THE STRUCTURE OF NOUN PHRASE COMPLEMENTS IN KHAMTANGA

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ABSTRACT

The Structure of Noun Phrase Complements

in Khamtanga

This study analyzes the structure of noun phrase complements in Khamtanga. It is stated in Jackendoff (1977) that various phrases and clauses can function as complements in a noun phrase. These complements occur at different levels of projection by phrase structure (PS) rules. Following the principles and parameteres approach of Government and Binding theory as developed in Chomsky (1981) and recent works, the present study shows that PS rules are not needed to account for the projection of NP complements. It is claimed that the relationship of complements with a head noun can be explained by independently motivated principles of Universal Grammar (UG).

The first chapter deals with some important theoretical issues regarding the model of grammar. The major claim is that PS rules create a redundancy which cannot be maintained in a restricted model of grammar.

The second chapter presents the analysis of phrasal complements. Because of the productive function of the genitive construction in the language, the most frequent phrasal complement is the genitive NP.

The third chapter investigates the most common clausal complement in NPs, i.e. the relative clause. It is argued that forms that formally resemble the relative construction can be quite different functionally.

In the fourth chapter the restriction that is imposed upon the order of complements is discussed. It is shown that ordering restriction can be explained independently without resorting to PS rules of particular grammars.

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DECLARATION

I, the undersigned, declare that this thesis has been submitted for examination with my approval as University Advisor.

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Date: June 5th 1989

CHAPTER ONE

INTRODUCTION

1.1 The Language

Khamtanga /XamtaNa/ is a Cushitic language spoken in the northern part of Ethiopia particularly in Wollo administrative area. Together with other three languages it forms a distinct group within Cushitic - known as *Central Cushitic* (Bender, 1976:14), though it is customarily referred to as the *Agaw group*. Other languages that belong to the same group are Bilin, Kemant, and Awngi, spoken in Eritrea, Gondar and Gojjam respectively.

Khamtanga like other Agaw languages is becoming highly influenced by Amharic and Tigrinya. Most speakers are bi-linguals speaking,in addition to Khamtanga, Amharic or Tigrinya or both. The exact number of speakers and possible dialect areas of the language are not clear matters. Regarding the latter, however, Appleyard (1987:247) suggests about four dialect areas. These are (i) Abargalle, (ii) Zikwala, (iii) Sakwata, and (iv) Simen dialects. As for the population estimate there is no reliable figure, though Bender (1976) put it around 5,000.

The phonemic inventory of consonants and vowels is presented below adopted from Appleyard (1987:246).

The Consonants

Plosive Stops	bilabial		b
	coronal	t	d*
	velar	k	g*
	labio-velar	k^w	g^w
	uvular	q	
	labio-uvular	q^w	

Glottalized Stops	Coronal	t'(T)
	Velar	k'(K)
	labio-velar	$k'^{w}(K^{w})$
Fricatives	labio-dental	f
	coronal	s
	palatal	$\overset{y}{s}$ (S)
	uvular	x
	labio-uvular	x^{w}
	laryngeal	h
Glottalized fricatives	Coronal	s'
Affricates	palatal	$\overset{y}{c}$ (c)
Glottalized affricate	palatal	$\overset{y}{c'}$ (C)
Nasals	bilabial	m
	coronal	n
	velar	n (N)
	labio-velar	$n^{w}(N^{w})$
Lateral	coronal	l (ł)
Tap	coronal	r
Semivowels	bilabial	w
	palatal	y

Vowels

High	i	+ (ɨ)	u
Mid		ə	
Low		a	

1.2 Previous Studies

The major studies on Khamtanga that are published[1] so far are, Leo Reinisch's *Die Chamirsprache* (1884), Conti Rossini's *Appunti sulla lingua Kamta dell'Enghelle* (1904), and David Appleyard's *A grammatical sketch of Khamtanga* (1987). Reinisch's Charmirsprache, though preceded by few other works - mostly short word lists - was the first description of the language. Although there are a number of asymmetries between the data of Chamirsprache and that of the present Khamtanga - there seem to be enough similarities to refer to both as belonging to the same language. The apparent difference of nomenclature also seems insignificant because of the fact that Khamtanga speakers call themselves as *Khamra* (Xamra) - which can easily be associated with Chamir. On the other hand, the data in Conti Rossini's brief descriptive study seems to differ significantly from the present Khamtanga, despite the obvious similarity between the name *Khamta* and Khamtanga.

Appleyard (1987) is the recent and up-to-date description of Khamtanga which presents both general and particular features of the language. It shows more general patterns by presenting the features which Kamtanga shares with (or differs from) other Agaw languages. In this respect the study is yet another important contribution of the author to the comparative study within Agaw as in Appleyard (1984a, 1984b, 1986). In his grammarical description of the language the author has dealt with two areas: *the nominal system* and *the verbal system*. In both the focus of description is on the various morphological forms. The nominal system, for instance, comprises the inflection of nouns for gender, number, case, and definiteness. Since I shall have occassion to comment upon some of the claims made regarding these systems, I shall not go in to the detail here.

Nevertheless, a general remark seems to be in order as to the overall significance of the study. Speaking from a descriptive point of view, the analysis is more morphological and explanations are often derived from diachronic sources via a comparative analysis. This is not to imply that there is an absence of a synchronic analysis but it is rather to indicate that most of the description focuses on apparent similarities or differences of the language in relation to the other Agaw languages or a reconstructed Proto-Agaw form.

This line of research contributes very important findings. In fact, within the wider realm of generative grammar many linguists reach at insightful conclusions by employing these methods. In Lightfoot (1979) a number of important issues are discussed concerning diachronic syntax. Moreover, generative grammarians would not rule out linguistic phenomena that are historical residues. As Chomsky (1986a: 145) pointed out, recent studies on related languages like those on the Romance languages, as in Kayne (1975, 1984), have been yielding quite enlightening findings.

The issue being questioned is, thus, not the theoretical nor the empirical relevance of historical comparative linguistics per se, but rather the theoretical framework in which it may be employed. This point was made explicitly in Hoekstra (1984:20), from which the following is quoted:

> "The framework /of the seventies/ was relatively unsuitable as an explanatory theory in the domain of comparative syntax. Differences between languages could be accounted for in a variety of ways, e.g. in terms of statements to the effect that a particular rule was absent in the grammar of one language but present in the grammar of another language, without it being clear why this should be so."

In other words, the issue cuts across the difference between *levels of adequacy* - a notion developed in Chomsky (1957) and subsequent works.

The study of Khamtanga as outlined in Appleyard (1987) can be termed as an attempt towards a descriptively adequate grammar. Radford (1988:28) defines descriptive adequacy as a level which can be reached by a grammar if it "properly describes the syntactic, semantic, morphological, and phonological structure of the sentences in the language in such a way to provide a principled account of the native speaker's intuitions about this structure." Therefore, as a systematic morphological description, the study contributes a lot to the better understanding of this Agaw language and it has set the stage for further research. Indeed, Appleyard's study is wider in its scope than what might be implied by the word *sketch*[2].

Regarding the unpublished works, they include two (B.A) thesises (at Addis Ababa University), The first one is *Morphological Structure of Nouns and Nominals in Wag Säq^{w}ota Agaw* (in Amharic, 1980) by Kasse Kelkay, and the second one is *The Verb Morphology of Khamta* (1984), by Mengistu Amberber. Both studies attempt an elementary morphological description of nouns and verbs respectively.

1.3 The Present Study

There are at least two factors that can distinguish the present study from its predecessors. The first one has to do with scope while the second one deals with goal. Apparently the latter seems more fundamental than the former because it involves mentioning the theoretical assumptions on which the study is based. Thus, I shall only mention the general direction here and elaborate the detail in the next section. Generally speaking the

study aims to make an explanatorily adequate analysis of noun phrase complements in the language. This is of course easily stated than implemented into practice, because the highest level of adequacy presupposes, among other things, the fulfillment of the lower levels. In other words, the present study not only describes certain aspects of the language but also attempts to explain why these aspects are perceived the way they are. However, as Chomsky (1986a) stressed, higher explanatory study has to assume fewer descriptive mechanisms.

As for the scope of the study, it is limited to the analysis of the syntactic structure of noun phrase complements in Khamtanga. *Complements* here are used to incorporate phrasal and clausal modifiers of a noun phrase. Therefore, it is much limited in scope than the previous studies which covered a larger domain.

In terms of data, the study is limited to the Zikwala dialect which is spoken around Zikwala region because my two informants had come from that area. For a comparative purpose I have also elicited data from Bilin and Awngi speakers.

1.4 The Theoretical Framework

In the preceding sections the term *generative grammar* was mentioned without being defined explicitly. This section shall attempt to define this term.

As Chomsky (1986a:4) asserts, generative grammar is not a *theory* in the strict sense of the word. He goes on to claim that "generative grammar is not a theory any more than Chemistry is a theory. Generative grammar is a topic, which one may or may not choose to study." Thus, the exact theoretical assumptions that the present study shall follow within the topic of generative grammar must be clearly identified.

The study is enclosed in the Government-Binding (GB) model as developed in Chomsky (1981, 1982, 1986a, 1986b) and others. Chomsky (1981:1), introduced this notion for *expository purposes* as an *alternative approach* to some of the concepts he sketched in his earlier (1980) framework. The whole development is embedded within the *Extended Standard Theory* (EST)- which evolved as a result of Chomsky's pioneering work (1970) and others. This theory itself is an extension of the fundamental issues brought forward by Chomsky (1965) also known as the *Standard Theory* or the *Aspect model*. Thus, the GB model could never be comprehended in isolation from the Extended Standard Theory. Hitherto, Chomsky, has never ceased to underline this relationship. In Chomsky (1982:3) he clearly stated it as follows:

> "Because of the crucial roles played by the notions of government and binding, the approach is sometimes called government binding (GB) theory. I will refer to it by that name here, though it develops directly and without a radical break from earlier work on transformational generative grammar, in particular, from research that falls within the framework of the Extended Standard Theory (EST)"

If GB is incorporated within EST in the above sense, the next task is to identify the components of grammar.

The major proposal regarding the components of grammar[3] states that it consists of two systems: the subcomponents of the rule system and the subsystems of principles. The subcomponents of the rule system[4] are the following:

i) lexicon

ii) syntax

  a) categorial component

  b) transformational component

iii) PF (Phonetic Form)

iv) LF (Logical Form)

The lexicon includes the inherent and idiosyncratic properties of lexical items. It also comprises lexical redundancy rules which determine predictable properites. In general it includes categorial (the category to which a lexical item belongs) and contextual (subcategorization) features.

The categorial component consists of phrase structure ruels which generate D-structure (deep structure). These rules permit the expansion of lexical categories into phrasal categories.

The rules of the tranformational component which are reduced to their absolute minimum by *Move* α (Move anything anywhere), map D-structure to a corresponding S-structure[5]. Movements that are not possible are explained by independent principles.

The remaining two components - the PF and LF (which are referred to as the interpretive sub-components) operate on S-structure to assign the associated phonetic form and logical form[6] respectively.

These subcomponents of the rule system interact with the subsystem of principles which are believed to be available by Universal Grammar (UG). The complex nature of this relationship is characteristic of the research strategy designed to acquire UG. The main focus of this strategy is reducing the expressive power of particular grammars, i.e. grammars of particular languages, by factoring out general principles, thereby narrowing down the option of possible grammars to be selected by the language learner. Clarifying the property of this relationship, Riemsdijk and Williams (1986:110) comment as follows:

> "The general principles, which take over the burden of regulating when and how the rules apply, are assumed to be part of Universal Grammar and hence constitute linguists' first crude attempt at characterizing the biological endowment with which the child can face this overwhelming task."

Taken individually, these subsystems of principles can be considered as independent modules exhibiting their own characteristic features. These modules of grammar are the following, as sketched in Chomsky (1982:6):

a) X-bar theory

b) θ-theory

c) Case theory

d) Binding theory

e) Bounding theory

f) Control theory

g) Government theory

The evoluton of X-bar theory (which is concomitant with the first major reduction of the transformational component) determines the hierarchical organization of lexical categories to phrasal categories. It also predicts the linear ordering of a *head* lexical category with respect to other constructions.

In θ-(theta or thematic) theory how each argument (complement of a head) receives a thematic (semantic) role is determined. Its basic feature, namely, the *θ-criterion* ensures that every argument is assigned a unique θ-role. In other words, there seems to be a one to one correlation between theta roles and arguments. Williams (1987:437) in describing the propositions embedded in the θ-criterion suggests the possibility of finding "more theta

roles in a sentence than NPs but not vice versa." His claim was motivated by the existence of optional or implicit arguments. Latter developments in the theory had extended the assignment of thematic roles to *chains*, a notion developed with the recognition of *traces*. The recognition of the structural importance attached to traces brought with it insightful concepts to the development of the theory. This stage is referred to as the Revised Extended Standard Theory (REST); See for discussion Riemsdijk and Williams (1986:171). The theory also attempted to converge θ-role assignment with Case assignment under what is known as the *Visibility Condition*. According to Aoun (1985:89), "in order for an element to be visible in PF, it must be case marked". This condition subsumes the major principle of Case theory, i.e. the *Case Filter*, which rules out structures that contain Case-less (phonologically real) NPs.

Thus, more generality was captured by reducing much of the effects of the Case Filter - which is a desirable result in accordance with the research strategy.

The theory of binding mainly deals with the interpretation of anaphors (reflexives and reciprocals) and pronominals. There are three principles which are central to the theory of binding. They are presented below from Chomsky (1986a:166ff):

a) an anaphor is bound in a local domain

b) a pronominal is free in a local domain

c) an r-expression is free

The notion of a local domain is equated with the minimal governing category of α. And a governing category can be defined as a maximal projection

containing both a subject and a lexical category governing it or containing it. Chomsky (Ibid) suggests that a governing category is a *complete functional complex* (CFC) where all grammatical functions compatible with its head are realized in it. Closely related is found the theory of control which accounts for the relation of PRO (empty Pronominal) with possible antecedents. In general the notion of empty categories (ECs) plays a crucial role. There are four kinds of EC: NP-trace, Variable, PRO, and Pro. An NP-trace is Case-less, and a variable is like an r-expression but is bounded by an element in a non-argument ($\bar{A}$) position. PRO is ungoverned but could be either bound or free. According to Chomsky (1986a:164) when PRO is free it typically has an arbitrary interpretation similar to *one*, as in "one's beliefs often prove false." The EC *pro* is a pure pronominal element like *he, she, they,* or an expletive *it* and is found in null subject languages like Italian where the subject can be dropped. It is obvious from the earlier model that the study of the relationship between different NPs and their possible antecedents has led to the formation of insightful concepts. In fact, according to Borer (1984a:7), "the central concern of GB is to characterize the positions in which different manifestations of NPs can appear." She further states that the subsystems of principles interact, "each predicting a certain distribution of nominal elements in a certain domain."

The theory of bounding operates by regulating the locality conditions on which *Move* α can apply. It specifies the possible barriers to government and movement in human languages.

The theory of government is related with a number of principles that play important roles in the operation of other subsystems. It is also closely related with structural notions like c-command (constituent command). A

c-command relation is a structural relation where "A c-commands B if and only if the first branching node dominating A also dominates B and A does not itself dominate B." (Riemsdijk and Williams (1986:142)). The basic notion of government is expressed by Aoun (1985:22) as follows:

> "Government is essentially a relation that holds in a specific structural configuration between a governer and a governed element. In the core case a lexical head governs its complements."

Different formulations of government have been proposed in the literature. For Chomsky (1986a:162), who follows the approach developed in Aoun and Sportiche (1983), "a category α *governs* a maximal projection X" if α and X" c-command each other; and if α governs X" in this sense, then α governs the specifier and the head X of X"." Thus given the above domain government is indeed a crucial concept. It regulates, inter alia, the assignment of Case and θ-roles. Chomsky (1986b:1) stresses the importance attached to the concept of government by saying, "government enters into a broad range of considerations; as a result any proposal concerning its formulation has many intricate consequences."

Having seen the major tenets of the grammar as outlined in the GB model we shall examine some of the important issues in light of the objective of the present study. Since a noun phrase is one type of phrase structure, the discussion focusses on the following two aspects:

i) the nature of the categorial component and its interaction with other components of the rule system;

ii) the role of the subsystems of principles in regulating the rules of the categorial component.

The development of the theory that characterizes the phrase structure (or categorial) component is marked by two opposite trends: the first one

witnessed its enrichment and the second one its impoverished status. The first significant modification that occured in the phrase structure component is its enrichment. This outcome was caused by the shift of some burden from the transformational component to the phrase structure component as a consequence of Chomsky's *Remarks on Nominalization* (1970). By taking one type of transformation, namely, nominalization, Chomsky showed that it can be obviated if a base generation approach is invoked. This proposal implied the existence of nominal phrases that are lower than full phrases.

With the introduction of the X-bar convention in *Remarks* - later to be developed by Jackendoff (1977), the phrase structure component took over further tasks that were formerly accorded to the transformational component.

