya- ñña-u
	‘that’		‘that one’ (‘not the other one’)

	<i>Cardinal</i>	→	<i>Ordinal</i>
(34)	sost		sost-ñña-u
	‘three’		‘the 3 rd ’

This all suggests that ordinal numerals, ordinal adjectives and locatives might have the same syntactic position in the DP. Just for simplicity, I call all the tree groups as ‘ordinals’ and assume them to merge in the same syntactic position.

2.5.2 Relationals

Relational *yä* derived adjectives (*group d*), on the other hand, appear lower in the projection. They appear after all other adjectives.

- (35) a. bät’am gizuf yä-t’or hayl
 very huge YÄ-army power
 ‘very huge military power’
 b. *bät’am yät’or gizuf hayl

Even if I use the phrase *yä derived adjectives* for the sake of exposition, as Leslau (1995) calls them, *yä* derived adjectives are not different from relational *yä-phrases* both in form and function. There is no clear difference between the two groups. Even the examples he use are the same.

- a. All of them are introduced by *yä*
- b. All of them appear lower in the projection, lower than the regular adjectives.
- c. They have a ‘close’ connection with the head noun.

- | | |
|--|---|
| <p>(36) <i>Group d</i> adjectives:
 and räjjim yä-kätäma lijj
 one tall YÄ-urban child
 Lit. ‘one tall boy of urban’</p> | <p>(37) Relational phrase:
 yä-kärmo säw
 YÄ-future people
 Lit. ‘people of the future’</p> |
|--|---|

Both groups of phrases have more of defining, rather than modifying relationship with the head noun. In addition, other constituents cannot intervene between them and the head noun. As I will also illustrate in chapter 4, *yä* is also not a derivational morpheme. Therefore, I assume those elements to have the same syntactic status, complement of the head noun, and I call them all *complement/relational phrases*. I will give some more reasons in chapter 4.6 on page 52 why I consider them to be complements.

2.5.3 Regular Adjectives

The relative position of *group a/b* adjectives is still not clear. They seem to exchange order freely.

- | | |
|---|---|
| <p>(38) and bic’a tseguram jaket
 one yellow hairy jacket</p> | <p>(39) and tsäguram bic’a jaket
 one hairy yellow jacket</p> |
|---|---|

Both (38) and (39) are fully acceptable. The difference is only the relative scope of the adjectives. As one might expect, in (38) the primary adjective, *bic’a*, scopes over the derived adjective, *tsäguram*, whereas the reverse is true for (39).

To sum up, the relative order of adjectives is:

- (40) *group c* – *group a/b* – *group d*

2.6 The Head Noun

With the exception of those few universal quantifiers mentioned above, all the modifiers precede the head noun⁶.

(41) *innä-zi-ya tınant gäbaya wust' yä-ay-än-ačč-u sost-očč-u räjajim-očč-u yä-kätäma lij-j-očč*

PL-zi-that yesterday market in yä-see-1pl-3plOBJ-Def three-pl-Def tall-pl-Def yä-town
child-pl

‘those the three tall urban children whom we say yesterday in the market’

As already mentioned above, the head noun can be marked for definiteness, case, gender and number.

Nevertheless, the way the head noun inflects is different from that of the modifiers in certain ways. First, gender, case and definiteness markers do not attach on the head noun itself given that there is any modifier preceding it. This means, the clitics⁷ may optionally occur on second and third position modifiers, but not on the head noun.

(42) a. *tiniš-it-u-n lij-j mämhür-u gäraf-ä-at*
 small-Fem-Def-Acc child teacher-Def whip-3msS-3fsO
 ‘the teacher flogged the small girl.’
 b. **tiniš-it-u lij-j-it-u-n mämhür-u gäraf-ä-at*

This restriction does not hold for the number marker as it may accompany both modifiers and the head noun.

(43) *tiniš-očč-u-n lij-j-očč mämhür-u gäraf-ä-aččäw*
 small-pl-Def child-pl teacher-Def whip-3msS-3plO
 ‘the teacher flogged the small children.’

⁶Many of the modifiers mentioned above may appear in the predicative positions. In predicative positions, only the copula, not the adjectives, agree with the noun. The predicative function of adjectives is not covered in this paper.

⁷Halpern (1995) has noted that the term *clitic* has been applied in so many different ways in the linguistics literature that it usually causes ambiguity. Hence, my use of the term *clitic* here has no theoretical significance. I simply use it as a cover term for all or some of the inflectional elements such as definite, number, gender and case markers and sometimes *yä*.

Second, even when there are no modifiers preceding the head noun, certain types of nouns cannot host the definite article. Proper nouns, pronouns, and common nouns in generic environments prohibit attachment of the definite article and the canonical gender and number markers.

- | | | | |
|------|----------------------------|------|-------------------------|
| (44) | a. *Yohannis-u
John-Def | (45) | a. *anta-u
'you-Def' |
| | b. *Yohannis-očč-u | | b. *antä-it-u |

For number feature, they are marked by a prefix-*innä*. This property correlates them with demonstratives.

- (46) *innä*-Yohannis
 PL-John
 'John and others' ('the group in which John belongs')

2.7 Intermediate Summary

Before we close this chapter, let's see the relative order of the above described elements in a nut shell.

The order of elements in Amharic shows a certain degree of flexibility. Except head-finality effect, in which the lexical heads of the projections are required to appear at the end of the projection, all other constituents can move to other positions under certain discourse contexts. At times, discourse requirements take prominence over the neutral order of elements. Amharic is a highly discourse-oriented language. The order of constituents could depend on the topic-comment structure. In the neutral reading (where discourse requirement is not a factor), numerals precede adjectives. If the speaker wants to give more emphasis for the adjective, say *tallness*, however, she/he might put the adjective before the numeral.

- (47) *räjajim sost lij-j-očč agännä-hu*
 tall.pl three child-pl meet-1s
 'I met three tall children'

This means that even if numerals precede adjectives in the neutral reading, it is not impossible to reverse the order. The same is true for other constituents.

The other point that must be considered in dealing with the order of constituents is the definiteness of the constituents. Definite marked constituents have more freedom to appear higher in the nominal projection. As already mentioned, adjectives appear lower in the nominal projection. They normally appear after locatives, relative clauses, demonstratives and numerals. But, definite marked adjectives might precede all other modifiers, including the highest elements such as demonstratives.

- (48) *tillik'-u, ya tīnant yä-mät'a-u lijǰ*
 big-Def, that yesterday yä-mät'a-Def child
 'the big, boy who came yesterday'

Quantifiers might also precede the highest elements such as demonstratives.

- (49) *bīzu-očč-u, innä-zi-ya lijǰ-occ*
 many-PL-zi-Def pl-that child-pl
 lit. 'many, those children'

This means that, the order of constituents in the DP can be reversed. This is a very prevalent phenomenon across the DP constituents. Adjectives, numerals, relative clauses, possessives, and even the head noun may move to pre-determiner position. When the orders are reversed, in spoken form, a long pause after the adjective, as in (48), or after the quantifier, as in (49), must be introduced. The pause reading suggests that some kind of dislocation is going on here. In written form, a preposed constituent is separated from the rest of the DP with comma. The interpretation is somehow similar to appositive (relative) clauses.

Abstracting away from discourse factors and the appositive readings, the fine grained order of constituents in Amharic can be summarized as:

- (50) a. Demonstratives — Ordinals — Quantifiers — Adjectives — Relational Phrases — N
 b. [DemP... [Ord... [Quant... [Adj... [Rel... [NP... [N]]]]]]]]
- (51) *innä-zi-ya tīnant gābaya wust' yä-ay-än-achāw sost räjäjim yä-kätäma lijǰ-očč*
 PL-zi-that yesterday market in yä-see-1pl-3plOBJ three tall.pl yä-city child-pl
 'those three tall urban children whom we say yesterday in the market'

This order is compatible with Cinque's (2005a, 2010) generalization, based on Greenberg's universal 20 on the order of elements in the DP. *When any or all of the items (demonstrative, numeral and descriptive adjectives) precede the noun, they are always found in that order. If they follow, the order is either the same or its exact opposite.*

Greenberg's universal 20 correctly predicts the order of constituents in Amharic. As Amharic is a head-final language, the order of elements is *Dem -Numeral -Adjective -Noun* as predicted. This is the most unmarked order across head-final languages, as Cinque points out.

Chapter 3

The Functional Elements

3.1 Introduction

Functional elements and their projections have been an important focus of study in generative grammar. The traditional VPs have been decomposed into tense, aspect, agreement and other fine-grained functional layers. The morphological markers on the verbs have been construed as the main evidence for the presence of these functional projections in the syntax. The introduction of the DP hypothesis is a result of an attempt to find functional categories in the nominal projection (Abney 1987). Not only the presence or absence, but also the universal or language specific properties of each of the functional projections, both in the clausal and nominal domain, get the focus of much research thereafter.

In this chapter, I will discuss the functional elements and their interaction with the substantive component of the grammar.

3.2 The Definite Article

Unlike English and like Scandinavian and other Semitic languages, the definite marker in Amharic is a bound morpheme. It attaches either directly on the head noun or on the modifiers of the noun.

The Amharic definite article¹ appears in two forms—*u* and *wa*. On plural and masculine singular

¹ I use expressions ‘the definite article’, ‘definite marker’, ‘definite suffix’ and ‘Def’ interchangeably to denote

nominals, the definite article is realized as *u* (*w* after vowels). On feminine nominals, the definite article is realized either as *u* (*w* after vowels) or as *wa*. As exemplified in (1) and (2), the canonical definite article—*u*—can mark both masculine and feminine nouns while *wa* is restricted to feminine nominals. There is one exception though—*u* may not accompany inherently feminine nouns such as *lam* (‘cow’), as depicted in (3-b), unless they are overtly inflected by the morphological gender marker, *it*, as in (3-a).

- | | | | | | |
|-----|--|-----|---|-----|--|
| (1) | lĭjj-očč-u
child-pl-Def
‘the children’ | (2) | lĭjj-it-u/wa
child-Fem-Def
‘the girl’ | (3) | a. lam-it-u/wa
cow-Fem-Def
‘the cow’
b. lam-(*u)/wa |
|-----|--|-----|---|-----|--|

This is the simplified way of describing the empirical data. The interaction of the definite article and the gender markers (feature) in Amharic DP, as I will delineate in chapter 6, is however more complex than this.

The other nominals that the definite article couldn’t occur on are proper nouns (names) and pronouns². Proper nouns such as names of days, places and people, and personal pronouns may not take the article, as in (4) and (5).

- | | | | |
|-----|-----------------------------|-----|---------------------------|
| (4) | *T’ilahun-u
T’ilahun-Def | (5) | *innä-ant-u
PL-you-Def |
|-----|-----------------------------|-----|---------------------------|

If there is an adjective modifying the proper name, however, Def may occur on it, (6). Pronouns rarely allow modification; if they do, the modifier may be Def marked, (7).

- | | | | |
|-----|--|-----|--|
| (6) | angafa-u T’ilahun
prodigious-Def T’ilahun
‘the prodigious Tilahun’ | (7) | ïdĭläbis-u ĭne
unlucky-Def me
‘the unlucky me’ |
|-----|--|-----|--|

The distribution of the definite article, and the rest of functional elements for that matter, as already mentioned in the 1st chapter, on the modifiers is fascinating. If there is an adjective (8), a numeral (9), a locative (10), a quantifier (11), a possessor phrase or a relative clause preceding the head noun, the definite marker attaches to the preceding constituent (modifier)—rather than on the head noun.

the same element, without any special connotation with any of them.

²Some of the observations in this sub-section are made by Kramer (2010, 2009).

- | | |
|---|--|
| <p>(8) räjjim-u lijj(*-u)
tall-Def child
'the tall boy'</p> | <p>(9) sost-u lijj-očč
three-Def child-pl
'the three children'</p> |
| <p>(10) lay-iñña-u bet
up-CM-Def house
Lit. 'the upper house'</p> | <p>(11) bizu-očč-u lijj-očč(*-u)
many-pl-Def child-pl
'many of the children'</p> |

If the adjective has an intensifier, the definite marker still attaches to the head adjective (12). If two or more adjectives come together, either only the first one, or the first and the second, or all of them may be marked by the definite article (13).

- | | |
|--|---|
| <p>(12) bätam(*-u) räjjim-u lijj
very tall-Def child
'the very tall boy'</p> | <p>(13) räjjim-u gobäz(-u) tämari
tall-Def intelligent(-Def) student
'the tall intelligent student'</p> |
|--|---|

As for the relative clauses, the definite marker always attaches to the finite verb of the relative clause.

- (14) tīnant t'iwat wädä-timihirtbet yä-hed-ä-u tämari
yesterday by-early to-school YÄ-went-3ms-Def student
'the student who went to school yesterday morning'

The definite article also attaches on the possessor in possessive phrases. If there is any modifier preceding the possessor, the definite article still accompanies the modifier of the possessor rather than the possessor itself as in (16).

- | | |
|--|---|
| <p>(15) yä-lijj-u gazet'a
YÄ-boy-Def newspaper
'the boy's newspaper'</p> | <p>(16) yä-räjjim-u lijj(*-u) gazet'a
YÄ-boy-Def newspaper
'the tall boy's newspaper'</p> |
|--|---|

In sum, if there is any modifier preceding the head noun, only the modifier may be marked by the definite article. If there multiple modifiers preceding the head noun, the first one carries the definite article obligatorily and the rest of them do optionally.

3.3 The Indefinite Article

As in many other languages, the numeral *and* ('one') functions as indefinite article. In most cases, the quantificational reading (to mean 'one') and the indefinite reading are not distinguishable; ambiguities arise.

- (17) *and tämari mät'a*
a/one student come
'a/one student came'

There is also another small clause-like expression, *yähonä*, which shows the indefiniteness of the noun phrases. Just like any of the modifiers, the expression agrees with the head noun; it can never come with definite nouns.

- (18) *yä-honä-čč lijǰ mät'a-čč*
of-be-3fs child come-3fs
'a girl is coming'

It is similar to the English existential 'there' for it avoids definite expressions.

The good thing about this expression is that it can appear both with plural and singular nouns while *and* is restricted to singular nouns. This characteristic of the expression helps us to distinguish indefinite plural noun from non-indefinite ones in ambiguous environments.

3.4 Case

Amharic is a nominative-accusative language. Nominative case is not marked. Accusative case is marked by the suffix—*n*.

Dative case is also marked by a preposition-like element, *lä* (Demeke 2003). Both the accusative and the dative markers are apparently sensitive to the definiteness of the nominal on which they occur. They seem to occur only on definite nouns.

- (19) a. Kasa anbäsa-u-n gädäl-ä-w
 Kasa lion-Def-Acc killed-3ms-3mO
 Kasa killed the lion
 b. *Kasa anbäsa-n gädälä(-u)
- (20) *Kasa lä-tämari däbdabe lak-ä-l-ät
 Kasa Gen-student letter send-3msS-Ben-3msIO
 ‘Kasa send a letter to a student’

In (19-b) and (20), the objects nominals are not definite, and hence the attachment of the case markers on them initiates ungrammaticality. We will come back to this issue in chapter 6.

3.5 Number

As already mentioned, Amharic nouns may inflect for number.

The number marker, *očč*, invariably attaches on the nouns and their modifiers.

- (21) wäfram-očč-u lij-j-očč
 fat-pl-Def child-pl
 ‘the fat children’

The only exceptions in the nominal projection are personal pronouns, proper names and demonstratives which take *innä* as their plural marker. Strictly speaking, *innä*³ is not a true plural marker. It shows a kind of grouping of entities including the entity denoted by the noun or pronoun in which *inna* is prefixed.

- (22) innä-Kasa
 PL-Kasa

In (22) *innä Kasa* doesn’t mean that there could be many people named *Kasa*. It means that ‘Kasa and some other people’ (usually the interpretation varies based on the context of

³ Note the distinction between the two markers in the gloss: *PL* for *innä*; *pl* for *očč*.

utterance: it could designate; ‘Kasa and his friends’, or ‘Kasa and his family’ or some other grouping in which Kasa is a member).

Only plural nominals are marked for number. Singular is unmarked. The number morpheme is an anomaly in that it occurs on the head noun, unlike the other agreement elements, even in the presence of preceding modifiers.

Kramer (Kramer 2009, 2010) also talked about irregular plural markers such as *at*, *an* and the like elements.

- (23) his’an-at
 baby-pl
 ’babies’

These plural markers are inherited from Geez (Classical Ethiopic). They are commonly used by people who have some contact with Ethiopian Orthodox Church, as Geez is still the official language of the church, and those who have attended grammar lessons in formal (government) or/and informal (church) schools. For the majority of the native Amharic speaker population, they are not plural makers. Even if they could be used occasionally, they are further pluralized by the regular plural marker of Amharic when pluralization is intended.

- (24) his’an-at-očč
 baby-ø-pl
 ’babies’

If not for the grammar lessons, the irregular (Geez) plural markers are not considered as plural by the everyday users of the language. Though the question whether these elements should be considered as part of Amharic grammar or not could be more of politics than linguistics, I personally don’t consider them as legitimate Amharic plural markers. Hence, I will not talk about them in this thesis.

3.6 Person

Person is overtly marked only on genitive nominals. As I will show in detail in § 4.5 on page 48, there are two ways a genitive interpretation manifest itself in the DP; either using an overt

possessor phrase or with an agreement morpheme on the head noun itself. Example (26) might be rewritten as (25) with no significant difference in meaning. The latter case is correlative of the pro-drop property of the language in the DP domain where the possessive morphemes represent the ϕ features of the possessor.

- | | | | |
|------|---|------|--|
| (25) | yä-ante bet
YÄ-you house
'your house' | (26) | bet-h
house-2msPoss
'your house' |
|------|---|------|--|

3.7 Gender

Masculine nominals are not marked for gender. As Kramer (2009) noted, there are two types of feminine gender marked nouns in Amharic—namely, inherently feminine nouns such as *lam* ('cow')—and the inflected ones, which are marked by the gender marker *it*, such as *tāmari-it-u* ('student-Fem-Def').

Inherently feminine nouns are small in number. Most of the nouns in Amharic get gender feature via the gender morphology. Even the few inherently feminine nouns can still be marked by the feminine suffix.

The status of the feminine gender marker, *it*, is somehow unclear. In the earlier grammar books, it is simply described as a gender marker. In some recent texts, however, that description is called into question. The questioning is due to the deviant nature of the morpheme. In the first place, the marker is invariant in its distribution. It occurs on nouns that refer to animate and inanimate entities. When it occurs on nouns that refer to animate referents it marks feminine gender. When it occurs on nouns that refer to inanimate objects, however, it marks *small* size than rather than gender. For its representation of small size, some people call it a *diminutive* marker.

- | | | | |
|------|--|------|--|
| (27) | tamari-it-u
student-Fem-Def
'the student' (female) | (28) | bet-it-u
house-Dim-Def
'the house' (small) |
|------|--|------|--|

Across languages, diminutive suffixes are commonly assumed to be derivational (Bauer 2004, Booij 2006). This however doesn't seem to be true for *it*. The diminutive/gender marker doesn't exhibit the properties of derivational morphemes. (see § 4.2 on page 37 of chapter 4

for some discussion about the distinction between derivational and inflectional morphemes). It does not change the category (class) of its host elements. Its hosts are always nominals (or their modifiers), and they do not shift to another category whatsoever. It is also a highly productive morpheme. It can occur virtually on every common noun in the language (nouns that refer to dimensionless objects such *air*, *atmosphere*, *rice* etc. are exceptions because they could not be referred as ‘small’ or ‘large’). The hard fact is that the gender and the diminutive interpretations are sometimes not easily distinguishable. Culturally, females are assumed to be ‘shorter/smaller’, ‘softer’ and ‘cuter’ than males. These social values (semantic concepts) seem to be decoded into the grammar with the single suffix *it*. The boundary between the gender and the diminutive function of the suffix is usually unclear (or may be irrelevant) because these two concepts are highly intertwined. For some nouns that denote naturally small entities, for example *ayt-it-u* (‘rat-Fem/Dim-Def’), one cannot tell whether the suffix is used to mean ‘small’ or ‘female’. The interwinding⁴ of gender and diminutive features is evident even on the definite article *wa* which nobody has ever attributed it with diminutive feature, but obviously induces both definite and diminutive reading on inanimate objects.

- (29) *bet-wa*⁵
 house-Def.Fem
 ‘the house’(small)

In addition, the gender/diminutive (henceforth just *gender*) marker is similar to the functional elements such as *yā*, the definite marker *u*, and the case marker *n*, in its syntactic distribution—it doesn’t attach on the head noun in the presence of any preceding modifier; it occurs optionally on the lower heads while obligatorily on the higher ones etc.

- (30) *wāfram-it-u lġj(*-it)(*-u)*
 fat-Fem-Def child
 ‘the fat girl’

From this, I surmise that the diminutive/gender marker in Amharic is an inflectional element, as the one in Walman (Brown & Matthew 2008). It is built from the bundling of at least

⁴See Jurafsky (1996) for the same type of conceptual bundling of diminutive(small size), age(young) and gender (feminine) in other languages.

⁵The definite articles are homophonous with the person morphemes in the language. *bet-wa* can also mean *her house*.

two semantic concepts (features) into one morphological element⁶. Even if the distinction and relationship the two semantic concepts is not easily discernable, in later sections, I will try to address the issue by claiming that semantic mismatch is responsible for the suppress of the gender feature and release of the diminutive feature on certain environments.

3.8 Intermediate Summary

The number marker in Amharic is relatively invariant. Any of the modifiers and the head noun can invariably be marked for plural. Other functional elements such as gender, definite and case are variable. Their distribution is dependent of different factors. The definite article can attach on the head noun if and only if there is no overt modifier in the DP. Gender and case markers behave exactly in the same way. They can occur on the head noun only in the absence of modifiers.

In addition, the gender, number and case markers are sensitive to the definiteness of the nominals. Demeke (2003) has noticed that the accusative case marker specifically is restricted to definite nominals. As already mentioned, this dependency on the definiteness of the nominals is not restricted to the accusative marker, but is noticeable on the dative case makers too, as in (31) and (33). Interestingly enough, these case markers may also mark pronouns, proper nouns, and demonstratives even though these nominals may not be marked by the definite article. (32).

- (31) mämhür-u Kasa- (*u)-n gäraf-ä-w
 teacher-Def Kasa-Acc flog-Ø-3msO
 ‘the teacher flogged Kasa’
- (32) mämhür-u tämari-*(u)-n gäraf-ä-w
 teacher-Def student-Def-Acc flog-Ø-3msO
- (33) mämhür-u lä-Kasa däbdabe lak-ä-l-ät
 teacher-Def Dat-Kasa letter sent-3msS-Ben-3msIO
 ‘the teacher sent a letter to Kasa’

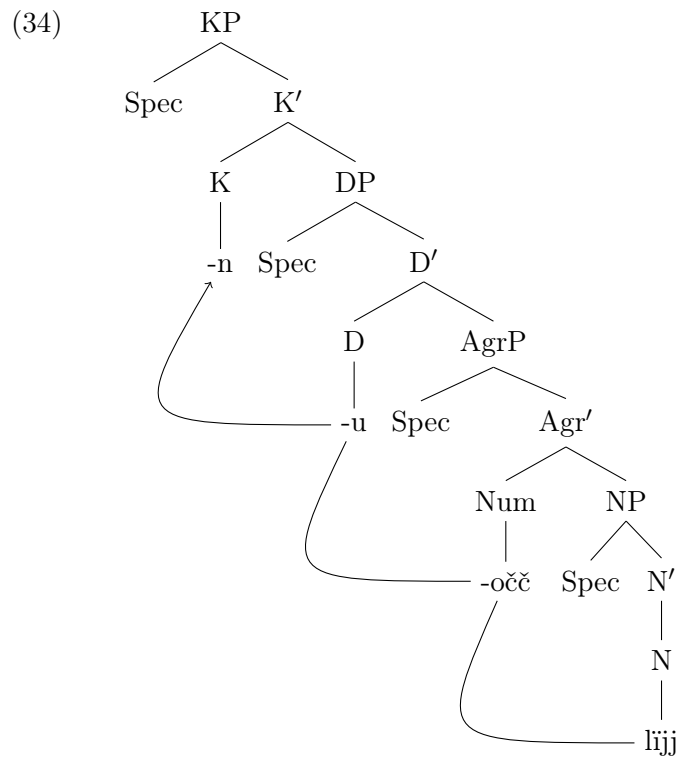
⁶See Borer (2005a) for the relation between semantic concept bundling and syntactic features; Gil (1994) and Muromatsu (1998) for claim that Classifier and Numeral features converge into a single syntactic category in Southeast Asian languages; Tarald (2010) for realization of multiple grammatical terminals in a single morpheme in Bantu languages; Corbett (1991) for extensive discussion about gender feature across languages, and finally Bernstein (1993) about gender projection—GenP.

This shows that the realization of the accusative marker has no direct relationship with the definite article. The accusative marker could rather be related with the definite interpretation (or the projection of D–head which I reckon to be the bearer of the definite interpretation anyway), rather than the definite article itself. This indirectly supports my assumption, following Lyons (1999) that the definite article itself is not the true bearer of the definite interpretation as it is not the head of the D projection. The null D–head bears the definite interpretation and the article is just realized as a result of agreement between the null D–head and the lexical heads in c-command domain of D.

The same type of relationship between definiteness and accusative case marker has been observed in other languages such as Hebrew & Turkish. As to Danon (2002) the accusative marker is a true distinguisher of definite nominals (marked or unmarked) from non-definite ones. His conclusion conforms to the cross-linguistic generalization that demonstratives, proper nouns and pronouns are definite nominals even if they are not overtly marked by definite articles. I come back to this issue in chapter 6.

Another kind of interaction is also available between the gender and number markers. The gender and number marker are mutually exclusive in Amharic. Plural nouns can not be marked by gender marker, and feminine marked nominals could not be pluralized. From this, we can suppose that number and gender features could be bundled in the same functional head in the sense of Giorgi & Pianesi’s (1997)’s *Feature Scattering Principle* which states that “a head is projected only if needed and more features can be bundled in one and the same head provided they do not violate the hierarch”. Following this line of reasoning, we can tentatively assume that gender and number features project a syntactic projection—AgrP.

Then, in traditional generative grammar, in which the affixes are perceived as heads of their respective projections and its concurrent assumption that affixes occur on their hosts through successive-cyclic head movement (adjunction), as defended by Baker (1988), a simple noun like *lijj-očč-u-n* (child-pl-Def-Acc) could have a structure like:



In later sections, we will see in detail if each of the functional projections, KP, DP, AgrP as well as the derivational method assumed here (head movement) could be maintained.

Chapter 4

Relative Clauses, Possessives and Complement Phrases

This chapter is all about *yä* and *yä-phrases*. *Yä-phrases* such as relative clauses, possessives and complement phrases will be briefed in the following sections. Before we proceed into the details of each of the *yä-phrases*, let's first have a short introduction to the particle *yä*.

4.1 Introducing *Yä*

Yä is one of the most productive morphemes in Amharic. Being a bound prefix, it may occur virtually in every lexical category—on nouns, adjectives, verbs, numerals, quantifiers, demonstratives and locatives.

In some cases, it seems to assign a genitive case ([Ouhalla 2004](#)). Possession relations in the language may be introduced by *yä*.

- (1) *yä*-Kasa bet
YÄ-Kasa house
'Kasa's house'

Relative clauses are introduced by it. Observing its ability to turn finite clauses into relative clauses, most linguists working in Amharic—[Mullen \(1986\)](#), [Bach \(1970\)](#), [Demeke \(2001\)](#), [Fullass \(1972\)](#) and others—consider it as complementizer.

- (2) Kasa yä-gäza-u bet
 Kasa YÄ-buy-Def house
 ‘the house (which)Kasa bought’

According to some people, (Manyahlot 1977), it also functions as an “adverbial complementizer” in factive complements¹.

- (3) yä-Kasa-n bet mägzat säma-hu
 YÄ-Kasa-Acc house bought heard-1
 ‘I heard of Kasa’s buying a house’

For its capability of converting its host elements to a modifier of the noun, Leslau (1995) also calls it ‘adjectivizer’.

- | | | | |
|-----|-------------|---|------------------|
| | <i>Noun</i> | → | <i>Adjective</i> |
| (4) | agär | | yä-agär |
| | ‘country’ | | ’national’ |

- | | | | |
|-----|-------------|---|------------------|
| | <i>Noun</i> | → | <i>Adjective</i> |
| (5) | t’or | | yä-t’or |
| | ‘army’ | | ’military’ |

- | | | | |
|-----|---------------|---|------------------|
| | <i>Adverb</i> | → | <i>Adjective</i> |
| (6) | ahun | | yä-ahun |
| | ‘now’ | | ‘modern’ |

As these examples illustrate, *yä* apparently turns certain categories into another (into adjectives/modifiers). The empirical observation is that any category on which *yä* occurs turn out to be a modifier of a noun.

- a. *Yä* marked adjectives and nouns function as derived adjectives (relational phrases).
- b. *Yä* marked DPs are what we call possessive phrases
- c. *Yä* marked finite clauses, what we call relative clauses, are also the result of the same process.

¹I will not address this issue here.

Whether it accompanies phrasal or lexical elements, *yä* always seems to have a *derivational* impact on its host elements. This means that *yä* creates a consistent paradigm by shifting other syntactic categories into modifiers of the noun. This makes *yä* very similar to the Bulgarian complementizer *deto*² in that it is a kind of “...*relativum generale*, capable of relativizing all sorts of lexical heads” (Krapova 2010) and to the Chinese *de* that it marks modifiers (Lee 2005).

As will be seen in chapter 5, Den Dikken (2007) also argues that *yä* is a *LINKER*, just like the English ‘of’ in sentences like *that oven of an office* (taken from his paper) derived as a by-product of predicate inversion.

Then, the question is, which of these views is right?

Before I return to the other issues, let me address the derivation and inflection argument first.

4.2 *Yä* as an Inflectional Morpheme

Even if most linguists working in Amharic syntax take *yä* as an inflectional morpheme, Leslau’s (1995) assumption of it as a derivational morpheme, which derives adjectives from other categories such as nouns, adverbs and other adjectives, pioneers a new challenge to the standard view.

In the generative literature, inflectional morphemes are relevant for the syntax while derivational morphemes are part of morphological analysis (Anderson 1992, Beard 1995). It is true that most of the syntactic works at the present time focus on inflections and the theories behind inflectional morphemes. Many of the mainstream syntacticians take derivational morphemes as part of the word (lexicon), and of no concern to syntax. The same is true of the morphologists; particularly those of who are on the Strong Lexicalist side. The relationship between the inflectional component and the derivational component is kept to a minimum. The morphological process is supposed to finish all of its derivations before it submits the finished words to the syntactic process (Perlmutter 1988, Scalise & Guevara 2005).

According to these theories, if the syntactic/morphological analyses are independent; and hence based on the inflectional-derivational classification, then, it is necessary first to put every

² It is worth noting that the Amharic *yä* and Burlgirain *deto* have many similar properties with Haspelmath’s (1995) ATRBUTIVIZER and somehow Szabolci’s (1994) SUBORDINATOR.

morpheme into one of the sub-classes³. Then, the question is: *is yä a derivational morpheme as Leslau (1995) claims, or an inflectional one as many others accord with?*

As is generally assumed in the literature, morphemes that change the part of speech are derivational (Anderson 1992, Plag 2003, Scalise & Guevara 2005). For some linguists, the transpositional property of the word class of the stem is an important property of derivational morphemes (Drijkoningen 1992). It is based on this assumption that Leslau (1995) categorized *yä* as derivational morpheme. Then, according to this assumption, *yä* could be taken as derivational morpheme: for the reason that it shifts one syntactic category to another.