The X-bar convention requires, among other things, that the head of a given phrase should be one bar lower than the dominating higher level - which is expressed by the schemata $X^n \longrightarrow \cdots X^{n-1}$ (Jackendoff, 1977:30). In addition, an essential notion was made explicitly which recognizes the existence of intermediate levels of projection for every head lexical category X(X=N(oun), V(erb), A(djective), P(reposition)).

With the development of the theory from system of rules to subsystems of principles, however, the claims made by the X-bar convention as properties of a possible theory of a phrase structure (PS) were gradually reduced. Most of the effects of the X-bar theory that once looked elegant were proved to be redundants, which can easily be reduced to the effects of other independently motivated general princeples. Chomsky (1981:31) points out the reduplication caused by the PS rules claiming that the rules merely restate

the information which is already provided by the lexicon. He further argues that if there is a universal principle that ensures the fulfillment of the requirement of lexical categories at every level of representation, then such unnecessary reduplication shall be eliminated. Thus, he invokes (1981:29) one such principle namely the *Projection Principle*, as "a guiding principle for the theory." He formulates it as follows:

> Representations at each syntactic level (i.e., LF, and D- and S-structure) are projected from the lexicon, in that they observe the subcategorization properties of lexical items.

More specifically, Stowell (1981) argues that most of the PS rules are derivable from independent but interacting principles. He proposes that most of the head-complement orders that were made available by PS rules would follow from the properties of Case and θ-role assignment. He then develops the notion of *Case Adjacency Principle* which requires that a Case assigner element must be close to the asignee.

Therefore, due to these and a number of other theoretical and empirical challenges it became quite obvious that PS rules are not adequate as explanatory devices. In fact, Hoekstra (1984:24) points out that some of the PS rules - as developed in Jackendoff (1977) - "imply the existence of phrases that do not actually occur," which means that PS rules are not adequate even at the descriptive level.

The direction of these arguments is to propose a theory that highly constrains possible PS rules. It appears that the only information an X-bar theory should consist is the relative position of the head with its complements. This defines the *headedness* parameter - right or left headed - for the language learner. The outcome is again in line with the overall research

strategy designed for the theory which assumes apparent differences to be results of fixing certain values of a parameter of a certain general principle. But even here some linguists, notably Koopman (1983) and Travis (1984), suggest that the headedness notion can be eliminated by invoking the *directionality* of Case and θ-role assignment. Still others have extended the arguments to include the traditional distinciton between configurational and non-configurational languages. For instance, Hale (1979) - as quoted in Stowell (1982:236) - suggests that languages (like Latin, Sanskrit, Japanese) which permit free word order (as opposed to English type languages where order between the major constituents is fixed) lack PS rules entirely. Stowell (1982:ibid) further develops this notion by claiming that the phenomenon of fixed word order can be explained "in terms of independently motivated principles of other components of grammar - while simultaneously accounting for the inapplicability of these principles in the grammars of the non-configurational languages." In describing the full implication of his claim, Stowell says, "We could assume that the component of categorial rules simply doesn't exist in any language; this would amount to treating languages such as English as being essentially nonconfigurational, from the perspective of the theory of phrase structure".

While the above and other proposals regarding the nature of the categorial component and its status within the theory of grammar should be subject to more empirical considerations - and thereby to more investigation of a number of other languages - the redundancy of PS rules in grammar stands out prominently. Consequently, the trend to eliminate PS rules would lead to a desirable outcome particularly in explaining the rapidity of language acquisition.

In the above discussion some of the major issues involved with the phrase structure component have been outlined briefly. The relationship of this component with other subsystems of principles is quite complex as the principles regulate the rules. It should be borne in mind, however, that there still a number of specific controversial issues that need to be resolved in undertaking a study on a particular constituent structure. One such issue which is relevant to the present study is the number of levels of projection for a head X. Jackendoff (1977:36), proposed what he calls a *'Uniform Three-Level' hypothesis*, in which the value of n equals 3, uniformly for all categories in the Schema - $X^0 \longrightarrow \cdots X^{n-1}$ - a notion which is also referred to as the *endocentricity constraint*. The hypothesis also imposes that the outcome of the Schema should be one-bar lower than the input. A number of arguments have surfaced against the above assumption. Radford (1988:262) implies that the value of n equals 2 - for a maximal projection. He suggests that Jackendoff's schema is too restrictive as it rules out recursive projections and gives evidence for the existence of recursive projections at the X^1 level.

By presenting some solutions to semantic ambiguities, Andrews (1983: 596) opts for a recursive or what he calls nested $\bar{X}$ analysis over Jackendoff's. Sturman (1983), has argued with analogous lines particularly focussing on the projection of restrictive and appositive modifiers. Following Emonds (1979), Sturman (1983:738) suggests that appositive relatives should not project from a different level. This approach, of course, markedly differs from Jackendoff's (1977:172) claim which bass generates appositives as modifiers of the maximal projection at X^{III} level. Quite an extreme trend of this development can be found in Travis (1984:85) where only maximal

projections are recognized. She stipulates that the restriction imposed on "branching possibilities ...also restricts other parts of the grammar" which is a desirable consequence within the theoretical assumptions of the GB model.

The choice of one proposal over another again depends on empirical considerations. For the purpose of the present study, however, I have opted for what Radford (1988:597) calls *the classical* version of X-bar theory - which posits a two-level phrasal expansion (X' and X" (or XP)) for a head X, where X is a lexical category: the lexical categories N,V,A,P are defined in terms of syntactic distinctive features [±N, ±V] (as in Jackendoff (1977:31). The study also assumes the *Modifier Maximality Constraint* as in Stowell (1981:70) which requires that every modifier (a non-head term in the expansion of a lexical head) must itself be a maximal projection. In other words, all complements of the noun phrase are considered to be maximal projections (XPs).

The term *Complement* is employed in its wider sense to include both subcategorizing and other complements and differ from other approaches (Radford (1988), Andrews (1985)) that make distinctions between the so called *adjuncts* and complements. The semantically based classification of complements into three distinct levels shall not be persued in the study for the obvious reasons that were made explicit above. Instead, the relationship of the complements both within themselves and with the head NP shall be examined in terms of the relevant general principles of grammar.

Notes for Chapter One

1. I have omitted the brief notes and word lists - like that of Bender (1971) from mentioning here.

2. I have learnt from David Appleyard (personal communication) that he has written an article on the *definite article* of Khamtnga. But unfortunately I could not get access to it. Throughout the thesis I have extensively quoted from Appleyard (1987). Thus if not indicated otherwise, Appleyard refers to the above mentioned study.

3. The concept of grammar and Universal Grammar is very crucial because of its philosophical and other theoretical implications. Universal Grammar (UG) is defined in most works on generative grammar as a notion related with the human language faculty - a biological human endowment. See Riemsdijk and Williams (1986) for discussion.

4. These subcomponents of the rule system are taken from Chomsky (1981). In Chomsky (1982:4) there are some minor terminological differences: (iia) is referred to as the *Base Component*, while (iii) and (iv) are grouped together as *Interpretive Components*.

5. S-structure here is not *surface structure* proper but it is rather an output of transformations in the sense of Radford (1981:260).

6. This component deals with aspects of meaning -structural meaning as opposed to lexical meaning. The term *LF* should be understood, as Chomsky suggests time and again, with the *usual provisos* because the same term is used differently in predicate logic.

CHAPTER TWO

PHRASAL COMPLEMENTS

The phrases that function as NP complements shall be examined in this chapter. Following the discussion in the preceding chapter these phrases are considered to be maximal projections of their respective heads. In the first section, the general distribution of noun phrases in Khamtanga shall be presented in terms of their grammatical function within a matrix clause. The types of phrases that can occur in the structure of the noun phrase shall be described in the second section. If there are phrase types that do not function as complements, an explanation shall be forwarded.

2.1 General Distribution

Before presenting the distribution of the noun phrases, it is worthwhile to elaborate the usage of some basic concepts which can often be taken for granted without being so clear. The notions *subject*, *object*, *direct object* and the like are grammatical functions[1] that express structural relations – as opposed to expressing semantic or pragmatic functions. Generative grammar holds that these notions are not primitive units themselves but are rather concepts that presuppose other basic system. In other words, grammatical functions or relations are considered derivative terms. In *Aspects* Chomsky has extensively dealt upon this point and in Chomsky (1981) he explicitly has distinguished between primitive and derivative concepts. His main argument against taking terms like *subject-of* or *object-of* as primitives is based on the requirement of UG, which he states as follows (1981:10):

> ".. it would... be unreasonable to incorporate such notions as "subject of a sentence" or other grammatical relations within the class of primitive notions, since it is unreasonable to suppose that these notions can be directly applied to linguistically unanalyzed data. Rather, we would expect that such notions would be defined in UG in terms of a primitive basis that meets the condition of epistemological priority."

The process of defining these notion in UG involves a number of factors. Among these, the important one is theta role assignment. Thus, it is obvious that a certain position in terms of a grammatical function does not necessarily correlate with the thematic relation expressed in that same position. Parallel to the distinction between primitives and derivatives, is found the distinction between semantic selection(s-selection) and categorial selection (c-selection). Chomsky (1986a:88) suggests that once an element s-selects a complement with a certain semantic role, then its c-selection property is derivable and need not be specified separately.

Another important issue regarding grammatical relations has to do with their representation. In generative grammar, grammatical functions are expressed configurationally. For instance, /NP,S/ expresses the grammatical function (GF) *subject of S* or NP dominated by S. A different view from this representation according to Andrews (1985:64) holds that "grammatical functions are treated as labels of relations in a network... The overt form of the sentence would be determined by principles for realizing such networks..."

Although there are more problems regarding the interpretation of grammatical functions, the above general assumptions shall suffice as a background to the concept.

In what follows, the general distribution of noun phrases in Khamtanga shall be presented.

(1) ljjr -d tär-u /NP,S/
man-DEF come-pst-3ms
"The man came"

(2) an ljjr-d qal-u-n /NP,VP/
I- man-DEF see-pst-1s
"I saw the man"

(3) lämma ljjr-i-z bira yiw-u /NP,NP,VP/
L. man-DEF-to ox give-pst-3ms
"Lämma gave an ox to the man"

As the structures (1-3) show, noun phrases can occur in subject, object, and direct object positions in simple clauses. These structures show the presence of single nouns in each position. The head nouns can take various complements as in the following examples:

(4) aksum-tl nIgusI-d klr-u /NP,S/
A. POSS king-DEF die-pst-3ms
"The king of Aksum died"

(5) an nIC-i-z haz x^{w}-u-n /NP,VP/
I today-DEF-POSS fishes eat-pst-1s
"I ate today's fishes"

(6) i) Nay aksum-t arSa-y-z bira yiw-u-N /NP,NP,VP/
They A -POSS farmer-DEF-to Ox give-pst-3pl
"They gave an ox to the farmer of Aksum"

ii) Nay arSa-y-z aksum-tl bira yiw-u-N
They farmer-DEF-to A-POSS ox give-pst-3pl
"They gave to the farmer an ox of Aksum"

The head nouns in (4) and (5) *nIgusId* "king" and haz "fish" have taken complement phrases. In (6), where the lexical requirement of the verb - *yiw*- "give" dictates the presence of two internal arguments - which can be called theme and goal in the sense of Koopman (1983)- both NPs can take a complement. Thus, *aksum-t* is the complement of *arSa* "farmer" in (6(i)), while it is the complement of *bira* "ox" in (6(ii)).

In all the above structures the heads can be considered as simple nominals. Derived nouns, particularly the so-called *verbal nouns* can also function as heads in a noun phrase. In Khaintanga, *-dänäw* is a very productive suffix in forming verbal nouns:

(7) i) diz-u
destroy-pst-3ms
"he destroyed"

ii) dizänäw
"to destroy/destruction"

Like in a number of other languages, these kinds of nouns can occur in the positions described above.

(8) i) xatmä-y-z dizänäw Clka NäN
town-DEF-POSS destruction-DEF bad be-pr.3ms
"The destruction of the city is bad."

ii) an xatmä-y-z dizänäw wac-u-n
I town-DEF-POSS destruction hear-pst-1s
"I heard the destruction of the town."

iii) an ljir-i-z xatmä-y-z dizänäw jiNz-u-n
I man-DEF-to town-DEF-POSS destruction tell-pst-1s
"I told to the man about the destruction of the town"

The occurence of the derived nominal as the single realization of a noun phrase is less common than simple nouns. Nevertheless, it can occur as in (9) - (11):

(9) dizänäw-d Clka NäN
destruction-DEF bad be-pr.3ms
"The destruction is bad"

(10) an dizänäw-d wac-u-n
I destruction-DEF hear-pst-1s
"I heard the destruction"

(11) an ljir-i-z dizänäw-d jiNz-u-n
I man-DEF-to town-DEF tell-pst-1s
"I told to the man about the destruction"

Note that the nominal is followed by a definite marker when it occurs as the single realization, i.e., when it is not preceded by complements as in (8).

In spite of its limited distribution, it is interesting to note the parallelism of the derived nominal with the corresponding verb as extensively discussed in Chomsky (1970). The following examples are illustrative[2].

(12) i) Lämma lj)r-i-z bira yiw-u
L man-DEF-to ox give-pst-3ms
"Lemma gave an ox to the man"

ii) Lämma-t lj)r-i-z bira yiwänäw
L.POSS man-DEF-to ox to give/giving
"Lemma's giving of an ox to the man"

Before concluding this section, some general remarks seem to be in order. It has been shown that the noun phrase can function as a subject, object, and an indirect object in a simple clause. The head noun can occur alone and also with different complement phrases. The noun that can head a noun phrase can be either a simple nominal or a derived nominal.

One question regarding the general distribution of a noun phrase could be whether or not there are other positions where a noun phrase can occur in some way. Of course, there are a number of other functions that are not discussed here. One of them is what Andrews (1985:80) calls *external* function involving structures like cleft-constructions and topicalization. Since these structures are usually, though not entirely, related with pragmatic functions, they cannot be adequately treated within the limited scope of this study. Therefore, the main focus is on *core* grammatical relations which include, subjects, objects, and indirect objects.

Another point is the relative position of the head noun with the complement. The structures exemplifed above are in accordance with the word order typologies as in Greenberg (1963), where *modifiers* precede the modified element in SOV language. This is true in as much as the above description

is considered also in terms of X bar theory it means that the language has selected a head-final parameter:

Whether this relationship in Khamtanga is motivated by general principles of UG, shall be examined together with other related issues in the subsequent discussion.

2.2 Choice of Complement Phrases

In the preceding section the usage of the term *complement phrase* was deliberately vague - as the main focus was on the general distribution of the noun phrase in terms of the core grammatical relations. The kind of phrases that can occur as complements in an NP shall be examined in detail below.

2.2.1 The Notion of a Complement

As it was stated in the introduction of this chapter the notion complement is used here in its wider context to include maximal projections that participate in the expansion of a noun phrase. It has a distinct function as opposed to a *specifier* which, according to Jackendoff (1977:103) mainly includes determiners, expressions of quantification and some possessive NPs. Hence, a complement is a functional or relational label and not a categorial one as Chomsky (1986b:3) pointed out. In the relevant literature however, there are different senses where a complement is employed. In Radford (1988:177) the distinction between complement and adjunct is proposed, based on the following kind of structures:

(13) A student [of Physics] [with long hair]
PP PP

In (13), Radford claims that the first PP, *of physics* is a complement phrase while the second one *with long hair* is an adjunct phrase. He suggests that complements expand N to N' while adjuncts cannot do the same in the presence of a complement, as the ungrammaticality of (14) shows:

(14) *A student with long hair of physics

The apparent restriction that is imposed on the positions that can be assumed by these phrases with a particular reference to Khamtanga shall be the main theme of the fourth chapter. Suffice it to say here that both phrases can be referred to as complements and their apparent restriction in terms of order is derivable from other indpandently motivated principles of grammar.

Another use of a complement is the kind found in Huddleston (1984: 260), where it is used distinctively from the so called *post-head* modifiers. For Huddleston, the phrase in (15) is a complement, while the one in (16) is a post-head modifier:

(15) her reliance [on her father]
PP

(16) a girl [with red hair]
PP

He argues for this distinction by providing semantic and syntactic motivations. If his syntactic argument is taken here, he claims (p.263), that syntactically there are three properties of complements that distinguish them from modifiers. These are, (a) the occurance of a complement of a given kind depends on the presence of a verb of an appropriate subclass, (b) complements are obligatory with certain verbs, (c) prototypical complements are realised by NPs or AdjPs. These supposedly distinguishing properties cannot be

extended to the NP structure in Khamtanga, because they are not adequate motivations both from a particularist and universalist points of view. From a particularist point of view, the distinction says little more than the observed phenomenon. It does not describe exhaustively which item needs obligatory complement nor does it say why those particular ones need these complements and not others. From a universalist point of view, the employment of the very phrase post-head is a language-particular which cannot be used, in any fruitful way, in head-final languages. As a result it cannot even be employed at the observational level. Thus both phrases , (15) and (16), can be considered as complements.

Having cleared the terminological confusion that may arise by the use of complement, the kinds of phrases that can bear this label in the NPs of Khamtanga shall be treated in detail.

2.2.2 Complement Phrases

According to Jackendoff (1977:69,74), possible noun phrase complements are the following:

(17) i) $N' \longrightarrow N-(Prt)-(NP)-(PP)-\binom{PP}{S'}$

ii) $N'' \longrightarrow (A''')^* - N' - (PP) - (S')$

Since the present study considers only maximal projections (XPs) as complements, (Prt) in (17(i)) shall not be examined here. Nor shall the clause (S') be examined because it shall be taken over in the next chapter (S' $\longrightarrow$ Comp S - where Comp is a complementizer like *that* and *who* ; every clause is represented as S', even when there is no overt complementizer). These leaves us with the (NP), (PP) and (A''' or AdjP) complements. XP^* shows a "concatenation of an indefinite Xs" as in Jackendoff (1977:73) or more precisely as in Chomsky (1986b:2) "X* stands for zero or more occurences of some maximal projection." Jackendoff did not propose these phrase types

as necessary universal properites - since his main concern was the English complement system. Nevertheless, given the assumptions he made for UG, the essentials of (17) should be expected in other languages too. In fact a number of studies have been conducted in the same spirit as in Baye (1986). All the same the discussion of these complement phrases - NP, PP, and AdjP, is not as clear in Khamtanga as it seems the case in English. We shall examine each complement phrase below.

2.2.2.1 NP Complements

Although, Jackendoff (1977:61), was the first to doubt the validity of his distinciton between complement types - attributing it to "little study of a possible distinction among different kinds of NP complements", he has proposed some formal properties for each of the complements.

Regarding the NP in (17(i)), he claims (p.69) that "in surface structure ....N cannot be followed by NP object or predicate. An N' corresponding to a V' with a direct object generally contains *of*...". Thus, in structures like (18) the head noun is followed by *of*+NP.

(18) i) destroy the city
ii) destruction of the city

The crucial question that is directly relevant for the present discussion will be what to call the *of*+NP structure: Is it a PP headed by the head P *of* or is it an NP occuring with *of* for some other reason. Moreover, what is the explanation for the difference between the former phrases and (19) and (20)?

(19) i) the city's destruction
ii) the destruction of the city

20) i) the student of Chemistry
ii) *Chemistry's student

Following Chomsky (1986a), the status of of-NP structure can be accounted for systematically. It has been assumed that in order to save the NP in complement position from the Case Filter, English employs a rule of *of*-insertion/*of* being a semantically empty Case marker. Another possibility for the genitive Case assignment in English is the affixation of the POSS(essive) element to the NP in subject position to get structures like (19(i)). Chomsky (1986a:193) argues further that Case assignment at D-structure must be distinguished from Case-realization at S-structure, although both occur under government. In order to capture more generalization, Chomsky proposes (p.194) what he calls the *Uniformity Condition* formalized as follows:

(21) If α is an inherent Case-marker, then α case marks NP if and only if θ-marks the chain headed by NP.

Assuming together with Chomsky that Ns are inherent Case assigners, (21) shall be the core principle in the analysis of the present study.

The exact nature of the NP in complement position shall be clear if the overall characteristics of genitive construction in Khamtanga is examined.

In Khamtanga, as it is the case in Oromo (Baye, 1986), and Amharic (Mullen, 1986), the same genitive structure can express a number of different relations. The following are the relevant examples:

(22) i) aksum-t arSa
A-POSS farmer
"A farmer of Aksum"

ii) lʧärä-y-z flClra
boy-DEF-POSS goat
"the boy's goat"

iii) tabb-i-z nǝi
Teff(wheat)-DEF-POSS Injera(bread)
"Injera of Teff

iv) ijir-i-z lik^{w}
man-DEF-POSS leg
"The man's leg"

v) lämma-tl Zin
L. -POSS brother
"Lemma's brother"

vi) xatmä-y-z dizänäw
town-DEF-POSS destruction
"destruction of the town"

It is clear that in the above examples, the genitive relation between the head and its complement is different. For instance, following Baye (1986), we can call *akaum-t* in (22(i)) a *locative* genitive since it shows us a particular location - *Aksum* - with which we can associate the head noun. (22(ii)) shows a possessional relation - the head noun belonging to the complement in some way. However, in all cases the assignment of genitive Case is the same. In (22(i)) *Aksum* is in an argument position. Being in a NP, we can also assume this argument position to be a θ-position (since raising predicates and the passive morphology are not involved). Thus, the NP in this position must be assigned the appropriate θ-role. It can only be assigned such a role by its governing head - *arSa* - and by virtue of the Uniformity Condition it can be further assumed that the NP in question is also assigned genitive Case by the same head. Therefore, *Aksum* is assigned genitive Case which is morphologically realized by the suffix *-t*. The same can be said about the rest, except that mostly Case is realized by the suffix *-z* which is the possessive Case marker in masculine nouns other than proper names, (cf. (45) below for the full inventory of Case markers).

Therefore, in (22) genitive Case is assigned and realized[3] on the possessive NP and as a result there is no violation of the Case Filter.

The fact remains however, that the genitive relation expresses different kinds of possession in the structures in (22). This is not a peculiar property of Khamtanga but is rather a typical property of possessive NPs in general as pointed out in Williams (1984). Therefore in spite of the different relations expressed by the genitive construction the assignment and realization of Case is identical.

Thus assuming the NP to be the maximal projection modifying the head N, the corresponding D-structure and S-structure of (22(i)) can be shown as follows:

(23) D-structure [aksum arSa]

S-structure [aksum-t arSa]

It is interesting to note that, although Jackendoff (1977:69) claims that an NP can occur as a complement of N at D-S and with *of*-insertion at S-S, he does not explain why this should be so. But with the notion of the Case Filter this phenomenon is explained systematically. This and other universal principles not only obviate the need to have an elaborated rule system but also strongly support the assumption made by category neutral phrase structure, as in Stowell (1981) which postulates that any XP can be a complement of any lexical head X. Thus, the fact that English requires the rule of *of*-insertion is a *default* as Chomsky (1986a:194) calls it and can be characterized as belonging to the *periphery* rather than to the *core* grammar.

Another issue that needs to be examined is the difference between the genitive constructions expressed by (19) and (20). The Khamtanga phrase that is the equivalent of (20) is (24):

(24) wängel-i-z^{4} tämari
Gospel-DEF-POSS student
"Student of the Gospel"

An important difference exists between (26) and (24), which surfaces when another phrase is added as in the English (25).

(25) a student of physics from England

(26) aksum-t wŏrgel-i-z tŏmari
A-POSS Gospel-DEF-POSS student
"A student of the Gospel from Aksum"

The crucial point is that while in Khamtanga the new phrase introduced is marked by the genitive Case realization, in English it is headed by a preposition *from*; the of-insertion rule cannot be implemented as the ungrammaticality of (27) shows:

(27) * a student of physics of England

One possible explanation for the ungrammaticality of (27) and the grammaticality of (26) can be derived from the properties of Case and θ-role assignment. If student θ-marks physics - giving it some kind of θ-role - like *possess-ional θ-role*, (Anderson (1983:5) suggests that this θ-role can be called *Possessional location*), then it can assign it genitive Case again by virtue of the Uniformity Condition. Then, this Case is realized *in-situ* by the of-insertion mechanism. But the NP *England* cannot be assigned Case by of-insertion. It seems English does not allow here the default case, i.e. *Of-insertion* →*Phyics of England. In other words, the ungrammaticality of (27) is associated with the failure of Case assignment by the language particular default mechanism. This can be supported by the fact that English seems to allow successive of-insertion elsewhere as the grammatical structure in (28) shows:

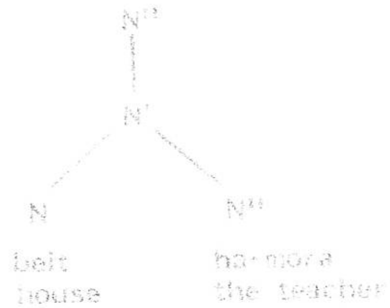
(28) the son of the friend of the farmer

But in (26) the head noun *tŏmari* θ-marks the complement and genitive Case is assigned and morphologically realized. At this stage an important

question crops up: how does [illegible] receive genitive Case if the head had already given one to [illegible] under government? According to [illegible] ([illegible] 42), certain structural conditions allow genitive Case assignment. This condition is shown in (30) by the Modern Hebrew example:

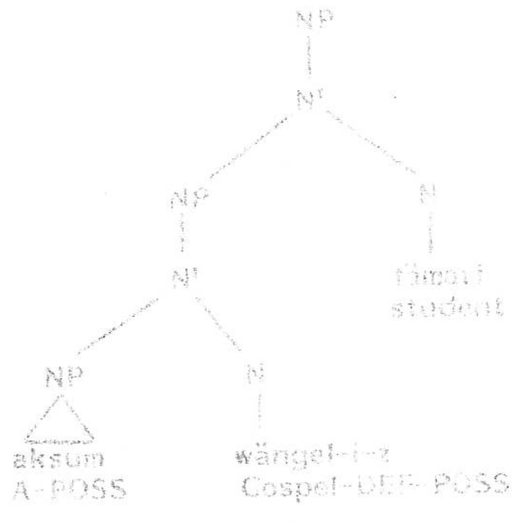
(29) beit ha-mora
house the teacher(fem)
"the teacher's house"

(30)



Following the structural relationship imposed by (30), the Khamtanga phrase (26) can be presented as follows:

(31)



The head noun assigns θ-role and Case to *wängel* which is realized by the Case suffix. Then *wängel* assignes Case to *aksum* which is also realized by the Case suffix.

From the above discussion it should be obvious that genitive Case assignment is closely related with θ-roles assignment. Thus, the thematic

relation that holds between different head nouns and their complements should be closely examined. A case in point is the distinction between (26) (repeated here) and (32) below:

(26) aksum-t wangel-t-z tamari
A, POSS Gospel-DEF-POSS student
"Aksum's student of the Gospel"

(32) lämma-t lk^w l-t-z gizih-t-z s'lmir
L.-POSS son-DEF-POSS dog-DEF-POSS tail
"the tail of the dog of Lemma's son"

In (26) it is possible to say *aksum-tI tämari* to mean "a student from Aksum". But in (32) it is not possible to do the same as the resulting structure would be incoherent: *lämma-tI s'lmir* or "Lemma's tail". One may argue that the apparent *oddity* may improve had the head noun changed to some other N or the complement changed to a different NP-like, *lämma-tI lIk^w* "Lemma's leg". But then that is exactly the point that needs to be made: the thematic relation between the head noun and its modifying genitive phrase is responsible for correct interpretation. Anderson (1983:5) discusses this important relation based on the following examples:

(33) (a) John's reconstruction of an 18th century French village was damaged in the fire

(b) John's reconstruction of the crime required deductive skills

Then, she comments that in the (a) sentence, "John could be the owner, the caretaker, the admirer, the discoverer, or the creator of the reconstruction. The referent of reconstruction is a physical object over which John has some claim of possession". On the other hand she argues that the role of John in the (b) sentence could only be that of *agent*. The distinction made by Anderson between nouns denoting a physical object and other nouns is not always responsible for acquiring the correct interpretation. The problem

can be solved by taking into account the relationship that holds between an NP and its complement in argument position. The desired interpretation involves grammatical well-formedness checked by the interpretive components - PF and LF, and facts of language use. As Chomsky (1986: 92) claims the grammar also includes the principle of *full interpretation* (FI), which requires, "that every element of PF and LF, taken to be the interface of syntax (in the broad sense) with systems of language use must receive an appropriate interpretation - must be licensed."

Therefore, though there are different approaches to the analysis of thematic relation as in the notion of *θ-grid* developed by Stowell (1981), or that of *argument structure* advocated by Williams (1984), or Jackendoff's (1987) attempt to reduce thematic relations to what he labels (p.378) "structural configurations in conceptual structure", the fact that a θ-role assigner element should assign the appropriate role to the assignee is hardly controversial.

In (32) each head N assigns genitive Case in a similar way as in (31). In (25) the thematic relation established by the head N and its complement is obviously different perhaps because of the *alienable* nature of the possession - in the sense of Chomsky (1970). The fact that Khantanga employs the Case suffix in such a way to be shown overtly on each possessor noun also has a direct effect on the interpretation of structures. This is clearly seen in comparison with the following Amharic sentence where the genitive Case realization does not appear with all genitive NPs:

(34) yê eksum wängel tämari
A. Gospel student

This phrase could have the following two different interpretations depending on two different parsings:

(35) a. [yä-Aksum [wängel tämari]]
NP
"student of the Gospel from Aksum"

b. [[yä-Aksum wängel] tämari]
NP N
"student of Aksum's Gospel"

The second phrase could only mean - as indicated by the gloss - "a student who learns a particular type of the Gospel" - the student himself could belong to any place. This distinction culd be made in the spoken form by introducing an intonation break at the desired place. The crucial point to note here is that the interpretation of (35(ii)) is not possible in Khamtanga where the Case assigned by the head noun is overtly shown on the immediately adjacent complement as in (26). In other words the presence of the head noun in (26) is obligatory as opposed to the following Amharic structure where the head noun can be omitted.

(36) yäAksum wängel
A. Gospel
"Gospel of Aksum"

If we do the same with the Khamtanga structure it would be ill-formed as (37(i)).

(37) i) *aksum-t wängel-i-t
A.POSS Gospel-DEF-POSS

ii) aksum-t wängel
A. POSS Gospel
"Aksum's Gospel"

This can be explained in terms of some constraints on deletion. Note that the presence of the Case suffix on the second NP in (37(i)) clearly shows that the NP has been assigned Case by a governing head. The absence of the head in this structure violates the *Recoverability Condition* in the sense of Chomsky and Lasnik (1977), where elements with semantic content are barred from deletion if they are not recoverable by some other means. On the other hand when genitive Case is not realized on the complement the equivalent of (36) will be (37(ii)) which can be properly

interpreted because the relationship will change. A list had been the complement becomes the head and is perceived in its capacity as an inherent Case assigner and not as one that has been assigned.

Before concluding the discussion on whether or not NPs can function as complements in noun phrase, one important problem should be addressed. According to Jackendoff (1977), Selkirk (1977), Anderson (1979, 1983), some possessive (genitive) NPs function to expand an NP in the specifier position. In the case of English these are clearly identified as belonging to the specifier position - though there are some controversial issues as in Stowell (1981, 1983, 1987). However, in a language like Khamtanga where the head-final parameter seems to be strictly observed, all modifiers occur before the head and the status of this NPs i.e. the possessive genitives is obscured. Nevertheless, following Baye (1986:300), we can assume that these possessive NPs are better treated if they are considered to be complements. Moreover, Jackendoff's claim that some possessive NPs can project in the specifier position seems to be activated by a language specific property of English, i.e. possessive NPs are in complementary distribution with specifiers like demonstratives. For instance it is not possible to say *that his book*; the possible structure is either *that book* or *his book*. But in Khamtanga, demonstratives which are clear case specifiers in the sense of Jackendoff (1977:103), can occur with possessive NPs as (40)(iv) and (v)) below clearly show. However, these complements differ from others in one crucial way: they can be associated with possessive pronominals. This issue shall be addressed below.

In Khamtanga there are bound possessive pronominals that are attached to the possessed noun. In Appleyard (261) these forms that are presented in (38) are termed *pronominal possessives*.

(38)	Singular	Plural
1	yɬ-	yɬɬa- / yɬnǎ-
2	kɬ-	kɬɬa- / kɬnǎ-
3(m)	Nɬ-	Nɬɬa- / Na-
(f)	Nɬr-	

These forms can occur in genitive constructions as in (39):

(39) i) Nɬr-ɬɬwa
her-cow
"her cow"

ii) Nɬr-Nɬn
her-house
"her house"

iii) Nɬr-ɬɬ
her-eye
"her eye"

iv) Nɬr-sɬn
her-sister
"her sister"

When these bound forms occur with the head noun, the head cannot take a complement as (40(i)) shows below:

(40) i) *ɬwnǎ-yǎn-ɬɬ Nɬr-ɬɬwa
women-DEF-POSS her-cow
"the women's cow"

ii) ɬwnǎ-yǎn-ɬɬ ɬɬwa
woman-DEF-POSS cow
"the woman's cow"

iii) ɬwnǎ-yǎn-ɬɬ ɬx^{w}ɬr-ɬ-z ɬɬwa
woman-DEF-POSS child-DEF-POSS cow
"the cow of the woman's child"

iv) ɬzzay ɬwnǎ-yǎn-ɬɬ ɬɬɬɬk^{w}
those woman-DEF-POSS chickens
"those chickens of the woman"

v) ɬnɬn yɬ-ɬɬrza
this my-horse
"this horse of mine"

The obvious question, then, is what is the relationship of the pronominal proclitic to the head noun? In order to get a comprehensive answer to this question some general properties of the bound forms in (38) should be examined.