The category shifting property of elements, however, is not a sufficient condition to put morphemes under the derivational subdivision. According to Haspelmath (1995) some inflectional morphemes in some languages could have the word-class-changing property. A few of his examples are given here:

- (7) $V \rightarrow Adj$ (*Participle*) (German)
 Der im Wald laut sing_v-ende_{adj} Wanderer (his 2a)
 the in:the forest loud sing-PTCP hiker
 ‘the hiker(who is) singing loud in the forest’
- (8) $Adv \rightarrow adj$ (*Attributivizer*) (Turkish)
 simki -ki kriz (his 2c)
 now-ATR crisis
 ‘the present crisis’
- (9) $N \rightarrow V$ (*Predicativizer*) (Blackfoot)
 nlt-aakii_N-yi_V-hpinnaan (his 2d)
 woman-PRED-pl.EXCL
 ‘we (excl.) are women.’

As we can see from these examples, in (8), the Turkish suffix, *ki*, changes the class of the adverb to adjective. Haspelmath call this ATTRIBUTIVIZER. In the Blackfoot example in (9),

³ Even if DM doesn’t explicitly assume a proper classification of morphemes into derivational and inflectional, the classification is still relevant, if not necessary, for its application. The application of some specific notions such as Maximal Word (MWd) and Submaximal Word (SWd) in (Harley & Noyer, 1999), for instance, presupposes the classification of derivational(word internal) and inflectional (word external) morphemes. The same is true of the standard Minimalist approach. Derivational processes, such as nominalization for instance are supposed to precede inflectional processes such as agreement.

the inflectional suffix turns the noun to a verb (predicate). Even if these structures have the type-shifting property, according to him, they could still be considered as inflectional elements if they are sensitive to the syntactic environments. The same could be said to *yä*.

Other measures that linguists develop to distinguish inflectional morphemes from derivational ones also support the view that *yä* is an inflectional element. I will mention some of them here.

Bauer (2004) and Bybee (1985) argue that inflectional morphemes are more ‘productive’ than derivational ones. As already mentioned, then, *yä* is highly productive morpheme. It can attach to almost any adjective, quantifiers, demonstrative, noun, and verb. The derivational morphemes in the language, however, are restricted to certain categories. *awi*, *ama* for example are restricted to the noun paradigm to derive nouns to adjectives. They can derive neither adverbs nor verbs nor even other types of nouns.

- | | | | | |
|------|----|------------------------------------|------|----------------------|
| (10) | a. | dingay-ama
stone-ama
‘stony’ | (11) | *ahun-ama
now-ama |
|------|----|------------------------------------|------|----------------------|

The other criterion linguists use to distinguish derivational morphemes from inflectional morphemes pertains to relative order of the morphemes in a word. Inflectional morphemes occur outside of derivational morphemes. It is only on the words that finished their derivational process that the inflection starts to operate. This is well attested. *Yä* occurs outside of the negation marker—*al*.

- (12) *yä-al-mät’a-u tämari*
 YÄ-Neg-come-Def student
 ‘the student who didn’t come’

Occurrence of *yä* outside of the negation marker—which itself is an inflectional morpheme—is indicative of its inflectional status.

It is also in a competition with prepositions. A DP can be marked by either *yä* or P, but not by both. This also suggests that *yä* could be a functional head, as are prepositions.

The other piece of evidence for its inflectional nature comes from the similarity it has with other inflectional elements in the DP domain. Like prepositions, the accusative case marker,

the definite article, and the gender (diminutive) marker it attaches on the lexical head⁴ of the phrases. In relative clauses, unlike complementizers in other languages, *yä* comes neither at the beginning nor at the end of the relative clause. It rather attaches on the finite verb, which itself is the last element—in exactly the same manner to that of the definite article and the case marker⁵.

There is also another characteristic that puts *yä* in harmony with other functional elements—its placement. As already mentioned in the 1st chapter, the functional elements in the DP occur obligatorily on the highest lexical head and optionally on the lower heads. This is visible on the multiple modifier constructions. If there are two or more adjectives in the DP, the definite article, for instance, necessarily occurs on the first adjective and optionally on the second adjective. In the same manner, if the possessor has a modifying adjective, *yä* does not occur on the possessor itself. Rather it occurs on the adjective.

Considering these facts, I come to the conclusion that *yä* is an inflectional morpheme. I attribute the apparent type-shifting property of it to the functional C–head. I am arguing, in this thesis, that the functional elements themselves are not the heads of the functional projections. They are rather the reflexes of the agreement between the respective functional projections and the lexical heads in the c-command domains of these projections. If I am on the right track, then, *yä* is the lexicalization of the agreement relation between a null C–head and the lexical heads. Following Carstens (2003) and Van Koppen (2005), I assume that C merges with relevant agreement features and hence, *yä* is the exponent of the agreement between the C–head and the lexical heads in the complement of C. In relative clauses, for instance, *yä* is the realization of the agreement between C–head and the finite verb. In the possessive phrases, in the same way, it is the lexicalization of the agreement between C–head and the possessor noun (provided that the possessor has no modifier). The same holds of all other *yä*-phrases.

Before I conclude this section, let me recap my three basic claims w.r.t. to *yä*. First, it is an inflectional element. Second, it is a realization of the agreement between the null C–head and the respective lexical heads in the projection of CP. Third, the apparent attributivizing impact

⁴ I use the phrases *lexical head* and *syntactic head*, the latter taken from Den Dikken, to mean the lexical heads of each of the respective phrases in the sense of Grimshaw (1990). According to her, the TP is the extended projection of the verb, hence the verb is the lexical/syntactic head of the TP projection. In the same manner, the noun is the lexical head of the NP; A of the AP; Q of QP and the like. They should be sharply distinguished from *functional heads* as D, *functional projections* as DP and/or *functional elements* as Def. The latter ones could be stated in terms of the extended projections of the formers, but not vice versa.

⁵ Unlike the other functional elements, *yä* is a prefix. The prefix-suffix discrepancies are usually captured in the literature by head movement analysis. Den Dikken attempted to capture the prefixhood of *yä* using the same technique—by raising the finite verb to the external D. This kind of analysis however could not be right. Provided that Amharic is strictly verb final language, raising of the finite verb is implausible.

on its host, which shifts non-modifiers to modifiers of the noun, is rather the property of the C head.

The first claim doesn't need further commentary as I have already detailed the motivations for taking *yä* as inflectional element in the above paragraphs. The second claim is also motivated on empirical grounds. As we will see in the next chapters, there are a couple of empirical facts that suggest that *yä* is the lexicalization of agreement between heads, in line with other clitics in the DP. Its complicated distribution across all *yä-phrases*, I assume, can be captured successfully only if we assume *yä* is a reflex of agreement—and, hence attributing its distribution to the unique properties of (Multiple/Reverse) Agree.

The third claim is problematic. Even if there is abundant research across languages dealing with functional elements such CP, DP and the like, little work has been done to definite, in a principled manner, what each functional projection/head is, how one projection/head differs from the other and what criteria we have to distinguish the one from the others. As a result of this, determining which functional element *is* a CP and which *is not* has been a notoriously difficult task. I don't think we have a guarantee that what we traditionally call DPs in one language are actually CPs, or vice versa in another language, so far as we are relying on simple untrustworthy intuitions to categorize syntactic elements. This is the issue I am facing here. I have tried my best to find a principled work that attempts to distinguish one syntactic element from another. Even if there is a huge collection of literature on CP, I have a hard time to find a work that properly defines what CP *is* and what it *is not*. Therefore, I couldn't give a well founded argument for the claim that *yä* is a reflex of C-head, but some cues.

As I already explained above, *yä* has attributivizing and subordinating impact on its host elements. Since the subordinating property is usually attributed to C-heads⁶, I assume that *yä* might be somehow a reflection of that head. The other clue to consider *yä* as a reflex of a C-head comes from the tradition in Amharic literature that *yä* is a relative complementizer. Provided that relative clauses are generally assumed to be CPs, and the complementizer is the head of the CP, then, it makes sense to associate *yä* with C. The third reason is its firm connection with finiteness. As I have explained above, *yä* marks only the finite verb of the relative clause. A close connection between finite T-head and C is well-known observation across languages (Pesetsky & Torrego 2001, Emonds 1985, Gallego 2010). Then, taking the cross-linguistics observation on the relation between the finite T and C for granted, the empirical fact in Amharic relative clauses that *yä* occurs only on the finite verb (finite-T) indirectly attests the association of *yä* with C⁷.

⁶But, Szabolcsi (1994) suggested subordination property for both C and D heads.

⁷Assuming *yä* as a reflex of P head is an equally attractive alternative. Having little knowledge of the properties of Ps, however, I don't dare to pursue this alternative here.

Taking its persistent property of type changing/shifting of non-modifier elements into modifier (subordinating and attributizing) and its association with finiteness as a point of departure, I assume it to be the reflex of C-head in all constructions—relative clauses, possessives and complement phrases. Similar invariant subordinator elements in other languages such as Greek, Swiss German, Bulgarian, Polish and many other Slavic languages have also been associated with the C-head, as mentioned in [Krapova \(2010\)](#) and the references in there.

4.3 *Yä-phrases*

Yä-phrases include relative clauses, possessives, complement phrases, and what I call *group c* & *d* adjectives.

These *yä-phrases* can be classified in to two major categories-*alienable* and *inalienable yä-phrases*, adopting the classification of possessives in the literature⁸([Vries 2006](#)).

The classification is meant to explicate the empirical distinction available among *yä-phrases* as well as to simplify the analysis by reducing them into these sub-groups. The empirical distinction is both semantic and syntactic. On the semantic side, inalienable phrases show relationship in place, time, kinship and whole-parts between the *yä-phrase* constituent and the referent of the head noun. They also do not denote agent-theme relationships since the constituent represented by the *yä-phrase* couldn't be referential. Alienable *yä-phrases* on the other hand modify the “whichness”, the quality or manner of the entity represented by the head noun. They are more like attributive adjectives. If the alienable constituents is a possessive one, it shows ownership relationship ([Dahl & Koptevskaja-Tamm 2001](#), [Alexiadou 2003](#)).

There is also robust evidence from the syntax about the distinction. According to [Grimshaw \(1990\)](#), true modifiers (predicates) can appear in copular constructions. Putting *yä-phrases* into her test makes it clear that alienable *yä-phrases*, such as regular possessives, ordinals (*group c* adjectives) and relative clauses belong to a different category from that of inalienable *yä-phrases* such as relational phrases and inalienable possessives. In chapter 2, I already suggested the unification of *group d adjectives* and relational *yä-phrases*.

⁸Even if the terms *alienable* and *inalienable* are borrowed from the possessive literature, I am using them here in a broad sense. The former term is used to mean any category that is ‘closely’ connected with the head noun while the latter refers to ‘loosely’ connected ones.

- (13) ya bet addis nāw (adjective)
 that house new is
 ‘that house is new’
- (14) ya bet Kasa yä-sära-u nāw (relative clauses)
 that house Kasa YÄ-build is
 ‘that house is the one (that) Kasa build’
- (15) ya bet yä-tämari-u nāw (alienable possessive)
 that house YÄ-student is
 Lit. ‘that house is of the student’
- (16) ??ya bet yä-sar(-u) nāw (relational yä-phrase)
 that house YÄ-grass is
 Lit. ‘that house is of grass’
- (17) *ya säw yä-kätäma(-u) nāw (relational yä-phrase)
 that person YÄ-town is
 Lit. ‘that person is of town’
- (18) *ya-čč enat yä-lijj-u n-at (inalienable possessive)
 that-Fem mother YÄ-child-Def is-Fem
 Lit. ‘that mother is of the boy’

As the first three examples ((13)–(15)) reveal, adjectives, relative clauses and alienable possessives are fully grammatical in the copular constructions. The relational phrase in (16) is marginal. Unless a special context is assumed (for example, comparison of two houses in which one of them is made of corrugated sheet while the other of grass), the construction is ungrammatical. The other relational phrase in (17) and the inalienable possessive in (18) are ungrammatical in the copular construction. This fits well with the semantic observation that the first three are loose relationship with the head noun (modify it) whereas the latter are closely connected with the head noun (specify it).

Furthermore, adjectives may not intervene between inalienable *yä-phrases* and the head noun whereas their intervention is fully acceptable for the alienable phrases (regular possessives & relative clauses).

- (19) ??yä-sar-u tillik' bet (relational yä-phrase preceding an adjective)
 YÄ-grass big house
- (20) tillik'-u yä-sar bet (an adjective preceding a relational yä-phrase)
 YÄ-grass big house
- (21) yä-tämari-u tillik' bet (alienable possessive preceding an adjective)
 YÄ-student-Def big house
 'the student's big house'

Finally, another strong evidence comes from the distribution of the functional elements such as the definite article, the gender and number markers. As I have mentioned in the first chapter, these elements do not attach on the head noun in the presence of preceding modifiers.

This restriction however, doesn't hold for inalienable *yä-phrases*. For relational phrases and inalienable possessives, the functional elements can occur on the head noun.

- (22) a. yä-sar bet-u (relational phrase)
 YÄ-grass house-Def
 'the house of grass'

The same is true of inalienable possessives. The important point about inalienable possessives is the fact that they can function as alienable *yä-phrases*.

- (23) yä-lijj inat-it-u (24) yä-lijj-it-u inat
 YÄ-child mother-Fem-Def YÄ-child-Fem-Def mother
 'the mother of child' 'mother of the girl'

As one can easily understand from the gloss, the two phrases have different interpretation. The first one, (23), is like the relational phrases where the entity represented by the *yä-phrase* is not referential whereas the latter is like the regular possessive phrases, with full DP possessor. Since they have utterly different interpretation, I don't consider these two constructions to have the same syntactic make up. Since the element in the *yä-phrase* is referential by itself, I consider the latter phrase, (24) as regular (alienable) possessives whereas the former as inalienable.

To sum, *yä-phrases* are two types: alienable and inalienable⁹. The alienable category includes

⁹(Alexiadou 2003, Espanol-Echevarria 1997) for similar story in other languages

alienable (regular) possessives, ordinals (*group c* adjectives), and relative clauses. They are modifiers of the head noun, and appear higher in the DP projection. The inalienable group on the other hand includes inalienable possessives and relational *yä-phrases*; they are complements of the head noun and their position is lower than regular (*group a & b*) adjectives.

Table 4.1: *yä-phrases*

Alienable <i>yä-phrases</i>	Inalienable <i>yä-phrases</i>
Alienable(regular) possessives	Inalienable possessives
Group c adjectives	Group d adjectives
Relative clauses	Relational phrases

From this I conclude that alienable *yä-phrases*, including regular (alienable) possessives project higher than the NP projection. Forming a strong chunk with the head noun, as the above mentioned syntactic and semantic tests show, relational *yä-phrases* and inalienable possessives¹⁰, I assume, merge within the NP projection (Carstens 2000).

4.4 Relative Clauses

Amharic relative clauses are made of at least a finite verb and *yä* attached on the finite verb. Other additional constituents such as prepositional phrases, non-finite verbs and adverbs could come within the relative clauses. In any of the cases, it is only the finite verb that can be marked by the whole bunch of functional elements such as *yä*, number, gender, case and definiteness markers.

- (25) *tinant wädä-irsha yä-hedä-u-n gäbäre*
 yesterday to-farm YÄ-go-Def-Acc farmer
 ‘the farmer who went to a farm yesterday’ (accusative)

Though the forms of the morphemes differ from the canonical ones, number and gender features may also be available in non-finite verbs.

- (26) *tinant mät'-a yä-näbär-äčč-u-n lij*
 yesterday come-3sf YÄ-was-3sf-Def-Acc child
 ‘the girl who came yesterday’ (accusative)

¹⁰Hereafter, I will call all of the inalienable *yä-phrases* simply as *relational phrases* or *complements*.

In terms of position in the DP, relative clauses project higher than many of the modifiers such as adjectives, quantifiers and possessives. Though the reverse order is also possible, they usually follow demonstratives.

- (27) *Yā* tīnant māt'-o yā-nābār-ä-u räjjīm tāmari
 that yesterday come-3ms YÄ-was-3ms-Def tall student
 'that tall student who came yesterday'

Though their relative position with other constituents is easy to grasp, determining the exact position of relative clauses in the DP, not only of the Amharic ones but also across many languages, proves to be a complex task. In the literature, there are two main competing analyses for relative clauses—the head raising analysis and the matching analysis. According to the matching (standard) analysis, the NP, containing the head noun, originates outside of the relative CP and gets connected to the CP through an empty operator (Chomsky 1977). In this framework, taking modification relation to be encoded through adjunction in the syntax, RCs are taken to adjoin to NP.

In the head raising (promotion) analysis, the NP is supposed to move from within the relative clauses themselves. Kayne (1994) specifically proposed that the relative clause is the complement of the D, and the head NP raises to SpecCP from the complement position of the CP (Alexiadou et al. 2000, De Vries 2002).

- (28) a. [_{DP} the [_{NP} [_{NP} claim_i]] [_{CP} OP_i(that) John made t_i]]
 b. [_{DP} D [_{CP} NP_i [C [IP ...t_i...]]]]

For relative clauses such as (29-a), Kayne argue that the relativized category (the noun phrase) starts out as an internal constituent of the CP and it appears next to the determiner only after raising to the specifier of the CP.

- (29) a. The picture that John saw
 b. [_{DP} The [_{CP} [_{NP} picture]_i [that [John saw [e]_i]]]]

In the same vein, N-final languages such as Amharic are also argued to have relative clauses whereby NP raises to SpecCP followed by a remnant movement of the complement of the CP, which is the TP, to SpecDP.

- (30) a. lijj-u yä-gädälä-u ibab
 child-Def YÄ-kill-Def snake
 ‘the snake that the boy killed’
 b. [_{DP} [_{TP} lijj-u yä-gädäl [_{t_i]]_k -u [_{CP} [_{NP} ibab]_i[_{t_k]]]]}}

Though the Amharic data seems to support the raising analysis for the fact that reflexive contained in the relative clause can be bound by an antecedent within the NP, both [Ouhalla \(2004\)](#) and [Demeke \(2001\)](#), argue against it.

Demeke specifically raised a series of criticisms against Kayne’s treatment of Amharic relative clauses. For Kayne’s analysis of Amharic relative clauses, it is necessary for the CP to have empty head. If the C head has overt complementizer, after the raising of the head noun to the SpecCP and the TP to SpecDP, the complementizer will remain below all other elements predicting a complementizer final relative clause. Since Amharic relative clauses are obviously not complementizer-final the overt realization of the supposedly complementizer turn out to be problematic for Kayne’s analysis. To run out of this problem, Kayne speculates *yä* not to be complementizer. [Demeke \(2001\)](#) refutes this Kayne’s assumption that Amharic lacks overt complementizer confirming that *yä* can be nothing, but a complementizer.

Rejecting Kayne’s analysis, and following [Platzack \(1997\)](#), Demeke proposes that the relative clauses start out in the complement main of the head noun and appear in pre-nominal position only after raising.

While his criticism of Kayne’s analysis seems sound, his own analysis faces some issues. In the first place, there isn’t any clue that shows that the relative clauses might start out in the post-nominal position. As he points out, there is no tenable explanation why the RCs could be raising to a higher functional projection across other modifiers and the noun phrase. In other Semitic languages, the N-initial order is assumed to stem from the N/NP raising to a higher position across the modifiers—contra Girma’s analysis. In addition, the raising of the relative clauses across the NP and other phrases such as adjectives, possessive phrases, and complement phrases seems to violate locality constraints such as Chomsky’s Minimal Link Domain (MILD) or Rizzi’s Relativized Minimality. Furthermore, the assumption that the relative clauses start as a complement of the head noun is problematic since, as explained above, the noun phrase can take other complements.

Even if his intuition that *yä* is related with the C-head seems right, taking *yä* literally as complementizer is also problematic. All the languages we know of so far have complementizers either at the beginning or end of their relative clauses. Complementizers determine the boundary

of the dependent clause (RC) by appearing either at the beginning of the relative clause, for N-initial languages ([N [_{RC} COMP...]]), or at the end of the relative clause, for head-final languages ([[_{RC} ...COMP] N]) Hawkins (1990), Cinque (2005b). For English for example, if we have a relative clause as *the boy that Mary kissed* we exactly know where the relative clause starts since complementizer *that* makes it clear. For Amharic *yä* appears in the very middle of the relative clause that the extended projection of the verb seems to beyond it.

Therefore, assuming *yä* literally as complementizer, and even taking the relative clauses in the traditional sense is somehow misleading.

The bottom line is that both of the accounts, Kayne's and Demeke's, have certain serious inadequacies. While my argument here that the C-head of the relative clauses merges with null apparently favors Kayne's analysis, there are still other non-trivial issues that Demeke raised against his analysis. For the sake of space, I am not going to review them here. Admitting that a more careful study is required to settle the case of the relative clauses, I temporarily assume that Cinque's (2010) proposal is right in which, after extensive survey of relative clauses across language, he conjunctures that relative clauses originate pre-nominal specifier positions. Therefore, abstracting away from all the complications of the internal syntax of the relative clauses, I follow Cinque (2010) and Ouhalla (2004) and assume that Amharic relative clauses appear in the specifier positions.

4.5 Possessive Phrases

As already mentioned, possessive phrases¹¹ in Amharic are introduced by *yä*. Like the rest of modifiers, they always appear in prenominal position. With the exception of pronominal possessives, which take modifiers rarely, the possessor may have as complex structure as one can imagine. A complex set of adjectives, quantifiers or relative clauses could come within the possessor DP. In all the cases, the possessive marker *yä* occurs obligatorily on the highest (first) modifier of the possessor¹².

¹¹Unless and otherwise mentioned, I use the term 'possessive' to mean the regular, alienable possessives.

¹²Note that this requirement of *yä* to occur on the higher head, the modifier, is somehow contrary to that of the relative clauses. In the relative clauses, it prefixes on the last element (finite verb). I will address these discrepancies in chapter 6.

- (31) yä-zi-ya räjjim tämari bet
 YÄ-zi-that tall student house
 Lit. ‘that tall student’s house’

In many languages, including English, possessives are usually classified into the pronominal and lexical (Saxon) genitive, and these two groups of possessives are construed to have different syntactic attributes. There is evidence that those two types of possessives behave differently, and that they should project in different syntactic positions. [Bernstein & Tortora \(2005\)](#) for example assert that, in English, the pronominal possessives resist coordination whereas full possessives DPs do not.

- (32) a. Jack and Jill’s house (their 15a)
 b. *we and their house (their 16a)

“a single ‘s’ marker is sufficient per coordination with full DP possessives...but not with pronominal possessives”. From this, they conclude that the possessive pronouns have a closer connection with the head noun than the full possessive DP [Cardinaletti & Starke \(1999\)](#), [Kayne \(1994\)](#) and [den Dikken \(2006\)](#) also distinguished pronominal possessives from Saxon genitives.

Contrary to this, possessive pronouns in Amharic are not different from lexical possessors. First, both groups are morphologically composed of the respective pronoun/noun by prefixing *yä*. For example, the attachment of the subordinator on the personal pronoun, *ine* ‘I’ produces the possessive pronoun *yä-ine* ‘my’. Lexical genitives inflect in the same way.

- | | | | | | |
|------|-------------|------|-------------|------|--------|
| (33) | yä-lïjj-u | (34) | yä-yohannes | (35) | yä-esu |
| | YÄ-boy | | YÄ-John | | YÄ-he |
| | ‘the boy’s’ | | ‘John’s’ | | ‘his’ |

Amharic pronominal possessive are morphologically as complex as lexical genitives. They could be composed of the combination of their respective nominative pronouns, and agreement morphemes. Most of the pronouns are not just simple elements; they are composed of a minimal element (‘I’ for 1st person, ‘you’ for 2nd person masculine, ‘he’ for 3rd person) and a gender or a number agreement morpheme within the stem. In syntactic constructions, they also behave the same as the full lexical nominals such as proper names.

They also have the same location in the DP with genitive DPs. Both pronominal possessives and full nominal possessives usually follow numerals and adjectives.

- (36) *innä-zi-ya sost-u adaddis yä-mämhir-u bet-očč*
 PL-zi-that three-Def new.pl YÄ-teacher-Def house-pl
 Lit. ‘the teacher’s those three houses’

Even if the canonical position of both groups of possessives is presumably after adjectives, they might occur virtually anywhere in the DP (except with/before the demonstratives, as shown in (37-b)).

- (37) a. *innä-zi-ya sost yä-inne bet-očč*
 PL-zi-that three YÄ-me house-pl
 ‘those three houses of mine’
 b. ??*yä-inne innä-zi-ya sost bet-očč-(ä)*

Coordination facts do not make distinctions between genitive DPs and possessive pronominals. Unlike Bernstein’s claim, possessive pronouns can properly coordinate.

- (38) *yä-antä ina yä-ine bet-(očč)*
 YÄ-you and YÄ-I house-(pl)
 ‘your and my houses’

From these similarities, it seems reasonable to assume that both pronominal possessives and full DP possessives could be treated in the same manner. Unless distinguishing the two groups of modifiers is found to be necessary, I will use the term ‘possessives’ for both.

Amharic possessives might agree in number, gender and person with the head noun—just like the verbs agree with their subjects in the clausal domain. In the same way to the Hungarian possessive phrases that Szabolcsi (1994) observed, the possessor agrees with the head noun in gender, number and person. One important fact that needs to be mentioned here, is that the possessives agree with the head noun, for reasons that I don’t understand, only when they occur in a higher position than the modifiers¹³. If the possessor is preceded by a modifier, agreement between the two is impossible.

¹³This is presumably similar to the case in Arabic in which full subject agreement is possible only when the subject is in higher position. I am not sure, however, how much the correspondence could be maintained.

- (39) a. yä-Aster addis-očč-u mätsihaf-očč-wa
 YÄ-Aster new-pl-Def book-pl-3sfPoss
 ‘Aster’s new books’
 b. ??addis-očč-u yä-Aster mätsihaf-očč-wa
 c. addis-očč-u yä-Aster mätsihaf-očč

As depicted in examples (39-c), the overt agreement between the possessor and the head noun is impossible when the possessor is below the modifier.

In a further correspondence with the clausal domain that the subject can be dropped (pro-drop), the possessor can also be dropped given that there is full agreement on the possessum.

- (40) (yä-eñña) bet-aččn täk’at’älä-bin
 (YÄ-we) house-1pl.Poss burnt-1pl.Mal
 ‘our house is burnt’

The agreement morphemes on the possessum are also identical to that of the verbs except for third person pronominals.

Furthermore, and interestingly enough, deverbal nouns in the Amharic DP can even be marked by negation, exactly the way the verbs are marked.

- (41) yä-Kasa alä-mämt’at
 YÄ-Kasa Neg-coming
 Lit. ‘Kasa’s not coming’

From this correspondence between the possessor and the subject, Szabolcsi and others hypothesized that the possessor merges in SpecnP (Cardinaletti 1998, Radford 2000). As the subject is customarily assumed to extract from SpecvP to higher specifier positions, the same phenomenon is proposed for the possessor. I take this analysis to be right for Amharic possessives too. Given that an independently motivated functional projection in Semitic languages, NumP, is available, we can assume the possessive in Amharic to merge in SpecNumP (assuming NumP to be a correspondent of vP of the verbal domain). This however couldn’t be a clear cut solution as the possessives might precede or follow adjectives. The relative position of adjectives and possessives is not clear. My assumption is, as I will explain in chapter 6, probably the position of each of the modifiers might depend on the timing of the Merge operation, and of course

the numeration. If the numeration has adjectives, the derivational Merge might introduce the possessives after the adjectives. In that case, the adjectives will occupy SpecNumP and the possessives might appear somewhere in higher position. We can also think of Merge introducing possessives before the adjectives.

We might also attempt to derive their positions via movement. This seems to be true for the higher position of the possessives. They seem so occupy specifier position above or in the specifier of DP, probably after they extract from their lower position¹⁴¹⁵.

4.6 Relational Phrases

As I have already mentioned in earlier sections, complement phrases are another class of *yä-phrases*. They involve a variety of thematic relationships between the complement phrase and the head noun. Concepts such as *part of a whole*, as ‘roof of the house’, *kinship relations*, as ‘John’s mother’, *events* as ‘the coming of the enemy’, and *something made of* such as ‘house made of grass’ all expressed through those relational *yä-phrases*. Earlier linguists usually refer to them simply as *complements*. Leslau (1995) groups some of them with derivative adjectives. Even though I also called them *group d* adjectives in the previous sections just for the sake of exposition, in practice, they differ from (regular) adjectives in many ways. In the first place, unlike all other derivational morphemes, which generate adjectives from other parts of speech, the supposedly derivational element—*yä*—has more of syntactic properties than derivational ones. It is highly productive, and has more affinity to syntactic affixes rather than derivational morphemes. Secondly, complement phrases build “stronger chunks” with the head noun than the adjectives. Other elements such as possessives or quantifiers cannot intervene between the complement phrases and the head noun while they happily do with adjectives. Thirdly, unlike adjectives, they do not block the inflections of the head noun. This all has been discussed in the above sections.

One point that I want to add about relational phrases in this section is about their similarity to what we call construct state nominals in Semitic literature. Even if there are some claims

¹⁴ Classifying possessives into weak possessives and pronominal possessives, Picallo (1994) restricted this position only to pronominal ones. (She groups the weak pronominal ones into determiners). This classification, however, is not relevant for Amharic possessives. Both pronominals and lexical possessives behave alike—at least in their linear position.

¹⁵ It is not clear to me why they move across the numerals and probably adjectives. Case assignment has been taken as a reason to extraction of possessor in some languages. This doesn’t seem to work for Amharic possessives because most people working on Amharic linguistics agree on, the case of the possessor is assigned by *yä* (by the null/abstract C-head, in my case).

that Amharic has no construct state, no serious attempt has been made to scrutinize the data. To the best of my knowledge nobody has ever studied the relationship between these relational *yä-phrases* with construct state nominals. It seems to me that these phrases can be analyzed in the same way as construct states in Arabic, Geez, and Hebrew. Even if I don't have evidence about the phonological dependency between the complement (annexee) and the head noun (the annexor), which is a well attested fact in classical Semitic, the syntactic facts show a high degree of resemblance. Both relational *yä-phrases* and construct state nominals are syntactically inseparable chunks. No other element can intervene between the two—including the definite article. Adjectives modifying the head noun must remain outside of the chunk. This means that, the adjectives must precede the relational phrases in Amharic since Amharic is head-final, and follow them in Arabic or Geez. In addition, just like the case in classical Semitic, regular possessives might appear as complements. Look at the following examples;

(42) dar-u [l-muʔallim-i l-kabir-i] l-wasiʔat-u (Arabic)
 house.Fsg-nom the-teacher.Msg-gen the-big.Msg-gen the-wide.Fsg-nom
 'the big teacher's wide house'

(Hoyt 2006)

(43) bet'am säfi-u [yä-tiniš lij] suri (Amharic)
 very wide-Def [YÄ-small child] trouser
 lit.'small boys' the very wide pair of trousers'

(44) bet'am säfi-u [yä tiniš-u lij] suri (Amharic)
 very wide-Def [YÄ-small-Def child] trouser
 'the small boy's very big pair of trousers'

From the surface, the *yä-phrase* in (43) is similar to the regular (alienable) possessive constructions. However, in this case, the *yä-phrase* *yä-tiniš lij* is not a possessor; it doesn't refer an entity in the real world. The *yä-phrase*, hence, doesn't read as the usual possessor phrase. Comparing it with the regular possessive phrase:

The reading for relational/complement phrase in (43) is:

- a. there exists a pair of trousers
- b. and they are especially designed (for children)

Whereas the regular possessor phrase in (44) reads like:

- a. there exists a small boy
- b. there exists a wide pair of trousers
- c. the small boy owns the wide pair of trousers

Hence, the noun phrase in the *yä-phrase* is non-referential, unlike the case in regular possessor phrases. The *yä-phrase* also has a defining (specifying) function to the head noun. This means that regular possessives have different functions and structures than that of the relational/complement phrases even if they have the same forms. This is similar to the Arabic example presented in (42). If the *yä-phrase* has a determiner in it, it directly implies that the phrase is a regular possessive phrase and it obviously would be referential.