It is clear from the observational level that forms in (38) are bound as opposed to independent words. If they are bound then, they are either clitics or affixes. The distinction between clitics and affixes has become an interesting area of research in the recent literature within different theoretical approaches.

Within the principles and parameters approach of Government and Binding theory, the study of clitic constructions has attracted special attention. The studies of Jaeggli (1982), Borer (1984a), and Rivero (1986), among others, have given important insights about clitic constructions. Rivero (1986:774), claims that "a homogeneous typology of pronominal clitics" can emerge from the studies preceding hers. So she summarizes the main characteristics of the clitic constructions particularly those found in modern Romance languages as follows:

(41) i) Clitics are *bound words* or affix-like items in non-Argument position.

ii) Clitics *absorb* some feature of the V connected with Government/Case/ θ-role.

iii) Clitics are linked to an Empty category in Argument position.

It is not intended here to present in detail all the major proposals made within generative grammar on the nature of clitic constructions. The choice of one proposal over the others is largely determined empirically. However, we shall appeal to the analysis made by Borer (1984a), in describing the status of the bound possessive pronouns of Khamtanga. Nevertheless, we shall not claim that this shall be the only possible analysis.

Borer assumes that the clitic is a spell-out of the Case features of the head. She formalizes the rule as follows (p.37):

(42) Clitic Spell-Out

$[_x X, \sigma \text{ case}] \longrightarrow [_x X[\alpha \text{ case}, \beta \text{ gender}, \gamma \text{ number}, \delta \text{ person}]]$

$x = [+V]$ in Romance

$x = V, P, N$ in Semitic

She further argues that since the clitic is itself a spell-out of the Case features, it absorbes Case. The relevant examples from Modern Hebrew are presented below:

(43) i) beit ha-mora
house the-teacher(fem)
"the teacher's house"

ii) beit-a[5]
house-her
"her house"

iii) *beit-a ha-mora
house-her the teacher

iv) beit-a Sel ha-mora
house-her of the-teacher
"the teacher's house"

The clitic *-a* in (43(iii)) absorbs the genitive Case that otherwise would be assigned to the complement. As a result the structure is ungrammatical by virtue of the Case-Filter. The complement NP which is in need of Case can be rescued by the Case assigner *Sel* "of" and the resulting structure becomes grammatical.

The Khamtanga structure (40(i)), can be accounted for in a similar manner. The bound possessive pronominal has absorbed the Case which would have been assigned to the complement NP. Thus the complement *Ianä-yän* "the woman" cannot be licensed. The crucial question is whether Khamtanga has a device to rescue the Case-less NP as Modern Hebrew. We shall argue below that Khamtanga has such a device. The following examples are illustrative:

(44) i) lwnä-yän-s Nlr-llwa
woman-DEF-to her-cow
lit. "to the woman her cow"
"the woman's cow"

ii) lwnä-yän-s Nlr-firänäw
woman-DEF-to her-leaving
lit. "to the woman her leaving"
"the woman's leaving"

iii) abäba-s Nlr-lx^{w}lr
A. to her-child
lit. "to Ababa her child"
"Abeba's child."

the *-s* segment in the structures is identified in Appleyard (p.258), as the feminine *Relational* Case marker. Although the present study is not concerned with the analysis of the Case system, it will be useful to present the relevant Case markers for the subsequent discussion.

(45)

	m.	pl.	f.
Abs. Obj.	∅		∅
Poss.	-z	-z ∿ -ä	-t
Rel.	-z		-s ∿ -tls

We will argue that the relational Case marker is not actually a Case marker in the sense of the POSS or the object marker. It is a kind of an adposition. Observe the following sentences:

(46) i) lwnä-yän-s *mäs'ahlf-d* yiw-u-n
woman-DEF-to book-DEF give-pst-1s
"I gave the book to the woman"

ii) llwä-yän-s S'äK yiyi
cow-DEF-to grass give-imp.2s
"Give grass to the cow!"

In (46) the transitive verb *ylw-* "give" subcategorizes for two arguments. It can govern and assign Case only to one argument in the sense of Chomsky (1981:181) and Uriagereka (1988:40). Thus *mäs'ahlfd* receives accusative Case (which is not overtly realized in masculine nouns). The remaining argument then must be assigned Case by other means. The *-s* segment has exactly this function: it assigns Case to *lwnä-yän* "the woman."

Thus, the status of this segment is clear from (46): it is not a Case realization. In Bilin (Palmer, 1958:376), the equivalent of the relational Case has been termed *dative*. But Palmer seems to be aware of the consequences of these terms because he stresses that "names and translations are used for identification only: the analysis does not employ any notional criteria that might appear to be implied by them". (Palmer, Ibid, n.2).

Then, the ungrammaticality of (40(i)) can be accounted for by invoking some general properties of clitic constructions. Particularly the notion of Case Absorption can be systematicaly applied to the Khamtanga data. However, Appleyard (p.261), presents some examples that could challenge the present analysis. They are presented below:

(47) i) arSä-y-z Nl-sln
farmer-DEF-POSS his-sister
"the farmer's sister"

ii) Mjagird-yän-tl Nlr-zln
girl-DEF-POSS her-brother
"the girl's brother"

iii) lfär-i-z Na-nya
boys-DEF-POSS their-mother
"the boys' mother"

Based on the above data some general remarks can be made. Firstly, all the examples involve kinship terms. Thus any comprehensive solution to the problem should examine the nature of kinship terms in the language. As Appleyard himself notes kinship terms behave differently since they cannot occur in isolation as other nouns do. Compare (48(iv)) with (48(i)-(iii)):

(48) i) 1lwä "cow"
ii) l1 "eye"
iii) Nln "house"
iv) sln ?
lwnä-yän-tl sln "the woman's sister"
Nlr-sln "her sister"

While other nouns can occur in isolation, kinship terms like (48(iv)) cannot be interpreted unless they occur with complement NPs or possessive pronominal proclitics.

Secondly, what Appleyard presented as a possessive Case realization in (47(i) and (iii)), must be rather the *relational* Case or the kind of an adpositional function which we argued for in relation to (44) and (46) above. Thus the real counter-example is (47(ii)), because the *-t* segment is clearly the feminine genitive Case marker formally different from the feminine relational Case marker *-s* . In other words we are claiming that (i) and (iii) can be accounted for in the same way as (44) because the genitive Case marker in masculine nouns and plurals *-s* , is formally similar with the rlational or the adposition *-s* as (45) shows. The following sentences give evidence to the status of the *-s* segment:

(49) i) arSä-y-z bira yiw-u-n
farmer-DEF-to ox give-pst-1s
"I gave an ox to the farmer"

ii) lfär-i-z mi yiw-u-n
boys-DEF-to Injera(bread) give-pst-1s
"I gave Injera to the boys."

However, the structure in (47(ii)), presents a real problem to our analysis because contrary to our claim the proclitic has not absorbed the genitive Case that should be assigned by the head. My informants have insisted that (47(ii)) is not possible at all. What is possible is the structure where *-s* the relational Case marker or the adposition occurs with the complement NP as in (50):

(50) i) lwnä-yän-s NIr-sIn
woman-DEF-to her-sister
Lit. "to the woman her sister"
"the woman's sister"

ii) Iwna-yän-s NIr-zIn-i-z NIn
woman-DEF-to her-brother-DEF-POSS house
lit. "to the woman her brother's house"
"the house of the woman's brother"

The same phenomenon is found in Bilin and Awngi. The following examples are illustrative:

(51) Bilin

i) In-Ix^{W}inä-r Sani
DEF-woman-POSS sister
"the woman's sister"

ii) *In-Ix^{W}inä-r nI-Sani
DEF-woman-POSS her sister

iii) In-Ix^{W}inä-si nI-Sani
DEF-woman-to her-sister
lit."to the woman her sister"
"the woman's sister"

Awngi

i) Ni-cuza
her-sister
"her sister"

ii) *Iwnä-t Ni-cuza
woman-POSS her-sister

iii) Iwnä-s Ni-cuza
woman-to her-sister
lit. "to the woman her sister"
"the woman's sister"

So given the above facts we might be inclined to suspect the validity of (47(ii)). If we conclude that it is erroneous then there will be nothing more to assume. But given the difference of judgements of native speakers, it may not be appropriate to rule out the possibility of structures like (47 (ii)). Then the analysis should be able to subsume cases like (47(ii)) without contradicting the general property of clitic constructions. In other words our analysis should be able to account for [NP+POSS cl+NP] structures without loosing the generalization captured by the notion of Case Absorption. We will argue below that this may be possible.

Suppose we assume that a kinship term has an empty thematic slot that must be filled by a genitive construction in the syntax and by a clitic in the lexicon. Then, if we further assume that this slot must be filled by either the clitic or genitive constructions at every level (because of the projection principle), then the boundedness of kinship terms can be explained. What we are proposing in effect is kinship terms have the potential of *incorporating* the clitic by a word formation rule. Once this process has taken place a complex noun is created that would be able to assign Case the same way as other nouns do. This process of word formation related to kinship terms is allowed given the idiosyncratic nature of the lexicon. Stowell (1981:301), invokes a word formation rule to account for some Double Object constructions in English, as in (52):

(52) Wayne sent [Robert [a telegram]]

In order to obviate apparent counter-examples to the principle of Case Adjacency, Stowell proposes that the internal NP can be "incorporated into the lexicon" by a word formation rule. The structure he derives looks as follows:

(53) Wayne $[_{V'}[_{V}$sent-Robert][a telegram]]

Therefore, the attachment of the pronominal proclitic to kinship terms by a word formation rule in Khamtanga can be seen in the same light. The proclitic no more functions as Case absorber because it has been incorporated into the noun as a primitive.

However, this noun differs from any other in one important way: it cannot have features different from the NP in argument position, while other nouns are not sensitive to this requirement. Observe the following structures:

(54) i) ɬljagird-yän-tl NIr-sIn
girl-DEF-POSS her-sister
"the woman's sister"

ii) *ljlr-i-z NIr-sIn
man-DEF-POSS her sister

iii) lwnä-yän-tl ɬlwa
woman-DEF-POSS cow
"the woman's cow"

iv) ljlr-i-z ɬlwa
man-DEF-POSS cow
"the man's cow"

If we assume as we did that the [cl+kinship] term is one lexical item, then it is a referential NP and should be free according to principle C of binding theory. But (54) shows that this noun should be obligatorily coreferential with the complement NP. This could be explained in terms of the peculiar nature of possessive pronouns themselves. Anderson (1979:93) following Lasnik (1976) suggests that possessive pronouns could be considered as an *obligatorily bound pronouns* as in the following examples:

(55) i) John lost his mind

ii) They blinked their eyes

Thus since the complex noun created by the incorporation of the proclitic in Khamtanga contains a possessive pronominal, it should be treated differently.

Before concluding, some general remarks seem to be in order. Firstly, in the case of kinship terms and in other cases also the configuration [NP+POSS cl+N] is not possible. If it is possible as Appleyard's data suggest then it must be a highly marked option given the facts of related languages - Bilin and Awngi - as in (51). The option also runs against evidences of a number of other languages as in Amharic (Mullen, 1986) and Oromo (Baye, 1986). Secondly, even in data of the present study the configuration

[NP+POSS NP] is more marked than [cl+NP] configuration in the case of kinship terms. In other words there seems to be a tendency to prefer (i) than (ii) in (56) below:

(56) i) Ni-sin his sister"
ii) ljlr-i-z sin "the man's sister"

In this respect Khamtanga seems to be closer to Awngi than to Bilin because in Awngi kinship terms are possible only with the attachement of the pronominal proclitic, as in (57):

(57) i) Ni-cuza "her sister"
ii) lwnä-t cuza "the woman's sister"
iii) lwnä-t ɬlwa "the woman's cow"

This indicates that the possessive pronominal proclitics are becoming affix-like in Khamtanga, while the same has been accomplished earlier in Awngi. Perhaps this process can be considered as an evidence to Givon's (1971) claim (quoted in Klavans (1985:103)) that the historical path of clitics is from independent words to affixes.

It should be obvious then that different genitive constructions function differently in noun phrases. In the remaining discussion how other phrases - namely, PPs and APs behave as complements in NP shall be examined.

2.2.2.2 PP Complements

Regarding PPs Jackendoff (1977:72) claims that PPs of time, place and accompainment can function as PP complements in noun phrases. Since in Khamtanga the genitive construction has a wide range of function it has been demonstrated that phrases that express spatial relation are subsumed under this construction. Those that show temporal relation are also expressed by a genitive construction as example (5) repeated here shows:

(5) an nIC-i-z haz x^{w}-u-n
I today-DEF-POSS fishes eat-pst-1s
"I ate today's fishes"

Thus, we will examine the status of other PPs.

In English the PP in (58) can be considered as a complement of the preceding noun (from Jackendoff (1977:69)):

(58) the talk [about the war]
pp

In Khamtanga the equivalent of (58) is the following:

(59) aCIna-y-z wigä-d
war-DEF-POSS talk-DEF
Lit. "the war's talk"
"the talk about the war"

Again the structure in (59) involves a genitive construction and it cannot be identified as a PP. In structures like (60) with *with* phrases, Khamtanga NPs involve quite a different structure as in (61):

(60) i) the girl with a black hair

ii) the man with a black mule

(61) i) NICIr s'IbKa s'ay-räy Iwnä-yän
black hair has-3fs-REL woman-DEF
"The woman who has a black hair"

ii) NICIr biqla s'ay-äw Ijir-d
black mule has-3ms-REL man-DEF
"The man who has a black mule"

It is obvious that Khamtanga employs the relative verb form of *have* to express the *with* phrases in (60). This completely different mechanism could be partly the result of the interpretation of *with* PPs themselves. As Andrews (1985:91) noted *with-PPs* can be problematic as far as their semantic function is concerned. Thus, he cites the example -- *the old man walks with a stick* can mean either the man walks *using a stick* or the man walks *carrying a stick*. In the latter sense *with* does not indicate *instrumental* usage but rather that of accompainment or even possession.

Incidentally, Amharic seems to have two options to express (60) though - which one of them involves a PP is controversial.[6]

(62) i) Käy s'ägur yä-allät set
red hair REL-has-3fs-pst woman
"a woman who has a red hair"

ii) bä-alä färässu säw-yye
(?with) horse-DEF man-DEF
"the man with a horse"

Therefore, while the meaning depicted by (61) is one of possession, Khamtanga does not employ the usual genitive construction but instead shows a different structure that involves the relative of the verb *s'ay-* "to have". An obvious and natural question would be what is the distinction between this two strategies - the genitive construction and the *have* construction? In other words is there any systematic relationship between these constructions - one being derived from the other?

Similar questions have been raised in a number of studies as in Chomsky (1970), Stockwell, Schachter and Partee (1973), and Anderson (1983). According to Anderson (1983:4) phrases like (63(i)) cannot be considered as derived from the *have* phrase (63(ii)), where *have* might be deleted somewhere in the derivation:

(63) i) Mary's store

ii) Mary has a store

She argues then, following Stockwell, Schachter and Partee (1973) against the hypothetical relationship between (63(i)) and (63(ii)), by saying that the *have* construction, "does not adequately cover the range of meanings included in the possessive...". To demonstrate the validity of her claim she provides the following examples:

(64) i) Robert's house is white

ii) The house Robert has is white

She points out that, *Robert's* house could be the one he owns, rents, used to live in, has picked out as his favourite or works in... while (ii) excludes all of these interpretations except the one in which he has possession of the house". Thus, it seems reasonable at least based on the potential of covering a *range of meaning* that the two possible strategies are not identical.

Moreover, the thematic relation that holds between the head and the genitive construction is different in the two possibilities. considering the Khamtanga example (61), the thematic relation between the head nouns and their respective complements is different: it is possible to omit the adjective in (61(ii)) as in (65(ii)), but doing the same in (61(i)) as in (65(i)) incurs ungrammaticality or semi-acceptability.

(65) i) ? s'lbKa s'ay-räy lwnä-yän
hair has-3fs-REL woman-DEF
? "the woman with hair"

ii) biqla s'ay-äw- ljir-d
mule has-3ms-REL man-DEF
"the man who has a mule"

Therefore, given the above examples the PP position in the NP is expressed by different ways in Khamtanga, including genitive NPs and clausal complements.

2.2.2.3 AP Complements

Adjectival Phrases as complements in NP are more problematic in Khamtanga than NP and PP complements. The main reason for this situation is the apparent lack of *adjective* proper in the sense of Amharic or English. In the unmarked case Khamtanga employs relative verb forms

as adjectives (which is also noted by Appleyard (262)). The following examples are illustrative:

(66) (a) Adjective

i) xayäw	lfär	"a big boy"
ii) xayräy	flClra	"a big goat"
iii) xayäK^{w}	bil	"big ox"

(b) Relative

i) qasäw	lfär	"the boy who shouted"
ii) qas'räy	lwna	"the woman who shouted"
iii) qas'äK^{w}	lK	"the men who shouted"

As it is obvious from (66), the adjectives strictly follow the relative verb paradigm - being conjugated for person/number/gender.