The complement phrases in Amharic are presumably different from the construct states in classical Semitic in two respects.

First, the annexee is marked by genitive case in the first case whereas it is marked by *yä* in the latter. The tenability of this distinction is questionable. If *yä* is a genitive case marker, as (Ouhalla 2004) claims, it obviously vanishes. The present proposal is also compatible with the idea of genitive case assignment on the annexee. But, in the present proposal, the null C-head is assumed to assign case to the annexee rather than *yä* itself. *Yä* is taken as agreement prefix.

Secondly, the annexee in Hebrew, Arabic and Geez always follows the head of the construct, (42), whereas it precedes the head noun in Amharic as in (43). This is the reflection of the general word-order distinction between the two groups—the classical Semitic versus (South) Ethio-Semitic. South Ethiopian Semitic languages, including Amharic, are head-final languages in which modifiers always precede the head noun, the complement precedes the finite verb and the like features, whereas classical Semitic languages have adjectives following the head noun and the complement preceding the main verb.

The popular explanation for this discrepancy between the South Ethio-Semitic languages versus the classical Semitic languages is linguistic transfusion (influence). According to historical linguists, the prenominal distribution of modifiers in the Ethio-Semitic group has been attributed to the influence of the Ethiopian Cushitic languages. Take Wolaytta (an Ethiopian Cushitic language) for an example.

- (45) He taa-w kuttuwa ehida iccash adusha laagge-t-I (Wolaytta)
 Those me-to chicken brought five tall friend-pl.-subj.
 ‘Those five tall friends who brought me a chicken’
 (Lamberti & Sottile 1997)
- (46) innä-zi-ya lä-ine doro yamät’ulign amüst räjjajim guwadiññ-očč-ä (Amharic)
 PL-zi-that to-me chicken brought five tall friends-pl-Poss
 ‘Those five tall friends who brought me a chicken’

As one can easily see from the English annotation, in both of the languages, Wolaytta and Amharic, the order of elements in the DP is: *demonstrative -Relative clause - Numeral-Adjective-Noun*. This exact match of the constituents is the result of the transfusion (interaction) of the languages.

Recent progresses in generative grammar interestingly call forth for another alternative analysis for the similarity between the language groups. If Kayne (1994) and indeed many other generative linguists are right, all languages start out with the same hierarchy of elements. The apparent difference in order of elements is the result of an operation-*Move*. Cinque (2010) has specifically proposed that the base hierarchy of elements in the DP to be [Dem RC Num A N]. If he is right, then, the similarity between the hierarchy of elements between the Cushitic and Ethiopian Semitic languages could be due to universal grammar (UG)¹⁶.

Further more, linguists working in classical Semitic quite consistently confirm that these languages exhibit N(P) raising. According to these studies, the post nominal placement of the annexee in the classical Semitics is derived via the raising of the head noun (annexor) to the higher position (Ritter 1993, 1991, Siloni 1996, Shlonsky 2004). Longobardi (1991, 1994) specifically contends that noun raising is a universal operation which is overt in classical Semitic languages and some instances of Romance languages, such as the proper nouns in Italian.

If that is true, then, it is conceivable that the prenominal versus post-nominal distinction in Ethio-Semitic and Classical-Semitic languages is attributable to the noun movement in the latter group. The so called complement *yä-phrases* in Amharic could also be treated as the annexee in classical Semitic languages. Following the proposals in the classical Semitic languages, I assume the relational *yä-phrases* to originate within NP, as the complement of the noun.

¹⁶Though his analysis by itself may not outlaw the historical one

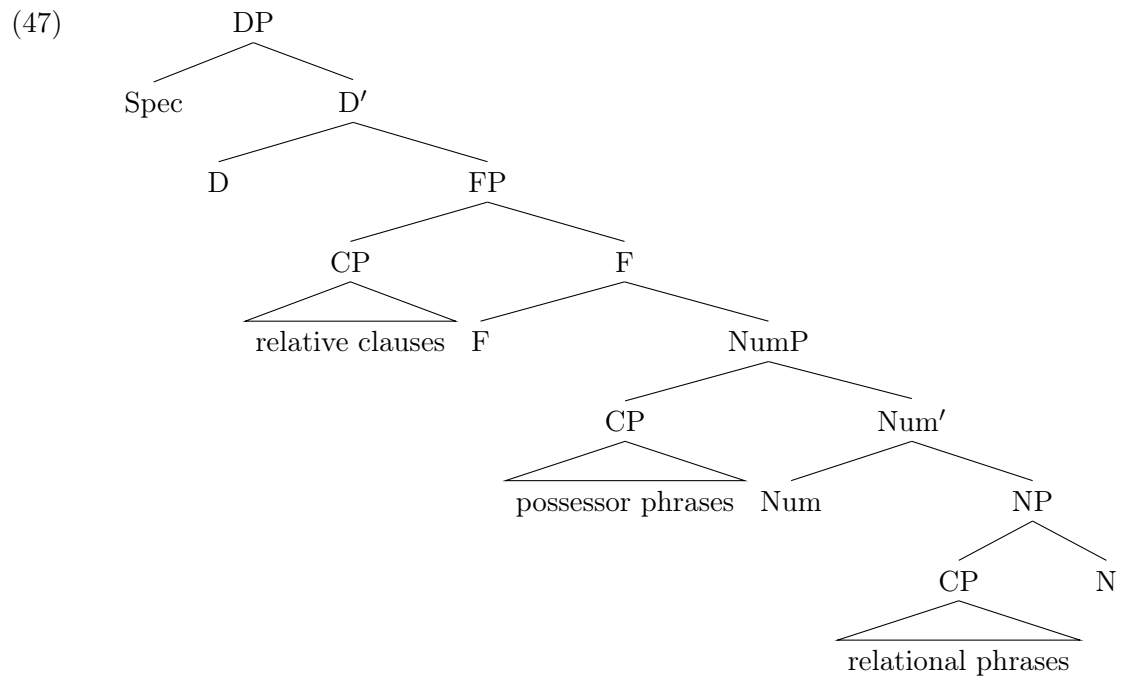
4.7 Intermediate Summary

The purpose of this chapter is to incorporate what I call *yä-phrases* (relative clauses, possessive and complement phrases) into the main picture of the Amharic DP. Being one of the most important elements in understanding the structure of Amharic DP, the first few sections of the chapter have been dedicated to introduce *yä*. After putting it to various tests that linguists developed to distinguish inflectional morphemes from derivational ones, I conclude that *yä* is a proper inflectional element. Taking its subordinating property as a point of departure, I also argue that *yä* better be understood as a reflex of a C-head. Observing its similarity with other inflectional elements in the DP, I also suggested that *yä* could be a reflex of agreement between the null C head and the lexical head in CP projection. I believe, this would solve many of the problems that the previous accounts fail to address. To explain the distribution of *yä*, we don't have to then base ourselves on stipulation that the *yä* of the possessives, in which it occurs in the first constituent, is distinct from that of the relative clauses, in which it occurs on the last element. We will come to the details of the agreement analysis in chapter 6.

The other issue I raised in this chapter is about the classification of what I call *yä-phrases*. I argue that *yä-phrases* could be grouped into—alienable *yä-phrases*, which included regular possessives and relative clauses, and inalienable *yä-phrases* which incorporates inalienable possessives and relational phrase. I also suggested that latter group could be treated like the Semitic construct state nominals.

I also attempted to characterize the positions of of various *yä-phrases* in the DP structure. Following the works of Ouhalla (2004) and Cinque (2010), I assumed that the relative clauses appear in specifier positions between DP and NP. As to the possessives, I argue that they have two positions; the base position and another higher position. In their base position, they follow numerals and probably adjectives. In the higher position, they are in complementary distribution with the demonstratives. From this, I suggested that their higher position might be acquired via extraction. Since they are in complementary with demonstratives in their extracted position, I assumed that they might be holding the same position.

In short, in this chapter, I have highlighted the morpho-syntactic characteristics of the popular particle *-yä* and the relative position of its phrases (*yä-phrases*) in the DP projection. The relative position of *yä-phrases* can be summarized as;



- (48) tinanat yä-mät'-a-u räjjim-u yä-Aster lijj
 yesterday YÄ-come-3ms-Def tall-Def YÄ-Aster child
 'the tall Aster's son who came yesterday'

And in relative to other constituents we have discussed in the second chapter, the unmarked order of elements looks:

- (49) Demonstratives — RC — Ordinals — Quantifiers — Adjectives — Possessives — Relational Phrases — N

Chapter 5

Previous Accounts

Even if descriptive works in Amharic syntax have been around since long time ago, little research has been carried out on Amharic syntax in general, and the DP domain in particular since the introduction of minimalist program. The recent works of [Ouhalla \(2004\)](#), [Den Dikken \(2007\)](#) and [Kramer \(2009\)](#) are the forerunners¹.

Kramer's works are based on extensive field work and original data collection. Hence, she made a large number of original observations and generalizations. Though there are a dozen of earlier studies conducted by the students and teachers of Addis Ababa University, notably Baye Yimam's textbooks ([Yimam 2004, 1987](#)), and by some Western scholars, notably Leslau Wolf's ([1995](#)) comprehensive descriptive grammar book and Dana Mullen's ([1986](#)) dissertation, she managed to come up with fresh generalizations on many issues. She has done one of the latest most extensive studies on the Amharic DP specifically in the functional domain. Her works are indeed main motivations for the very inception of the present study with the intention of complementing some of the gaps that her studies overlooked. I will shortly review and evaluate her analysis on the placement of the definite article in § 5.1 on the following page. She derives the article via post-syntactic morphological operations. With all the respect and appreciation of her efforts, I will contend that the DM analysis for the article could not be maintained.

Den Dikken also made an appreciable attempt to derive *yä* via predicate inversion. I will examine Den Dikken's ([2007](#)) predicate inversion analysis in §4.3. Den Dikken's purpose in this work is to illustrate that the Amharic particle *yä* is a member of the class of elements that he calls LINKERS. With all its theoretical elegance and sophistication, the predicate inversion

¹Since I have already discussed Demeke's ([2001](#)) paper in the previous chapter, I will not review it here.

proposal seems promising to formulate the prefix nature of *yä* as opposed to the rest of the functional elements. I will show in that section that the LINKERhood of *yä* is dubious as numerous facts in the language show that it has a different story from what Den Dikken assumes. I will raise some specific objections against the predicate inversion analysis of *yä-phrases*.

Kramer (2009) and Den Dikken (2007) made a substantial effort to derive some of the DP internal suffixes though neither of them noticed the parallelism among the functional elements. Kramer doesn't consider *yä* in her analysis where as Den Dikken takes it as a LINKER assuming that it has little to do with the rest of inflectional elements.

As I will explain in § 5.2 on page 64, Ouhalla (2004) also made valuable attempt to capture Amharic relative clauses in line with those of other Semitic languages—specifically with that of Arabic. Though his claim that relative clauses in Semitic languages appear in specifier positions of the functional projections is attractive and some of the arguments he made w.r.t Arabic DPs are of paramount significance for understanding the structure of Arabic DP, I argue that many of the generalizations he made with w.r.t Amharic DP are untenable—especially his claim that the definite article is the head of both the DPs and CPs is quite objectionable.

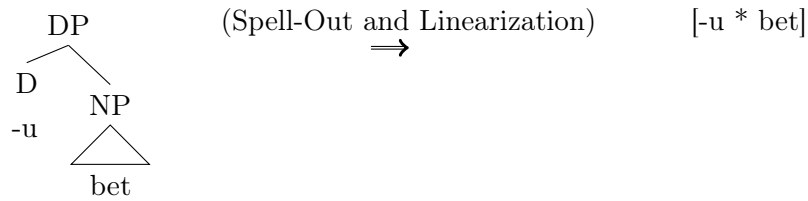
5.1 Distributed Morphology (Kramer 2009, 2010)

The first and most comprehensive attempt to accommodate the Amharic DP in the Minimalist framework is carried out by Kramer. In her PhD dissertation, (Kramer 2009) and later in a published paper, (Kramer 2010), she analyzed the distribution of different functional heads in the Amharic DP using the principles and practices of Distributed Morphology.

As I have already shown in the first chapter, the definite article is obligatory on the highest constituent of nominal projection. If the DP is made of just the head noun, the definite article occurs on it. If two or more adjectives precede the head noun, the definite article obligatorily occurs on the first one and optionally on the rest of them. Focusing on the obligatory Def, she contends that the definite article targets the right edge of the highest phase. Assuming the highest (obligatory) Def to be distinct from the lower copies of it, Kramer takes the obligatory Def as the realization of D. Then, she argues that the obligatory Def occurs on its hosts after Spell-Out through Local Dislocation.

(1) **On unmodified noun:**

a. Input:



b. Local Dislocation

(i) -u ~ -wa must have a host. (her 29)

(ii) -u~-wa attaches to the right edge of its host.

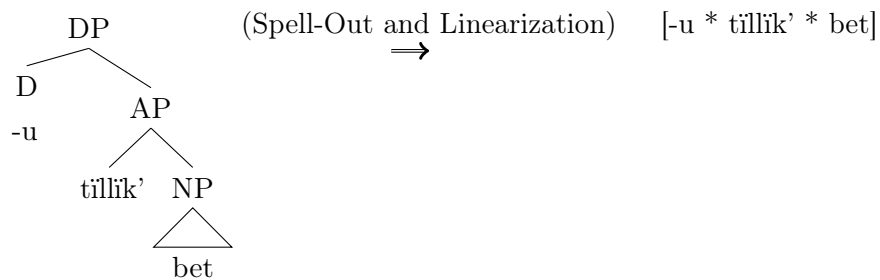
(iii) [-u * bet] → [bet-u]

c. Output of Local dislocation:[bet-u] (her 30)

(2) **On a modified noun:**

In the same way, the definite article lowers and attaches to the highest adjective.

a. Input:



b. Local Dislocation

-u * (tillik') * (bet) → tillik'-u * bet

'Def * big * house'

c. Output of local dislocation:[tillik'-u bet]

While this kind of analysis produces the right output for the highest copy of Def, it couldn't solve the multiple realizations of the definite article on multiple modifiers. There are also some other non-trivial issues that the DM analysis fails to address. I will mention some of them.

Arguing that the definite marker is a morphological element attaching to its hosts post syntactically, and trying to capture the fact that the article is not attaching to any of the internal constituents of the adjectives and the rest of the modifiers, she applied the phase impenetrability

hypothesis on the adjective phrases. She takes the AP as a phase. However, there is no independent evidence whatsoever that the adjective phrases are phases, neither from language internal data nor on the theoretical grounds. Although there are evidences in the literature that DPs have phases, as far as I know, nobody has explicitly argued that APs are phases. Under all current accounts, APs do not seem to have a phase status.

In addition, to accommodate the fact that the article occurs on the quantifiers, numerals, locatives, and relative clauses, she needs to assume all those modifier phrases to have phase status. This assumption has a theoretical disadvantage for it predicts too many phases in the DP. It seems to reduce phase to phrase. If every maximal projection, which hosts the definite article, is construed as a phase, then, the original conceptual necessity of phase is changed or significantly diminished. In the works of Chomsky and most of the subsequent literature, the clausal domain is reckoned to have two phases, namely CP and vP. In parallel with clauses, DP is also supposed to have two phases, Radford (2000), though some people still suppose that there is only one phase in DPs (Fukui & Zushi 2008). But as far as I can tell there is no such a theory that postulates as many phases as maximal projections, neither in the DP nor in the CP domain (Boeckx & Grohmann 2007, Svenonius 2004).

Kramer's splitting of the definite article into two types, "definite marker" (the obligatory one) and "definite agreement", is also not well motivated. She treated the definite article occurring on the highest modifier as the head of D but the lower instances of it as a reflex of DP internal agreement. This classification has no independent motivation. The definite article that occurs on the higher and lower modifiers is the same in the all the ways one can imagine except for optionality. The one attributed to the agreement exhibits all the patters that the obligatory one shows.

- a. It skips non-head elements such as adverbs and adjectival intensifiers.
- b. It doesn't occur on non-finite verbs in the relative clauses
- c. It doesn't occur on proper nouns, and pronouns
- d. It doesn't occur on the head noun in the presence of modifiers.
- e. Its distribution affects the distribution of other features such as gender and number and so on

There is no obvious phonological, morphological or syntactic difference between the two instances of the definite article. The obligatoriness of the article on the highest modifier is the only reason that made Kramer to divide the article in two groups. Of course, the obligatory occurrence of

the definite article on the highest modifier calls for independent explanation. Classifying the article in two types is not an explanation by itself, rather an ad hoc stipulation. As I will argue in this thesis, the multiple instantiations of Def are not actually the reflection of the existence of two or more distinct articles; they are different realizations of the same D-head generated by the same syntactic operation-Agree. The apparent optionality of the lower copies is due to the optional incorporation of the definite features of the lower heads to that of the higher heads.

The other major issue that Kramer's work faces is what [Hankamer & Mikkelsen \(2005\)](#) calls the "morphological gap". Since Kramer's work is motivated and directed by Embick and Noyer's² ([2001](#)) with respect to work in the distributed morphology framework, most of the criticism that are raised on their work can also be raised with respect to hers. [Hankamer & Mikkelsen \(2005\)](#) suggested that morphological gap is one of the main issues for the DM analysis. In Swedish, the suffix definite article cannot occur with proper nouns, some loan words and deverbal nouns. As [Hankamer & Mikkelsen \(2005\)](#) state that unless one assumes an ad-hoc 'unmotivated diacritic feature', it is impossible to handle such types of data in Embick and Noyer's system, because post-syntactic operations are blind to the internal structure of the word. The same argument can be extended to Kramer's analysis. In Amharic, the definite article doesn't occur on proper nouns, pronouns and demonstratives. The explanation is apparently straightforward—those nominals, as reported across languages, are inherently definite ([Enç 1991](#)). They fulfill the very classical definition of definiteness-*familiarity*. This explains why definite articles in many languages, including Amharic, avoid occurring on these nominals. Since definite article is a definiteness marker, it normally does not occur on definite expressions³.

If this is true, then, the assumption that the definite article locally dislocates in the post-syntactic domain (after Spell-Out) is incorrect. If we assume the definite article is to occur on its host after Spell-Out, we will have no explanation why it avoids to occur on inherently definite nominals. The sensitivity of the definite article to the semantics of its host elements clearly indicates that the article occurs in the syntax proper.

Coordinate constructions also confront her analysis with a problem. In Amharic, when two modifiers, say adjectives, coordinate in definite noun phrases, both of them must be marked by the definite article. In both of the standard analyses of coordinate constructions, 'tripartite' and

²Even if I am not in a position to favor a certain theory over the other, the fundamental conceptual flaws in DM argue against Kramer. See ([Williams 2007](#)).

³One might think of a way to escape out of this problem by assuming non-projection of D over these nominals. But, the fact that these nominals appear in argument position confirms that they merge under DP projection ([Longobardi 1994](#))

‘asymmetric’, there is no way that the definite article could occur on both of the coordinates under the DM analysis. Local dislocation wrongly predicts the definite article to occur either only on the first adjective (taking the two adjectives as independent phases) or only on the second adjective (taking the whole coordinate construction as one phase).

Her observation of the optionality of the definite article is also not quite right. The definite article is not freely optional in the lower modifiers. It is rather *iteratively optional*. If there are three modifiers preceding the noun, for instance, the optionality of the Def on the second modifier is dependent on the first modifier while the optionality of Def on the third is also dependent on that of the second.

- (3) a. yä-mäjämäriya-u räjjim-u gobäz-u tämari
 YÄ-first-Def tall-Def intelligent-Def student
 ‘the first tall intelligent student’
 b. yä-mäjämäriya-u räjjim-u gobäz tämari
 c. yä-mäjämäriya-u räjjim gobäz tämari
 d. *yä-mäjämäriya-u räjjim gobäz-u tämari

As we can see in (3-d), the definite article on the lower adjective *gobäz* may not be overtly realized in the absence of an overt article on the preceding adjective, *räjjim*. This shows that the realization of the definite article in the lower modifiers is not always optional. It rather depends on the overtness of the definite article on the preceding modifier. Kramer’s analysis overlooks this problem.

5.2 RCs as DPs (Ouhalla 2004)

In a short paper, Ouhalla argues for parametric difference between English-like languages where relative clauses are headed by Cs versus Arabic-like languages where relative clauses are headed by Ds. He put Amharic in the latter group. He propose that the relative clause in Amharic “is a DP with a [_{DP} D [_{TP}]] structure that lacks CP altogether”.

- (4) lïjj-u yä-gäddalä-u ĩbaab
 boy-Def YÄ-killed-Def snake
 ‘the snake the boy killed’

He assumes the relative clauses, headed by D, to merge in SpecNumP. Taking the definite article on the relative clauses to be the head of the internal DP (relative clauses), he argues that the raising of the TP to the specifier of the internal DP gives the right order.

- (5) [_{DP} D [_{NumP} [_{DP} [_{TP} lijj-u yä-gäddälä]i [_{D'} D=-u ti]] [_{Num'} Num [_{NP} ĩbaab]]]]

Ouhalla's analysis is attractive for the Arabic data provided that there is at least a morphological clue on the relative marker that shows that the definite marker could be part (subset) of it. His account of the Amharic relative clauses however falls short of explaining why he is assuming them to be DPs. He doesn't mention any reason why the relative clauses in Amharic should be analyzed as DPs, apart from extrapolating from the Arabic case. He also doesn't discuss the status of *yä* in the relative clauses. In contradiction to the long standing consensus among Amharic linguists, Mullen (1986), Yimam (1987), Demeke (2003) and many others, that the subordinating job of the relative clauses is done by *yä* itself, his analysis attributes this to the definite article. In fact, if we remove *yä* from the relative clauses, they can no more function as (clausal) modifiers of the noun. Relative clauses may appear without the definite article, in indefinite nouns for instance, but never without *yä*. The definite article play no known role in relativization.

Analyzing the relative clauses as DPs also causes a host of complications. Relative clauses do not exhibit many of the properties that DPs attributed to. Longobardi (1994) and many more linguists following him claim that DPs are referential. They can appear in argument positions. This is not true of relative clauses. Ouhalla took the morphological form of the complementizer in Arabic as evidence for analyzing the Semitic (Amharic and Arabic)⁴ CPs as DP. Even if the complementizer in Arabic is morphologically cognate to the definite article, it is not appropriate to treat/define the CPs in Semitic in general as DPs. It is a robust fact that relative clauses in Amharic could not be DPs. Relative clauses are simple modifiers of the head noun, though in a clausal form, while DPs are independent projections that need not to modify any other category. Most of the Semitics languages I am familiar with—Hebrew, Tigre, Geez—have clearly distinct definite and relative markers. Instead of explaining the Arabic case on independent grounds, conflating one with the other couldn't be an elegant explanation.

From a broader theoretical perspective too, as Baker (2008) states, Ouhalla's attempt to redefine syntactic categories from their morphological paradigms, agreement morphemes in Baker's case, is not attractive. Morpheme terminals are highly epiphenomenal—some languages have more of

⁴He grouped Hebrew on English side, where relative clauses are CPs

those morphemes while other have less—with no inherent reason (Bobaljik 2001). Linguistic categories, on the other hand are persistent across languages. In languages such as Japanese and Chinese, for example, agreement morphology is not a robust phenomenon while syntactic categories such as adjectives, nouns and verbs are indisputably available. Then, using agreement (morphology) as a means of defining categories would be a ludicrous practice at least for these languages. Or else, if we use morphology to classify categories only in morpheme-rich languages, we will end up with nothing but inconsistencies (Baker 2008).

5.3 Predicate Inversion (Den Dikken 2007)

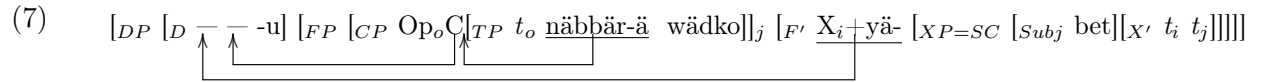
Den Dikken follows Ouhalla in assuming relative clauses and possessives project in the same functional position. For Den Dikken, however, both possessives and relative clauses originate, not in the specifier position of some functional position between DP and NP, rather as a predicate of a small clause. For him, *yä* is neither a case marker, nor a complementizer. It is rather a LINKER introduced into the structure as a “by-product of the application of Predicate Inversion”—the raising of the predicate (the relative clause or the possessor phrase) out of the small clause across the subject of the small clause. The subject of the small clause is assumed to be the head noun.

$$(6) \quad [_{DP} D [_{FP} [_{Pred} YP=POSSESSOR/RC]_j [_{F'} X_i +F=y\ddot{a}- [_{XP=SC} [_{Subj} (...) NP] [_{X'} t_i t_j]]]]]$$

Here, the DP dominates a functional projection, FP, and FP dominates the small clause XP. The head noun starts out as the subject of the small clause XP, and the relative clauses (and the possessor phrase) as predicates of it. Since the small clause is propositional, referring to Chomsky (2000, 2001), Den Dikken then assumes it to be a phase. Given that phases are impervious to external probing, he proposes a domain-extending head movement so that the predicates (possessor phrase and relative clauses) would be visible to the XP-external projections. Therefore, the head X raises to F ending up with realization of the supposedly LINKER *yä*⁵ on F. The raising of the X to F accomplishes another important job, in addition to extending the domain of phase. It puts the predicate of the small clause in equidistance with the subject (the head noun). This legitimizes the raising of the predicate across the subject NP to specFP—as

⁵ In his hypothesis, LINKERS are realized as the result of the raising of the head of a small clause to a higher position. The head of the small clause is called RELATOR. The X-head in (7) on the following page is a null RELATOR; and XP is a relator phrase (small clause).

instantiated in (6) on the previous page. He assumes the possessives to be headed by DP and the relative clauses by an empty C head. For the relative clauses, the finite verb (*näbbär-ä* in (7)) raises up further to the empty C head and then finally to the external D. The LINKER- *yä* also moves to D and left-adjoins to the finite verb.

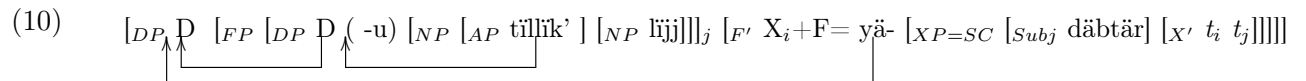


This correctly gives the required order in which *yä* prefixes and Def suffixes on the finite verb (*yä-näbbär-ä-u*). Note also that the raising of the TP of the relative clause to SpecDP is necessary as the finite verb follows other elements (adverbs) in the relative clauses.

- (8) **yä-näbbär-ä-u wädk'o bet*
 YÄ-was-3SM-Def fallen house
 ‘the house that had fallen down’

For the possessives, the highest head (the modifier of the possessor if any, or the possessor itself) head, moves to the outer D through the inner D. Finally, *yä* moves and left-adjoins to it—as in (10).

- (9) *yä-tillik'-u lijj däbtär*
 YÄ-big-Def boy notebook
 ‘the big boy’s notebook’



This again correctly predicts the position of *yä* relative to other elements such as the possessor and the definite article. His analysis is interesting in many aspects. He treats both Def and *yä* as syntactic elements, which is attractive. He also managed to give a unified analysis for both the relative clauses and possessives. Minimizing idiosyncrasies to the lowest point possible is a characteristic of a proper linguistic (any scientific, for that matter) investigation.

With all its theoretical elegance, there are many, however, complicated issues that his analysis faces when it comes to the relative clauses and possessives in the Amharic DP.

My first question about his analysis is a “why” question. Why do we suppose predicate inversion? couldn’t possessives and relative clauses originate in prenominal position? Having all the evidence from different languages that relative clauses and possessives originate in the pre-nominal position, Szabolcsi (1994) and Cinque (2010) and the references in there, what is our reason to propose post-nominal origin for relative clauses and possessives? Den Dikken doesn’t answer those questions in the paper. Since the analysis he gives of Amharic DP is an extension of his broad research project, it is necessary for me to refer back and forth to his book(2006) to understand the basic premises of the theory. In the book, he claims two important characteristics that put inverted predicates apart from uninverted predicates. (He calls the latter group “Predicate-Specifier” structures). Inverted predicates resist A-bar movement, and they have an obligatory LINKER (or RELATOR).

Therefore, to know if possessives and relative clause in Amharic are truly inverse predicates (not Predicate-Specifier constructions) one needs to put them to these tests. Of course, A-bar extraction of DP internal elements in Amharic DP is an independently motivated. As I have already stated in chapter 2, any of the elements in the DP might appear in a pre-demonstrative position. It was also mentioned that demonstratives are the highest substantive elements in the DP layer that any item preceding them must be in A-bar position. I have also mentioned that any of the lexical elements (or their extended projections) in the DP might raise higher than the demonstratives. This kind of movement, which is apparently an A-bar movement as the appositive reading and the accentuation pause show, is available to relative clauses and possessives.

- (11) tinant yä-mät'-a-u, ya bät'am tillik'-u lij
 yesterday-YA-come-3ms-Def that very big-Def child
 ‘that very big boy who came yesterday’
- (12) yä-Kasa, ya bät'am tillik'-u bet
 YÄ-Kasa, that very big-Def house
 lit.‘that Kasa’s big house’

This ability of the possessives and relative clauses to raise to an A-bar position puts Den Dikken’s idea of predicate inversion into question. In his own system with his own test, they can safely be grouped under the non-inverting groups of predicates (Predicate-Specifier constructions).

His second test, which requires the obligatory occurrence of the LINKER element, also proves that relative clauses and possessives in Amharic are not inverted predicates. As I will explain

latter in this section, *yä* could be optional in certain environments.

Another, but connected, issue is the trigger for movement. As he consistently argues, predicate inversion is an A movement. If it so, then he needs to activate unchecked (unvalued) feature to trigger movement. In the paper, he is not clear about the trigger for both head and phrasal movements. In his book, [den Dikken \(2006\)](#), he assumes EPP as the trigger for the phrasal movements (inversion of the predicates). Taking EPP as the trigger does a good job for the most part, except the last steps in the derivation. Now compare the relative clauses movement in [\(7\) on page 67](#) with that of the possessives in [\(10\)](#). In the first instance, the specifier position of the external D has been filled by the raised TP of the relative clause. This properly satisfies the EPP of the external DP. In the latter case, however, the possessor remains in lower position. If we raise the possessor to SpecDP to satisfy EPP, the possessor will precede the adjective—an unattested order (**lĭjj yä-tĭllĭk'-u dābtār*). Therefore, to get the attested form, he has to assume the possessor to remain in SpecFP. This results in an unfilled SpecDP (unsatisfied EPP). This violates Full Interpretation condition if we consider EPP as an unvalued feature, in the sense of [Chomsky \(1995\)](#). Removing EPP from the feature checking story and construing it in the “fill-spec XP” sense, ([Lasnik 2001](#), [Chomsky 2001](#)), won’t solve the problem as there remains a question why SpecDP can stay empty in one instance (when the possessive phrase inverted) while it has to be filled in another instance (when the relative clauses are inverted).

Thinking further of the possessives, there is some interesting data that Den Dikken has presented, but, I believe, drawn an improper conclusion from it. Possessive phrases in Amharic deviate from the possessives of other languages that we are familiar with for the fact that the definiteness of the possessor doesn’t spread to the whole DP.

- | | | | | |
|------|----|---|----|--|
| (13) | a. | yä-lĭjj-u tĭlik’ bet
YÄ-boy-Def big house
(i) ‘a big house of the boy’
(ii) !‘the big house of the boy’
(iii) *‘a big house of a boy’
(iv) *‘the big house of a boy’ | b. | yä-lĭjj-u tĭllĭk’-u bet
YÄ-boy-Def big-Def house
(i) *‘a big house of the boy’
(ii) ‘the big house of the boy’
(iii) *‘a big house of a boy’
(iv) *‘the big house of a boy’ |
|------|----|---|----|--|

Compare the above two phrases-[\(13-a\)](#) and [\(13-b\)](#) (13a and 13b in his paper, respectively).