Thus, it follows that any adequte analysis of these adjectives in particular and APs in general must presuppose an examination of the relative construction. This task shall be addressed in the next chapter.

It is not, of course, strange to find relative verb forms functioning as adjectives. In English, though not the relative verb per se, as English does not have a different relative verb, a syntactic means of relative clause formation may be said to have an attributive funciton. Moreover some verbs known as *participles* function in the same way as adjectives do as Huddleston (1984) points out:

(67) i) The vase is broken

ii) A broken vase

Khamtanga employs relative verb forms to express (67):

(68) i) Cin-d kil1dl-S wiyn-u
vase-DEF break-PASS be-pst-3ms
"The vase was broken"

ii) Kiidi-S-äw Cin-d
break-PASS-REL-3ms vase-DEF
"the broken vase"

However, there are very few adjectives that do not fall under the relative verb paradigm. These are the following:

(69) i) NICIr "black"

ii) CIKa "bad"

iii) witu "small"

iv) Imq^{w}u "dirty"

The fact that only these few adjectives diverge from the relative verb form seems to be an idiosyncratic feature since neither lexical nor semantic constraints seem to operate only on these adjectives as opposed to others[7]. The adjectives occur in modifying a single N or an expanded N:

(70) i) NICIr firza
black horse
"A black horse"

ii) NICIr Iwnä-yän-tI firza
black woman-DEF-POSS horse
"The black horse of the woman"

The adjective in (70(ii)) modifies the NP *Iwnä-yän-tI firza* "the woman's horse". The head noun *firza* "horse" has assigned the appropriate θ-role and Case to *Iwnä-yän* "the woman." Another possible structure is (71):

(71) Iwnä-yän-tI NICIr firza
woman-DEF-POSS black horse
"The women's black horse"

But as we shall argue in chapter four, (71) is a possibility only at a different level of representation. In other words *Iwnä-yän* cannot be assigned Case by the adjective because adjectives neither assign nor receive Case. One evidence is that the adjective unlike the noun can occur in clitic constructions where we argued for the property of Case absorption:

(72) NICIr yI-firza
black my horse
"my black horse"

It cannot assign case, because if it had, structures like (73) would have been grammatical:

(73) *Iwnä-yän-tI NICIr
woman-DEF-POSS black

To summarize the discussion, the main finding is that genitive NPs can productively function as complements in an NP. However, genitive constructions also function as PPs of time, place, accompainment, etc.- which would have been expressed by PPs proper in the sense of English. The role of APs also has been examined and it was found out that the great majority of adjectives are actually relative verb forms.

NOTES

FOR CHAPTER TWO

1. The term *grammatical function* has been employed alternatively with *grammatical relation* in the relevant literature. But some linguists make finer distinction between the two. See Andrews (1985:65) for discussion.

2. The idiosyncratic nature of the forms of derived nominals also can be seen in Khamtanga. This can be readily observed in comparison with Amharic forms:

	Amharic		Khamtanga
i)	däKKäKä	"became flour"	diKu
ii)	mädKäK	"becoming flour"	diKänäw
iii)	duKKet	"flour"	gizan

The third form in the Khamtanga examples is completely different both from the verb or the second derived nominal. In other cases the derived nominal is derived from a clausal complex:

i)	näffäsä	"the wind blew"	figiya tär-u wind comes-pst-3ms "wind came"
ii)	mänfäs	"being blown"	figyänäw
iii)	nIfas	"wind"	figya

3. In some few instances Case may not be realized morphologically, when the relation between the possessor and the possessed is of an idiomatic nature. Appleyard (260) gives some examples:

i) xar zila
night-bird
"bird of night"

ii) dIr awCIna
forest-cat
"forest cat"

Perhaps, it will be possible to treat these forms as compounds, rather than two separate nouns. Moreover, accusative (object) Case is not realized on masculine nouns:

i) an Ijlr-d qal-u-n
I man-DEF see-pst-1s
"I saw the man"

ii) an Iwnä-yän-tI qal-u-n
I woman-DEF-ACC see-pst-1s
"I saw the woman"

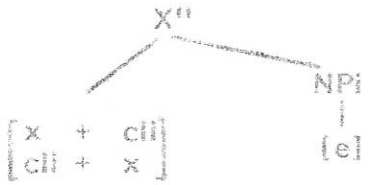
The segment *I* after *t* is not part of the Case marker but it seems to be a kind of epenthesis.

4. It is obvious from the data that the definite marker is realized by different forms. Appleyard (257) claims that the definite marker distinguishes two gener/number forms. The masculine/plural form is realized by a number of allomorphs before a Case marker. Thus following Appleyard we can present the alternation of the definite marker as follows:

	absolute	object	other cases
m./pl.	-(I)d(I)	m. -d(I)yä(n)- pl. -d(i)za-	-y- \ -i-
f	-Sän ∿ yän		

The alternation of *-y-* with *-i-* is phonological: the former occurs after a vowel final stem and the latter after a consonant.

5. Borer shows the clitic doubling construction by the following configuration:



There are a number of controversial issues in determining the exact component(s) where clitic assignment takes place. See for discussion Klavans J. (1985), Zwicky, A.M. (1985), Rivero, M-L. (1986).

6. Tremblay, (n.d.) ms., considers Amharic PPs as Case phrases and claims that *lä* and *bä* among others are Case morphemes. This analysis embedded within the GB framework is motivated by generalizations on Amharic word order where heads appear to the right in every XP.

7. Within this small set a finer distinction can be made based on the inflectional pattern. Thus as Appleyard indicated the first two in (69) follow the pattern of nouns:

NICIr (sg) NICIr-Tan (pl)

The last two can be singled out by the different pattern they show *witu* "small" and *Imqʷu* "dirty" inflect for gener and number by suffixing *-u* "masc", *-wa* "fem", and *-ɨ* "plu". Interestingly the antonyms of most of these adjectives follow the relative paradigm:

NICIr	"black"	s'äräw	"white"
CIKa	"bad"	Kasäw	"good"
witu	"small"	xayäw	"big"

CHAPTER THREE

THE RELATIVE CLAUSE

In the preceding chapter phrasal complements in the noun phrase were examined. It was also pointed out that clausal complements particularly relative clauses, can function as complements. According to the phrase structure schema of Jackendoff (1977) restrictive and appositive relative clauses can project from N'' and N''' levels respectively. In this chapter the general distribution of relative clauses shall be examined.

The first section shall deal with some intorductory notion about the significance of relative clauses as the main clausal complements in NPs. In the second section, the relativizable positions in the formation of relatives in Khamtanga shall be presented. The third section examines the relationship of the relative verb with adjectives.

3.1 General Properties

The study of relative clauses has been characterized by a number of interesting issues. Before we go into the detail of these issues it is worthwhile to have a working definition of a relative clause. Lehmann (1986), in his comprehensive study on the typology of relatives, proposes the following definition of the relative clause construction (p.664):

> "A relative construction is a construction consisting of a nominal (or a common noun phrase, in the terms of categorial grammar)(which may be empty) and a subordinate clause interpreted as attributively modifying the nominal. The nominal is called the head and the subordinate clause the RC."

From a descriptive point of view, the definition by Lehmann can serve the purpose of identifying the relative clause.

In a language like English on which linguists have done extensive studies, most of the properties of the relative have been learned. Within generative grammar, the seminal works of Ross (1967), Chomsky (1977), Jackendoff (1977) though different in a number of ways, have shown important aspects of the relative clause. The studies also brought new insights in the analysis of other constructions like clefts, comparatives, and topicalization.

There have been of course different ways of analysing the relative clause. Regarding the branching possibilities, for instance, there have been at least three major contending approaches which Jackendoff (1977: 169), describes as the *determiner* theory, the *Chomsky-adjoined* theory, and the *NP-complement* theory. It is not possible to go into the detail of these approaches here. It shall suffice to say that according to the first the relative clause (S') branches with a determiner dominated by a node Art''', and by a rule of obligatory extraposition appears to the right of N'''. In the second theory, S' branches as a sister of N''' while dominated by another N'''. The NP-complement theory proposed by Jackendoff (1977), on the other hand stipulates that restrictive relatives are sisters to N', while appositives are sisters to N''.

Jackendoff argues against the former approaches. He claims that the determiner theory involves unnecessary rule of extraposition and the Chomsky-adjoined theory is not consistent with the endocentricity condition of the phrase structure schema. He also argues against other approaches like that of Thompson (1971), where conjoined structures are stipulated to be the sources of a relative clause.

Although Jackendoff builds a strong case for his NP-complement theory, some of his motivations and formalisms have been seriously questioned.

The first problem, as mentioned in the first chapter is his powerful endocentricity constraint which prohibits recursive projections. The second one is his attempt to equate the distinction between restrictive and non-restrictive (appositive) relative clauses with different hierarchies in the projection of NPs. It seems the case that the analysis of the second problem follows from the former as in Emonds (1979) where it is argued that the third bar level is not necessary because appositives do not have distinct properties. However, according to Jackendoff (1977:172), restrictives and appositives differ in a number of ways. One important difference is the presence of an intonation break. Thus in (1) below, the intonation break marked by the comma is a characteristic feature of a non-restrictive relative:

(1) The man, who Bill saw, sneezed

In other words in the absence of the intonation break (1) becomes a restrictive. Generalizing their distribution, Jackendoff (ibid) claims that "the fact that appositives always follow restrictives is explainable by the NP-complement theory as a consequence of restrictives being N" complements and appositives being N''' complements."

The problem with this claim is that the comma intonation plays an important role in distinguishing the two relatives. This obscures the distinction because the notion of intonation cannot be studied from a purely formal approach. As Bache and Jakobsen (1980:266) commented, this classification should take into account *communicative characteristics*. Their distinction is based on semantic criteria: restrictives contribute "to what an addressor is talking about," while non-restrictives, "predicate something about which is being talked about rather than contributing."

The same issue is treated in Emonds (1979), as mentioned earlier. He argues that the third bar level in Jackendoff's schema is created as an ad hoc level to accomodate the projection of appositives. He claims that if appositives can be derived by what he calls a *root-extended transformation* from main clauses that are coordinated to the clause that contains the antecedent and not by a different base generation, the need to postulate an additional bar level would be obviated.

The distinction between these two relatives has become more important in the recent literature within generative grammar as it is presenting new insights on the nature of the different components of grammar. Based on the principles and parameters approach of GB theory, attempts have been made to explain why such a distinction should exist at all. It has become obvious by now that the arguments of Jackendoff cannot be maintained. His claim seems to be circular: if a question arises as to why restrictives and not appositives project from N'', the answer would be because the former are N'' complements and not N''' complements. And if a question also arises as to why N'' complements should project at that particular level, the answer would be that they are restrictives in meaning. On the other hand, it has been attempted to attribute the distinction between these relatives to different components of the grammar and different levels of representation. Thus, Safir (1986) equates this distinction to a distinction between binding relations. Exploiting ideas proposed in Chomsky (1982), Safir suggests that the difference between these relatives could be accounted for by assuming *reindexing* at *LF* (a level later than LF). By introducing the notion of *A-binding*, binding by a relative head, he further argues (p. 663), that "coindexing between a relative operator and a relative head holds at a syntactic level

later than LF for non-restrictive relatives but not for restrictive relatives." Then he hypothesizes that "at LF restrictive relative heads must R-bind something in the clause that follows ... R-binding can be vacuous for the non-restrictive head at LF." Thus, the distinction between the two relatives reduced to the binding relation Safir says that, "all relatives have the structure of the restrictive relative", as in (2):

(2) $_{NP}[_{NP}[a\ man]_i\ [_{S'}[_{comp}\ [who]_i]\ [_S[Bill\ knows\ [e]_i]]]]$

It can be presented configurationally, as (3):

(3) $[_{NP}\ S']^1$

Thus, both the motivation for projecting relative clauses from different bar levels and the distributional restriction can be explained by invoking more general principles. Assuming (3) to depict the structure of relatives, subject to the word order parameter, other particular properties are derivable from independent principles.

Regarding the overall status of S' in (3), many believe it is a particular kind of clause both sharing some properties with other clauses and also differing in important ways. According to Rappaport (1987:480), a relative clause is a kind of an attributive clause. He suggests that, "if an attributive clause is defined as a clause modifying a nominal, a relative clause is a special kind of an attributive clause." This implies of course that there are other clauses that resemble the relative clause.

One such kind of clause which has a striking resemblance with the relative is what is known as the *noun complement clause*. According to Radford (1981:216) some few nouns like, *fact*, *idea*, *claim*, *theory* can take noun complement clauses. Rappaport (1987:480) shows important differences between noun complement clauses and relative clauses. The

main structural difference is the fact that relative clauses contain an empty position while noun complement clauses do not. The distinction is based on lexical properties of the head. Another clause that resembles the relative is an interrogative clause. Bresnan and Grimshaw (1978:334) show that the similarity is superficial. One of the important differences they point out is the fact that while a relative clause cannot contain multiple Wh-phrases, an interrogative clause can. Still another construction which has been identified with relatives is the cleft construction. Some argued, as in Schachter (1973), that the cleft construction like *It's Papa who came*, should have the same non-language specific deep structure with a relative construction. Chomsky (1977) has argued in a similar spirit.[2]

Given these facts it is obvious that the relative construction differs from other clauses.

3.2 Relativized Positions

There are three relativizable positions in a relative clause formation corresponding to the positions where NPs can occur.[3] In order to show the relation of the relative clause with the head NP, it is appropriate to present the relativizable positions within a matrix clause.

(4) i) ʃjʃr-d tär-u
man-DEF come-pst-3ms
"The man came"

ii) ʃjʃr-d fiCIrä-yän-tI jib-u
man-DEF goat-DEF-ACC buy-pst-3ms
"The man bought the goat"

iii) Kässan-d IK^{W}In-i-ʔ habäSe-d yiw-u-N
priests-DEF woman-DEF-to bread-DEF give-pst-3pl
"The priests gave the bread to the woman"

The corresponding relativized forms are presented in (5):

(5) i) [[tär-äw] $_{NP}$[j]r-d]
NP S'[come-REL-3ms] man-DEF
"The man who came"

ii) a) [[fiClrä-yän-ti j]b-äw] [j]r-d]
NP S'goat-DEF-ACC buy-REL-3ms NP man-DEF
"The man who bought the goat"

b) [[j]r-d j]b-äy] fiClrä-yän]
NP S' man-DEF buy-REL-3ms NP goat-DEF
"The goat whom the man bought"

iii) a) [[tK^{W}In-i-z habäSe-d yiw-äK^{W}] $_{NP}$Kässan-d]
NP S'woman-DEF-POSS bread-DEF give-REL-3pl priests-DEF
"The priests who gave the bread to the woman"

b) [[Kässan-d habäSe-d yiw-NäK^{W}] $_{NP}$tK^{W}In-d]
NP S' priests-DEF bread-DEF give-REL-3pl woman-DEF
"The women to whom the priests gave the bread"

c) [[Kässan-d tK^{W}In-i-z yiw-Näw] $_{NP}$habäSe-d]
NPS'priests-DEF woman-DEF-to give-REL-3pl bread-DEF
"The bread which the priests gave to the women"

As it can be observed from (5) the relativized positions are the subject position in (i), the subject and the object positions in (ii), the subject and oblique positions in (iii).

Before proceeding further, some general remarks about (4) and (5) seem in order. Firstly, there are some elements in the above structures that can be omitted: the definite markers on the relativized NPs are not obligatory. Secondly, the NP in subject position in (4) can be omitted, since it is recoverable in the verb. However, in (4) the NP in object positions cannot be deleted because Khamtanga verbs do not show object agreement.[h]

It seems clear that Khamtanga employs different verbal forms in relativization. It is equally obvious that these verbal forms show feature agreement with the relativized NP. The fact that there are different forms

for subject relativization as distinct from oblique relativization is not readily observable from (5). Since much of what follows may depend on understanding these forms they are presented below by taking one verb stem *käb-* "cut" (from Appleyard (1984))[5]:

(6) Subject Relative / Oblique Relative

	Subject Relative	m	f	pl
Sg				
1	Käbär	Käbäw	Käbäy	KäbäK^{w}
2	Käbrär	Käbräw	Käbräy	KäbräK^{w}
3m	Käbäw	Käbäw	Käbäy	KäbäK^{w}
3f	Käbräy	Käbräw	Käbräy	KäbräK^{w}
Pl				
1	KäbnäK	Käbnäw	Käbnäy	KäbnäK^{w}
2	KäbIrnäK	KäbIrnäw	KäbIrnäy	KäbIrnäK^{w}
3	KäbäK	KäbNäw	KäbNäy	KäbNäK^{w}

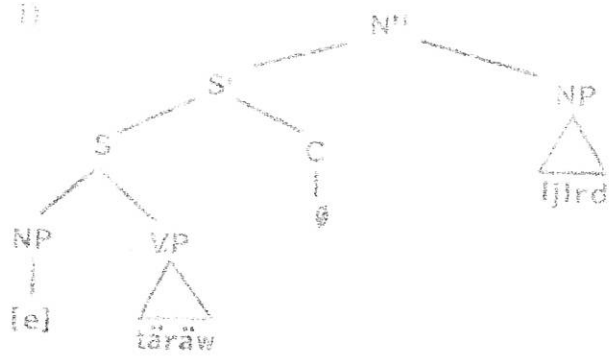
The paradigms in (6) show the relative verb form for every person, number, and gender. The next important issue is to find out the relativization strategy in Khamtanga.