When the possessor only is marked by the definite article, as [\(13-a\)](#), the uncontroversial reading for the whole NP projection is the indefinite one -as in [\(13-a-i\)](#). Den Dikken further argues that the definite reading of [\(13-a-ii\)](#) “is normally impossible”. In [\(13-b\)](#), in which both the possessor and the adjective are marked by the definite article, however, the whole nominal complex gets

only the definite interpretation, as the ill-formedness of (13-b-i) instantiates. This means that the definite article, as Den Dikken observes, on the adjective is responsible for the definiteness of the whole nominal projection. Taking this fact into consideration, it is natural to propose that the definite article of the adjective is the realization of the external D. Note also that Den Dikken’s own system, at least for the relative clauses and possessives (especially in a section where he argues against Ouhalla’s analysis, he explicitly argues in favor of the idea that the definite article which assigns definiteness interpretation to the whole nominal projection must spell out on the external D), promotes the definite article to be the head of the external D. For the example in (13-b) in which the possessor raises to the external D, however, the adjective can not raise to the external D. In any event, the proposed phase head of FP also doesn’t allow the adjective to agree with or move to the external D. The head noun and the adjective will be “trapped inside the domain of the phase head (Y+F=yä-)”(pp.15).

At this point, to rescue his analysis, one might argue that the raising of the phase head (*yä*) to the external D extends the phase domain from FP to DP resulting in visibility of the adjective from the external D for agreement. This is a natural reasoning if we follow Den Dikken’s original assumption that head raising extends the phase domain. But, unfortunately, Den Dikken insists that FP remains the phase, and spends section 5 of his paper to convince the reader that FP is a phase, and that agreement between the external D and the head noun is blocked due to that phase. He uses the form of the definite article on the finite verb to demonstrate the phasehood of FP. Look at the following example, taken from his paper, for instance.

- (14) Anbäsa-wa-n yä-gäddäl-äčč-*{iw/*iwa}* lijj-*it* (‘14’ in his paper)
 lion-Def.f-Acc YÄ-killed-3SF.SU-*{Def.3SM/Def.3SF}* girl-Fem
 ‘the girl who killed the lion’

In (14)⁶, according to him, the definite article on the finite verb is masculine even if the head noun is feminine. From this he inferred that the finite verb on the external D is not agreeing with the head noun due to the blocking of the phase at FP. In his own words “So as a consequence of X raising to F, FP now becomes a derived phase, with the head of the relativized noun phrase (in SpecXP) ‘trapped’ inside the domain of the phase head (X+F=yä-), causing the head to be inaccessible to D *qua* outside probe.” If that is the case, then, there is no explanation why the adjective in (13-b) hosts the definite article and assigns the whole noun phrase a definiteness interpretation. It is supposed to be trapped in the phase as it is obviously below the edge of

⁶Note that this is an illicit form—the gender marker *it* can not occur on a relativized noun. I am presenting it here just for the sake of argument.

FP (the position of the possessor).

The inconsistency of his analysis of the definite article on the adjectives becomes plain when we compare the adjectives of the possessor with that of the possessum. In (13-b), the adjective obviously modifies the head noun (the possessum). The definite article on the adjective assigns the whole nominal complex a definiteness interpretation. He takes the adjective to have (possibly long distance) agreement with the external D. But, when the adjective is the modifier of the possessor, he assumes that it moves to the external D, as we can see from (9) above. This is contra to what he himself proposed. Obviously, the definite article on the adjective of the possessor is not that of the external D. It doesn't assign the whole DP a definite interpretation. As he himself argues, it has restricted scope to the possessor only. Look the following nominal phrase for example;

- (15) bät'am addis-u yä-tillik'-u lijj bet
 very new-Def YÄ-big-Def boy house
 'the very new house of the big boy'

The definite article on the first adjective is the one that assigns the whole nominal phase a definite interpretation—*the new house*. The definite article on the lower adjective—*tillik'* assigns a definite interpretation only to the possessor noun phrase *big boy*. It is clear that the definite article of the first adjective—*addis*—belongs to the external D. But, he is reversing this fact. He is moving the lower adjective—*tillik'*—to the external D while keeping first adjective down in the phase. The word order itself is wrong unless we posit raising of the first adjective phrase *Bät'am addis-u* to SpecDP or higher—again contradicting the phase hypothesis.

There are also other facts that argue against his assumption of *yä* as a LINKER. Take the occurrence of *yä* on strictly attributive elements (that may not occur in predicative positions) such as *t'int* ('ancient'), *k'äddmo* ('former'), and *baläfä* ('last') for instance.

- (16) a. Roma t'intawi kätäma näčč
 Rome ancient city is
 'Rome is an ancient city'
 b. ??Roma t'intawi näčč
 c. *Roma t'int näčč
 d. Roma yä-t'int kätäma näčč
 e. *Roma yä-t'int näčč

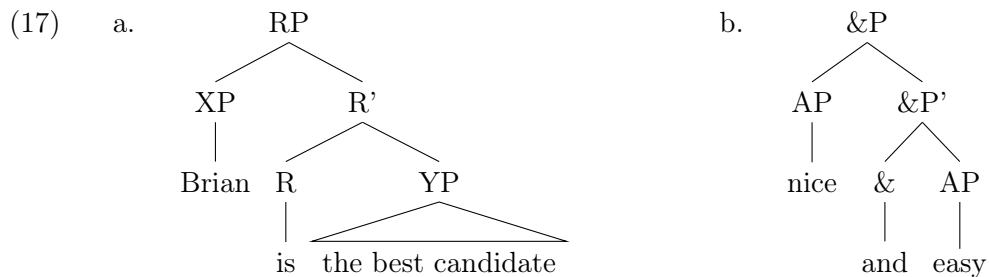
As the ill-formed forms in (16-b) & (16-c) instantiate, the stem *t'int* and its derivative adjective *t'intawi* may not occur in predicative positions regardless of the presence of *yä*. Then, its association with *yä* as in (16-d) with the adjective could not be due to predicate inversion. In other words, if *yä* is assumed as a LINKER that attaches on its host as a result of predicate inversion, its occurrence on the strictly attributive elements remains unexplained.

And, indeed, there are many constructions in the language, ranging from relational phrases to ordinal adjectives, locatives and demonstratives that have nothing to do with predication, let alone predicate inversion, but are still marked by *yä*. Remember the discussion in § 4.3 on page 42 of Chapter 4 where I demonstrated that inalienable *yä-phrases* (relational phrases) can not occur in copular positions.

The problem with the predicate inversion hypothesis gets more complicated in a construction in which multiple *yä-phrases* happen to come together. Stacked/coordinated relative clauses and possessive phrases put a question mark on the validity of the analysis of predicate inversion in general and *yä* as LINKER in particular. Though I base my discussion on the coordinated possessives here, the fact remains the same for all other constructions.

But, first it seems necessary to introduce his idea of small clause and predication to give a better picture of the matter for the reader. In his book, he takes copular constructions as prototypical cases of predication; and assumes that predication relations are syntactically represented as small clauses.

In (17-a), *Brian* is the subject, *is* the RELATOR and *the best candidate* is the predicate. When we translate this predication relation into coordination, the result is as shown in the following tree. Following Kayne (1994), he assumes coordinate constructions to have a coordinate phrase in which the coordinator is the head, and the two coordinates appear as the specifier (subject) and predicate (complement) of the coordinator.

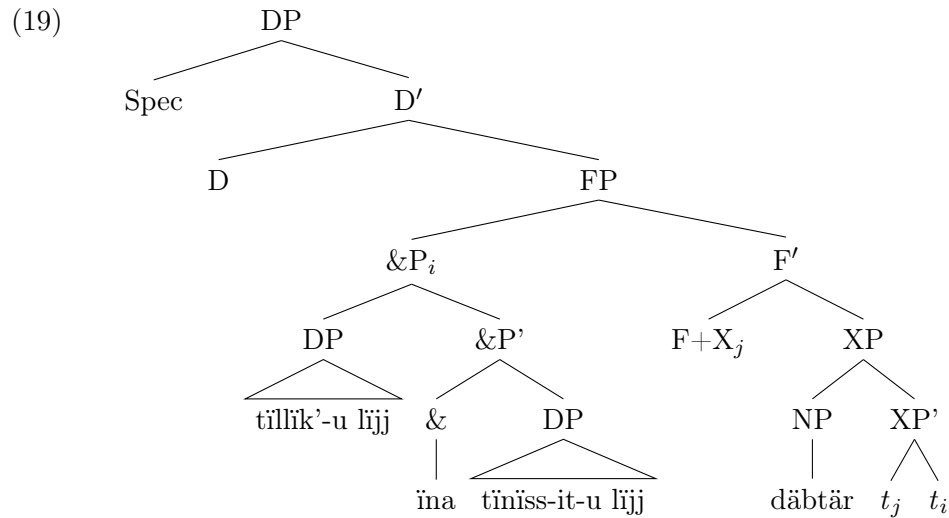


(den Dikken 2006)

“With [(17-b)] being an instantiation of [(17-a)], this presents the possibility that the RELATOR in [(17-a)] might uniformly be the logical operator ‘ \cap ,’ with predication being semantically represented as set intersection.”. If the RELATOR, which we represented as the X head in the above examples, mirror that of the coordinator “&”, then putting coordinated possessive phrases into the system is a simple task. Now let’s take the example in (9) and turn it into a coordinate construction.

- (18) (yä-tillik’-u lij) ina (yä-tiniss-it-u lij) däbtär
 (YÄ-big-Def child) and (YÄ-small-Fem-Def child) notebook
 ‘The big boy’s and the small girl’s notebook’

Since the head noun is singular, the interpretation is unambiguous. It means, a shared single notebook. Based on the above discussion, the two coordinated possessive phrases must be the subject and predicate of the coordinator. The coordinator is the RELATOR, and hence corresponds to the X head in examples (7)–(10) above. Putting them together, the whole DP structure gives us the following tree:



Hence, based on the derivation we have seen above, we can move X to the pre-subject head— F . This supposedly extends the domain of the phase from XP to FP and puts the subject (the head noun) and the predicate (the coordinate phrase) in equidistance. This enables the coordinate phrase ($\&P$) to move to SpecFP . The raising of the X head to F supposed to lexicalize $yä$ on F , as we have seen in the above ((7)–(10)) derivations.

In his analysis, *yä* meets its final host after it moves to the external D-head. But, the external head can not host the entire coordinate phrase given that heads host only heads. It couldn't connect *yä* of each of the coordinates to with the finite verb. The head movement hypothesis loses its value here. If we move one of the coordinates to the external head and connect it with *yä* and the definite article, still we will not have a means to move the second coordinate. In short, coordination constructions devastate the whole story of head movement so terribly that I don't think there is way around it. Note that this issue is independent of the analysis *ina* as a RELATOR.

His treatment of *yä* as a LINKER also relies on the assumption that it is an obligatory element on the relative clauses and possessives, as mentioned above in this section. In the paper, he writes “The obligatory occurrence of the morpheme *yä-* is a reflex of this Predicate Inversion process: *yä-*functions as a LINKER of the possessor or relative clause and its ‘head’”. This is not true, however. A modifier of a possessor (or the possessor itself) in relativized possessor construction might only optionally be marked by *yä*, as the following example shows.

- (20) *tinant yä-mät'a-u (yä)-tillik'-(u) lijj bet*
 yesterday YÄ-come-Def (YÄ)-big-(Def) boy house
 lit.‘[the big boy who came yesterday]’s house’

There are three things in the possessive phrase—the relative clause, the possessor and its modifier adjective. If the possessor was not relativized, *yä* would have been obligatory on the adjective. But, because of the relativization of the possessor, *yä* of the adjective becomes optional. Deriving this construction in Den Dikken’s system is quite complicated. Predicate inversion has no place for optionality. In his analysis, if there is a predicate inversion, it is supposed to work via head raising (raising of X to F), and the head raising is also assumed to release *yä* on F. Predicate inversion and realization of the LINKER are mutually inseparable processes. There is no way that one can assume that the possessor optionally inverts with the head noun. We obviously know that the possessor is in prenominal position always. Allowing the predicate inversion and assuming *yä* to lexicalize on F only optionally during the raising of X could be a way out of the problem. But, we still need to explain why it is not optional in other cases too (like on relative clauses and simple possessive phrases as in (7) & (10)). I don't think there is a way that his system could disentangle this puzzle. As I will elaborate in chapter 6 of this thesis, the multiple agreement analysis I am espousing here can easily bypass these problems.

5.4 Intermediate Summary

In a nutshell, in addition to the specific issues raised against each of the studies, the striking correspondence among the definite article, agreement clitics and *yä* has been overlooked in these studies. As already mentioned, relative clauses and possessives have certain common (and idiosyncratic) properties. Both groups are headed by the same head-*yä*. Both groups are prenominal. Moreover, at least to some extent, both of the groups function to modify the head noun.

In chapter 3 of this paper, I also illustrated that the DP internal agreement elements such as the definite article, the gender marker and the case marker behave alike.

What is more interesting is that these common characteristics manifested in the DP internal agreement elements, as I have demonstrated in the introduction chapter, are also exhibited on *yä*.

- a. *Both groups of syntactic elements (the agreement clitics and yä) target (syntactic/lexical) heads of phrases.* The agreement clitics skip non-head elements such as intensifiers (degree adverbs) of adjectives and quantifiers. They occur on the adjectives and quantifiers which themselves are the lexical heads of their respective phrasal projections. In the same manner, *yä* never occurs on intensifiers of adjectives and quantifiers, nor on adverbials. In the possessive phrases, *yä* occurs either on the adjectives, quantifiers or the possessor noun itself. In the relative clauses, *yä* occurs only on the finite verb, which is again the head of the RC.
- b. *Both groups can have multiple realizations in the same DP.* In the same way that I already talk about the multiple realizations of the agreement clitics, *yä* can occur on multiple modifiers of the possessor.
- c. *Both groups of clitics occur obligatorily on the highest modifier.* As already mentioned, the agreement clitics occur obligatorily on the highest modifier and apparently optionally on the lower modifiers. Whenever a possessor noun takes an adjective and a relative clause as its modifiers (ie, relativized possessor), as will be clear in the next chapter, *yä* obligatorily occurs on the relative clause whereas optionally on the adjective. This property of shifting to the highest lexical head is common across all the clitics in the Amharic DP except for number (plural) marker. In relation to this,
- d. *Both groups of clitics occur on the head noun itself if and only if there is no modifier preceding it.* The definite article, the gender and case markers couldn't occur on the head

noun if the noun has any modifier. Adjectives, quantifiers, numerals, demonstratives, relative clauses and possessive phrase all can block the occurrence of these agreement elements on the noun. This is true of *yä* too. In the possessive phrases, *yä* can occur on the possessor if and only if the possessor has not taken any modifier—an adjective, a quantifier or a demonstrative.

- e. *Both groups of clitics also have dependencies to each other.* As I will explain in later sections, if the definite article is not overly marked on a head, other elements can not be marked. In the same way, if *yä* is not overly marked on the highest modifier of the possessor, the definite article can not be marked, or vice versa.

We will see the detailed derivations each of the functional elements as well as different syntactic and post-syntactic operations to capture prevailing convergence between the functional elements.

Chapter 6

The Analysis

6.1 Introduction

As I have described in chapter 2, Amharic has virtually the most unmarked word order attested cross-linguistically as summarized in the Greenberg Universal 20 ([Cinque 2005a](#)).

- (1) ïnnä-zi-ya Kasa yä-säraččäw sost adaddis yä-sar betočč
 PL-zi-that Kasa YÄ-build three new YÄ-grass houses
 ‘those three new grass houses that Kasa build’

- (2) Demonstratives – Relative Clauses – Quantifiers & Numerals – Adjectives – Possessives–
 Complement Phrases-N

The inflectional system of the Amharic DP is more complex than this. Amharic distinguishes two number classes, plural and singular; two cases, nominative and accusative; two gender classes, masculine and feminine. Amharic nominals can also be definite or indefinite. With the exception of relational/complement phrases, all the lexical constituents in the DP may inflect for number, gender, case and definiteness.

The way the modifiers agree with the head noun in Amharic is different from the common agreement system across many of the Semitic, and even Indo-European, languages. In Hebrew and Arabic for instance, the agreement suffixes release both on the head noun and on the agreeing adjectives (modifiers). In Amharic, the head noun can be marked by the inflectional

elements (with the exception of the number marker) only when there is no preceding modifier. If there are two or more modifiers in the DP, the agreement elements obligatorily occur on the first modifier, and optionally on the rest of the modifiers.

- (3) bizu-očč-u-n räjjim(-očč-u-n) lij-j-očč
 many-pl-Def-Acc tall (pl-Def-Acc) child-pl
 ‘many of the tall children’ (accusative)

The main challenge in the analysis of the distribution of these morpho-syntactic elements is the matching of their surface distribution with their position in the syntactic projection. The other challenge is the accommodation of the analysis in hand with the analysis given for other Semitic languages as well as with the cross-linguistic theory at large.

Ouhalla analyzes the definite article in line with Arabic one. He assumes the definite article as the head of the DPs, including possessives and relative clauses, both in Amharic and in Arabic. He takes *yä* as a case marker. Den Dikken, on the other hand, takes *yä* as a LINKER inserted as a by-product of predicate inversion of the relative clauses and possessives from post-nominal positions. Both of the studies give a good starting point for the analysis of the Amharic DP. Having specific purpose in mind, however, none of them gives proper attention for the interaction of those syntactic elements. In an attempt to complement the gap I, in this thesis, attempt to derive the agreement clitics and *yä* by the same mechanism¹. I reckon that the Multiple-Agree approach proposed in Baker (2008), Hiraiwa (2001) and Zeijlstra (2004) gives the means to address the placement of these syntactic elements in Amharic DP. On the theoretical side, I will show that the data under consideration strongly supports that Multiple Agree is superior to the standard Agree to handle DP-internal agreement (concord) phenomena. The standard Agree is too restrictive in that it runs short of the power to capture the multiple realizations of the agreement suffixes in the DP. Then, Multiple/Reverse Agree avoids many of the problems of the standard Agree by creating a parallel relationship between the functional heads and the multiple lexical head in their c-command domains.

I posit that the functional projections in Amharic DP enter into the derivation with null heads. For the definite article, for instance, DP enters the derivation with a null D-head. The null head contains the semantic content of definiteness, in the sense of Campbell (1996), Lyons (1999) and Giusti (2009).

¹ See Legat2008 for similar, unified analysis of complementizers and agreement clitics.

6.2 Setting The Context: Theoretical Motivations For Multiple/Reverse Agree

Before I proceed to the specifics of my own proposal, let me shortly revise some of the most influential approaches customarily used to analyze agreement (concord) phenomena across languages.

- a. Head movement: subsequent raising and adjunction of the lexical heads to higher functional projections (Baker 1988)².
- b. Phrasal movement: raising of the phrases to the specifiers of the higher functional projections. In this case, the clitics are assumed to attach on the lexical elements either at the linearization in the PF domain or through Spec-head agreement in the syntax (Kayne 1989, Koopman 2003).
- c. Agree: long distance agreement between the functional heads and the lexical items in their c-command domain³.

6.2.1 Head Movement (Adjunction)

In many studies across Slavic, Scandinavian, Semitic and many other languages, suffixed particles are taken to be derived via head movement of the head noun to the functional heads (Baker 1988, Longobardi 1994, Ritter 1988, 1991, Siloni 1996). Considering the adjectives and the rest of modifiers as heads, it is possible to argue that the head movement proposed for other languages can capture the Amharic data. This seems promising for the fact that the adjectives and other modifiers are presumably in competition with the head noun; D attracts either the adjectives (the highest of them) or the head noun, but not both.

Even if there is an extensive research on the topic and an abundance of data from various languages, head movement, finally has been disputed as conceptually inelegant. Chomsky (1995, 1998) state that head movement violates Extension Condition and concludes that “[the] optimal design should eliminate such strange and difficult properties as strength, and perhaps remove from the core syntax such operations as adjunction of categories (XP adjunction and head

² In some works, agreement is also construed as a head-to-head pronoun incorporation (Tarald 1992). This type of agreement, however, doesn’t seem to apply for DP internal agreement.

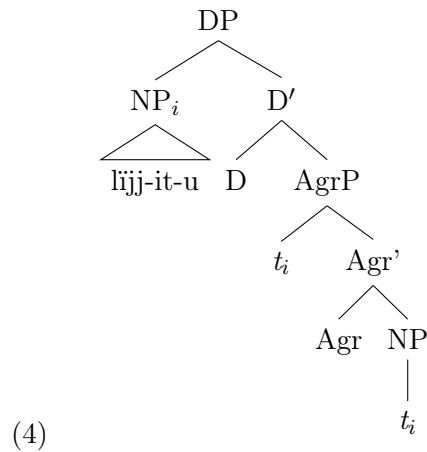
³ In some approaches, HPSG for example Anderson (1992), concord is treated different from index agreement. Giusti (2009) also argued for distinction between concord and agreement. In the standard Minimalist approach, however, concord and index agreement are treated in the same way (Collins 2004, Baker 2008, Carstens 2000, 2001).

adjunction)”. Other recent advancements in the literature also favor phrasal movement over head movement, (Georgi & Müller 2010, Laenzlinger 2005, Mahajan 2000, 2003, Shlonsky 2004, Tarald 2000, Toyoshima 2001). The head movement account is also less relevant for the data under consideration for there is a good reason to believe that these lexical heads do not move out of their respective phrases—adjectives always follow the adjectival intensifiers; numerals stay within their complex phrases, the finite verb always follows the adverbs; possessors always follow their modifiers. Meaning, the lexical heads always follow their modifiers attesting that the heads of each of the respective phrases stay in lower positions. Since there is no evident word order shift, the null hypothesis is then to assume that these heads are in situ positions.

6.2.2 Spec-head Agreement

Kayne (1989) proposed that functional heads occur on lexical elements after the raising of the latter to their specifier positions of the former. According to this analysis, if Y agrees with X, X and Y must be in Spec-head relation (Koopman 2006). The Spec-head agreement has been effectively applied to analyze the data coming from different languages both in clausal and nominal domains (Alexiadou 2001, Shlonsky 2004, Sichel 2002).

Extending the Spec-head agreement proposal to the Amharic DP, one may contend that the NP raises to the specifier of AgrP to satisfy the EPP features of AgrP. Then, an agreement relationship could be established between the Agr-head and the raised head noun in its Spec position. The agreement relation between the lexical head of the NP and the functional head, Agr, then results in the lexicalization of the gender feature on the head noun, as in (4). Activating a further raising of the NP to SpecDP, proper Spec-head agreement can be established between the D-head and the highest lexical head. The same process apparently derives the functional elements on the adjectives and other modifiers.



The Spec-head analysis, however, gets into trouble when we think of the multiple realizations of the suffixes. Take example (3) above, the definite article and the case marker occur both on the numeral as well as on the adjective. We can not get the clitics on the adjective via Spec-head agreement because SpecDP would be occupied by the numeral or its trace. Adjectives in the lower positions could not be in the specifier position of the D-head even if those adjectives obviously carry the inflectional elements. The same holds for other modifiers and higher functional projections.

In other languages too, agreement relations built across clause boundaries has been mentioned as the major challenge to the Spec-head analysis.

- (5) a. There seems to be a problem with agreement.
 b. There seem to be many problems with agreement

In these examples, the finite verb of the matrix clause agrees with DPs in the subordinate clause. This poses a problem for the Spec-head analysis since the DPs in the subordinate clause can not be in Spec-head relation with the matrix verb. There are also other evidences which demonstrate that Spec-head agreement might not be attainable. [Wurmbrand \(2006\)](#) for example argues that scope and binding facts show that some subjects remain in a VP-internal position both at LF and PF in Icelandic and German. This means that, the supposed Spec-head agreement can not be created between the subject DP and T. [Baker \(2008\)](#) also mentioned that agreement between predicate adjectives and their subjects can not be established via Spec-head in Bantu languages.

Different versions of Spec-head agreement have been proposed for different languages but I

have no space to illustrate them all here. See (Alexiadou et al. 2007, Alexiadou 2001) and the references in there for more information.

6.2.3 Agree

Agree creates a relationship between a probe and a goal (Chomsky 2000). The probe enters the derivation with unvalued, uninterpretable features whereas the goal enters the derivation with valued interpretable features. The probe scans its c-command domain and creates agreement with the head that holds the valued, interpretable instance of the feature.

Agree

- (6) A probe-category β establishes Agree with a goal-category γ iff a–d holds.
- a. β bears a subset of uninterpretable unvalued F-features
 - b. γ bears a matching set of interpretable valued F-features
 - c. β c-commands γ .
 - d. There is no intervener α between β and γ .

(Chomsky 2000)

In this type of agree derivation, all the unvalued uninterpretable features on the probe categories must be valued by their valued, interpretable counterparts. The Agree relation is created to check (value) the unchecked (unvalued) features of the probe. In this line of reasoning, the main motive for Agree relationship is the need of the Probe to delete its uninterpretable features before Spell Out. Agree assigns a value for the unspecified Probe from the specified Goal. For the standard Agree, it is necessary that the Probe has unvalued features. Unvalued features are also construed as uninterpretable. The presence of unvalued features on the Probe activates it to look down for a valued counterpart of that feature. It is also necessary that an intervening Goal does not exist between the Probe and the Goal for an Agree operation to succeed. Probing is also restricted to heads (Chomsky 2004).

However, in the recent literature, this version of Agree has been challenged both on conceptual and empirical grounds. According to Pesetsky & Torrego (2007) interpretability is a semantic notion. If syntactic derivations such as Agree & Move are dependent on the semantic notions, as the above definition of Agree entails, then Chomsky’s own Bare Phrase structure which assumes the narrow syntax to be relatively independent of the semantics interface is contradicting itself.

On the empirical side, the problems are many.

One of the main challenges comes from the concord phenomena in the DP domain. Given that Merge, Move and Agree (and their interactions in different forms) are the only derivational mechanisms in the standard Minimalist framework, then, an articulated theory needs to address the issue of DP agreement (concord). As is attested in many languages, modifiers such as adjectives, quantifiers, and determiners agree with the head noun in number and gender (Carstens 2000) and sometimes definiteness.

- (7) le mie case belle (Italian)
 the- FEM.PL my- FEM.PL house- FEM.PL nice- FEM.PL
 ‘my nice houses’ (Carstens 2000, pp.329))

According to Carstens, in the above Italian example, the adjective *belle* can not be higher than NumP. It is well known that number is uninterpretable on adjectives. Then, it is impossible to establish an Agree relationship between the adjective and the number head if the interpretable number feature on NumP are not allowed to probe.

The same is true of the Amharic data.

- (8) t’ik’it-očč-u gobäz (-očč-u) tämari-očč
 some-pl-Def intelligent(-pl-Def) student-pl
 ‘some of the intelligent students’

In this Amharic DP, the adjectives *t’ik’it’* and *gobäz* apparently agree in number with the head noun, *tämari*. The uninterpretable number features on the adjectives are supposed to probe to their interpretable counterpart on the head noun or NumP, based on our assumption of the number feature.

If we take the first alternative and assume that number is interpretable on the head noun, then we are led to suppose that multiple adjectives are probing down to a single goal. This doesn’t go well with the Activation Condition which dictates the goal to have an unvalued feature for the Agree operation to succeed. In the first place, it is not clear what unvalued feature could make the head noun active. One possibility is to assume case to be the unvalued feature on N. This presumably makes N an active goal for the adjectives to probe to it. But, the issue is, if the adjectives are probing to the number feature on the head noun, for Agree to succeed, they are supposed to have a valued case, because Agree is supposed to be a one-to-one relationship where

the agreeing heads value one another. Independent evidences also suggest that the adjectives themselves merge with unvalued case feature. Having unvalued case features, the adjectives couldn't value the one on the head noun. Even if we assume that the adjectives have valued case features, probably after they agree with the case valued heads such as D or with the DP external verbs, agreement relationship between the adjectives and the head noun won't be such promising since the case feature of the head noun would be valued by a single adjective, and the noun would be inactive for further agreement with other adjectives—contra to the empirical fact that even multiple adjectives may carry the number morpheme.

We might also assume independent functional projections for the syntactic features such as number (Ritter 1991). Taking NumP to project immediately below DP, one can activate agreement between the adjective, which raises to SpecDP through SpecNumP, as Julien (2005) assumed for the Scandinavian DP.

(9) [DP t'ik'iti [D' D [NumP *t_i* [Num' Num [FP₁ *t_i* [F'₁ F₁ [FP₂ gobäz [F'₂ F₂ [NP [tämari]]]]]]]]]]]

This analysis still faces problem when it comes to the agreement between Num and the multiple agreeing heads. It is clear that that the head noun doesn't move to higher projections in the presence of preceding adjectives. Amharic doesn't allow post nominal adjectives. If the head noun is in its base position, then, agreement relation between Num and the head noun can not be established because the interpretable feature of Num is not allowed to Probe down in the standard Agree. The same is true for the second adjective.

Negative concord also raised the same issue for Chomsky's Agree. According to Zeijlstra (2004), negation is true syntactic agreement in some languages. In strict negative concord languages such as Czech, negative markers do not always imply negative interpretation. Only one of the elements carries the negative interpretation and the rest of the morpho-syntactic elements agree with it.

(10) Milan nevidi nikoho (Czech)
 Milan neg.sees n-body
 'Milan doesn't see anybody'

(Zeijlstra 2004, p. 250:emphasis original)

According to Zeijlstra, the multiple realizations of the n-constituents, *ne* and *ni* in the above example, have no semantic import. A null operator on SpecNegP, c-commanding both n-words,

carries the negative interpretation. This type of agreement again creates another challenge to the Probe-with-uninterpretable feature story. The uninterpretable n-constituents are in lower positions than the interpretable operator is; they cannot create Agree relationship in the traditional sense.

Definiteness Spreading/ agreement available in Greek, Scandinavian and Semitic languages is another challenge for one-to-one valuation based standard Agree. In these languages, the definite article occurs on multiple lexical heads (usually adjectives). The realization of multiple definite articles doesn't encode multiple interpretations of definiteness.

Then, the question is how can these data be accommodated into the Minimalist framework ? Here is where the Multiple Agree proposal comes to the rescue.

6.2.4 Multiple Agree

As already mentioned above, the multiple realizations of the definite article and other clitics pose a major challenge to standard Agree. In an attempt to remedy equivalent problems in other languages, some credible proposals, which deal with agreement relations across multiple heads, have already been introduced in the literature. Hiraiwa's (2001) Multiple Agree is one of them. His proposal comes from the observation that a single probe may enter in agreement relationship with two goals. His data is from Japanese.

- (11) Mary-ga eigo-ga/*wo yoku dekiru.
Mary-Nom English-Nom/*Acc well do-can-Pres
'Mary can speak English well.'

In this sentence, a single probe- T enters in an agreement relationship with two DP goals and assigns nominative case to both of them. From this, he proposed an improved version of Agree which he called MULTIPLE AGREE/MOVE (multiple feature checking) in which a single probe is able to agree with multiple goals. In this system, AGREE is "simultaneous derivation" that applies to all the matched goals at the same derivational point in time.

Further interesting substantiation in support of Multiple Agree (AGREE) comes from long distance agreement (LDA) in Hindi-Urdu. In Hindi-Urdu agreement is triggered by nominative and accusative subject or object DPs. Ergative DPs cannot trigger agreement on the verbs. In bi-clausal constructions, if the matrix clause has an ergative subject and the embedded clause

an accusative object, the matrix verb (as well as the infinitive of the embedded clause) may agree with the embedded accusative object, but not with the ergative matrix subject.