It has been stated that languages differ in their strategy of relativization. Keenan (1985:146) claims that there are a number of ways of presenting the relativized NP. These are, where the relativized NP may be (i) an ordinary personal pronoun, (ii) a special pronominal form peculiar to relatives - which can be called a *relative pronoun*, and (iii) nothing at all or a gap. Chomsky (1977:80) has analyzed English relativization as a case of Wh-movement and admitted that not all languages employ movement for relativization. Thus, he suggests that in languages which lack the movement rule, relativization "interprets a base-generated pronoun in the relative caluse."

To find out the strategy of relativization in Khamtanga, the relationship between the relativized NP and the clause must be examined.

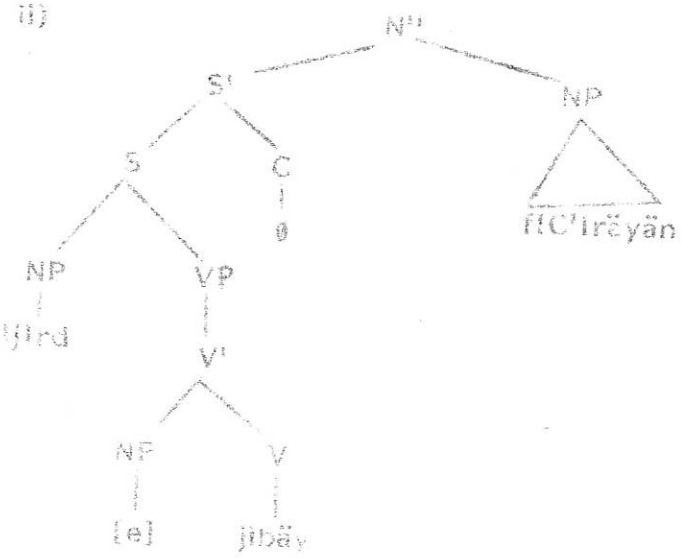
Firstly, the phrases in (6) can be represented as follows where both the subject and object relativization are shown:

(7) i)



"The man who came"

ii)



"The goat whom the man bought"

The EC cannot be PRO because it is in a governed position. It is not an NP-trace or a variable because it is neither triggered by an instance of Move-α nor is Ā-bound by an operator. Thus, it is reasonable to assume that this EC must be Pro.

Secondly, the agreement of the relative verb with the relativized NP is obligatory.

(8) [[fiCIrä-yän-tI jib-äw$_i$] Ijir-d$_i$]
NP S' NP
goat-DEF-ACC buy-REL-3ms man-DEF
"the man who bought the goat"

If the relativized NP changes in (8) the relative verb will show the appropriate agreement:

(9) [[fiCIrä-yän-tI jib-räy$_i$] Iwnä-yän$_i$]
NP S' NP
goat-DEF-ACC buy-REL-3fs woman-DEF
"the woman who bought the goat"

However, there is a difference between subject and oblique relatives in terms of agreement possibilities. In the subject realtive form it is possible to omit the object position as in (10):

(10) jib-äw Ijir-d
buy-REL-3ms man-DEF
"the man who bought"

However, this phrase has a reading, analogous with Amharic, *yä-gäzza-w säw* - "the man who bought". That means (10) does not indicate what was actually bought. In other words (10) cannot be consdiered as an alternative to (8). On the other hand, in the oblique relative the relative verb shows a subject and an object agreement as in (11):

(11) jib-äy fiCIrä-yän
buy-REL-3ms goat-DEF
"the goat he bought"

Thus, (11) can be an alternative to (5(b)), because the relative verb form *jibäy* indicates both the subject (3ms) and the object (3fs). In other words, the oblique relative is a kind of complex form showing a subject and an object agreement. This can be seen if we change the subject in (11), because the change will be seen in the relative verb, as in (12):

(12) jib-Näy fiCIrä-yän
buy-REL-3pl goat-DEF
"the goat they bought"

In (12) the subject is 3pl, while the object is 3fs. Suppose both the subject and the object in (11) change, what would be the form of the relative? In (13) the relative shows a 3fs subject and a 3ms object:

(13) jib-räw firza
buy-KEL-3fs horse
"the horse she bought"

As it will be evident in the subsequent discussion a one to one identification of morphs with their realization is difficult. However, the following identification within the relative verb seems plausible. By taking the oblique relative feminine forms in (6) we can identify the agreement element as follows:

(14)

				<u>S</u>		<u>O</u>
Käb- "cut"	<u>sg</u>	1	Käb-	Ø	-	äy
		2	Käb-	r	-	äy
		3m	Käb-	Ø	-	äy
		3f	Käb-	r	-	äy
	<u>pl</u>	1	Käb-	n	-	äy
		2	Käb-	rn	-	äy
		3	Käb-	N	-	äy

The element äy shows that the relativized positon is an oblique position occupied by a 3fs head. The elements under S alternate according to the person-number-gender features of the NP in subject position. Note that when both the subject and the oblique are identical in features, as in the fourth line in (14) the resulting form is simiilar with the 3fs subject relative in (6).

This situation can also be found in some Amharic relatives. The following Khamtanga (15(i)) and Amharic (15(ii)) examples are illustrative:

(15) i) a) Iwnä-yän fIClrä-yän-tl jiblc
woman-DEF goat-DEF-ACC buy pst.3fs
"the woman bought the goat"

b) fIClrä-yän-tl jib-räy Iwnä-yän
goat-DEF-ACC buy-REL-3fs woman-DEF
"the woman who bought the goat"

c) Iwnä-yän jib-räy fIClrä-yän
woman-DEF buy-REL-3fs goat-DEF
"the goat which the woman bought"

ii) a) setl-yäwa flyyäl-wa-n gazzac-at
woman-DEF goat-DEF-ACC buy-pst-3fs-
"the woman bought the goat"

b) flyyäl-wa-n yä-gäzz-ac-at seti-yo
goat-DEF-ACC REL-buy-3fs woman-DEF
"the woman who bought the goat"

c) setl-yäwa yä-gäzz-ac-at flyyäl
woman-DEF REL-buy-3fs goat
"the goat which the woman bought"

In (15(i)) the relative verb *jib-räy* is identical despite the relativization of two different positions - the subject in (b) and the object in (c). In (15(ii)) *yä-gäzz-ac-at* is also identical in subject and object relativization. This phenomenon can also be found in Awngi. Hetzron (1969:19) suggests that "this is the natural consequence of the agreement rules".

Relativization is indicated and solely represented by the relative verb form in Khamtanga. In other words, there is no Wh-movement[6] as in English, to form the relative construction. It is also clear that there is no form with a complementizer funciton, as in Amharic *yä* (Mullen, 1986), or as in Oromo *kan* (Baye, 1986). There is neither a kind of independent personal pronoun as in Modern Hebrew (Borer, 1984), nor a relative pronoun in the sense of Keenan (1985), where forms similar with interrogative and demonstrative pronouns are cited. Then would it be possible to attribute the relativization strategy of Khamtanga to gapped forms of English as in (16)?

(16) the boys I saw

The answer seems to be partially in the affirmative and partially in the negative. In as much as there is no relative pronoun, an interrogative pronoun, or a complementizer, Khamtanga relatives resemble (16). However, Khamtanga relatives unlike (16) show rich agreement features in the verb. Indeed, the verb is the most important constituent in the relativization process. However, it is indicated that the relativized NP is coindexed with the relative verb. The question is how can this relationship be formalized? Perhaps the best approach will be to treat this relationship as a predication relation in the sense of Chomsky (1977:81), who claims that "the rule of interpretation for relatives requires that the relative be taken as an open sentence satisfied by the entity referred to by the NP in which it appears...". Then following Williams (1980:221) we can assume that a predication relation is shown by coindexing a referential expression (the relativized NP) with the predicative S' (the clause). Williams (ibid) formalizes this relationship as follows:

$$X\ S' \longrightarrow X\text{pred}_i \quad S'\ \text{subj}_i$$

Suppose we take an example where an object NP is relativized, as in (5(ii-b)) repeated here, the predication rule can show the required coindexation as follows:

(5) (ii) (b) ljir-d jib-äy fiCirä-yän
man-DEF buy-REL-3ms goat-DEF

[[ljird $[e]_i$ jib-äy$_i$]$_{S'_i}$ [fiCirä-yän]$_{NP_i}$

"The goat whom the man bought"

Thus the Khamtanga relative construction employs a strategy of predication that coindexes the relativized NP with an agreement feature in the relative verb.

The oblique relatives in Khamtānga are particularly revealing becau they exibit agreement features not available in main verb forms. For instance the past tense inflection of the verb *jib-* "buy" cannot show object agreement:

(17)

	fiCirā-yān-ti goat-DEF-ACC "the goat"	
ŋjīr-d man-DEF "the man"	firzā-d horse-DEF "the horse"	jib-u buy-pst-3ms "bought"
	bil-id oxen-DEF "the oxen"	

Although the NPs in object position differ in features the verb does not show this difference. Thus the relative construction has introduced additional agreement features. However, as indicated earlier identifying these agreement features and assigning them a definite function as attemp in (14) can be complex - a fact well stressed in Appleyard (474). Comme ing on this issue, he says, "Identification of the morphs in a one-to-one relationship with the categories denoted is not always an easy process in the Khamtanga verb. During the development of the agglutinated forms, the division between morphs and their functional interrelationship have to some extent become obscured."

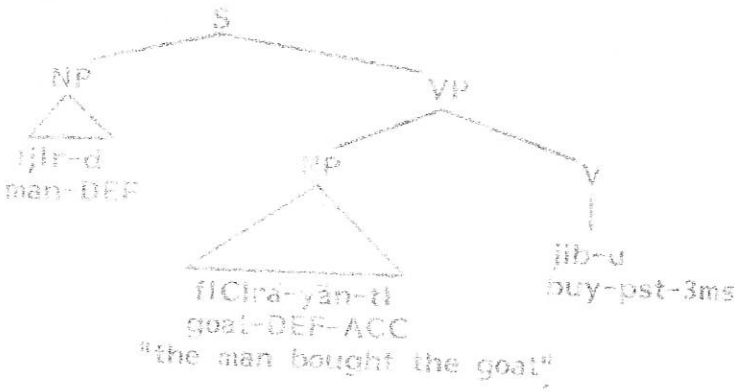
In any event, the crucial point for the purpose of this study is the fact that the agreement elements in the relative verb license relativiza- ion as much as other strategies do. The apparent asymmetry between ob, and subject relativization though interesting in comparison with main verb forms, does not seem to be strange when some facts from other languages are considered. As Keenan (1985:147) observed, in languages where a personal pronoun is used as a means in relativization it rarely occurs in subject position. Thus, he gives an example from Hebrew where the personal pronoun that is employed in relativization, *hu* cannot appear in subject relatives:

(18) *ha-ich she-hu makir oti
the-man that-he knows me
"the man who knows me"

Borer (1984b) has extensively discussed the distinction between object relatives and subject relatives in Hebrew based on the distribution of gaps and resumptive pronouns. Thus, since the main focus of the study is analyzing the relationship of the head NP with its complement clause, perhaps a non-trival question at an explanatory level is why would such a difference exist at all? In other words, why does Khamtanga show object agreement in relatives, when it does not do the same in main verb forms?

One possible explanation can be found if some general facts of θ-role assignment are considered. Suppose the sentence in (4(ii)) can be represented as follows:

(19)



"the man bought the goat"

Following Williams (1980,1987), we can assume that θ-roles can be assigned internally and by predication. The internal argument of the verb is assigned θ-role of theme under "the tightest possible relation of sisterhood", Williams (1987:435). The external argument is assigned a θ-role by predication - the maximal projection of the assigner, the VP, assigns the θ-role of agent to it. This can be shown as follows:

(20)

The index of the agent is similar with the VP, while the index of the theme is similar with the NP object. This is a necessary result given the fact that V cannot directly assign the θ-role agent to the external argument.

The point is then, when relativization takes place on (19), affecting the internal argument of the verb (the verb has the tightest possible relation of sisterhood) the thematic role assigned to it should be maintained by agreement features in the verb. On the other hand, when relativization takes place affecting the subject position, the thematic relation with the verb is via the maximal projection which obviates the need to show object agreement. Perhaps a similar restriction but of a different relativization strategy can be found in English as the following examples show:

(21) i) the man saw the boy

ii) the man who saw the boy

iii) ?the boy who the man saw

iv) the boy whom the man saw

Thus, in (21(ii)) when relativization affects the subject position it is indicated by *who* ; when the object of the verb is relativized the θ-role assigned to it must be transparent on *who* as *whom* in (21(iv)). Otherwise, (21(iii)) is not acceptable at least not in standard English.

The relationship of the relative with the head can also be exhibited in one other way. With the presence of the proper agreement element in the relativized verb, the head NP can be omitted. The deletion observes the recoverability condition: the heads in (22(ii)) and (iii) below are recoverable by the definite marker *-d*(m) and *-yän* (f), respectively. This process is productive in focussed structures like clefting:

(22) i) tinantina yi-zih tär-u
yesterday my-brother come-pst-3ms
"My brother came yesterday"

ii) tinantina Nän yi-zih tär-äw-d
yesterday be-prs-3ms my-brother come-REL-3ms-DEF
"It is yesterday that my brother came"

iii) tinantina yi-sin tär-ic
yesterday my-sister come-pst-3fs
"My sister came yesterday"

iv) tinantina Nän yi-sin tät[7]-räy-yän
yesterday be-prs-3ms my-sister come-REL-3fs-DEF
"It is yesterday that my sister came"

In case of relativizing the object of an adposition the process is identical with (5).

(23) i) Lämma Tor-i-z fiCIrä-yän-tI Kiw-u
L. spear-DEF-with goat-DEF-ACC kill-pst-3ms
"Lemma killed the goat with the spear"

ii) lämma fiCIrä-yän-tI Kiw-äw Tor-d
L. goat-DEF-ACC kill-REL-3ms spear-DEF
"The spear by which Lemma killed the goat"

In the above structure the relativized complement is the NP of the adposition phrase *Tor-i-z* "with a spear". However there is no sign of *-z*, in the relativized construction. Perhaps this contrast will be more clear in comparison with the following Amharic structures:

(24) i) lämma bä-Tor anbässa-w-In gäddälä-w
L. with spear lion-DEF-ACC kill-pst-3ms
"Lemma killed the lion with the spear"

ii) lämma anbäsa-w-In yä-gäddälä-bbät Tor
L. lion-DEF-ACC REL-kill-pst-3ms.-cl spear
"the spear by which Lemma killed the lion"

If we assume with Mullen (1986:268), that the *-bbät* in (24(ii)) is an object clitic which combines with the preposition *bä-*, then clearly, this element, whatever one might call it plays an important role in relativization. This can be seen in a structure where only the relativized verb and the head NP are present:

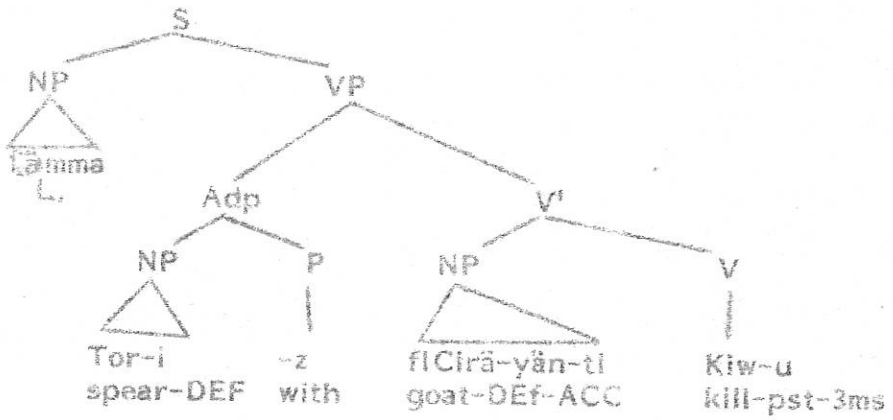
(25) yä-gäddälä-bbät Tor
REL-kill-pst-3ms-cl spear
"The spear by which he killed"

The gloss for (24(ii)) differs from (25) only in the absence of the subject and the object NPs of the verb *gäddälä* "kill". Both are recoverable in the relativized verb. However, the same cannot be said with the following Khamtanga structure, in relation to (23(ii)):

(26) ? Kiw-äw Tor-d
kill-REL-3ms spear-DEF

The gloss for (26) will not be similar with its supposedly analogous structure (23(ii)). It has a reading: "the spear that kills/killed"[8]. In fact the relative construction in (26) seems to have acquired a different kind of function: that of limiting the range of meaning of the head NP to a "particular brand of spear", as an attributive adjective. One obvious question is whether it is possible to account for the absence of an adposition agreement in the verb in the same way as we did for (19), where some general notions of θ-role assignment were considered. Suppose the structure in (23) can be represented as follows:

(27)



"Lemma killed the goat with the spear"

The verb assigns a θ-role to its subcategorizing complement - the NP *flCirä-yän* "the goat". But the NP *Tor* is assigned a θ-role

independent of the verb by the governing adposition -z and as a result the verb does not show this agreement in relativization. The absence of oblique clitics seems to be responsible for the difference of interpretation between (23(ii)) and (26). Hetzron (1969:17) observes a similar situation in Awngi. The following are the relevant examples:

(28) i) kantaw Nin(i) "the house which I see"
ii) Kantat NIna "the small house (fem.) which I see"
iii) Kantak^{w} NInka "the houses which I see"

(29) i) desaw NIn "the house [in] which I study"
ii) desat NIna "the small house [in] which I study"
iii) desak NInka "the houses [in] which I study"

Hetzron suggests that "which (acc)", "in which", "to which", etc., of English are not distinguished in Agaw.

When relativization takes place in an expanded NP, what has been discussed so far applies with equal force. The following is one example:

(30) i) kIt lämma-t firza sIN-ru
you(s) L.-POSS horse steal-pst-2s
"You stole Lemma's horse"

ii) [[kIt sIN-räw] lämma-t firza]
NP S' NP
you steal-REL-2s L.POSS horse
"horse of Lemma which you stole"

At this stage few remarks about a restrictive vs. a nonrestrictive relative are in order. As far as the familiar diagnosis of an intonation[9] break is concerned, Khamtanga relatives behave as predicted for English:

(31) [[tInantIna täräw] [jima Känn-äw] ˈIjIr-d]
S'_2 S'_1
yesterday come-REL-3ms song like-REL-3ms man-DEF
"the man who came yesterday, who likes to sing"

In (31) there should be an intonation break between S'_1 and S'_2, for the structure to be grammatical. This is also true for cases where the

elative construction substitutes the function of other constituents (which were discussed in the preceding chapter) as in (32):

(32) [[tInantIna tär-äw] [bira s'ay-äw] IjIr-d]
S'_2 yesterday come-REL-3ms S'_1 ox have-REL-3ms man-DEF
"the man who came yesterday, who has an ox"

.3 Adjectival Relatives[10]

In the previous section some of the important characteristic features of the relative construction were discussed. Among these its potential o be an attributive adjective was pointed out. Since this construction productively functions as an adjective, a fact mentioned in chapter two also, the issue shall be explored in this section.

The distinction between relative clauses and adjectives has been an nteresting topic from different perspectives. For typological description his distinction is important for drawing surface generalizations that can nold across languages. In an attempt of such nature Lehmann (1984) claims hat the apparent similarity between relative clauses and attributive adjectives can be determined by what he calls *morphological closeness* between the head and the attribute (cf. Haiman (1986) review of Lehmann (1984)). He argues that the existence of a formal difference between relative clauses and attributive adjectives is due to the greater distance between head and attribute in the former case than in the latter.

In structural descriptions it has been a traditional view that adjectives may derive from relative clauses. The following example is relevant:

(33) i) an English teacher

ii) a teacher who is English

However, Huddleston (1984:267) argues that this kind of derivation is hard to maintain, because of the irregular nature of the semantic and syntactic relationhsip between the relative and the adjective. Some of the differences he points out are the following:

(34) i) there is contrast in relative clauses between restrictive and non-restrictive, which is not systematically made in adjectives.

ii) the relative clause makes a distinction of tense:
a) the tomato that was ripe
b) the tomato that is ripe
whereas in adjectives, the temporal contrast is not encoded.

iii) there is a tendency for attributive adjectives to correspond to properties that are relatively permanent, whereas the relative clause construction can be used for permanent or temporary properties.

Huddleston (268) then concluded that "the difference between the two constructions are too great for us to regard one as systematically derived from the other."

In line with the Lexicalist Hypothesis, Chomsky (1970), the notion of deriving a word-class adjective from verbal sources cannot be maintained because of the idiosyncratic nature of each lexical item.

To determine the kind of relationship that holds between the relative and adjectives in Khamtanga, their distribution must be examined. Among the major properties of adjectives that distinguish them as a word class from others is their potential to be employed as an attribute and as a predicate. Both are presented below:

(35) i) the attributive use

a) a tall man

b) ligzäw ljlr-d
tall(m) man-DEF
"a tall man"

ii) the predicative

a) He was tall

b) ljlr-d ligzäw wiyn-u
man-DEF tall(m) be-pst-3ms
"he was tall"

Thus it is obvious that the so-called adjectival relatives can appear in typical adjective positions. What about their capacity of projection? In other words could they take modifiers as in the following English structure?

(36) Very tall

The adjectives in Khamtanga can also take a degree modifier:

(37) CäKnan ligzäw
very tall(m)
"very tall"

The adjective with its degree modifier can be a complement to an expanded NP:

(38) CäKnan s'äräw aksum-tl tabb
very white(m) A.-POSS Teff
"very white Teff of Aksum"

Thus, it is clear even at the observational level that in Khamtanga adjectival meanings are conveyed through verbal forms. This situation seems to be expected in languages which lack open class adjectives in the sense of English. In English, *tall* in *the tall woman* is an open class adjective. According to Schachter (1985), in languages which lack an open class adjective, the notional equivalent of adjectives is expressed either by nouns or verbs. He suggests then the expression of adjectival

meanings through *verbs* in languages with closed adjective classes typically involves relativization to express the equivalent of a modifying adjective." (Schachter, 1985:19). He gives the following examples from Bemba:

(39) i) umuuntu ŭashipa /ŭakosa /ŭaceenjela
person who is brave / who is strong / who is wise
"a brave/strong/wise person"

ii) umuuntu ŭalemba
person who is writing
"a person who is writing"

The above examples show a modifying adjective. In the case of a predicative adjective, a non-relativized verb is used:

(40) i) umuuntu áashipa / áakosa / áaceenjela
person is brave/is strong / is wise
"the person is brave / strong/ wise"

ii) umuuntu áalemba
person is writing
"The person is writing"

The interesting point is that while Bemba employs the relative verb form only as a modifying adjective or as an attribute, Khamtanga employs it both in the attributive and predicative structures as shown in (35). Thus, the Khamtanga data give additional facts to the typology of Schachter.

Given these facts it can be said that the adjectival relatives in Khamtanga do not behave differently in any important way from an adjective proper. In other words, except the similarity in form an adjective with a relative construction behaves quite distinctively from the relative clause. One such evidence that strongly supports this claim is found in Huddleston's main points of distinction presented above in (34). He has suggested that the relative clause is distinct from the adjective because it makes distinctions of tense. Therefore, since the Khamtanga relative does not make this distinction, as mentioned earlier, one may conclude that

the same form is used either as an adjective or as a relative verb under the appropriate structureal environments. In Awngi where the relative construction distinguishes tense, it does not productively function as an adjective. Most of the adjectives then follow the inflection pattern of nouns as in (41) below:

(41) i) dedeNi "short (m)"
dedeNa "short (f)"
dedeNka "short (pl)"

ii) ligisimi aqi
tall(m) man
"tall man"

legesema lwna
tall (f) woman
"tall woman"

legesemka aq
tall (pl) men
"tall men"

In Bilin also where tense is distinguished, adjectives in general follow the pattern of nouns. Palmer (1958:389) said, "many adjectives follow the pattern of the noun" as in (42(i)) and "a common type of adjective has a plural stem structure with an infix *-an-* ,..." as in (42(ii)):

(42)

	m.	f.	pl.	
i)	klkin	klxlni	klkin	"clever"
ii)	ʔlmun	ʔlmuni	ʔlmunan	"faithful"

Generally speaking the relative verb form is very productive in the language. We have seen it functioning as an attributive and predicative adjective. Moreover, in some instances the relative seems to be derived directly from common nouns as in (43):

(43) i) s'abb "(foot) shoe"
ii) s'abbăw "one(m) who wears a shoe"

A number of issues can be discussed related to adjectival relatives in particular and the relative construction in general. The important generalization, however, is that formally identical constituents may behave differently as far as their syntactic function is concerned. Thus, these forms should be investigated separately and should not be treated together because of their apparent similarity.

NOTES FOR

CHAPTER THREE

1. There are alternative structures that have been suggested: Partee (1975) suggests [Det [Nom S]] (cf. Safir (1986, n.2)).

2. Chomsky (1977:94) notes the striking resemblance of cleft constructions with topicalization, and proposes that a closer connection could be established between the two by stipulating (i) to be "the underlying structure of cleft sentences"

(i) it - is - S"

3. Appleyard (483), categorizes these positions into two: *the subject* and the *oblique* -the latter includes every non-subject position. Hetzron (1969:17) uses the term *Complemental Relative* for non-subjectal relatives. For expository purpose I have distinguished between direct object, indirect object, and an object of an adposition. If not to refer to these positions individually I shall use the term *oblique* just in the sense of Appleyard.

4. Recoverability is used here in the sense of Chomsky and Lasnik (1977) and Chomsky (1980, 1981). The central notion is that deletion can be conducted only under recoverability. Although I have deliberately used the word *omission*, it could be very well the case that Khamtanga is a *pro-drop* language. This is true as far as one of the criteria that distinguish pro-drop languages from the others, in the sense of Chomsky (1981) and Rizzi (1982) is concerned: the criterion of *missing subject* can be confirmed without any controversy. I refrain from using the more technical term *pro-drop* because I believe that to call a language by such term needs to incorporate certain other facts that cannot be covered within the scope of this study.

5. Only one verb type - Type one (Appleyard, 478), with *the stable consonant-final stem* - is taken here. Basically the forms of other types are similar.

6. It may seem premature to conclude that there is no Wh-movement just by the data in (5). However, since Wh-movement does not operate in question formation, there is good reason for this conclusion. Wh-question is in situ as in (ii) below:

i) ljlr-d tär-u
man-DEF come-pst-3ms
"the man came"

ii) aw tär-u?
who come-pst-3ms
"who came?"

7. The alternation in the stem, *tär* —> *tät* is part of a morphological rule that requires a consonant shift in certain stems. (cf. Appleyard (474)).

8. This has been noted in Appleyard (484). He has also listed the relative verb form for both subject and oblique in the negative, and this distinguishes tense. The negative form is not analyzed separately, because basically it does not exhibit any difference in the relation with the head. If it differs in any important way, it is by its failure to be used in the attributive function - for a reason that shall be clear in section 3.

9. According to Jackendoff (1977:169), another way of distinguishing restrictives vs. non-restrictives is that the latter can modify a proper noun, as in (i):

i) John, who came yesterday

In Khamtanga, it is also the non-restrictive that can occur here because there is an intonation break.

ii) [tämantlnä täräw] [lämma]
S' yesterday come-REL-3ms L.
"Lemma, who came yesterday"

10. The term *adjectival relative* does not have any theoretical importance and is employed for a purely expository purpose, i.e. to distinguish this particular form from the relative verb that occurs in the relative clause. Schachter (1985) uses the term *adjectival-verb languages* to classify languages that use verbs as adjectives as opposed to languages which use nouns as adjectives.

CHAPTER FOUR

ORDERING RESTRICTIONS

In this chapter some issues concerning word order shall be raised and discussed. The analysis shall be based on the findings made in the previous two chapters.

It has been shown that particular phrase types or maximal projections of some Xs and the relative clause can be complements in an NP. It has also been indicated that the head N which is modified by these complement phrases and the clause occurs at the right-most of the projection. In other words, all complements precede the head. What has not been shown is the order within these complements. In fact the notion of order has not been mentioned. Therefore, this chapter shall address this problem in some detail.

4.1 The Significance of Ordering

The study of word order, in its wider domain, has been a particularly interesting area. It is not uncommon to find in prescriptively oriented grammars statements to the effect that a certain word or particle should precede or follow another one. It can be said, however, this area has not in the past attracted the attention of other grammarians more than it did that of the typologists. One eminent work with the theme of a typological description is that of Greenberg (1963). Greenberg has attempted to classify the languages of the world by the major word order they exhibit: the order between S(ubject), O(bject), and V(erb). Together with this he presented a number of *implicational universals*. For instance, he claimed that if a language has a dominant SOV order, and the genitive follows the governing noun, then the adjective likewise

follows the noun. His universals are graded in such a way that some are relatively weaker than the others and are prefaced by the statement *more than chance frequency*. Since then, many studies have brought important findings about word order across languages as a result of more descriptive works on unstudied languages. Among studies with this spirit are Greenberg (1978), Dawning (1978), Hawkins (1983), and Comrie (1981).

Although different formalisms are employed by the different typological studies, all are characterized by a common goal. They attempt to factor out some universal features languages exhibit by making surface descriptions. As it has been stated at the begining of the first chapter while there is nothing wrong about this kind of approach to language universals, it does not even bring an elementary insight to the central question of grammatical study - namely that of explanatory adequacy. It neither questions nor attempts to analyze why a certain word order is preferred in a particular language out of a number of other options. That is why typological studies will not give us more than interesting generalizations about certain facts.

On the other hand, within generative grammar, particularly with the advent of X-bar theory, a good start has been made to derive facts of word order from a restricted model of grammar. This theory attempts to show that a lexical category X projects into a maximal category and by virtue of this projection every level must have a head. Therefore, the major word order difference between OV, and VO, is the result of setting the head-final or the head-initial prarameter of the X-bar theory.

In the current development of the principles and parameters approach however, most of the claims made by the X-bar theory were highly reduced

or even eliminated, apart from the head-final/head-initial parameter. As research goes on, new insights are gained which indicate that phrase structure rules should not be part of the grammar referring to among others, order of the head with its complements or the order between the complements themselves. These studies Stowell(1981), Koopman (1983), and Travis (1984) among others, showed that word order rules can be factored out by other components of the grammar like Case theory, θ-theory, and government theory.

Such an approach to the study of word order has brought remarkable results. A case in point is the explanation accorded to structures of the following kind, (from Travis, (1984:34)):

(1) i) I like books very much

ii) *I like very much books

The typical phrase structure account for (1(ii)), as in Jackendoff (1977), would be to claim that the complement of the verb should be projected from X' (in this particular example from V'), and any projection to the contrary results in ungrammaticality. The best explanation that can be found from this PS account is the claim that X' complements must be close to the head because they are functional arguments. What is particularly characteristic of these functional arguments to project at the X' level is not questioned at all. However, examples like (1(ii)) can be accounted for by invoking independently motivated principles.

4.2 Ordering of Complements

In this section we shall argue that the ordering restriction between phrasal complements that were analyzed in chapter two can be accounted for by general principles of different components of grammar and not by PS rules.

Genitive constructions shall be examined first. In (2), there are different expansions of NP:

(2) i) $_{NP}$[tabb-i-z $_{N}$[mi]]
Teff-DEF-POSS Injera(bread)
"Injera of Teff"

ii) $_{NP}$[aksum-tI $_{N'}$[tabb-i-z mi]]
A.-POSS Teff-DEF-POSS Injera
"Injera of Teff from Aksum"

In chapter two we have discussed the process of θ-role and Case assignment. It is to be seen now whether these two complement phrases are restricted to the order in (2(ii)). Observe the following phrase:

(3) * tabb-i-z aksum-tI mi
Teff-DEF-POSS A.-POSS Injera

The resulting structure is ungrammatical. This result is not unpredictable, given the PS schema: *tabb-i-z* is an N' complement like the *of-complement* in English and *aksum-tI* is an N'' complement. Thus, by determining the structural position occupied by different phrases - as X', X'', and X''' complements, the phrase structure schema predicts ungrammatical structures like (3). Following this approach, Baye (1986:88), argues that genitives like *tabb-i-z* may be called *source* genitives because they "... define the head N in terms of the material from which it is made or has originated." Thus, these genitives are complements of N', and any other order is ungrammatical. Even in a PS rule which is less restrictive than Jackendoff's, and where recursive nodes are allowed, the restriction is determined by a rule. In Radford (1988:179) (4) below is ruled out by virtue of the distinction between complements and postnominal adjuncts:

(4) * a student $_{pp}$[with long hair][$_{pp}$of physics]

For him, these two PPs are projected by two different PS rules: the *f-phrase* by a complement rule that projects N into N', and the *with*

phrase, by a recursive adjunct rule that projects N" into N'. The insight is that phrases projected by a complement rule are subcategorizing complements and as such must be adjacent to the head. Thus it seems that PS rules can predict ordering between complements of a head.