- (12) Shahrukh-ne [tehnii kaat-nii] chaah-ii thii
Shahrukh-Erg branch.Fem cut-Inf.Fem. want-Pfv.Fem. be.Pst.Fem.Sg
'Shahrukh had wanted to cut the branch.'

(Bhatt 2005)

Here, the object of the embedded clause, *tehnii* triggers gender and number agreement with the matrix auxiliary, *thii*, and the main verb, *chaahii*. According to Bhatt, then, the embedded object has entered multiple agreement relationships. First, in agreement with the v of the embedded clause, an accusative case is assigned to the DP. Then, in agreement with the matrix clause T, the object DP gives rise to the realization of the number and gender agreement features on the matrix verb. This data enabled Bhatt to come up with a new version of AGREE in which a goal can enter to agreement relations with multiple probes. Carstens (2001) also made similar conclusion in her analysis of DP internal agreement in Italian and Bantu languages.

6.2.5 Reverse Agree

Even if most linguists are not explicit about it, Reverse Agree (upward) has been used in works of many linguists. Of the studies which implicitly or explicitly assume upward probing mechanism, Zeijlstra's Zeijlstra (2004) and Baker's (2008) recent works give the most conclusive argument for it. After a careful study of the DP internal agreement phenomena in Bantu and European languages, Baker concludes that agreement could be a downward as well as an upward probing process. According to him, there is no way that the predicate adjectives could be in Spec-head relation with their subjects in Bantu languages that their agreement with their subjects must be via upward probing. If he is right, then, upward probing is an indispensable agreement mechanism. To establish agreement between functional projections and lexical elements in their c-command domain; as well as the agreement between lexical elements in higher positions with that of other lexical heads, the bi-directionality of agreement is an irreducible fact of human language⁴.

Zeijlstra (2004, 2010) is probably the first person to propose Reverse Agree explicitly. He applied Reverse (upward probing) Agree in his study of negation concord across Slavic lan-

⁴See also Chandra (2007) for questioning the relevance of c-command in the computational system (note that the standard (downward) Agree is legitimized via c-command) and Ura (1996) for a related hypothesis.

guages. Observing that multiple negative elements always encode a single semantic notion, he proposed that the interpretable instantiation of negation [*i*NEG] in SpecNegP c-commands the uninterpretable counterparts in the vP domain. Then, for the agreement to succeed, the uninterpretable instance has to probe upward. He defines Reverse Agree (upward probing) as:

Agree is a relation between a probe α and a goal β , such that:

- (i) α and β are in a proper local domain;
- (ii) α has some unvalued feature [uF];
- (iii) β has a matching valued feature [iF];
- (iv) α is c-commanded by β ; and
- (v) there is no matching goal carrying [iF] in between α and β .

(Zeijlstra 2010, pp. 17)

In this approach, the valued/interpretable instantiations of the features are assumed to c-command their unvalued/uninterpretable counterparts; and hence, eliminating all the complications AC causes, the unvalued/uninterpretable instantiations of the features probe upwards.

Reverse Agree is conceptually elegant. If we follow Chomsky's (1995) reasoning that he used to reject Agr^sP and Agr^oP that functional categories must be visible to the Conceptual–Intentional (CI) system to project a functional projection, then, we are led to conclude that the interpretable instances of each of the features merge on the heads of their respective functional projections. T, for instance, merges with the interpretable instantiation of tense whereas the verb merges with the uninterpretable tense. Removing the complications that reflex feature valuation causes, we can assume a direct upward probing of V to T. We don't need to assume some superfluous unvalued features on V to activate the valuation of tense feature of it, of course, unless and otherwise there is independent evidence for the existence of such a feature.

The same holds for definiteness and negation. If Abney (1987) and subsequent authors are right in proposing a D node as locus of definiteness interpretation, then the definite article (definiteness marker) occurring on the lexical items in the complement domain must be due to upward probing. (This is true as far as we are in line with the very central premises of Minimalist approach such as Economy/Greed). DP merges with the valued/interpretable definiteness feature while the adjectives and the nouns merge into the syntax with unvalued definiteness features. Not only the definiteness but also gender feature in Amharic DP, as I will demonstrate in the later sections, merges valued on D head rather than on the head noun. The spread of the

gender feature on the adjectives depends on their valuation for the definiteness feature, and lexical gender can never spread to the adjectives. Number and case features are also in the same line.

Hence, I assume that the agreement features available in Amharic DP can best be analyzed via the upward probing approach since these features are valued in higher positions. This is the reasoning I am following in this thesis. For features that are valued in higher functional positions, upward probing is the right analysis. Since multiple adjectives probe to a single functional head parallelly, activating Multiple Agree is also inescapable⁵

6.3 Agreement Across the Regular Modifiers and the Head Noun

In this section, I will deal with the derivation of the agreement clitics on the modifiers and the head noun.

- (13) *tīlikʷ-u-n rājǰīm-u-n lǰj*
 big-Def-Acc tall-Def-Acc child
 ‘the big tall boy’(accusative)

In this example, the functional elements such as the accusative case marker and the definite article are released on the adjectives. Talking of the case feature, in the minimalist framework, DPs enter into the derivation with unvalued case feature and they get the value of the case from the case assigners (T for nominative, v for accusative) during the derivation.

- | | | | | | |
|------|-----------|-----------|------------------------------|-----------|-----------|
| | v | D | $\xrightarrow{\text{Agree}}$ | v | D |
| (14) | Person[] | Person[3] | | Person[3] | Person[3] |
| | Number[] | Number[1] | | Number[1] | Number[1] |
| | Case[Acc] | Case[] | | Case[Acc] | Case[Acc] |

The unvalued case feature on D gets its value via the Agree relation with the head-v. But, as we see from the above example, the Agree relation between the DP projection and the external case assigner is not one-to-one. The accusative case marker is realized on two heads.

⁵Cyclic Agree of the kind proposed in Haegeman & Lohndal (2010) may be used to analyze the multiple reflexes of agreement elements on the modifiers. This kind of analysis however is troublesome on the coordinate constructions and stacked CPs. I will not pursue it here.

The standard approach to deal with this issue is an indirect agreement. Assuming that the adjectives do not have access to the case assigning head, the agreement relationship is supposed to be established indirectly via the head–D (Carstens 2001). In this approach, the DP internal elements have no direct access to the verbs in clausal domain. Rather the D–head functions as a bridge between the clausal domain and the nominal domain that the case feature transfers via this head. The alternative⁶ proposal is the one in Becker (2009) in which the adjectives are argued to have direct access to the case assigning head. The standard approach is attractive for two reasons:

- a) If those authors who argue that DP is a phase, (Bošković 2005, Heck & Zimmermann 2004, Heck et al. 2008, Svenonius 2004, Bošković 2010), are right at least in some languages, Becker’s way of thinking is could not be maintained since a direct agreement between the phase-external *v* and the adjectives could not be established across the phase boundary.
- b) In Amharic, as already mentioned above, the accusative case marker is dependent on the definite marking. Unless the adjectives are marked by the definite article, they can not carry the case marker. If direct agreement between the adjectives and the DP external case assigning heads is possible, then, the dependency of the accusative marker on the definite article will remain mystery.

This leads us to assume that the adjectives get the case feature via the D–head, which is the source of the definite article anyway. Both the case marker and the definite article on the adjectives are the reflexes of the agreement of the latter with the head–D.

As the paradigm in (14) on the previous page shows, in Chomsky’s system, the D head is assumed to have ϕ features in addition to an unvalued case feature. Having valued ϕ features on D is necessary for Chomsky because the verbs are assumed to merge with the unvalued counter parts. They must be valued via Agree with D(P).

- (15) [räjjim-it-u-n lijj] mämhir-u yiwäd-at-al
tall-Fem-Def-Acc child teacher-Def 3ms.like-3fs-perf
‘the teacher likes the tall girl’

⁶The third alternative is to consider case assignment as a special operation that involves the head noun itself directly. In this line of thought, the case marking on the adjectives could be taken as DP–internal concord between the head noun and the adjectives. This is the mechanism proposed by Chomsky 2001. He assumes Concord distinct from Agree (case assignment) by claiming a “similar but distinct agreement relation” (page 42, note 6). This assumption is not attractive for it begs other questions about the mechanism of agreement, why and how the two operations differ. I will not pursue this story here. See Baker (2008) for extensive discussion on the issue, and Kayne (2005) for derivation of case in line with the standard Agree. I take the null hypothesis that Agree as the sole responsible operation for all types of agreement.

Since ϕ features of the verb are uninterpretable, they must be inherited from the DP via Agree. This kind of agreement can be achieved only if these features are visible to the DP-external agreeing heads, ie, the verbs. Specifically for languages such as Amharic where the head noun is not overtly marked for these ϕ features, activating adjectival probing to the head noun doesn't seem the right analysis. The empirical data shows that the lexicalization of the ϕ features on the modifiers depends on lexicalization of the definite article on them (the modifiers). I have also mentioned that the case marker occurs on the adjectives only when the adjectives are marked by the definite article. This dependency on the definite article is evident for the gender and number features too.

- | | | | |
|------|---|------|---|
| (16) | a. räjjim-it-u lij
tall-Fem-Def child
'the tall girl' (feminine)
b. *räjjim-it lij | (17) | a. räjjim-očč-u lij-očč
tall-pl-Def child-pl
'the tall children' (plural)
b. *räjjim-očč lij-očč |
| (18) | a. räjjim-u-n lij
tall-Def-Acc child
'the tall boy' (accusative)
b. #räjjim-n lij ⁷ | | |

As the ill formed forms in the 'b' examples reveal, the occurrence of the gender, the number and accusative case⁸ markers on the adjectives is dependent on the definite article.

From this, I infer that the adjectives acquire not only the definiteness feature but also the rest of the features (number, gender and case) from head-D. This generalization is also substantiated by the indefinite noun phrases in which number and gender agreement can never occur on the adjectives even if the head noun is feminine or plural.

- | | | | |
|------|--|------|--|
| (19) | räjjim-(*očč) lij-očč
tall-(pl) child-pl
'tall children' | (20) | and-it räjjim-(*it) lij
a-Fem tall-Fem child
'a tall girl' |
|------|--|------|--|

⁷If generic reading assumed, the phrase could be grammatical. See section 6.6.2 on page 134 about case feature in generic environments.

⁸ There are some complications that the case and definiteness features causes in their relation with the proper nouns, demonstratives, pronouns and nouns in generic environments. We will come back to the issue in later sections.

- (21) and-it räjjim-(*it) set
a-Fem tall-Fem lady
'a tall lady'

The example presented in (20) quite interestingly proves the point that the agreement clitics on the adjective have nothing to do with the head noun. As we can see from this example, even if the indefinite article is marked by the gender marker, assigning the noun phrase a feminine interpretation, the adjective is not agreeing with it. This makes it clear that the spread of a gender feature to the adjectives can never happen in the absence of the definite article (or D-head if we assume that projection of D is restricted to definite noun phrases). The same is true for (21) where the head noun is inherently feminine. The adjective is still not agreeing with the head noun assuring that the features of the head noun can not spread to the modifiers. The gender marker on the adjectives is the reflex of this agreement between them and D.

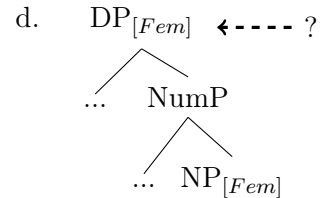
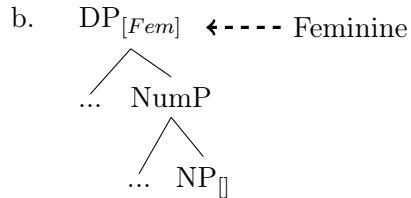
There is an issue that immediately arises when we consider examples like in (21). That is about the interaction between the lexical and the functional gender values. Here, I am claiming that the gender feature is valued on the D-head, and hence the adjectives and other modifiers get the feature, not from the head noun itself, but from D. Since D doesn't select the head noun directly, one may ask about the interaction of the gender value in D and that of the noun. To make the issue clear, let's assume that D merges with the feminine gender feature, whereas head noun is inanimate. Provided that the interpretation of gender on inanimate nouns is vacuous⁹, how the gender feature of the D would match with the inanimate noun? Or, even the worst scenario, we might assume that the noun merges lexically masculine, say a 'bull' or 'husband', while D is valued for feminine gender. How would the two incompatible feature values live together in the same DP?

The way the gender feature mismatch is handled is interesting. When D merges with feminine feature, and the head noun is lexically inanimate or masculine, the interpretation of the feminine marker turns from feminine to diminutive. That is where the controversy of diminutive versus feminine marking of *-it* sparks from among some linguists working on Amharic.

⁹This doesn't include personified inanimate objects

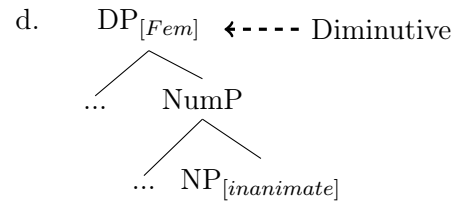
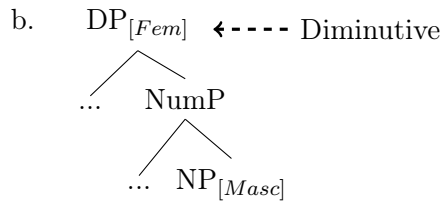
(22) a. addis-it-u lij
 new-Fem-Def child
 ‘the new girl’

c. addis-it-u lam
 new-Fem-Def cow
 ‘the new cow’



(23) a. ?addis-it-u korma¹⁰
 new-Fem-Def bull
 ‘the new bull’(small)

c. addis-it-u bet
 new-Fem-Def house
 ‘the new house’(small)



As the ‘a’ and ‘b’ examples and the patterns presented immediately below each of them as ‘c’ and ‘d’ respectively illustrate, the interpretation of the gender marker seems to shift from gender to diminutive based on the lexical feature of the head noun. Though pattern presented in (22-b) is the most prevalent form in the language that I am assuming it to be the default value, the gender marker seems the reflex of at least two layers of conceptual information—[Fem] and [Dim]. If the head noun merges with an unspecified gender feature, as the example in (22-a) and its pattern in (22-b) demonstrate, the gender feature on D (reflected by the gender marker *it*) values the whole DP a feminine interpretation, via its default value, Fem. If the head noun is lexically inanimate or masculine gender valued, however, the default value of the gender feature on D conflicts with that of the head noun. This conflict between the values finally “suppresses” or “peels off” the one on D. As a result, its second value (diminutive)—which causes no conflict with the gender feature of the head noun—prevails. The patterns presented in (23-b) and (23-d) illustrate this case. This means that the mismatch between the default value of the feminine marker and the lexical feature of the head noun is resolved by a repairing mechanism that “peels off” the default value and uncovers the second value on the gender marker. The

¹⁰This is possible only in colloquial Amharic

detail is outside the scope of this thesis. See [Starke \(2009\)](#), [Tarald \(2010\)](#) and [Borer \(2005a\)](#) for different approaches on the mapping between conceptual information (feature bundling) and lexical terminals.

Turning back to the number feature, the examples presented in [\(17-a\)](#) and [\(19\)](#) reveal that the number marker agreement on the adjectives is dependent on their agreement with the D. As the example in [\(19\)](#) specifically illustrates, if the adjectives don't agree with D, they don't come adorned with the number morpheme. Whether the head noun is marked with the plural marker or not doesn't make any difference for the adjectives. From this we can further assume that the number feature, just like the gender and definite features, is also originating on D. However, the head noun is still marked for number regardless of the definite article. One way or another, this tells us that the head noun doesn't have to agree with D to receive the number value. Unlike the one on the adjectives, the number feature of the head noun doesn't depend on the definite article or D-head. There is also independent evidence from the Semitic literature that number feature projects in independent syntactic projection—NumP. Since number morphology is one of the most prevalent elements in the DP domain across Semitic languages, arguing that number is not a lexical property of the nouns, [Ritter \(1991\)](#) proposed a functional projection—NumP. Since that time, a couple of pieces of independent evidence have been presented in favor of NumP not only in Semitic but also in many more languages. If that is true, then, we can say that the head noun in Amharic DP is directly probing to NumP while the adjectives acquire the number feature via their agreement with the D-head. This means that number feature is available in two different positions in Amharic DP—unlike what is usually assumed across languages—one on NumP and another on D. The Num feature on NumP values the head noun while the one on D values the adjectives.

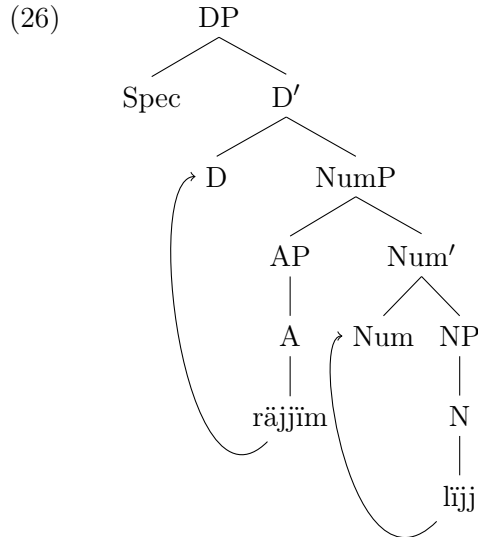
One of the most interesting data in support of the assumption that languages can have number feature on D comes from Finnish. In Finnish, if the noun phrase contains a numeral, the head noun stays unmarked for number. In this case, the noun phrase always triggers singular agreement on the verbs—like in [\(24\)](#). If a determiner precedes the numeral, however, the determiner must be marked by the plural morpheme. Again, the whole noun phrase triggers plural agreement on the verbs—like in [\(25\)](#).

- (24) kolme auto-a aja-a tiellä.
three car-sg drive-sg road
'Three cars drive on the road.'

- (25) Ne kaksi pien-tä auto-a seiso-ivat tiellä.
 those.pl two.sg small-sg car-sg stand-past.3pl road
 ‘Those two small cars stood at the road.’

Brattico (2010)

As we can see from the example in (25), the adjective and the head noun remain singular even if the whole noun phrase triggers plural to the DP external verb. Interestingly enough, as Brattico points out, if the adjective precede the numeral, it agrees in number with the determiner. Abstracting away from the detail of the story, the Finnish agreement system indicates that the language has only the upper instance of number feature. This fits well with my assumption that ϕ , including number, features of the adjectives must be acquired from D–head. As Brattico suggests, the number feature doesn’t originate on the head noun. It is the feature of higher projections and hence visible to the DP external probes. The ϕ -features of the noun phrase complex should also become accessible to the DP-external probes via the highest head, which is D. If the verbs have to agree with the subject DP, the number features of the subject DP must be valued on D. That is what the data from both Amharic and Finnish noun phrases confirm. The number feature in Amharic however is slightly different since it apparently is available in two positions—both on D and Num.



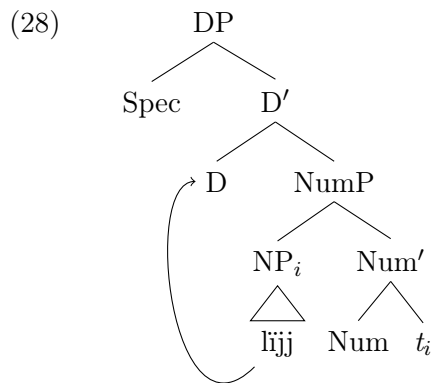
I have also suggested that, following Ritter (1993), number feature might merge in Num head across Semitic languages. Then, the issue in the Amharic DP is how the number feature could be valued on the external D if it merges in lower position, Num. There are two ways to go around this issue. We can either assume the number feature of the D directly merges on it, or acquired it via agreement from Num head. If we take the first alternative, still the problem is to explain how the two number features could interact with each other to give identical values both on the head noun and on D (on adjectives indirectly). It is not clear to me how we can achieve this. Therefore, with no further discussion, I take the latter one to be right, and assume that the D agrees with the Num-head before it agrees with the adjectives, as illustrated in (35) on page 98. That will give D the number feature required for valuing the adjectives as well as the verbs of the clausal domain.

I also assume the Num to be a phase in the sense of Svenonius's (Svenonius 2004) proposal that nPs, in correspondence to vP, are phrases (though I am abstracting away from the story of phase triggers and nP projections just to simplify my system). Assuming that movement out of the phase is possible only via the edge (SpecNumP) (Chomsky 2000, 2001, Svenonius 2004), and taking for granted that Merge is preferred over Move, (Chomsky 1995, 1998), the lowest modifier merges in SpecNumP and denies the NP access to D. This means that the phase on NumP blocks the head noun from probing to the external D whenever a modifier merges into the derivation. If no modifier merges into the derivation, the noun phrase will raise up to SpecNumP and probe to the external D. This properly explains why the head noun behaves differently of the rest of the lexical elements in the DP. Unlike the one on the modifiers, the number marker of the head noun is independent of the definite article, as the examples in (16-a) and (19) on page 90 show. In plural noun phrases, the number marker of the head noun is obligatory on the head noun regardless of the presence of the definite article and modifiers. The head noun must have the number marker whether it is definite marked or not, whether there are preceding modifiers or not. Secondly, with the exception of the number marker, the head noun can not carry any of the agreement elements in the presence of a preceding modifier. What I want to stress here that the ban on agreement elements on the head noun in the presence of a preceding modifier is very strong. The avoidance of agreement clitics of the head noun can not be compared with that of optionality of the clitics on lower modifiers. When there are multiple modifiers, the agreement clitics may optionally occur on lower modifiers. This is not possible for the head noun. If there is any modifier preceding the head noun, occurrence of the agreement elements on the head noun is totally unacceptable.

Let's see some examples to make the case clear.

(27) lijj-it-u

In this example, the head noun is adorned with the definite and gender markers just because no modifier is occupying SpecNumP, an escape hatch for the NP. The head noun is introduced into the syntax, by assumption, with unvalued gender and unvalued definiteness features. The valuation process is then straightforward. The head noun agrees with Num-head. Since the singular instantiation of the number feature in Amharic has no morphological exponent, we don't see any visible effect from this agreement operation. Then, since there is no modifier preceding the head noun in this case, the NP raises to the edge of the phase (SpecNumP). At this point, since the NP is on the edge of the phase, the head noun can probe up to the external D. This agreement between D-head and the head noun results in the lexicalization of the gender marker and the definite article on the head noun.



If an adjective is introduced into the DP derivation, however, the definite article, gender, number and case markers occur only on the adjective. Following Cinque (1994) and his subsequent works, I assume the adjective as phrasal constituents projecting in the specifiers positions of functional projections. Since SpecNumP is free, the first adjective introduced into the derivation occupies it. I assume NP, NumP and DP to be the only functional categories that necessarily merge into the derivation. Other functional categories, are introduced in the course of the derivation from the grammatical features of the lexical categories themselves (Bošković 1997, Franks & Pereltsvaig 2004). This line of analysis presupposes that SpecNumP could not be reserved for a specific category. The phrasal category (modifier) introduced earliest into the derivation reside in SpecNumP. The Hierarchies of the modifiers in the syntax tree are determined, not by unique features that fix them on specific positions, rather by the timing of their merge. If the

numeration has an adjective and a relative clause, for instance, Merge introduces the adjective before the relative clause. Provided that Merge is a bottom-up building operation, the earlier merging of the adjective puts it in the lowest free space available—namely SpecNumP. Then, the subsequent merge puts the relative clause in a higher position than the adjective. The implication of the derivational system is clear—the earliest modifier merging in to the derivation occupies the lowest open position available. If the numeration has only a relative clause, merge introduces the relative clause in SpecNum as it is the lowest available free position. This means that the relative clause merges in higher positions, say SpecFP, only when SpecNumP is occupied. This type of derivational Merge correctly blocks the NP from raising to SpecNumP every time any modifier merges into the derivation.

(29) *tīnant yā-māt'a-čč-u-n tāmari*
 yesterday YÄ-came-Fem-Def-Acc student
 ‘the student who came yesterday’ (feminine & accusative)

(30) *räjjiim-it-u-n tāmari*
 tall-Fem-Def-Acc student
 ‘the tall student’ (feminine & accusative)

(31) $[_{DP} [_{D'} \underbrace{D}_{\uparrow} [_{NumP} [_{AP} [_{A} [räjjiim]]]] [_{Num'} Num [_{NP} [tāmari]]]]]]$

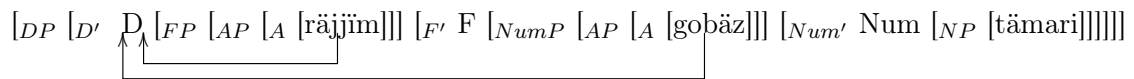
At this point, one might question about the unvalued features of the head noun in the phase. Given that we are assuming that the head noun merges with unvalued features and that the head noun is not agreeing with the D-head incase modifiers merge, the issue is how the unvalued features of the head noun get valued/deleted. Couldn't they cause crash? To run out of this problem, I have to make a further assumption w.r.t Agree operation. Following Preminger (2010, March, 2011), I assume that failure of agreement causes crash only when locality effects are not causing the failure. Incase the failure is due to locality, the unvalued features can be “systematically tolerated”. That means that if unvalued features remain unvalued, they basically cause crash unless and otherwise the valuation is banned due to locality effects. Here the valuation of the features of the noun failing due to the intervening phase. In this kind of situation, the unvalued features can be tolerated.

When multiple modifiers merge into the derivation, all of them probe to the external D parallelly. Multiple Agree enables the lexicalization of the functional elements on the modifiers.

- (32) räjjim-it-u-n gobäz(-it-u-n) tämari
 tall-Fem-Def-Acc intelligent(Fem-Def-Acc) student
 ‘the tall intelligent student’(feminine & accusative)

This explains why the realization of the agreement clitics on the modifiers seems dependent on the realization of the definite article on them. I have already mentioned that all the ϕ -features of the modifiers are inherited from the D-head via Reverse Agree. If the adjectives do not probe to D, which is the source of the case, ϕ and definite features, they won’t be able to value their unvalued ϕ -features.

- (33)

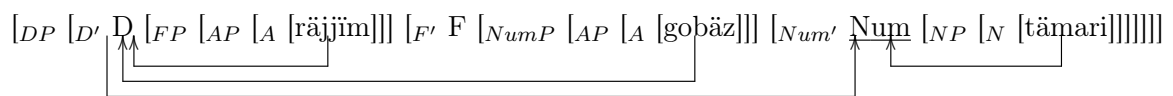


Agreement between the unvalued instance of the definite feature on the adjectives and the valued counterpart on the D-head is sufficient to copy the remaining sub-features to the adjectives.

This means that the modifiers do not agree with the number projection directly, as nor do they with other functional projections except with D. Merging of the modifiers in SpecNumP doesn’t allow them to trigger agreement with NumP since the two heads are not in a c-command relationship. So, for the adjectives to get number feature, they have to probe up to D. D itself gets the number feature from the Num head. Agreement of modifiers is always effected via the external D. This makes the direct agreement between the head noun and the modifiers impossible.

- (34) räjjim-očč-u-n gobäz(-očč-u-n) tämari-očč
 tall-pl-Def-Acc intelligent(pl-Def-Acc) student-pl
 ‘the tall intelligent students’(accusative)

- (35)



This way, all the modifiers parallelly agree with the functional elements whereas the head noun gets blocked inside the phase head—NumP. The parallel agreement of all the modifiers with the functional heads is what we call Multiple Agree. As demonstrated in (35), both of the adjectives *räjġim* and *gobāz* are directly probing to the external D. As argued by Zeijlstra (2004, 2010) and Hiraiwa (2001), Multiple Agree is a direct probing of multiple heads, all at the same time. In the same spirit, I am here assuming that all the modifiers in the DP are directly probing to D. Since all lexical heads of the modifier phrases are assumed to merge into the derivation with unvalued Def feature, they all probe to D to value their unvalued feature.

Unlike the standard Agree, probing is upward here. To explain the fact that the adjectives is dependent on the definite article, we have to assume upward probing. The adjectives get the features via probing to D. This is what we called above Reverse Agree. Even if we do not manage to eliminate downward probing all together, as the D head still has to agree with Num head to get the number value, Reverse Agree gives us the most cogent explanation for the dependency of adjectival agreement on the definite article (or D-head).

To explain the dependency of the functional elements on D, we have to further assume that (Reverse) Agree is an exhaustive operation. As Chomsky explicitly or implicitly assumes virtually in all his works (2001, 2000, 1995), and as Béjar & Rezac’s (2009) words explicitly claim “agreement is an all-or-nothing (AON) operation”. This means that whenever the adjectives probe just for definiteness feature, they end up getting marked with all the features available as a cluster on D-head, including the definite article, the number, gender and case markers. I follow Béjar & Rezac (2009, p.45) who specifically argue a match between a single subset feature (uF’) of a feature cluster (uF) with a subset feature (iF’) of another feature cluster (iF) is sufficient to trigger Agree between the two feature groups/clusters (uF & iF). They state “when a feature [cluster] [uF] matches with a goal feature [cluster] [F’], Agree copies the feature structure containing [F’](ie., *all features that entail[F’] to [F]*); this constitutes valuing”¹¹. The spirit of their claim is that the probe and the goal features should not have identical feature compositions—“unmatched segments (sub-features) within such a structure pose no problems”. Note that for the idea of Exhaustivity, it is not the head that really matters. It is rather the cluster of features in the head that matters for Agree. Assume D as the composition of multiple sub-features (Fs), say case, definiteness, number and gender of which some of them form clusters. We can think of, for instance, gender, number, case and definiteness forming a cluster, cluster α . Even if the adjectives have only the unvalued definiteness feature, the match between the unvalued definiteness feature [uDef] on the adjectives is sufficient to trigger agreement or copy

¹¹The emphasis is mine; and I add [*cluster*] to help the reader understand the sentiment of their claim since they are using *feature* in a slightly different sense.

all the features of the cluster α to the adjectives.

Following this line of reasoning that “a feature bundle is organized into subsets” of features, (Béjar & Rezac 2009, p.42), I assume that the features in D are organized into subsets/clusters. Gender, number and definiteness and case form a cluster. Any head that gets Def feature also gets all the other features automatically. The adjectives probe because of the unvalued Def feature they merge with, but other features are lexicalize on them as their reflexes of agreement with D— provided that all the features form an inseparable features chunk(cluster) on D.

This properly explains not only the dependency of the feature dependency on the modifiers in definite nouns, dependency on Def feature, but also the lack of feature spreading in indefinite noun phrases. As we have seen above, in the indefinite noun phrases the gender and number features do not spread to the adjectives, ref513a repeated here.

- (36) and-it räjjim-(*it) lijj
 a-Fem tall-Fem child
 ‘a tall girl’

In this example, the gender marker occurs only on the indefinite article(number one), but not on the adjective. One might then question how the adjectives value their unvalued Def feature without probing to D?, or the other way round, how could they probe and agree with D without getting the gender feature? Since we already assumed that adjectives merge with unvalued Def feature, agreement between them and D is unavoidable. But, the solution lies on the clustering. Assuming that the indefiniteness feature and gender features do not form a cluster—contra to the definiteness and gender features in definite noun phrases—we can get the right result that the adjectives get the indefiniteness value (value their unvalued Def) without getting the gender feature.

6.4 Agreement in the *Yä-phrases*

In this section, I will deriving *yä* and the agreement clitics in relative clauses, possessive and complement phrases.

6.4.1 Relative Clauses

I have already argued in Chapter 4 that relative clauses and possessives, and all *yä-phrases* for that matter, are CPs. Relative clauses are different from other *yä-phrases* for they have TP complements.

Relative clauses: $[_{CP} [_{TP}]]$

Possessive phrases: $[_{CP} [_{DP}]]$

Complement phrases: $[_{CP} [_{NP}]]$

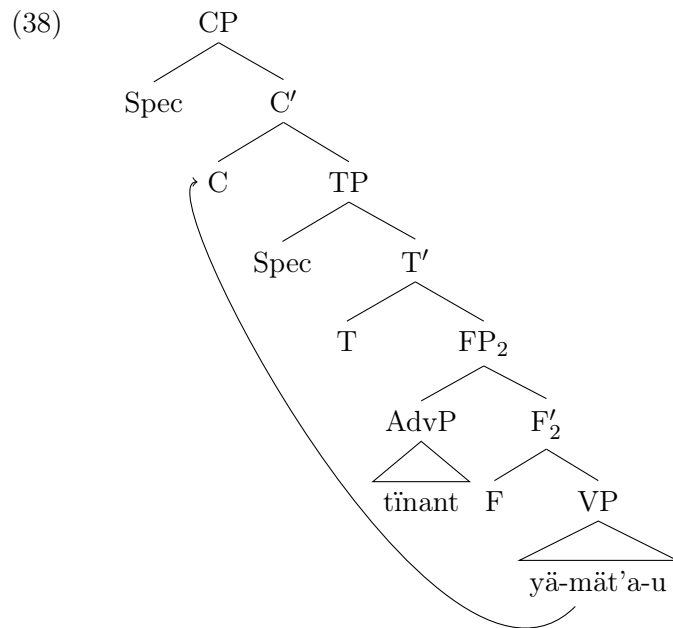
Following Cinque (2010) and Ouhalla (2004), I assume relative clauses to merge in the specifier positions of functional projections between DP and NP.

Deriving the relative clauses doesn't need further complications then. The system we have developed above can naturally assimilate them.

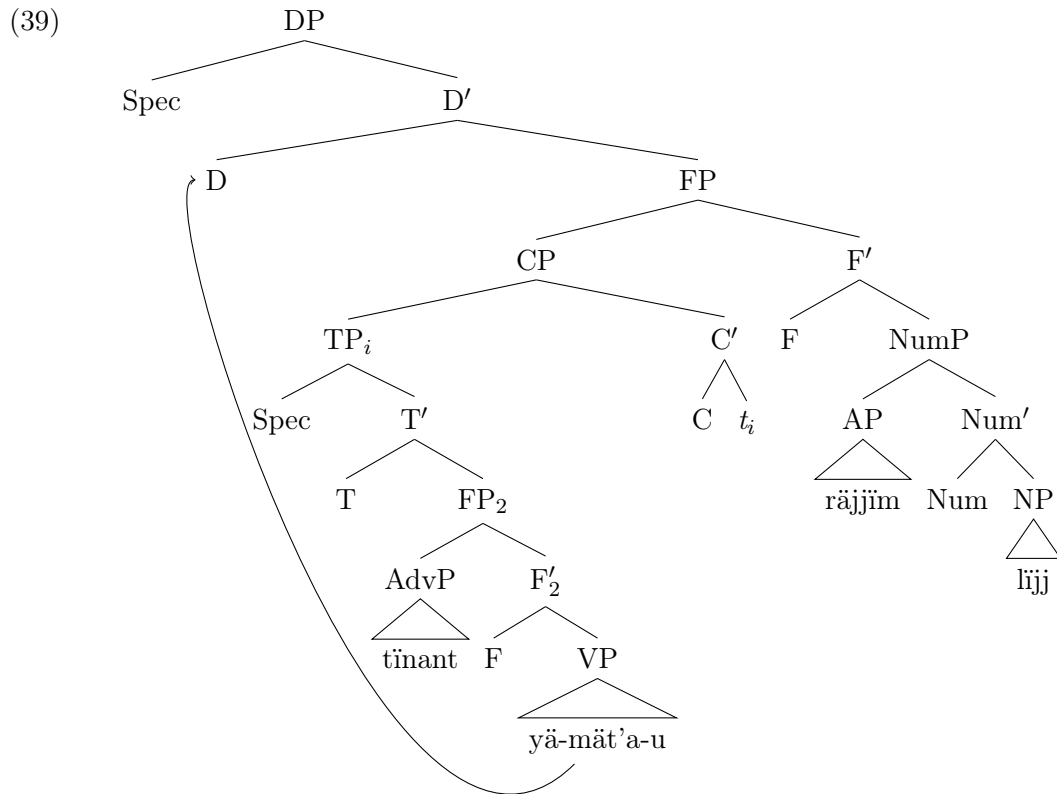
Just like the lexical heads of the APs—the adjectives—probe to D, the syntactic/lexical head of the TP—the finite verb—probes up to C and agrees with it. This agreement relation between the finite verb and the C-head lexicalizes *yä* on the finite verb—in exactly the same way to that the definite article and the rest of agreement clitics are attached on the modifiers and nouns.

Following the agreement between the null C head and the finite verb, we can assume, either a direct agreement the finite verb and the external D or agreement with the D only after the raising of TP to SpecCP. Though neither of the alternatives has a serious undesired consequence on my analysis, the latter alternative is advantageous for theoretical reasons. If the CPs are phases, direct agreement between the finite verb and the external D couldn't be effected across the phase boundary. For that reason, I assume two cycles of agreement. First, the finite verb of the TP agrees with the C head—lexicalizing *yä* on the verb.

- (37) *tinant yä-mät'-a-u räjjim lijj*
 yesterday YÄ-come-3ms-Def tall child
 'the boy who came yesterday'



At this point, the TP raises to SpecCP so that agreement between the finite verb and the external D would be possible.

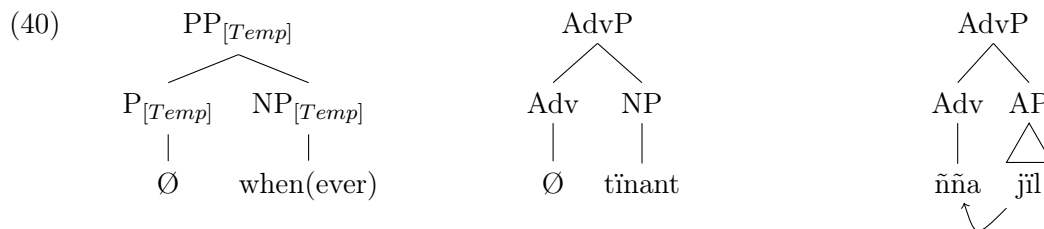


This agreement relation lexicalizes all the ϕ features, the definite article and *yä* on the finite verb.

As already mentioned in chapter 4, the baffling thing about the distribution of *yä* is the fact that it skips adverbs while it occurs on adjectives in the relative clauses and possessive phrases respectively. This is one of the main reasons that lead linguists to think of *yä* of the relative clause as distinct element from that of the possessives. While there is sufficient evidence in the literature that adjectives and adverbs are corresponding elements (some people even considered them as they are the same categories) why on earth does *yä* favor one over the other? This is not a trivial issue. Every linguist working in Amharic noun phrases has faced this puzzle at some point. Why *yä* skips adverb phrases and non-finite verbs while it happily occurs on adjectives and other modifiers? It seems that the heads on which *yä* is occurring have certain common properties or features though finding out what features these heads might have is not

such a trivial issue. This calls even deeper questions—what makes a head element different from a non-head element? What makes the head noun and the finite verb distinct elements from all other constituents in their projections? The technology we have doesn't seem to give straight answers to these questions. Though little understood concept by itself, *finiteness* apparently gives a proper explanation for the distribution of *yä* in the relative clauses. But, can we extend the same concept in the nominal domain? Some people seem to have a yes answer to this question—though less promising in practice. The fact of the matter is, explaining the features that makes heads different from non-heads is a notoriously difficult task.

Therefore, admitting the fact that the fundamental issue is still on stake, I temporarily suggest two alternative explanations why *yä* and the definite article, and the case marker are skipping non-finite verbs, intensifiers and adverbs while occurring on finite verbs, adjectives and quantifiers. My first suggestion deals with adverbs—probably they have some locality or some internal structural factors that blocks them to trigger agreement. The idea is, adverbs might not be truly comparable with adjectives in this language. Even if we traditionally call some time and place indicator elements in the language ‘adverbs’, they might practically be other syntactic categories. The element we have seen above as adverb—*tinant*—is actually a noun, probably derived to adverb by an abstract head, as argued by [Bresnan & Grimshaw \(1978\)](#), and recently by [Barrie \(2007\)](#) for English adverbs. Even the elements that are dubbed pure adverbs in the languages such as *jülñña* (‘badly’) are decomposable into some other constituents—adjectives and suffix items—*ñña* in this case.



This means that the so called adverbs phrases in the language could be some functional heads taking APs and NPs as their complements. [Amare \(1995\)](#) argues this to be true. If this is correct, then, it might be the case that the adjectives and the nouns which are in the complements of those PPs (AdvPs) are heavily buried inside those functional heads that they can not probe to the higher functional projections. For the adjective *jil* modifying a possessor noun, for instance, it doesn't have to cross any layer of functional projections, provided that AP is the extended projection of A anyway, to access the C-head while it has to cross a PP (or AdvP) in the adverb phrases. Furthermore, functioning to specify time and place just like

prepositions, those functional projections could actually be PPs, as [Bresnan & Grimshaw \(1978\)](#) suppose. Given that PPs are usually assumed as phases, it is then less likely that the adjectives and nouns in the complement domains of these PPs would have access to the external domains. This is presumably true. None of the elements in supposedly adverbial phrases do agree in definiteness, case or ϕ features.

My second suggestion deals with non-finite verbs. Even if they are lexical, as already mentioned in [4.4 on page 45](#), non-finite verbs such as gerunds and infinitives couldn't host *yä* as well as the definiteness and case markers. To exclude them from the agreement system, probably a plausible explanation comes from the idea of extended projection introduced by [Grimshaw \(1990\)](#). To her, functional projections are extended projections of the lexical heads. Following her, [Szabolcsi \(1992, 1994\)](#) further argues that NP is analogous to VP while the DP is to the CP.

- (41) a. [CP C [TP T [VP v . . .]]]
b. [DP D [PP (P) [NP N . . .]]]

([Pesetsky & Torrego 2004](#), [Gallego 2010](#))

Every category inside the NP is assumed to be inside the extended projection of N, and every category inside VP is that also inside of the extended projection of V. Following this line of thought and assuming [Wurmbrand's \(2004\)](#) claims about the small clauses, in which non-finite verbs merge, that they might originate in the complement domain of the finite verbs, we can conjuncture that these small clauses are in the extended projection of the finite V. Assuming that only heads of projections (I have been calling them *lexical/syntactic heads* in the above sections) trigger agreement with the functional heads, it is only the finite verb—being the only *head* of the VP projection—that can probe to C and D.

Note at this point that we are excluding adjectives and other modifiers in the nominal domain from the extended projection of the noun, as suggested by [Szabolcsi and Gallego](#). Following [Szabolcsi](#), we can assume that these lexical elements are able to head their own extended projections—AP, DemP and QP—in the DP. This makes them eligible to trigger agreement with the functional heads. Being in the extended projection of adjectives/quantifiers and verbs, intensifiers and non-finite verbs respectively, on the other hand, would fail to trigger agreement with the functional heads outside of the their dominating extended projections.

This gives us at least a closer explanation why heads of projections agree with definite, case, gender and number features while presumably non-heads fail to do so. As we will see in [section 6.4.3](#),

the assumption that only heads of extended projections trigger agreement also seems to explain why the complement phrases couldn't agree with D and the noun can, while both parties are technically in *equidistance* to D.

6.4.2 Possessives

As I have already argued for the relative clauses, *yä* is the realization of the agreement between the functional C-head and the lexical heads its c-command domain. This analysis extends to the possessives with an interesting distinction which is already observed by many linguists. In the relative clauses, *yä* virtually always occurs on the finite verb. In the possessives, on the other hand, the distribution of *yä* is multifaceted. If the possessor has no any modifier, *yä* occurs on the possessor itself. If the possessor has a modifier, then, *yä* occurs on the modifier.

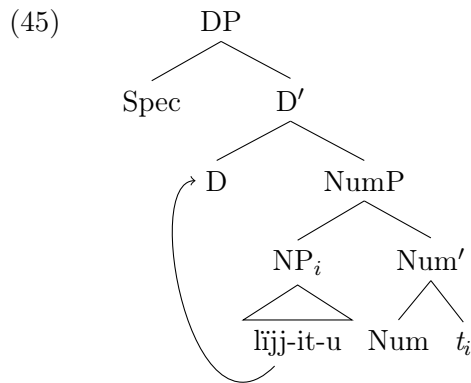
- (42) [yä-lijj-it-u] addis bet
 [YÄ-child-Fem-Def] new house
 'the girl's new house'
- (43) [yä-räjjim-it-u lijj] addis bet
 [YÄ-tall-Fem-Def child] new house
 'the tall girl's new house'
- (44) [tinant *(yä)-mät'-ačč-u (yä)-räjjim-(it-u) lijj] bet
 [yesterday YÄ-come-Fem-Def (YÄ)-tall-(Fem-Def) child] house
 Lit 'the tall girl who came yesterday's house'

In (42), both *yä* and the definite article occur on the possessor noun itself. When the possessor noun is modified by an adjective, however, as in (43), both *yä* and Def occur on adjective¹². As already mentioned in the introduction chapter and in the previous sections of this chapter, this pattern is exactly the same as what we have seen about the definite article, the gender and case markers. All of them shift to the modifier if there is any. They reflect a relation between the lexical heads and the syntactic projections. The only exception we see in the possessor phrase is the prefixhood of *yä*.

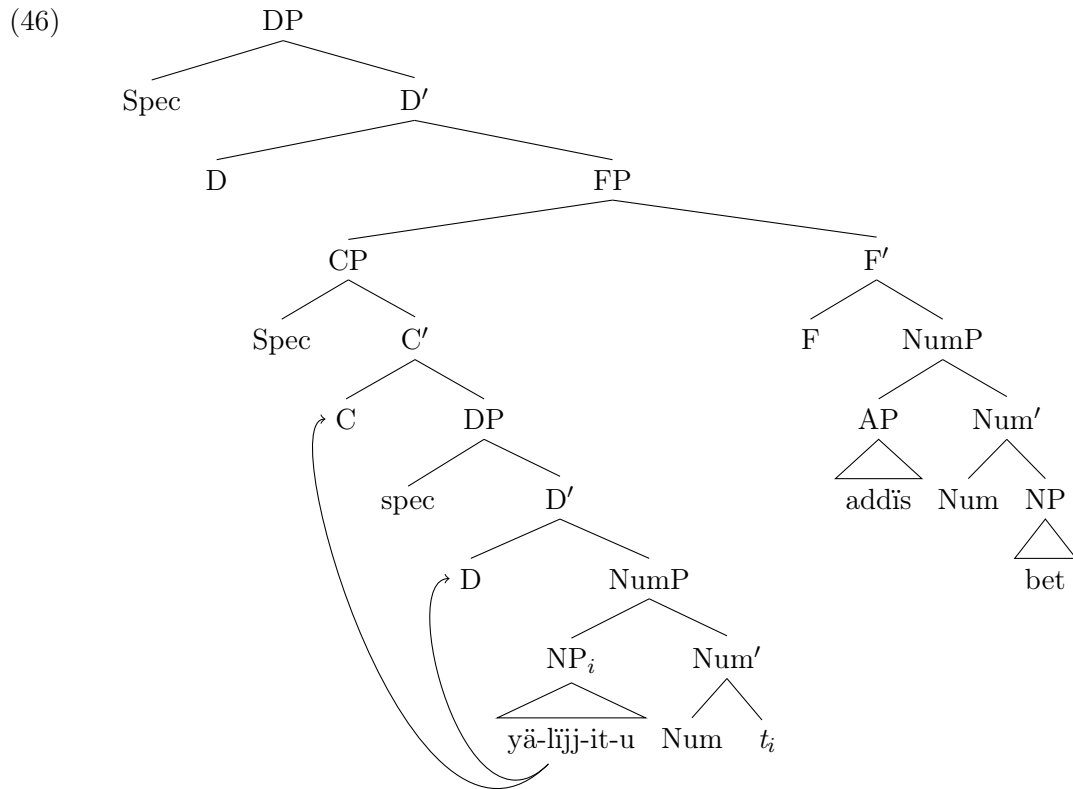
¹² Note that the definite article in all of the above examples has nothing to do with the head noun, nor with the outer DP. It is restricted to the possessor phrase, as argued by Den Dikken. See §5.3.

Given that we have assumed *yä* as the lexicalization of the agreement between C-head and lexical elements uniformly in all the *yä* phrases, the possessor DP in the possessives must be dominated by CP. Though possessive phrases are usually taken as DPs in the literature, taking the attributizing properties of *yä*, and the predication properties they manifest as a point of departure, as explained in chapter 4, I assume them to be dominated by CP projection.

As we well know from the Minimalist literature, the derivation proceeds from bottom to top building up constituents. First, the D-head of the internal DP projection agrees with the closest lexical head in its c-command domain. In (42), since there is no preceding adjective modifying the possessor noun, the possessor itself probes to the internal D and agrees with it—resulting in the lexicalization of the internal D on the possessor itself.

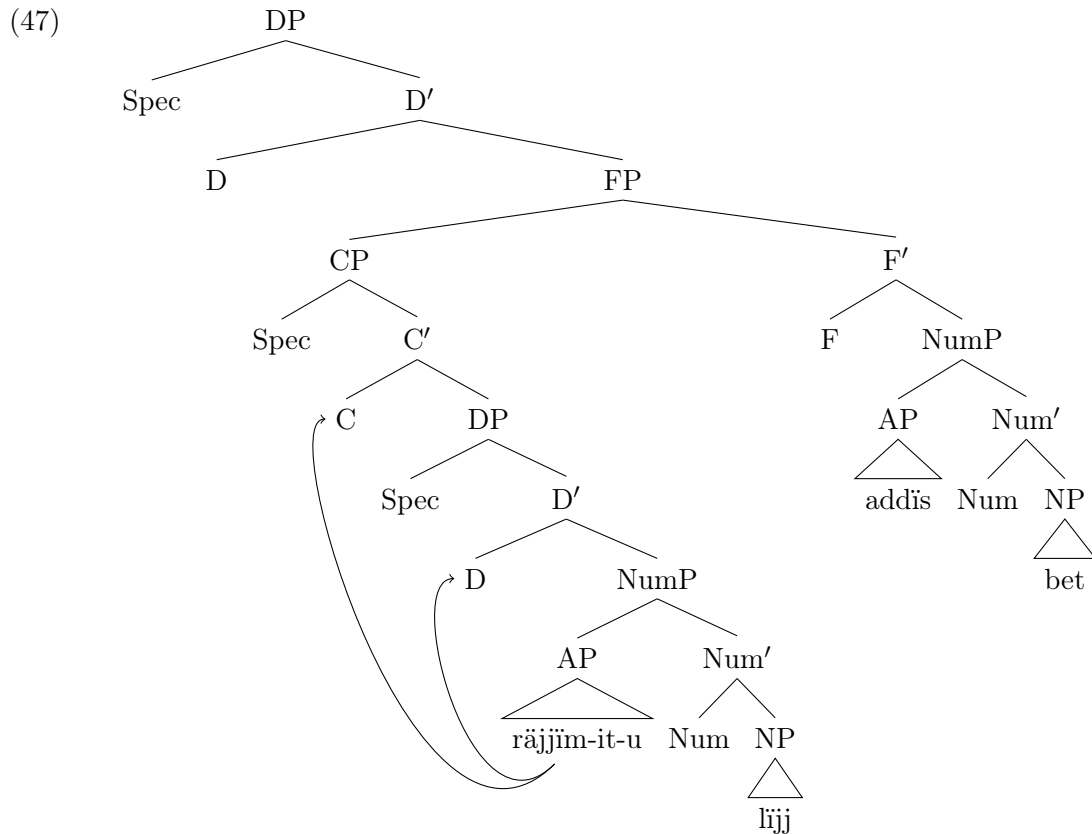


At this point, the highest functional head of the possessive phrase, which is C, merges. The merging of the C-head enables the possessor to probe further up to C. This agreement relation between the possessors on SpecNumP and the C-head lexicalizes *yä* on the possessor.



As we can easily see from the tree structure, the definite article and gender marker of the possessor phrase is restricted to the possessor DP itself. This explains why the definiteness marker of the possessor doesn't scope over the head noun, *bet*, and its modifier adjective-*addis*.

Turning back to the example in (43) on page 106, the only new thing about this construction is the presence of a modifying adjective preceding the possessor noun. In this case, the agreement clitics are realized on the adjective, instead of the possessor. This is a simple replication of the agreement system we have seen on regular noun phrases in the above sections. We don't need to devise a new system for it. It just follows the proposal we have in § 6.3 on page 88. The possessor is blocked by the phase projection, NumP, and the adjective agrees with the functional projections.



NumP is assumed to be a phase, and the escape hatch for the head noun (the possessor in this case) is occupied by the adjective. This blocks the possessor from raising out of NumP. Being a lexical head on the edge of the phase, the adjective agrees with the higher functional projections—resulting in the lexicalization of not only the agreement clitics but also *yä* itself on the adjective.

The relativized possessor phrase in (44) is also a good example to show the perfect homogeneity between the agreement clitics and *yä*. *Yä* and the other agreement elements occur obligatorily on the highest modifier, which is the first relative clause, and optionally on the lower modifier, which is the adjective. This is a prototypical agreement pattern we have seen above. When two or more modifiers are preceding the head noun (or the possessor), the first one gets marked by the agreement morphemes obligatorily and the latter ones optionally. Since optionality is persistent phenomenon in Amharic DP, we will deal with it extensively in an independent section. But, before that, let's talk about complement phrases, another variants of *yä-phrases*.

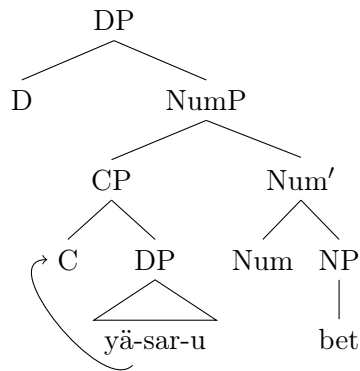
6.4.3 Complement Phrases

As already mentioned in chapter 4 of this thesis, there are some *yä-phrases* that have different distribution from that of possessives and relative clauses. Though they are varied in their semantic import, I have shown that syntactic tests suggest that they are complements of the head noun. Considering *yä* as grammaticalization of attribution/subordination, I have proposed that all the *yä-phrases* including complement phrases are headed by C, and hence *yä* as the reflex of the agreement between C and lexical heads. I have also mentioned that unlike all other *yä-phrases*, complement phrases fail to block the NP from agreeing with the external D. Given my assumption that the agreement of the head noun is contingent to its raising to SpecNumP (edge of the phase), we can deduce that the raising of the NP is not blocked by the complement phrases. That is why the head noun carries the agreement clitics, albeit being preceded by a complement phrase, as in the example in (49-a).

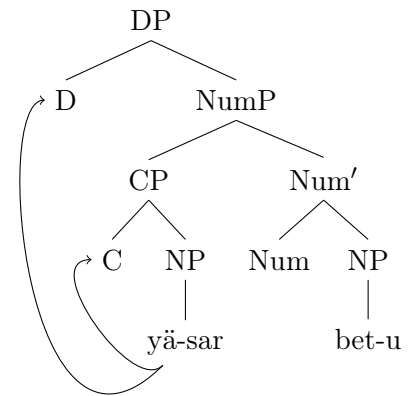
Even if the two phrases seem similar, the one (48) can have a referential interpretation for the *yä-phrase* while the one in (49) is a pure relational phrase. Hence, I assume the first phrase—(48)—to be just like regular modifiers and possessive phrases; and hence the same derivation with them. The construction has two readings. The first reading (*the house of the grass*) is available when the *yä-phrase* is internally DP as illustrated in (50), just like the possessor phrase. The second reading (*the house of grass*), on the other hand tells us that the definite article of the *yä-phrase* is not internal to the *yä-phrase* itself. It must be acquired from the external D, just like the adjectives. This is illustrated in (51).

- | | | | |
|------|--|---------|--|
| (48) | yä-sar-u bet
YÄ-grass-Def house-Def
'the house of the grass'
'the house of grass' | (49) a. | yä-sar bet-u
YÄ-grass house-Def
'the house of grass' |
| | | b. | *yä-sar-u bet-u |

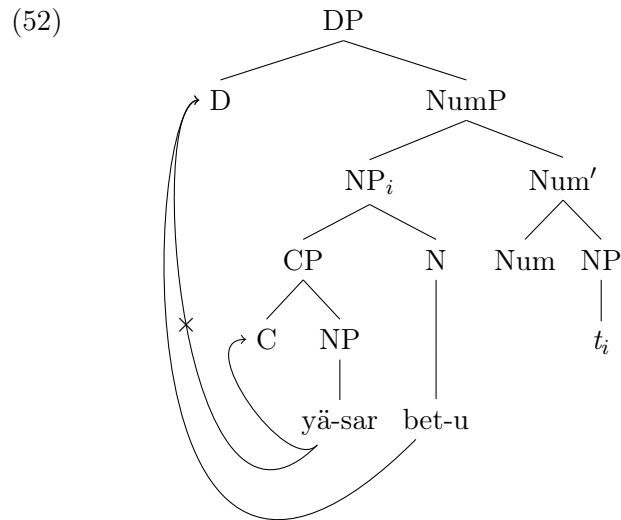
(50)



(51)



As already mentioned, the true relational phrases are the one in (49). The important question is why the complement (relational) phrases do not agree with D in provided that we have advocated Multiple Agree as a legitimate operation. As exemplified in (49-b), the complement phrase doesn't agree with the external D even if, by assumption, the whole NP is in SpecNumP and it holds a lexical head, *sar*, in it. This is a similar issue with that of non-finite verbs we discussed above. Hence, we can explain it with the idea of extended projection. As I have already mentioned above, Grimshaw (1990) have introduced the idea of extended projection, and Szabolcsi (1992), recently followed by Pesetsky & Torrego (2004), Gallego (2010), Corver (To appear), specifically proposed that every thing inside the NP is inside the extended projection of N. Merging within the NP, thus, the complement phrases are in the extended projection of the noun. In the same way we assumed for non-finite verbs in the above sections—though they are lexical in their category, and heads within their own projections—merging within the extended projection of another lexical head, say V, A, or N, disables them to trigger agreement with the functional heads, as in (52).



Only *syntactic head* of the projection—the head noun—triggers agreement with the NP-external projections.

6.5 Optionality

When I talk about Multiple Agreement of the adjectives and other modifiers in the DP, an important point that I deliberately postponed to this point is the optionality of the agreement elements in the lower modifiers. When there are two or more adjectives modifying the noun, the definite article, the case, gender and number markers obligatorily lexicalize on the highest adjective and optionally on the lower ones. Since the distribution of the other agreement elements follows the definite article's, talking about the latter would be sufficient to explain the agreement optionality. Therefore, unless and otherwise making distinctions is necessary, I will rely on the definite article for the exposition of optionality in the following few examples. The reader has to recognize that the agreement paradigm illustrated by the definite article could be replicated using the other agreement clitics. Here is the agreement pattern in a nutshell.

- (53) a. $A_3\text{-Def} \dots A_2\text{-(-Def)} \dots A_1\text{-(-Def)} \dots N$
 b. $Q\text{-Def} \dots A_2\text{-(-Def)} \dots A_1\text{-(-Def)} \dots N$
 c. $RC\text{-Def} \dots Q\text{-(-Def)} \dots A_1\text{-(-Def)} \dots N$
 d. $Poss\text{-Def} \dots Q\text{-(-Def)} \dots N$

- (54) $Mod_3\text{-M} \dots Mod_2\text{-(-M)} \dots Mod_3\text{-(-M)} \dots N$ ¹³

(54) is the overall pattern of distribution of the agreement morphemes such as the definiteness, case, gender and number markers. When there are multiple modifiers in the DP, the highest modifier carries the agreement clitics obligatorily while the lower modifiers carry them optionally. The patterns from (53-a) to (53-d) are meant to show that the distribution of the agreement elements is not restricted to certain syntactic categories. The distribution is consistent across all kinds of modifiers—quantifiers, adjectives, relative clauses, possessives and numerals¹⁴.

We can easily observe from the general pattern that the obligatoriness or the optionality of the definite article is apparently a reflection of the linear sequence of the modifiers. With the exception of the head noun, all the lexical heads (modifiers) have an equal chance of hosting either the optional or the obligatory article based on their syntactic position.

Whichever modifier that appears highest (first) in the hierarchy of the modifiers carries the agreement morphemes obligatorily. When the highest lexical head (modifier) gets marked obligatorily, all other lexical heads (modifiers) in the lower positions are marked only optionally. Viewing the pattern from another angle, we can also say that Def of modifier α is optional if and only if there is another Def marked modifier β in a higher position. I call the morpheme/feature (Def) of the higher modifier *licenser* and the one on the lower position *licensee*. This means that the optionality of a licensee is dependent of the presence (realization) of a licenser. Look at the following examples.

- (55) a. $ya \ y\ddot{a}\text{-m}\ddot{a}j\ddot{a}m\ddot{a}r\ddot{i}ya\text{-u} \ r\ddot{a}j\ddot{j}\ddot{i}m\text{-u} \ g\ddot{o}b\ddot{a}z\text{-u} \ t\ddot{a}m\ddot{a}r\ddot{i}$
 that $Y\ddot{A}\text{-first-Def} \ tall\text{-Def} \ intelligent\text{-Def} \ student$
 lit. ‘the first tall intelligent student’
 b. $ya \ y\ddot{a}\text{-m}\ddot{a}j\ddot{a}m\ddot{a}r\ddot{i}ya\text{-u} \ r\ddot{a}j\ddot{j}\ddot{i}m\text{-u} \ g\ddot{o}b\ddot{a}z \ t\ddot{a}m\ddot{a}r\ddot{i}$

¹³ Where: $A_1=1^{st}$ (lowest) adjective; $A_2=2^{nd}$ adjective; $A_3=3^{rd}$ (higher) adjective; Q=quantifier, including numerals; RC=relative clause; Poss=possessive; $Mod_3=1^{st}$ modifier; $Mod_2=2^{nd}$ modifier; $Mod_3=3^{rd}$ modifier; M=a morpheme (of/or a feature); N=head noun. Note that I am taking the order of modifiers in their order of merge. The ‘first modifier’ means the first of the modifiers to merge into the derivation—not the first modifier linear appearance.

¹⁴See the following sections for few exceptions.

- c. ya yä-mäjämäriya-u räjjim gobäz tämari
- d. *ya yä-mäjämäriya räjjim-u gobäz tämari
- e. *ya yä-mäjämäriya räjjim gobäz-u tämari
- f. *ya yä-mäjämäriya-u räjjim gobäz-u tämari

The first example, (55-a), shows the definite article occurring on all of the modifiers. The second example, (55-b) shows the definite article occurring only on the first two modifiers, and the third example shows the definite article occurring only on the first modifier. The ill-formed examples in (55-d) & (55-e) show that the optionality of the definite article on the higher modifiers is unacceptable. But, the ill-formedness of the phrase in (55-f) is even more problematic. I will come back to this issue later in this section.

Then question is, why do the functional elements appear only optionally on lower modifiers? We can approach the issue in at least in three different ways.

- a. Agreement relationship between the lower modifiers and the functional heads doesn't happen at all
- b. Agreement relationship has been established, but a special kind of Agree that allows the agreement of the lower heads to depend on that of the higher
- c. The Agreement relationship has been established, but some kind of post-Agree operation has deleted the features.

Granted that we have at least some instances, as in (55-a), in which the features actually lexicalize on the modifiers, totally denying the agreement is not an alternative. The second alternative is broad. It could encompass various approaches that it is not possible to reject it entirely. The most plausible kind of Agree based analysis to the data under consideration, to the best of my knowledge, is the one proposed by [Haegeman & Lohndal \(2010\)](#). They proposed a cyclic Agree analysis in which the lower heads probe to the valued higher heads cyclically. I believe, the Cyclic Agree analysis is equally attractive to the Multiple Agree analysis. I have two issues with the cyclic Agree. Firstly, it couldn't explain why Amharic is different from that of other Semitic languages, say Arabic, in which optionality of the agreement elements on the modifiers is unacceptable.