However, there is at least one drawback with such explanation of ordering restriction. The reason provided for stipulating that subcategorized complements must be adjacent to the head, as opposed to other phrases, is not independently motivated. Since it refers to the subcategorizing frame of lexical items it has rich expressive power. It makes use of descriptive devices that are hard to maintain in grammar, particularly from the point of a language acquisition. The child learning Khamtanga should be able to know which positions are reserved for which complements. This task becomes more and more complicated cross-categorially, because of the idiosyncratic nature of each lexical item and the categorial distinction of the heads. But we know from typical poverty of stimulus arguments as in Chomsky (1986a), that the language learner has little or no positive evidence at his disposal to work out the specifics of grammar. Therefore, naturally, a theory that is less expressive and employs fewer descriptive devices is to be preferred over the one which resorts to an elaborated system of rules. This theory then must be able to explain how a given order between constituents is to be preferred (or rather to be allowed) over any other, so that the ruling out of structures like (3) and (4) would be natural.

The principles and parameters approach of the GB theory, accounts for (3) and (4) by invoking general principles which are independently motivated. The theory attempts not only to capture category-neutral generalizations within a particular language but it goes further and defines the property of configurational and nonconfigurational languages in the

sense of Chomsky (1981), Stowell (1981,1982). The main insight can be stated as follows: the grammar can be perceived as basically characterized by a free order between each constituent. Then the order that languages actually exhibit is derivable from independent but interacting components of grammar. These components of grammar have general principles and parameters to be fixed at a certain value by the language learner of a particular language. For instance, the child acquiring Khamtanga begins by fixing the head-final value of the X-bar paramter: this naturally specifies inter alia, that modifiers of different sort will precede a head lexical category in the canonical structure of ordering. Together with the details of the lexicon[1] which he has to learn he proceeds by fixing parametric values of other components of the grammar. The sum total of these values of parameters then define the particular nature of Khamtanga.

Then, how are structures like (3) actually ruled out? What are the specific values of parameters that have been fixed in order to make (3) an unacceptable order of complements? The most relevant subsystems of principles that can account for this problem are Case theory and θ-theory.

The notion of *Case Adjacency* as developed in Stowell (1981) can account for certain ordering restrictions in English. According to this principle, a Case assigner element must be adjacent to its complement. In (4) the *of* PP is actually an NP which is a complement of the head N *student*. Since N assigns θ-role and Case to its complement, it must be realized by the insertion of *of* in a manner discussed in chapter two. So, this NP cannot be peripheral to its (dummy) Case assigner. The princple also predicts ordering in VPs requiring the NP complement (which is dependent for its θ-role on the verb) to be adjacent to the verb.[2]

The Case Adjacency requirement shows variation. Stowell (1982:244) himself notes this and suggests that the "effects of the adjacency requirement are more transparent" in English where even manner adverbials do not intervene between a verb and its object NP, as opposed to Italian where the same is not the case. However, the Case Adjacency requirement is less relevant in languages where Case is morphologically realized as Chomsky (1986a:82) pointed out.

Suppose we test the effects of this principle on (3). The NP adjacent to the head N is *aksum* and can be assigned θ-role and inherent Case by the head N- *mi*, in the manner discussed in chapter two. Then if we assume, as we did earlier, that every compleemnt NP can potentially be assigned an inherent Case by its governing N, the complement NP *tabb* can be assigned Case accordingly, and there does not seem to be a violation of the Case Adjacency Principle. But since according to the Uniformity Condition we have equated the assignment of Case to N with the assignment of θ-role, the Adjacency requirement must be able to subsume adjacency in terms of θ-role assignment. In other words, the primary thing we want our Adjacency requirement to do is to predict ungrammaticality due to a failure of θ-role assignment bv NPs. And since the Case Adjacency Principle is concerned with Case assignment, it cannot be employed in cases like (3) as it stands. Moreover, the fact that this principle is less relevant in morphological languages where the morphology overtly shows Case, indicates that it is a condition rather than an overriding principle. Therefore, how can the ungrammaticality of (3) be explained without resorting to PS-rules? There seem to be two possibilities. The first, perhaps the easier one is to completely do away with the Case Adjacency condition

and look for another equally independent notion that predicts structures like (3). The second one is to find a way which sharpens the Case Adjacency requirement in such a way so as to make it work for cases like (3).

The first option seems a priori wrong. As Chomsky repeatedly pointed out this kind of approach is against the very nature of scientific inquiry. In any scientific inquiry a certain principle that proved to be important in explaining a good amount of data is not abandoned just because it failed to do so for some other data. What one does in such instances is to do further research that will bring evidences for more generalizations. If any principle is going to be dropped whenever it meets a challenge, then the theory that has advocated the principle has little explanatory power and ultimately will turn to nothing.

Thus this leaves us with the second option. Noting the loose nature of the Case Adjacency condition, Travis (1984:74) proposes an interesting way of extending the notion of the Adjacency requirements. Her major claim is that, "θ-role is also conditioned by adjacency." Her proposal not only can cover cases like (3) which shall be demonstrated below, but also accounts for some ordering asymmetries in English that cannot be accounted for by the Case Adjacency condition. The following are the examples she gives:

(5) i) Deborah bought a book yesterday
ii) *Deborah bought yesterday a book
i) Deborah put a book on the table yesterday
ii) *Deborah put a book yesterday on the table

It is obvious that (5(ii)) is an outright violation of the Case Adjacency condition. The verb *bought* as a transitive verb lexically requires an internal argument. The NP *a book* can fill this argument position and receive accusative Case. But since it is not adjacent to the verb it cannot receive Case, and as a result the structure is ungrammatical. But the case of (6(ii)) is quite different since every NP in need of Case has been assigned one either by the governing verb or by other assigner.

Thus, Travis (ibid) argues that, "obviously two arguments cannot be adjacent to a verb. I suggest instead that there exist certain domains and that these *domains cannot be interrupted by elements* from outside them." (emphasis added). Then, for Travis, (6) exemplifies the interruption of a θ-role or a Complement Domain. She formalizes this notion of domain adjacency as follows (p. 76):

(7) Domain Adjacency Condition (DAC)

Given a direct relation R between a node W and a node X, where R involves sisterhood, if there is another node Y that does not enter into R with W or X, then

*[...X...Y...W...]

Direct relations are θ-role assignment (complementation) and case assignment.

The DAC can rule out (6(ii)) in the following manner:

(8) [[put ... yesterday [on the table]]
X Y W

The node Y has interrupted the complement domain betwen X and W. We can examine now the effects of the DAC on (3) repeated here:

(3) * tabb-i-z aksum-tl mi
Teff-DEF-POSS A.-POSS Injera

Assuming X to be the lexical head, which is the right most element in Khamtanga, we can represent (3) in terms of DAC:

(9) i) * W: tabb-i-z; Y: aksum-tI; X: mi

ii) W: tabb-i-z (Teff-DEF-POSS); X: mi (Injera)
"Injera of Teff"

First, lets recapitulate certain facts. An N can assign an inherent (genitive) Case to its complement under government. And if an NP complement is not assigned the proper θ-role it cannot be assigned Case and thus cannot be licensed.

In (9(ii)) X(*mi*) can be in direct relationship R with W(*tabb-i-z*). And given the directionality of Case and θ-role assignment in the sense of Travis (1984) it is X that assigns a θ-role and Case to W. As a result we have the grammatical structure (9(ii)). However, in (9(i)) there is a Y(*aksum-t*) that interrupts this domain and Y does not enter into R with W[3]. Again given the notion of directionality it is only Y that can assign θ-role to W and never vice versa. But Y cannot assign W the appropriate θ-role. If we assume that it can assign one then the following structure must be possible

(10) * tabb-i-z (Teff-DEF-POSS); aksum (A.)
?"Aksum of Teff"

It is not possible in Amharic, **Yä-t'eff aksum*, nor in English **England of wheat*. Then how can (10) be explained? In other words as stated earlier N has a potential of assigning a θ-role, and then a genitive Case: then why does the N in (10) fails to do so? There are two options to the solution of this problem. The first is to devise some criteria that classify the nouns into those which assign θ-role and those that do not. By taking this option we can group the N in (10) with the latter and explain the ill formedness in terms of the lexical property of the N. This approach is particularly attractive because our examples

nvolve proper nouns like *aksum* which are traditionally different from other nouns. But even if we substitute *aksum* by *IjIr-d* "the man" the problem remains the same. The second is to find out some mechanism that would rule out (10) without loosing the generality that all nouns can assign some sort of θ-role. The first option seems to introduce devices that resort to arbitrary properties of lexical items and as such has a weak explanatory power. Taking the second option we may appeal to the principle of Full Interpretation (FI), which checks structures at both levels of the Interpretive components, and can claim that (10) is incoherent at LF.

In order to illustrate the whole process, we can assume the following D-structure representation.

(11) [tabb-DEF aksum mi]

Given the D.S (11) the assignment of θ-role can proceed as follows

(12) W Y X
/tabb-DEF aksum mi/
θ-role θ-role

The node Y then cannot enter into R with W because of FI at LF.

One important question about this process is that if we are invoking general principles that operate at different levels of syntactic representation i.e D.S, S.S, and L.F, - is the DAC relevant at all levels? Although a comprehensive relpy to this question would certainly involve the investigation of other XPs, particularly VPs, we can plausibly assume with Travis (1984:268), that "domains play an important role at all levels of syntax."

Therefore, (3) can ultimately be accounted for as an interruption of a complement domain. Since all of the relevant phrasal complements except APs involve the genitive construction, the above anaysis could

be extended. Thus we should examine how adjectives behave in terms of the complement domain ordering. Observe the following phrases.

(13) i) ligzäw wängel-i-z tämari
tall(m) Gospel-DEF-POSS student
"the tall student of the Gospel"

ii) *wängel-i-z ligzäw tämari
Gospel-DEF-POSS tall (m) student

In (13) the complement domain of the head *tämari* (with the complement *wängel*) is interrupted by the adjective. Since (*wängel-*) in (ii) cannot receive a θ-role from *ligzäw* (tall(m)) the structure will be ruled out.

In the above structures the head NP is a simple nominal. If the notion of domain adjacency predicts word order in structures where simple nominals are involved, it should aslo operate with equal force in structures where derived nominals are involved. Observe the following example:

(14) kärr-i-z flClrä-yän-tl KIwänäw
kinfe-DEF-with goat-DEF-ACC to kill/killing
"to kill/killing the goat with the knife"

If we asume, as we did in chapter two, that NPs like (14) are similar with a clause then, in (14) the derived nominal *KIwänäw* "to kill/killing" assigns Case to its internal argument. This Case is realized by the Case suffix *-t*. Thus the NP *kärr* "kinfe" must be assigned Case independently in order to be licensed. So *-z* which we have assumed to be an adposition assigns Case. So far there is no violation of the domain adjancy requirement. However, the following structure is commonly found:

(15) f Clrä-yän-tl kärr-i-z KIwänäw
goat-DEF-ACC knife-DEF-with to kill/killing
"to kill/killing the goat with the knife"

In (15) the complement domain of the head NP and its argument seems to be interrupted. But contrary to the DAC prediction this structure is not ungrammatical.

We will argue that (15) does not present a violation of the complement adjacency requirement. In fact (15) is another evidence to the claim that domains should not be interrupted. If we assume that the complement NP *fICIrâyân* "the goat" is preposed to the maximal NP by adjunciton, then it leaves a trace. This trace is in a c-command relationship to its antecendent and its presence is required by the projection principle. This trace can only be a small *pro* because it is in a govened argument position. Moreover, which is crucial to our argument, the adjunction movement is not a syntactic movement triggered by syntactic reasons like Case assignment. The movement is rather a post-syntactic one operating for pragmatic purposes at PF. Therefore, in (15) the complement domain of the head is not interrupted at all but is shown by the empty category which is coindexed with the moved antecedent.

Given this result with the phrasal complements, the basic insight of DAC can be extended to the analysis of clausal complements.

The schema in Jackendoff (1977) imposes an ordering restriction on the position of clausal complements, in the same way it does on phrases. Accordingly relative clauses either project as restrictive modifiers from X'' or as appositive modifiers from X'''. In the canonical structure they occur peripheral to the head after all other complements as in the following example:

(16) The student of physics [who was here]
S'

A different order will cause ungrammaticality:

(17) * The student [who was here][of physics]
S'

In accounting for (17), Stowell (1981) proposed the *Case Resistance Principle* (CRP) which bars the assignment of Case to a category which bears a Case-assigning feature. In other words the principle attempts to systematically rule out the appearance of S' in a Case position. However, Travis (1984:261) again notes that Case assignment may not account for all of the facts. She gives some instances from German, where S's move even from passivised structures where Case is not assigned. Thus she suggests to extend Case domains to complement domains. In light of this, the CRP can be incorporated into the notion of Domain Adjacency.

In the following Khamtanga structures the interruption of a complement domain can be seen:

(18) i) tär-äw wängel-i-z tämari
come-REL-3ms Gospel-DEF-POSS student
"student of the Gospel who came"

ii) * wängel-i-z [tär-äw] tämari
S'
Gospel-DEF-POSS come-REL-3ms student

iii) tär-äw aksum-t wängel-i-z tämari
come-REL-3ms A.POSS Gospel-DEF-POSS student
"the student of the Gospel from Aksum who came"

iv) * aksum-tI [täräw] wängel-i-z tämari
S'
A-POSS come-REL-3ms Gospel-DEf-POSS student

In both structures, (ii) and (iv), the clause is found in a complement domain. Suppose (19) is the representation of (18(ii)).

W Y X
(19) [wängel-DEF [täräw] tämari]
S'

It is clear that Y cannot enter into R with W. Thus W(*wängel*) "Gospel" cannot be licensed for obvious reasons. As a result the structure becomes ungrammatical.

Finally, it should be noted that it is not common to find all complements i.e. genitive NPs of different function, APs and relatives within the expansion of one NP. However, if this be the case, ordering restriciton is observed along the lines discussed above.

NOTES FOR

CHAPTER FOUR

1. All properties of the lexicon cannot be learned, in light of some proposals in the study of generative morphology, as in Aronoff (1976), S. Anderson (1982), Selkirik (1982), Williams (1981), Scalise (1984). These studies, employing different formalisms, agree that the lexicon is not strictly memorized but also consists of some predictable entities.

2. This raises questions about the claim that a verb subcategorizes for two arguments in three-predicate verbs like *give*. If the very subcategorizes for two arguments it means it assigns θ-roles to them. How can its failure to assign Case be explained? Stowell (1982) points out the suggestion of Borer that verbs may not actually assign θ-roles to subcategorized PP complements, but what she calls a *compositional θ-role* to the NP object of P within PP, by combining the verb's θ-role with the inherent meaning of the preposition.

3. The fact that Y does not enter into R with W seems to suffice because we are dealing with complements that have the potential of assigning θ-roles themselves.

CONCLUSION

The study set out to accomplish one major task - to analyze the structure of noun phrase complements in Khamtanga. In the first chapter, general theoretical isssues were discussed. It was shown that some fundamental claims made by phrase structure rules cannot be maintained in the light of the central concern of modern linguistic theory, i.e. achieving a level of explanatory adequacy. On the other hand, it was demonstrated that the principles and parameters approach which characterizes the GB theory can be employed to analyze the projection of lexical heads into higher levels and explain the particular relationship the head has with its complements. Chapter two and three focussed on this task.

In chapter two, phrasal complements of NP were examined. It was found out that genitive constructions with different functions can be complements and the function of PP complements generally can be factored out between genitive NPs and relatives. The relationship the NP has with each complement was analyzed in terms of θ-role and Case assignment. Taking the insight of Chomsky (1986a) where N can assign a θ-role and by the Uniformity Condition is required to assign an inherent (genitive) Case, it was illustrated that particular PS rules would not be necessary at all. The status of genitive constructions that involve possessive pronominals was also discussed. It was claimed that since these NPs occur with typical specifiers they should be treated as complements. The failure of NP complements to occur in the domain where pronominal proclitics are found was attributed to a general property of clitics, namely Case Absorption. Some counter examples to this analysis were accounted for by invoking the notion of incorporation of clitics in the lexicon by a word formation rule.

Extending the discussion to a clausal complement, the analysis attempted to account for the relationship between a relative clause and the NP. The relative clause construction has been examined in terms of relativization strategies. It was found out that agreement features in the relative verb that are coindexed with a base generated empty category license the relativized NP by predication. It was found out that formally similar forms which exhibit the relative verb paradigm can actually function differently: the relative construction can productively function as an attributive and predicative adjective. This has complicated the analysis of the distinction between APs and S'. But by showing important differences an attempt has been made to explain the categorial status of adjectives.

In the fourth chapter a very important issue in terms of PS rules was raised - the quesiton of order between the complements of NP. Again by showing the inadequacy of PS rules in determining order between complements, some general principles were introduced that can account for order. The relevant notions were the Case Adjacency condition, the Case Resistance Principle and the Domain Adjacency Condition. Particularly revealing was the DAC which was employed to account for ordering restrictions within phrasal complements and also between phrasal complements and the relative clause. It was found out that the insight which requires that a complement domain must not be interrupted has great explanatory power in determining constituent order.

In general, given the research strategy outlined by the principles and parameters approach, the study has attempted to demonstrate that a particular aspect of NP structure in Khamtanga can be treated by independently motivated principles.

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DECLARATION

I, the undersigned, declare that this thesis is my work and that all sources of material used for this thesis have been duly acknowledged.

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