- (56) al-bayt-u *(l)-kabir-u
 Def-house-Nom Def-large-Nom
 'the large house'

Secondly, it fails to generate coordinate constructions. As I will explain in later sections, coordinate constructions force lexicalizations of agreement features on both of the coordinates. Cyclic Agree couldn't explain why the features necessarily lexicalize in coordinate constructions while they are optional in regular stacked phrases.

Therefore, I took the last alternative to be the best one, albeit not the sole. I already claimed that Multiple Agree can elegantly explain not only the Amharic data, but also all across the Semitic languages—with certain PF idiosyncrasies. Then, the remaining question is, if it is true that Multiple Agreement relationship is established between the modifiers and the functional heads, why do the agreement clitics remain silent in the lower modifiers, contra other Semitic languages? Paraphrasing the question in proper Minimalist terms, why are some of the syntactic features valued on the adjectives are not lexicalized provided that the *Exhaustive Lexicalization Principle*, (Ramchand 2007, Fábregas 2007), requires every syntactic feature to have a lexical exponent?

As Kramer (2009) reported, young speakers (akin to the “standard” Amharic) apparently prefer to fade away the agreement morphemes while it is common among elder speakers to produce the agreement morphemes all the way down. Then the other issues is, why do young speakers prefer dropping agreement morphemes?

The fact that dropping the (lower) morphemes is not allowed in other Semitic languages and that the phenomenon is less common among some group of Amharic speakers suggests that the phenomenon is only superficial. Had it had deeper roots, there would have been some consistencies among the speakers and across the language families. Dropping the morphemes also has no relevant semantic import. From this, I conclude that optionality (licensing) is more likely a PF phenomenon.

Attributing the licensing to the PF domain, however, doesn't solve all the problems. We still need a proper explanation why these features (morphemes) are being dropped in certain (syntactic) environments.

There are a few stories in the literature that have direct or indirect relevance to the data under consideration.

The first of all the proposals that captured my attention was Ackema & Neeleman's (2003) prosodic based feature deletion/licensing. According to them, some seemingly syntactic properties can best be explained by prosodic based allomorphy. They argue that Prosodic phrasing, following the linearization of syntactic terminals, “aligns certain syntactic boundaries with certain prosodic boundaries”. Certain alignment rules fix the syntactic boundaries to the prosodic

boundaries. Then, allomorphy rules apply observing those prosodic phrases. In mapping the prosody domains with syntactic domains, they attempted to explain why certain prosodic operations observe syntactic environments indirectly.

Head-initial languages are argued to have right alignment while head-final languages have left alignment. That means that, the left edge of every syntactic phrase in a head-final language has to map with the left edge of the prosodic phrase in the language. Since Amharic is a head-final language, it is supposed to adhere to left alignment. This means that the left edge of every syntactic phrase aligns with the left edge of a prosodic phrase (p-phrase) in Amharic. Following the prosodic mapping the allomorphy rules apply. Let's see one allomorphy rule for Amharic definite article weakening.

Def weakening: {[Mod-Def] [Mod-Def]} → {[Mod-Def] [Mod]}

This rule states that if two modifiers lie in the same prosodic domain, represented by the curly braces, and that one of them precedes the other, the definite article of the former suppresses that of the latter. Though their analysis seems promising in handling the PF deletion of features under linear adjacency, it has some non-trivial issues.

One of the main concerns for this type of analysis, however, is the prosody assignment itself. Do all the adjectives on which Def licensing is applying lie in the same prosodic domain? [Ackema & Neeleman \(2003\)](#)'s analysis lacks independent evidence for this. Of course, experiments in certain languages prove that relative clauses, possessives and adjective belong to different prosodic domains [Truckenbrodt \(1999\)](#). If that is the case, the assumed prosodic based analysis can not be maintained. The most serious issue with regard to their analysis is the directionality of the feature weakening (deletion). Since prosodic boundaries are assumed to align with phrase boundaries, then, Amharic, being a head-final language, is supposed to have feature weakening (deletion) only in phrase (word) final positions. As I have shown in example (44), the Amharic prefix *yä* occurs in word initial and (relative) clause medial positions. But, still it licenses when two CPs fall into the same syntactic domain (when the possessor is relativized). Its licensing could not be explained by uni-directional prosodic based feature licensing.

The other two most relevant proposals with regard to hierarchy-based optionality, to the best of my knowledge, are the ones by [Nunes \(2001\)](#) and [Bianchi \(1999, 2000\)](#). In both of the proposals, the authors are not involved directly with the issue of optionality (feature deletion/licensing). They touched the issue only slightly while explaining some other linguistic phenomena.

Nunes is primarily concerned with why traces of movement in Chomsky's copy theory are phonetically silent (deleted at PF). In languages such as English, for instance, wh-elements

are assumed to overtly move (cyclically) to higher positions. In most cases, only the highest copy of the moved item is phonetically visible. Why are the lower copies silent, and why is the highest copy pronounced? He proposed a constraint called Chain Reduction which deletes the multiple instances of moving elements. Nunes restricts the application of Chain reduction to the word-external level claiming that “deletion of chain links is triggered by linearization considerations as regulated by the LCA...that the LCA does not apply word-internally”. There might be a way that one can adapt Chain Reduction to deal with the word internal deletion of features, and hence for the optional deletion of agreement features in Amharic DP. I will leave this alternative open, and concentrate on what I believe to be the most appropriate proposal—Bianchi’s (2000) feature incorporation.

The main purpose of Bianchi’s paper is rescuing Kayne’s (1994) raising analysis of relative clauses from a series of pungent criticisms posed by Borsley (1997). One of the issues that Borsley raised against the raising analysis was about the categorical status of the raised constituent.

(57) $[_{DP} \text{ the } [_{CP} [\text{picture}]_i [\text{that } [_{IP} \text{ Bill liked } t_i]]]]$

Borsley claimed that various syntactic tests reveal that the trace position is an argument (DP), not an NP, position—contra Kayne’s original assumption. Admitting that Borsley’s criticism is right, Bianchi assumed that the raised category is a DP.

(58) $[_{DP} \text{ the } [_{CP}[_{DP} \text{ D picture}]_i [\text{that } [_{IP} \text{ Bill liked } t_i]]]]$

As a result of this assumption, she faced a non-trivial problem—why is the article of the lower DP silent if the raised category is truly a DP? She claimed that feature incorporation is responsible for the phonological licensing of the lower D. Since the outer D and the lower D are in a strict locality configuration, she claims, the lower D feature might incorporate to the higher D. I quote her at length.

Concerning the first question, it is possible to take advantage of a specific aspect of the raising structure [(58)], namely, the fact that the raised relative DP is covered by only one segment of CP, given the adjunct status of specifiers (Kayne 1994:22–27), and hence is not included in the CP barrier; furthermore, the relative D is immediately c-commanded by the external D, so that there is no intervening head for the purposes of Relativized Minimality. Thus, the external D and the empty relative D turn out to be in a strictly local configuration, and they can establish a

licensing relation. Specifically, let us assume that the empty relative D is licensed through abstract incorporation to the external D.

As already mentioned, the optionality (licensing) of the agreement morphemes is dependent on the presence of a higher licenser. As the patterns in (53-a) to (53-d) on page 113 exhibit, an agreement morpheme on modifier β can remain silent only when it has another instance of itself (a licenser) on another modifier α in the *dominating*¹⁵ positions. Following Bianchi, I assume this licensing is due to feature incorporation.

Before we go into the detail analysis of the data using feature incorporation as a tool, let me spell out my basic assumptions about the operation.

I propose that Feature Incorporation (henceforth Finc) is a FP¹⁶ extension of Agree. Just like Agree, I assume it to work under Match (feature identity). As Chomsky explains while activating the operation Agree, he argues that Match is one of the prerequisites of Agree. Agree works only under Match, though Match doesn't always lead to Agree. Since there is no reason that restricts Match only in the pre-PF domain of syntax, as some people activate Match in pre-Merge domain of the grammar, I assume that Match works in the PF (interface) component of the grammar.

- (59) *Matching* is a relation that holds of a probe P and a goal G. Matching is feature identity (Chomsky 2000).

Match is simply feature identity. As Match might legitimize Agree in the narrow syntax, I assume, it also legitimizes Finc in the PF domain. If two features are identical in the narrow syntax, there is chance that they would Agree (one value the other). In the same way, if two features are identical in the PF domain, there is a chance that they would Incorporate (one absorbs the other). We can then assume that Match is a prerequisite both for Agree and Finc though it doesn't always lead to Agree, neither does to Finc. Finc occurs after Agree but before Spell-out.

- (60) a. *Agree*: Narrow syntax operation, one instance of the matching features values the other

¹⁵One might think of linear precedence as a reason for features weakening(optionality). But, that couldn't be true as the lack of optionality in coordinate constructions indicates.

¹⁶Since Finc is sensitive to the syntax domains such as dominance, it is more appropriate to think of Finc as an interface operation between the PF and the syntax proper domains. Taking this to be true, I will continue to call Finc a PF operation just for ease of expression.

- b. *Finc*: PF (interface) operation, one instance of the matching features coalesces with the other

Agree basically copies/duplicates the values of one instance of the feature to the other instance. In addition to reduplicating values of a feature, it, at least in some versions of it, might also delete a (uninterpretable/unvalued) feature. *Finc* doesn't delete any unvalued/uninterpretable feature, nor does copy/duplicate values. It rather causes coalescence of one instance of the identical features to another—simplifying the job for the phonological/PF component of the derivational system. I assume *Finc* as one of the many ways that the performance system simplifies the tasks of the SI (sensorimotor interface) system.

One issue is why the computational system optionally allows *Finc* not to apply if it is said to reduce the computational cost. In other words, why are the features in the lower adjectives optionally allowed to lexicalize if applying *Finc* is more minimal for the computational system? Optional operations are not favored in Minimalist framework where computations are assumed to work in tension between Last Resort and Full Interpretation. Syntactic computations such as Agree apply iff there is any feature that needs to be checked/valued, and they must apply if there is any.

My suggestion is irrelevant to the general minimalist issue—but for the fact of the optionality the data in question. I have already mentioned that fading away the morphemes is common among young speakers while producing the whole bunch of morphemes is common among elderly speakers. My suggestion here is that the computational system in young speakers might be slightly different from those of elderly speakers—in a way that a cardiovascular muscle of a 2 years old child pumps blood much faster than that of 50 year adult. One point we have to note here is that, *Finc* as a process by itself might not be more economical than lexicalizing the features themselves. The difference between the two processes—full lexicalization of the features and *Finc*—is probably not because one is inherently more minimal than the other—rather one is more minimal to certain type of computational system than the other. In this sense, what really matters is not entirely the PF operation (process) α itself, rather the kind of computational system that process α is used by. Note also that the computational system is directly or indirectly related with an organ in human brain/mind [Chomsky \(2000\)](#). If it is true that the computational system is related with certain organ in the human brain, then it is not strange thing to think that young speakers might process language in a slightly different way than that of adult speakers—though the distinctions could not be relevant for deeper faculties such as FL itself. This way, the grammar in the output can be explained via the slight difference the computational system in the human brain has among the age

groups. Note that when we talk about PF processes such as Finc and lexicalization, we are not dealing with the actual pronunciation process, nor with the actual pronunciation organs such as tongue or vocal cords. In the Chomskian tradition, these processes and “linguistic expressions $\text{Exp} = \langle \text{PF}, \text{LF} \rangle$ [...] are internal to the mind/brain” (Chomsky 2000, p.91) and of course have “externalizations” too. This way, the preference of one process over the other between the two age groups could be explained by the cost that a certain process triggers on the slightly different computational systems that the age groups possess.

Another issue at hand is about the locality of the incorporating features. Unlike Bianchi’s D heads, the licensing features in Amharic DP apparently are not in strict locality relationship, taking locality in its traditional sense of *c-command*. To alleviate this issue, however, we don’t need to go to *c-command* relations. Since the relative position of the features themselves is the crucial factor in the licensing processes—we can assume a different kind of locality.

The first alternative is to define the locality of Finc using intervener based locality, as first proposed in Rizzi (1990) and recently revived by Béjar & Rezac (2009). In this sense, the application of Finc operation can be taken to apply on the closest matching feature in the feature hierarchy (feature relativized locality, Béjar & Rezac (2009)) in the search space. The dominating projections of a head α are the search spaces of the incorporating features in it. Meaning, the feature $F_1, F_2 \dots$ of head H search their matches in the *dominating* projections of H.

We can also definite this locality of Finc using the idea of extended projection I have already introduced above.

- (61) *Locality of Finc*: Feature F_1 incorporates to feature F_2 iff the extended projection of the head H_1 hosting F_2 *c-commands* the head H_2 hosting F_1 .

In both of the senses, the domain of application of Finc is different from Agree since it doesn’t follow the traditional *c-command* relation. Having a domination relationship between the heads hosting the incorporating features is a sufficient condition for Finc to apply.

The significant distinction between Finc and the regular morphological operations such as syncretism, morphological weakening and haplology¹⁷, I assume, is the fact that the former is not restricted to linear adjacency relations. As there is complex syntax in the morphological word (M-word), it is probably reasonable to assume “morphological” relations across XPs too.

¹⁷See Neeleman & Van de Koot (2005) for discussion of what they call “syntactic feature deletion”, feature deletion under *adjacency*.

This is the spirit we see in [Ackema & Neeleman \(2003\)](#) too. Even if they activated prosody as a means to determine locality effects, the actual linguistic process is effected via morphological operations (feature deletion) across syntactic boundaries. Though my assumption of locality for Finc deviates from their prosody based locality, some of the basic premises are similar.

I have already argued that the multiple modifiers agree with the head D parallelly. The optional silence of agreement elements in the lower features then goes by the Finc. In the present sense, Finc is a system in which features of lower heads move and coalesce to their own instantiations in higher heads. This is also somehow similar to [McGinnis \(1995\)](#)'s syntax motivated morphological process. The idea is, whenever there are identical features (or instances of the same feature) in a certain "local" domain, the lower feature incorporates to the higher feature—resulting in the silencing of the lower instance of the feature.

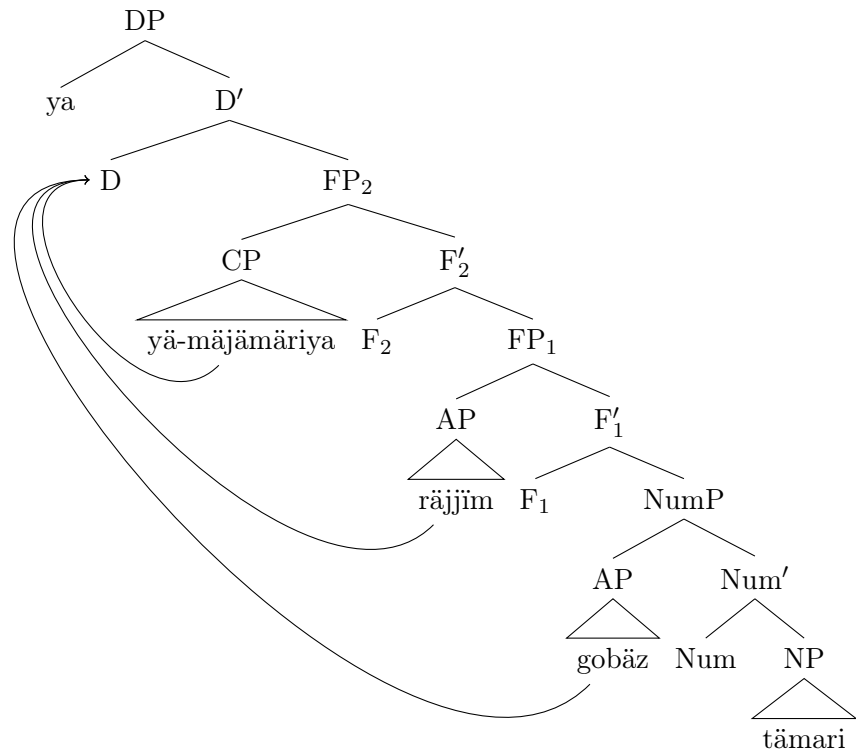
Let's see how the Finc hypothesis can capture the optional feature deletion in the lower modifiers. Some of the relevant examples mentioned above are repeated here for convenience.

- (62) a. ya¹⁸ yä-mäjämäriya-u räjjim-u gobäz-u tämari
that YÄ-first-Def tall-Def intelligent-Def student
'the first tall intelligent student'
b. ya yä-mäjämäriya-u räjjim-u gobäz tämari
c. ya yä-mäjämäriya-u räjjim gobäz tämari
d. *ya yä-mäjämäriya räjjim-u gobäz tämari
e. *ya yä-mäjämäriya räjjim gobäz-u tämari
f. *ya yä-mäjämäriya-u räjjim gobäz-u tämari

As I have already argued above, the entire agreement process as in (62-a) is generated via Multiple/Reverse Agree between the modifiers and D-head. I assume this one to be the true syntactic process in all the cases.

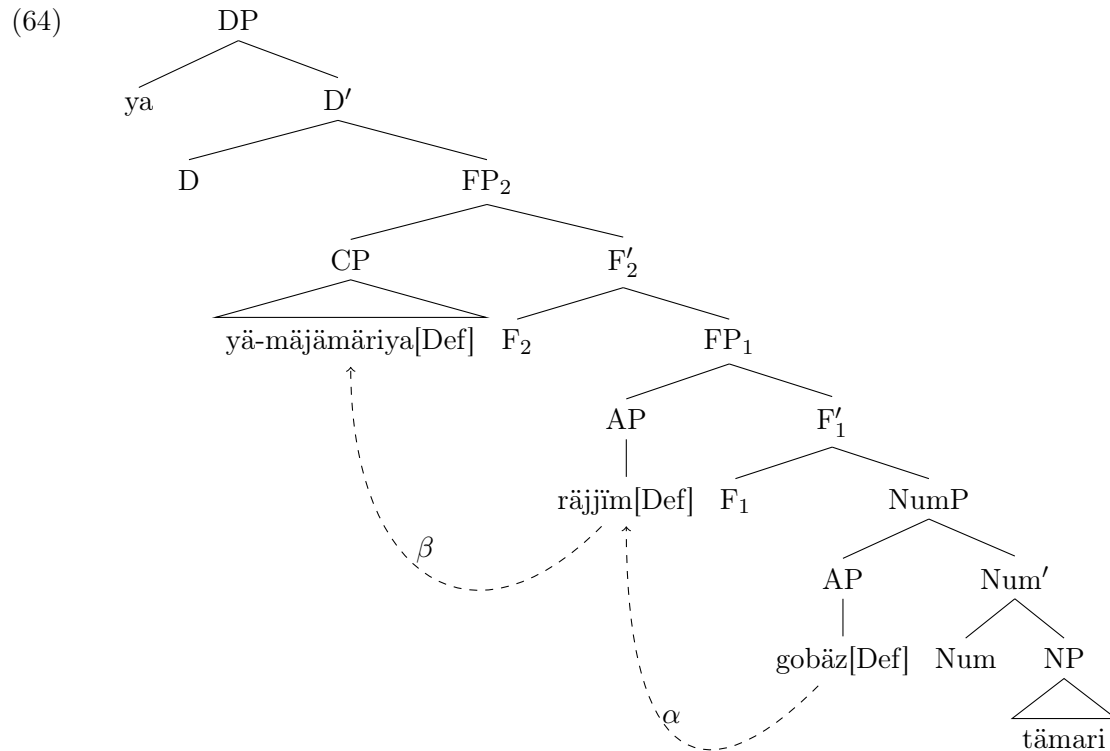
¹⁸The demonstratives have some idiosyncrasies in their interaction with the definite article. See section 6.6.1 for the detail.

(63)



This Multiple Agree process values all the unvalued features on all the lexical heads. But, just before the lexicalization of the valued features, a possible PF operation, Finc, occurs between the neighboring heads. The discrepancies visible on the latter examples are the result of application of Finc after the Multiple Agree process is established in the narrow syntax. In the second example, (62-b), only the last adjective lacks the definite article. This is where the definite feature of the last adjective incorporates to that of the second adjective. After the incorporation of the definiteness feature of the third adjective to that of the second, the third adjective lexicalizes without the definite article.

The third example in (62-c) can be explained by two-step Finc. In the first step, the definiteness feature of the last adjective coalesces to the one in the second adjective. This process (Finc) is represented as α in the following picture. In the second step, the ones on the second adjective further coalesce with the first one—represented as β . This two step feature incorporation leaves the second and third adjectives without definite feature (article) after lexicalization.



The ill-formed forms in (62-d) and (62-e) can be ruled out by Multiple Agree itself. Since the modifiers are assumed to merge into the derivation with unvalued features, agreement is not optional. If the modifiers do not agree, unvalued features will survive to LF and cause crash. Feature incorporation couldn't be responsible for the silence of the features in these higher heads, as already explained, as Finc applies only under licensing. This means that, unless there is an instance of a feature F in higher heads that can license (incorporate or absorb) it, F couldn't remain silent. The licensing of the definite feature on adjectives could be effected only if there is another instance of definite feature in the dominating heads. This makes Finc incapable of applying in cases such as in (62-d) and (62-e).

Ruling out (62-f), however, is not an easy task. In the first place, Agree could be activated to rule out this ill-formed pattern. Assuming that the second adjective doesn't agree with D, we might argue that the narrow syntax Agree could be sufficient to rule this phrase out. But, we don't have a guarantee whether the agreement relationship is established or not given that we have activated Finc as a feature licensing mechanism. It could be the case that the definite feature of the second adjective incorporated to that of first adjective.

To protect Finc from applying in this case, we have to make some further assumptions, obviously language specific, about Finc. We can still keep an analogy with the Minimalist concepts already activated for other syntactic operations. Taking the idea from Chomsky’s *Merge*, I propose Cyclicity for Finc. What I want to emphasize at this point is even if I am attempting to give it Minimalist concepts by borrowing ideas from already activated operations such as Agree and Merge, Finc is not strongly associated with these operations themselves—specifically with the latter one. It is rather strongly motivated by the data under consideration. So, when I claim that Finc is cyclic like Merge, I don’t mean that Finc is truly Merge or Merge-like. Finc is obviously a different operation proposed to capture the puzzling idiosyncrasies of the agreement system—including feature dependency—that Amharic DPs display.

- (65) *Cyclic Finc*: Finc starts out from the base of the feature hierarchy. Feature incorporation never starts out in the middle of the feature hierarchy, nor can it look back. This rule states that if Finc applies to a feature, it applies from the lowest instance of that feature in the feature hierarchy cyclically to higher instances. This assumption rules out look back effects as well as middle ground applications of feature incorporation. Just like Merge operation, feature incorporation proceeds successively from bottom up to higher in the tree. It doesn’t start out in the middle of the tree.

This correctly keeps Finc out of functioning in instances such as (62-f). Since the lexicalization of the definite article on the last adjective, *gobüz-u*, suggests that Finc is not applying—provided that its Cyclicity—then, failure to agree could be taken the sole responsible reason for the ungrammaticality of the phrase. In other words, if Finc can not start out in the middle of the feature hierarchy, the overtiness of the definite article on the last adjective demonstrates that Finc is not applying in this case. This means that the definite article on the second adjective is silent not because Finc applies, but because it fails to agree. This causes violation of full interpretation (unvalued phi-features will be shipped to the interfaces)—a proper explanation for the crash.

Before we move on to the optionality of *yä* in stacked relative clauses and possessives, I want to stress at this point that the application of Finc is not restricted to the definiteness feature. I assume it to be the responsible operation for the optional silence of all the functional elements in the lower heads.

Now, let’s look at the phrases presented in (44) on page 106 repeated here once again:

- (66) a. [tinant yä-mät'-ačč-u-n yä-räjjim-it-u-n lij] bet
 [yesterday YÄ-come-Fem-Def-Acc (YÄ)-tall-(Fem-Def-Acc) child] house
 Lit 'the tall girl who came yesterday's house'
- b. [tinant yä-mät'-ačč-u-n räjjim lij] bet
- c. *[tinant yä-mät'-ačč-u-n räjjim-it-u-n lij] bet
- d. *[tinant yä-mät'-ačč-u-n yä-räjjim-u-n lij] bet
- e. [_{DP} [_{PossP} [_{RC}...yä-verb-Fem-Def-Acc] [_{AP}...(yä)-Adjective-(Fem-Def-Acc)] possessor] head noun]

This is an instance of a relativized possessor phrase. The possessor phrase also has an adjective modifying it. The general pattern of the system is presented in (66-e). The idea is, when the possessor is relativized, the *yä* of the modifier of the possessor can be licensed by that of the relative clause—just like the agreement elements we have seen so far. (66-a) illustrates the whole bunch of inflectional elements, both on the relative clause and on the adjective. This is an instance where we find the full agreement in its untouched form. All the agreement elements and *yä* lexicalize both on the adjective and on the relative clause.

In (66-b), all the features on the last modifier of the possessor, which is the adjective *räjjim*, remain silent. This is where Finc applies on the lowest modifier—granted that there is a licenser in the higher domain. The idea of feature based locality is critical at this point because, if we follow the regular phrase based locality, incorporation between the adjective and the finite verb won't be possible. There is at least one CP boundary between them. In the feature based locality, however, having an intervening DP and/or CP projections doesn't block the incorporation. Locality issues arise only if there is an identical feature intervenes between the two instances (incorporating features). The feature based locality we have here blocks incorporation of *yä* of A₂ into *yä* of RC in an environment like this; (RC-*yä*... A₁-*yä*... A₂-*yä*). Since there is an intervening identical feature between A₁ and RC, in this case, incorporation couldn't take place directly between the two heads. It has to proceed cyclically starting from the lowest to the next lowest.

Therefore, the *yä* of the adjective incorporates to that of the relative clause. The same holds for the gender and definiteness features of the adjective. They incorporate to that of the relative clause.

Now, the issue is why (66-c) and (66-d) are ill-formed. We have seen that Finc is a feature—based operation. If it operates by coalescing one feature of head to the identical feature of another head in a higher domain, it is not clear why (66-c) is ill-formed. In this example, one can simply

assume that Finc operated only on *yä*, and left the rest of the features untouched.

In the above sections, I have tried to capture the dependency of the number, gender and case features on the definite article (definiteness feature) by assuming that adjectives get those features via their agreement with the head-D. This explains why adjectival agreement is impossible in indefinite noun phrases, as well as the relationship between those features in the definite DP. The issue here however couldn't be explained by the feature dependency we have assumed above. In (66-c), the incorporation of *yä* is triggering ungrammatically, in way that we do not expect. In (66-d) too, the incorporation of the gender feature is causing ungrammaticality. The issue is not restricted to relativized possessive phrases. It is rather widespread in the whole modifier system of Amharic DP. Look at the following examples.

- (67) a. räjjim-it-u-n gobäz-it-u-n lij
 tall-Fem-Def-Acc intelligent-Fem-Def-Acc girl
 lit. 'the tall intelligent girl' (accusative)
- b. räjjim-it-u-n gobäz lij
 c. *räjjim-it-u-n gobäz-it-u lij
 d. *räjjim-it-u-n gobäz-u lij
- (68) a. räjjim-očč-u-n gobäz-očč-u-n lij-očč
 tall-pl-Def-Acc intelligent-pl-Def-Acc child-pl
 'the tall intelligent children' (accusative)
- b. *räjjim-očč-u-n gobäz-u-n lij-očč
 c. *räjjim-očč-u-n gobäz-očč-u lij-očč

Here is the pattern:

- (69) a. Mod₃[Fem-Def-Acc]... Mod₂[Fem-Def-Acc]... Mod₃[Fem-Def-Acc]... N
 b. *Mod₃[Fem-Def-Acc]... Mod₂[Fem-Def-Acc]... Mod₃[Fem-Acc]... N
 c. *Mod₃[Fem-Def-Acc]... Mod₂[Fem-Def]... Mod₃[Fem-Def-Acc]... N
 d. Mod₃[Fem-Def-Acc]... Mod₂[Fem-Def-Acc]... Mod₃[-]... N
 e. *Mod₃[Fem-Def]... Mod₂[Fem-Def]... Mod₃[Fem]... N
 f. yä-Mod₃[Num-Def]... yä-Mod₂[Num-Def]... N
 g. *yä-Mod₃[Num-Def]... Mod₂[Num-Def]... N-Num
 h. *yä-Mod₃[Num-Def]... yä-Mod₂[Def]... N-Num ...

Though it looks too complicated from the surface, the pattern is not difficult to grasp. Incorporating (deleting) a single morpheme, from the whole cluster of morphemes of a head, causes ungrammaticality. To perceive this idea, it is wise to look at the full paradigm of morphemes on the first modifier. In (67-a) for instance, the phrase is grammatical since all of the modifier heads have all the morphemes lexicalized. In the same way, the phrase in (67-b) is grammatical since all the features on the second adjective are incorporated to that of the first. In (67-c), however, only the accusative marker has been coalesced (incorporated). This causes ill-formedness. In (68-b) too, incorporating only the number feature of the second adjective triggers ungrammaticality. These facts show that optionality is not a free market. A feature F_1 on a lower head H1 can not incorporate to its instance on a higher head H2 unless and otherwise all the features— F_2 , F_3 & . . . of H1 incorporate to that of H2. This means that, if the features of a head H1 have to incorporate, they all must incorporate; or else, they all must lexicalize.

To capture this fact, we have to make further assumptions about Finc operation.

- (70) *AON Finc*: Finc is an exhaustive operation. This is another ramification of what I have mentioned above about Agree from Chomsky’s implicit assumptions and Béjar & Rezac (2009)’s explicit claim that “agreement is an all-or-nothing (AON) operation”. The idea is, if Finc applies on a feature of F_1 of the whole feature cluster F in a head H, it applies to all the other members of the cluster F.

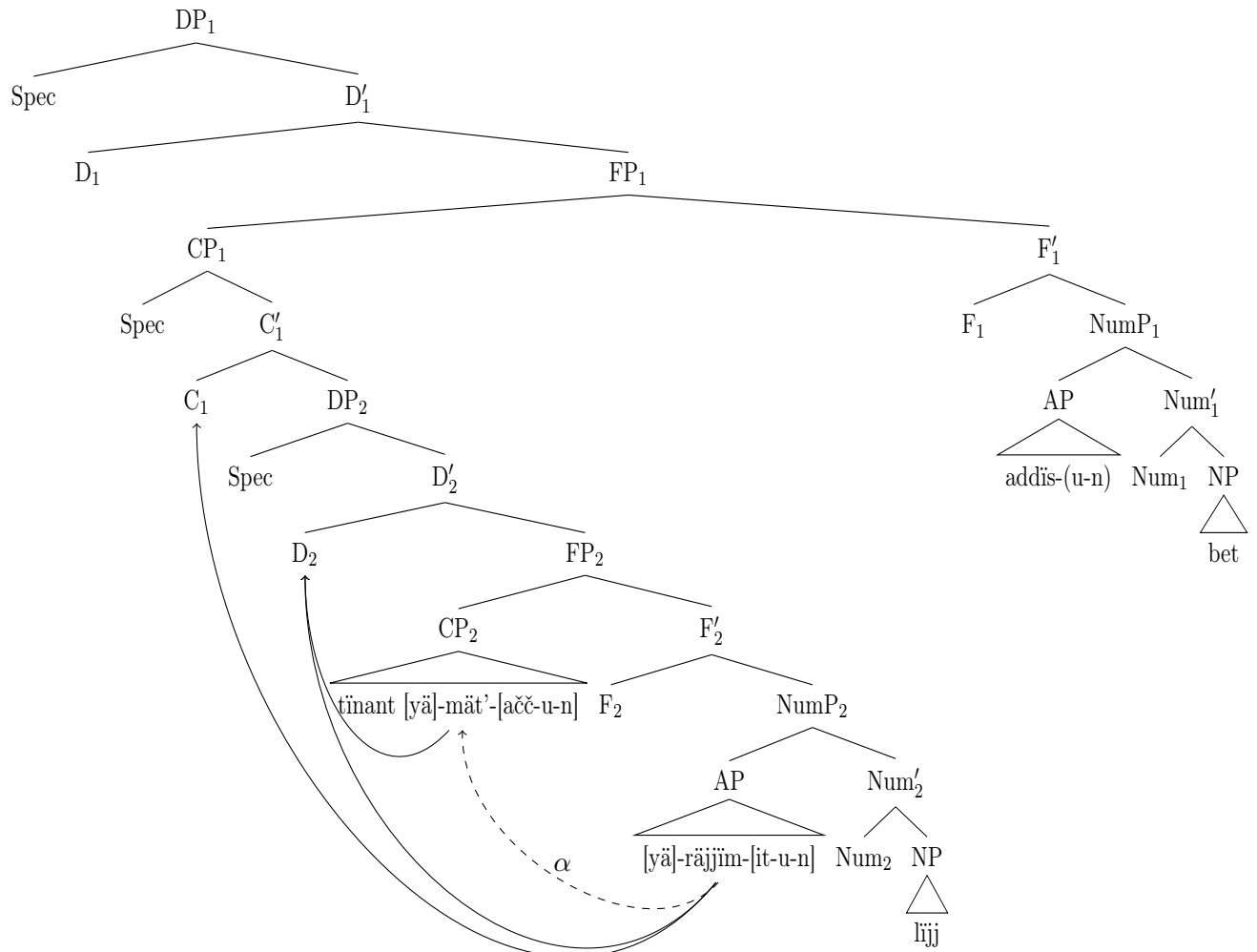
Exhaustive Finc blocks singled out incorporation of features—in a similar way that Agree blocks a singled out copy of a feature from cluster of features. As we have seen above, if Agree applies on Def feature of D, it applies to all other features clusters on D—such as number, case and gender. In a similar way, if Finc applies on *yä* in head H1, it applies to all other features clusters in H1. Note that the prefixhood of *yä* doesn’t really cause problem for the idea of feature clustering since its prefix position could be assumed a mere morphological displacement after all the PF and narrow syntax operations completed. This properly explains why the individual features, from the full cluster of features that a head carries, couldn’t remain silent. If they do, they cause crash at PF as the examples presented in (66-c), (66-d), (67-c), (67-d), (68-b), (68-c) show. To make the case clearer, let’s have a closer look at the relativized possessor constructions we have seen above in (66) repeated here as (71).

- (71) a. [tinant yä-mät'-ačč¹⁹-u-n yä-räjjim-it-u-n lijj] bet
 [yesterday YÄ-come-Fem-Def-Acc (YÄ)-tall-(Fem-Def-Acc) child] house
 Lit 'the tall girl who came yesterday's house'
- b. [tinant yä-mät'-ačč-u-n räjjim lijj] bet
- c. *[tinant yä-mät'-ačč-u-n räjjim-it-u-n lijj] bet
- d. *[tinant yä-mät'-ačč-u-n yä-räjjim-u-n lijj] bet
- e. [_{DP} [_{PossP} [_{RC}...yä-verb-Fem-Def-Acc] [_{AP}...(yä)-Adjective-(Fem-Def-Acc)] possessor] head noun]

In the well-formed forms in (71-a), as already mentioned above, Finc doesn't apply at all. In the second example, (71-b), Finc has only on the lowest head. The lowest head is synonyms to the lowest cluster of features in this case since clustering, by assumption, is possible only inside a head (under linear adjacency). Hence, in the phrase, Finc has eliminated all the features on the lowest adjective, *räjjim*. The problem with the phrase in (71-c) is that Finc has applied only on the *yä* feature. The adjective *räjjim* hosts all other functional elements except *yä*—though obviously *yä* feature has merged into the derivation as the instance (licensor) on the highest modifiers shows. This means that, Finc is applying only on a single feature *yä*, violating *AON Finc*. This causes crash at PF. The same goes to (71-d) though in this case the incorporation is on the gender feature.

The interesting thing about the examples in (71) is not that Finc can capture their distribution—they are rather good evidences for the existence of such an independent operation. Now look at how the syntactic Multiple Agree interacts with the Finc in the following tree structure.

¹⁹The canonical gender marker has been syncretized into the verb morphology- *cc*. In some dialects, *it* itself can appear—as in *yä-mät'-ačč-it-u*—though we don't need to worry about it at this point.



The solid lines represent Agree while the dashed one does Finc. Though the picture doesn't demonstrate the timing of the operations, it is also necessary for the reader to recognize that the Finc operation takes place only after all Agree process is completed.

As the tree and the examples clearly show, the *yä* of the adjective *räjjim* has a different source from that of the relative clause. The one on the adjective is a reflex of the agreement with the C on top of the whole possessor phrase, C₁—rather than the C of the relative clause, C₂. We can confirm this (distinctness of the source of *yä* of the adjective from that of the relative clause) in two ways:

a) In regular noun phrases (where there is no possessor): the *yä* of the relative clause can't occur on the adjective.

- (72) *[tinant yä-mät'-ačč-u-n yä-räjjim-it-u-n lijj] mämhir-u gäraf-at
 [yesterday YÄ-come-Fem-Def-Acc (YÄ)-tall-(Fem-Def-Acc) child] teacher-Def flog-3fsO
 'The teacher flogged the tall girl who came yesterday'

b) In the possessive phrases: the relative clause can be dropped, but *yä* of the adjective still survives. The relative clause in the possessor phrase is a mere optional modifier—dropping the relative clause from the possessor phrase doesn't drop the *yä* of the adjective. Rather, it makes becomes obligatory.

- (73) [* (yä)-räjjim-*(it-u-n) lijj] bet
 [* (YÄ)-tall-*(Fem-Def-Acc) child] house
 'the tall girl's house'

The last example, (73), proves that the agreement between the adjective of the possessor and the C of the possessor phrase is obligatory. Hence, the silence of *yä* on (71-b) could not be due to the optionality of Agree. The merging of the relative clause could not be taken as a cause of optional Agree too since the *yä* feature of the adjective originates in a different position from that of the relative clause.

The same goes to the definite article. In the tree, the definite article of the modifier, *addis*, definite marks the head noun (the whole noun phrase) while the definite article of the first adjective, *räjjim* marks that of the possessor. The former belongs to the top most D, D₁ while the latter belong to the D of the possessor, D₂. The seemingly optionality of the definite feature on the adjective *addis* couldn't be in the syntax itself—as the cases in the absence of the possessor phrase shows that the adjective obligatorily agrees with D in definite noun phrases. This means, the possessor phrase is not responsible for the optionality of the definite article in the syntax since they (the possessor and the adjective) are also not agreeing to the same head. There is no way that the possessor phrase would block or influence the syntactic agreement between the lower adjective (*addis*) and the external D. They also do not c-command to each other. We also know that the lower adjective can be indefinite—marking the whole noun phrase indefinite—while the possessor phrase is definite. So, the agreement between the lower adjective and D is obligatory whether the possessor phrase merges or not. This is the other most important piece of evidence—in addition to coordinate constructions—for my claim that

(Multiple/Reverse) Agree is obligatory in the DP. The apparent optionality on the lower heads is the result of a post-syntactic modification (operation) that I call Finc. The definite article in the possessor phrase is able to license the one on the lower adjective in the PF domain—via Finc. The locality domains of applications on the two operations (Agree and Finc) differ so significantly.

The ability of the *yä* of the adjective to incorporate into that of the relative clause, though from different source (head), is also an important evidence against those who claim that the *yä* of the possessive phrase is completely distinct from that of the relative clause Ouhalla (2004) and Demeke (2001), Mullen (1986). The features are the same, but the sources are different. That is why the incorporate has been possible since incorporation (licensing)—as the data at large shows—is applies only under feature identity.

6.6 Remaining Issues

6.6.1 Names, Demonstratives and Pronouns

Personal names, demonstratives and pronouns²⁰ in Amharic have certain idiosyncrasies. In the first place, as already mentioned, they carry different inflection morphology from the regular nominals.

- (74)
- a. They do not inflect for number. The canonical plural marker, *očč*, can not occur on them. Another group/plural marker-like element, *innä*, prefixes on them.
 - b. Demonstratives and pronouns carry the regular verbal morphology, *-čč*, to mark gender, instead of the canonical nominal gender marker, *it*. This property doesn't include names as they can't be gender—marked at all.
 - c. The definite article can not occur on them.
 - d. They can be case marked without the definite article.

²⁰Unless making distinction is necessary, I will use the term 'pronominals' to represent all these three kinds of nominals

(75)	Names	(76)	Demonstratives	(77)	Pronouns
	a. innä-Kasa PL-Kasa 'Kasa and others'		a. innä-zi ²¹ -ya bet-očč PL-zi-that house-pl 'those houses'		a. innä-antä PL-you 'you'(plural)
	b. *Kasa-it/čč-(u)		b. ya-čč/*it bet		b. *antä-it
	c. *Kasa-u		c. *ya-u bet		c. *antä-u
	d. Kasa-n		d. ya-n bet		d. antä-n

Each of the generalizations made from (74-a) to (74-d) are exemplified with corresponding phrases in (75), (76) and (77). I don't need to say anything about the first two generalizations at this point. The last three, however, are in contradiction to the claims I have made so far regarding the agreement elements. The two critical questions that need to be addressed here are:

- a. Why are the definite and gender markers not occurring on them?, and in relation to this
- b. Why does the case marker occur on these pronominals without the definite article if we assume that the former is dependent on the latter?

We can approach these issues in two different ways; we can either assume that agreement takes place between the pronominals and D, but without phonological output, or we can totally reject the agreement. We will examine the first alternative in this section, and the second alternative in the next section.

Starting from the first question, a plausible solution is to assume that agreement between the pronominals and the D-head actually takes place—though the definite article and the gender marker are not lexicalizing for some reason. Of course, there are a few clues that suggest that agreement relationship might be established between these pronominals and D. The first clue comes from adjectives modifying names and pronouns. These pronominals rarely take adjectives. If they do, the modifying adjectives can be marked by the definite and gender markers.

- (78) talak'-wa Roma
great-Def.Fem Rome
'the great Rome'

²¹This element seems one of demonstratives in Geez though I have no clue why it appears within Amharic demonstratives.

This, though indirectly, tells us that the pronominals can merge with D, and at least the regular kind of agreement is potentially available.

The other clue that suggests that the demonstratives might truly agree with the D comes from a morpheme. If the demonstratives are marked by the morpheme *ñña*, which has to do with rhematic (comparison) interpretation, both the definite article and the gender marker suddenly appear.

- (79) *ya-čč-ñña-it-u-n räjjim lijj*
 that-Fem-ñña-Fem-Def-Acc tall child
 ‘that tall girl, not the other one’ (accusative)

We can take this to mean that the abstractness of the agreement elements has something to do with their *adjacency* with the pronominals. One might specifically argue that the definiteness feature inherent to the pronominals is causing some kind of feature haplology with the definite feature (article). Neeleman & Van de Koot (2005) has reported the same type of data in some languages such as Dutch, Old French, and Arabic in which they claim that feature licensing under adjacency (they call it ‘syntactic haplology’) “ is triggered by syntactic features even though the morphemes affected are not phonologically identical”. In the demonstrative, for instance, when the Def feature and the definiteness feature in the nominal are under adjacency—after Agree—the latter could license (phonologically suppress) the former. When a barrier (*ñña* as in the above example, (79)) is inserted between the two features, the adjacency breaks and the licensing fails—resulting in the lexicalization of the definite article. The same can be argued for gender.

In short, we can assume that the agreement relationship between these pronominals and D could take place and that the abstractness of the definite article on these pronominals is the result of an independently motivated operation—feature haplology—which suppresses the realization of Def feature of D when it occurs on lexically Def valued nominals. If we assume that Agree is still in operation between the pronominals and D, we are free to maintain the claimed dependency of the case marking on the definite article. This apparently answers both of the questions we have raised above.

But, still, the issue is why the agreement relation is established between the pronominals and D in the first place if these pronominals are lexically valued for definiteness feature. In other words, if the pronominals do not have unvalued Def feature, why do they probe to D? This kind of probing is not allowed even in the very weak versions of Agree since this makes Agree utterly

unconstrained. This issue leads us to another issue—generic reading of the regular nouns.

6.6.2 Nouns in Generic Environment

Not only the specific case of the fore mentioned pronominals, but also most of the generalizations we have made about feature dependency in the above sections fall apart terribly when we consider generic reading of the regular nouns.

- (80) [lijj-n] märgäm mät'fo näw
 child-Acc curse bad is
 'to curse a child is bad'
- (81) [tiniš-n lij] märgäm mät'fo näw
 small-Acc child curse bad is
 'to curse a small child is bad'
- (82) [gäna yä-al-adägä-n tiniš-(n) lij] märgäm mät'fo näw
 still YÄ-Neg-grow-Acc small child curse bad is
 'to curse a child who has not yet grown is bad'

Though the English translation doesn't seem to give the intended interpretation, the Amharic phrases are obviously generic. As we can see from these examples, the accusative case marker is able to follow its usual patterns in the absence of the definite article. This puts the proposal we have developed, about the dependency of the case marker on the definite article, under trouble. By observing from facts on the adjectival agreement, so far, we have claimed that the occurrence of the case marker follows that of the definite article. We also tried to explain the phenomena by assuming that the case feature could be valued on D. This explanation is, however, facing challenge from two sides—one from the pronominals we have seen from the previous section and another from the nouns in the generic environment in here.

The possessives pose a similar issue. Though the definite article of the possessor phrase doesn't agree with the external D, as already mentioned, the possessor phrase could still be marked by the accusative case marker.

- (83) Kasa [[yä-räjjim-it-u-n lij] addis-(u-n) bet] ak'at'al-ä-w
 Kasa YÄ-tall-Fem-Def-Acc child house burn-3msS-3msO
 'Kasa burnt the tall boy's house'

Here, the accusative case assigned by the external external verb obligatorily occurs on the modifier of the possessor and optionally on the modifier of the head noun. We have said the

definite article of the possessor phrase has nothing to do with the external D. It is the reflex of the possessor DP. The accusative case marker, however, could not be internal to the possessor DP as it is assigned by the external verb. This causes a contradiction—because on the one hand, to explain the dependency of the accusative case marking on the modifiers, we are arguing that the accusative marker on the modifiers is acquired by probing to the external D, on another hand, the data from the possessives tells us that the possessor phrase can be marked by the accusative case without probing to the external D. This makes our previous proposal on the dependency of case feature untenable.

Therefore, to address the contradiction we have on the possessor phrase as well on the pronominals and generic nouns, I propose that an independent functional projection for case feature—KP (Bittner & Hale 1996, Tremblay & Kabbaj 1989). I further propose that the apparent dependency of the case feature on the definite article is due to feature inheritance of D from K, as in Chomsky (2007, 2008).

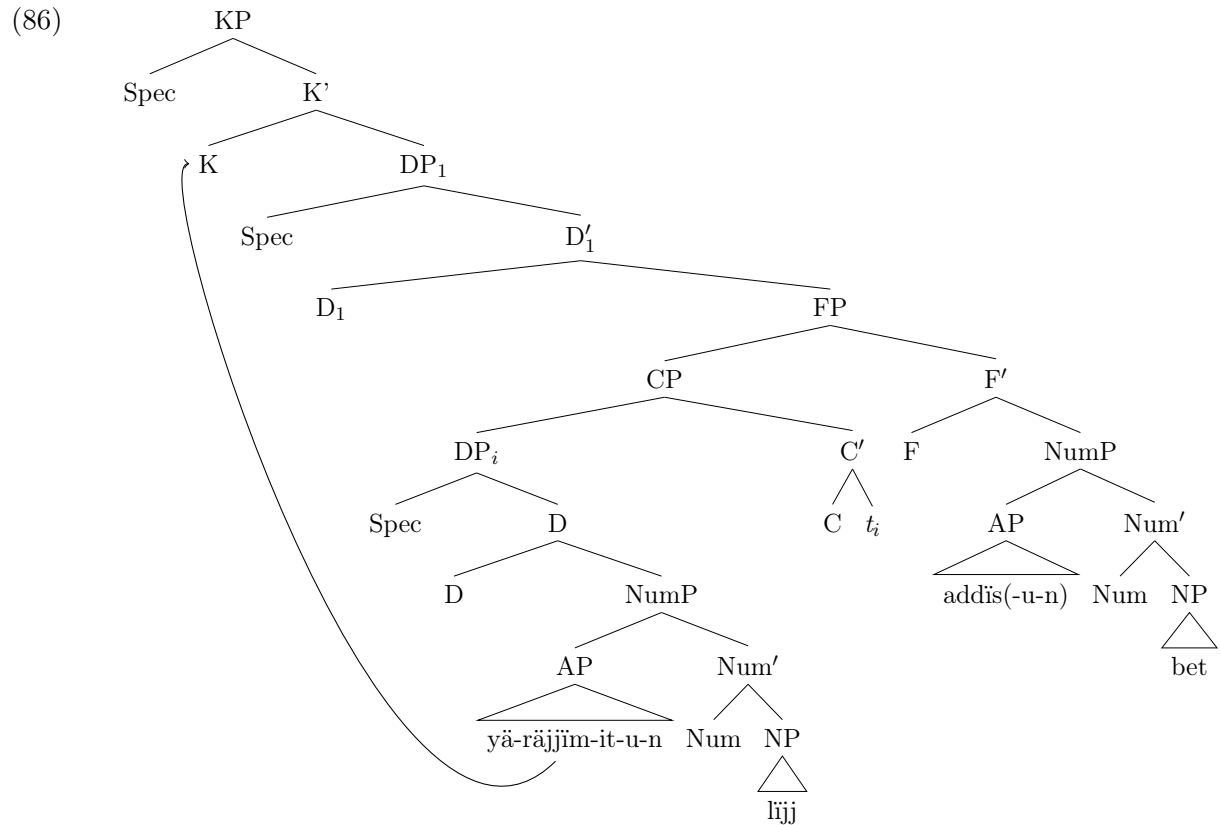
$$(84) \quad [_{KP} K [_{DP} D]]$$

Since K and D are in strict locality domain, D head can inherit the case feature of K. This enables the former to have a case feature in it. Every time the modifiers probe for Def on D, they get the case, gender and number features to, as to AON principle. The origin of some these features, however is not D itself. As already suggested, the number feature might be acquired via agreement with Num-head. In the same manner, the case feature of D could be acquired via feature inheritance, or even agreement with K-head. This opens two possibilities for the lexical categories to acquire case feature:

- (85) a. By probing to D
 b. By directly probing to K

For lexical elements that have unvalued Def feature, direct probing to K is not economical since all the required features can easily be acquired on D. Hence, regular modifiers and nominals acquire case feature from D-head. For internally definite categories, however, probing to D is not possible, unless we assume another unvalued feature, as they are already valued for Def feature. Hence they directly probe to K. To be more specific, the possessor phrase is valued for Def feature from the internal D; the pronouns, names and demonstratives are also lexically valued for definiteness feature. Hence they do not need to probe to D. The inability of the canonical gender and number markers to occur on the pronominals substantiates this assumption provided

that the features are available on D²². Hence, the pronominals and the possessor phrase get the case feature by directly probing to K, unlike the regular modifiers and nominals. Generic nouns also couldn't get marked for definite article suggesting that they might not agree with D. They also probe directly to K-head.



6.6.3 Coordinate Constructions

Criticizing both Kramer's and Den Dikken's accounts for their failure to capture coordinate constructions, I am supposed to demonstrate how my own approach can handle them. And, after all, coordinate constructions are one of the strongest pieces of support for the Multiple Agree analysis I am promoting here.

²²As for the non-canonical morphemes, it is not clear if they are lexicalizing the same features, specially the number morpheme seems to have a different interpretation. If they are taken to be the same features, we can still assume feature transfer from D to K.

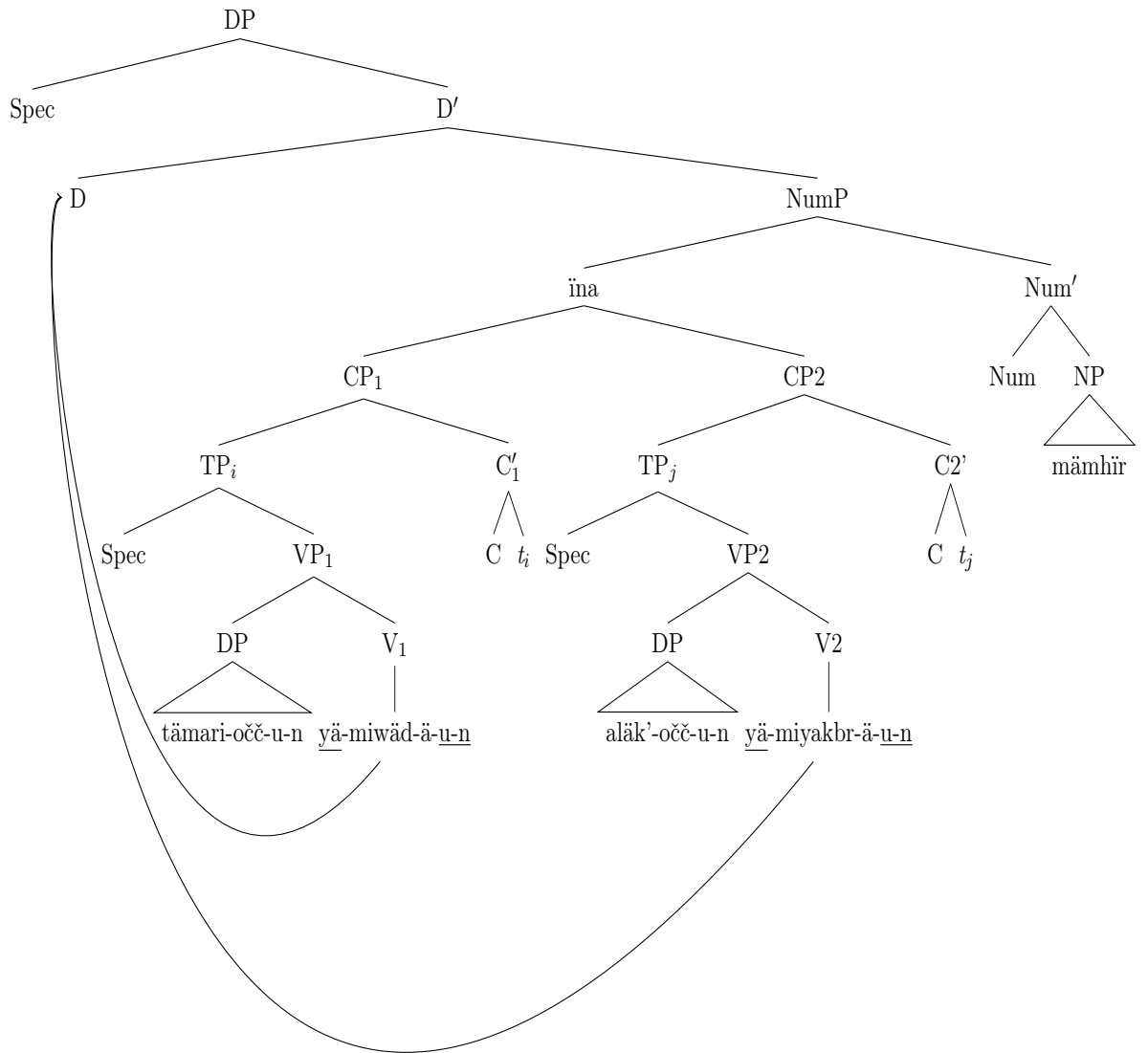
When two relative clauses, possessor phrases or adjectives are coordinated, as Kramer has already observed, both of the coordinates must be marked by the agreement clitics even if the whole DP refers to a single entity.

- (87) [tāmari-očč-u-n yä-miwäd-ä-u-n] ina [aläk'-očč-u-n yä-miyakbr-ä-u-n] mämhür
student-pl-Def-Acc YÄ-like-3ms-Def-Acc and boss-pl-Def-Acc YÄ-respect-3ms-Def-Acc
teacher
'the teacher who likes the students and respects the bosses'(accusative)

- (88) räjjim-u ina gobäz-*(u) tāmari
tall-Def and intelligent-Def student
'the tall and intelligent student'

Two coordinated relative clauses are modifying a single entity represented by the noun *mämhür* in (87) and *tāmari* in (88). The lexical heads of each of the coordinates both in the AP and RC come adorned with the agreement clitics and *yä*. The interesting thing about coordinate constructions is the fact that, unlike ordinary multiple modifiers stacked in the DP, both of the coordinates *must be* marked by the agreement clitics and *yä*. In (87) for instance, neither *yä* nor other functional elements can be eliminated (licensed) on any of the coordinate constructions.

Under the tripartite analysis of coordinate constructions, the Multiple Agree analysis can capture this fact properly. The lexical verbs of each of the relative clauses directly probe to C and the external D.



As already mentioned, the agreement clitics and *yä* neither on the second nor on the first coordinate can remain silent. Optionality in the coordinate constructions is not acceptable. As I have argued above, the optionality of the agreement clitics is the result of a PF operation called Feature incorporation (Finc). Since I already proposed that Finc works under *Dominance*, and given that neither of the coordinates is dominating the other, the operation Finc doesn't apply in this case. This elegantly explains why coordinate constructions avoid optionality.

Chapter 7

Conclusion

The two objectives of this study have been

- a. Sketching the basic setup of the Amharic DP.
- b. Demonstrating that the functional elements in DP could be derived in the same fashion

Considering the fact that little studies have been conducted on drawing the basic setup of the Amharic DP, an attempt is made to accomplish the task first by describing each of the lexical elements (the head noun and its modifiers) and the functional elements, and then by proposing the placement of each of the elements in relative to the other elements in the DP. Concerning the placement of the lexical elements, I have claimed that the order of elements in Amharic is compatible with what Cinque (2005a), based on Greenberg 20, claims to be the most unmarked order cross-linguistically.

Demonstratives – Relative Clauses–Ordinals–Quantifiers & Numerals – Adjectives – Possessives–Complement/relational phrases-N

Of these constituents, relative clauses, possessives, relational phrases and some of the ordinals are *yä-phrases*. Taking the fact that all *yä* phrases have attributive and subordination property, I proposed that all of them are headed by C. Following Cinque's works, I also assumed that each of the modifier phrases such as quantifiers, adjectives, demonstratives, ordinals and all *yä-phrases* merge in specifier positions of functional projections.

Being the main targets of this thesis, the functional elements such as the definite article, the number, gender, case markers as well as *yä* are argued to have similar distributions (syntactic

properties) in the DP.

- a. With the exception of number marker, they can not occur on the head noun if the head noun preceded by a modifier
- b. They all can have multiple realizations on multiple lexical heads
- c. When they have multiple realizations, they occur obligatorily on the highest modifier and iteratively optionally on the lower modifiers.
- d. They skip non-head elements such as adverbs, non-finite verbs and adjectival (quantifier) intensifiers.

Taking these persistent similarities across the functional elements in their distributions as a point of departure, I have argued that the functional elements including the traditionally dubbed ‘complementizer’ element, *yä*, are the reflexes of the agreement between their respective functional heads and the lexical heads in the c-command domains of the projections. Assuming that the functional projections merge with phonologically null heads, the agreement between those null heads and the lexical elements in the complement domains of the heads lexicalizes the functional elements such as the definite article, the gender, number and case markers as well as *yä*.

Arguing that the definite article is sensitive to the semantic and syntactic properties of its host elements—for the fact that it avoids to occur on inherently definite nominals such as proper nouns, demonstratives and pronouns—I claimed that the post-syntactic analysis of the definite article advocated by Kramer could not be maintained. The distribution of the definite article must be captured via syntax proper. Putting different syntactic tests such as coordinate constructions, I also claimed that Den Dikken analysis of *yä* as LINKER, which inserts as a by-product of predicate inversion, couldn’t be correct.

I proposed that all the functional elements are the result of the same agreement mechanism—Multiple/Reverse Agree. I have shown that Multiple/Reverse Agree of the kind proposed in Zeijlstra (2004, 2010) and Hiraiwa (2001) can capture the distribution of the functional elements more elegantly than the standard Agree. Coordinate constructions and stacked CPs, as in a relativized possessor phrase, provide the strongest support for the Multiple/Reverse Agree analysis while they are solid counter evidences for the post-syntactic analysis offered by Kramer as well as for the head movement (predicate inversion) analysis proposed by Den Dikken.

The intricate distribution of *yä*, where it occurs on the final element in the relative clauses and on the first element in possessive phrases, which has been a puzzle for many linguists, is derived

by the same method.

Its capability to demonstrate that all these functional elements have similar distributions that they can be derived in the same fashion is, I assume, the most important innovation of this thesis. In a way that has never been proposed before, here, I have shown that the functional elements, not only the ϕ features and case but also *yä* have strikingly similar properties that they can be derived in the same way with little stipulations.

Taking the agreement clitics and *yä* as lexicalizations of the agreement operation also gives a proper justification why they always target the lexical/syntactic heads (heads of projections), such as the finite verb, adjectives and the head noun, while they skip presumably non-lexical/head elements such as adverbs and adjectival intensifiers as Agree is usually assumed to be a relation between heads.

No systematic study has ever attempted to incorporate the optional agreement elements in multiple modifier constructions in Amharic DP. Observing the fact that the optionality of the agreement elements is more systematic than many people assumed, I have proposed that the optionality is the result of feature incorporation (what I call *FinC*) on the interface between the syntax and the PF domain. Taking for granted that optionality has no place in Minimalist framework, where language is assumed to be an optimal system, I argue for obligatory Multiple agreement, and I further propose that the seemingly optionality of the agreement elements is the result of this feature incorporation phenomenon.

I have also shown that the occurrence of the ϕ features on the modifiers is apparently dependent on the definite article. To explain this fact, I proposed that the ϕ features might merge on D–head, rather than on the head noun. I argued that the dependency of the gender marker on the definite article in Amharic DPs is so robust phenomena that the two features might form a feature cluster in D. Following [Béjar & Rezac \(2009\)](#), I assume Agree as an *exhaustive* operation in which agreement with feature F entails agreement with all other features of the cluster where F belongs. I also mentioned that the absence of gender feature on the modifiers in indefinite noun phrases could be the result of absence of feature clustering. About the diminutive interpretation of the gender feature, I suggested that the gender feature on D has two sub-layers of features in it—the gender itself and the diminutive one. The emerging of the diminutive reading in certain environment (when the head noun is inanimate or inherently masculine), I claim, could be as a result of repairing mechanism triggered by semantic mismatch between the gender feature on D and the one on the lexical nouns.

As to the number feature, considering various alternatives, I claimed that base generation of the feature on D is problematic. Hence, following the works of other syntacticians in Semitic languages, I proposed a syntactic projection—NumP. To address the fact that the head noun doesn't agree with the functional elements whenever a modifier merges into the derivation, I also proposed NumP to be a phase, in the spirit of [Svenonius \(2004\)](#). Every time a modifier merges into the derivation, by occupying the escape hatch SpecNumP, it blocks the raising of the NP. This correctly outlaws the agreement of the head noun with the higher heads in presence of modifiers. The dependency of number marking of the adjectives on the definite article is explained by assuming that the D head acquires number feature via agreement with Num head.

As to the case feature, considering facts in generic nouns, names, pronouns and demonstratives, I claimed that the dependency is only indirect. It seems that the case feature depends on the definiteness interpretation rather than on the formal definiteness feature (and/or its reflex, the definite article). I argue that Amharic DPs are dominated by a case projection, KP, which hosts the case value assigned by the external verbs. If a lexical element merges with no unvalued definiteness feature (if it merges with the semantic information of definiteness), it couldn't probe to D given that probing to D is assumed to be motivated by lack of such a feature (information). A lexically (internally) definite constituents such as possessives demonstratives, pronouns and names as well as generic nouns acquire case feature directly from K-head.

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