Chapter One

Introduction

1.0 Area of Investigation

This study examines complementation in the Nyanja language spoken in Chakari, hereafter referred to as Chakari Nyanja. Chakari is a mine town located in Mashonaland West Province in Zimbabwe. The term "complement" is defined as a word or phrase that completes the sense of a subject, object or a verb (Fowler, 1995). Crystal (1991) notes that in its broadest sense, it is a very general notion subsuming all obligatory features of the predicate other than the verb. In some approaches the term is given a more restricted definition, for example to refer only to the 'completing' function of structures following the verb <u>to be</u> or similar verbs. In this study it is defined as a phrase, clause or sentence that completes the sense of a predicate. Other lexical categories other than the verb may be predicators as well, although their theta-role assigning properties may be different from those of the verbs (Rappaport and Levin, 1988).

The names given to different types of complements relate to the different roles that they realise or the function that they play in sentence structures (Brown and Miller, 1991). The term "complement" may be applied to sentential objects and all noun phrases (NPs) that follow the verb. An NP is a phrasal category whose main element is a noun.

The study also examines subcategorisation and selection of these complements. Subcategorisation is concerned with the lexical specification of a predicate's local phrasal context. In general this specification involves reference to the syntactic requirements imposed on arguments. A predicate is one of the syntactic functions constitutive of the sentence (Greimas and Courtes, 1979). A predicator expresses relationship between arguments. The classification of predicates according to their complement options is called subcategorisation.

Selection on the other hand, represents semantic requirements imposed on arguments. Haegeman (1991) defines an argument as a participant involved in an activity or state expressed by the predicate or lexical item. She also notes that every predicate has its own argument structure. This serves to show the number of arguments required by a particular predicate. Predicates are distinguished on the bases of the number of participants they take, for example, 1 place, 2 place and 3 place predicate. A one-place predicate has one participant while a two-place predicate has two participants.

Subcategorisation and selection information is represented in the form of frames by the researcher. These frames are in the form of predicate argument structures (PAS). The PAS indicates the number and type of arguments a particular predicate selects and subcategorises. Predicates do not necessarily occur with all complement types. The lexicon and the categorical component both specify the range of possible complement structures selected by a particular predicate. However, the predicates impose selection and subcategorisation restrictions on the types of complements that follow them.

Subcategorisation is based on a syntactic representation of PAS. However, the notion of grammatical function (GF) occupies a central role in determining which of the arguments semantically selected by a predicate are syntactically realized and how. Bresnan (1982) defines grammatical functions as "universal syntactic primitives of the grammar classified according to two main parameters: subcategorisability and semantic restrictedness." Subjects, objects and sentential complements are subcategorisable functions in that they can be assigned to the arguments of lexical items. Nonsubcategorisable functions correspond to adjunct phrases—as the term suggests—may not be associated with the arguments of lexical items. In other words, GF show the function of a syntactic category in relation to other syntactic categories. GF, which are not inherently tied to specific selectional restrictions, are semantically unrestricted while those, which can only be paired with arguments of specific semantic types, are semantically restricted. As a matter of fact, grammarians have long recognized the importance of GF in the description and explanation of linguistic phenomena.

The researcher also investigates the distribution of complements in Chakari Nyanja. Distribution is concerned with the functional roles that different complements realize in syntactic structures, that is, the full range of environments in which a lexical or grammatical form occur (Trask, 1993). Noonan (1985) notes that there are outright constraints on the distribution of complements in a number of languages. Constraints on the selection and distribution of complements in Chakari Nyanja are also discussed in this study.

In order to make a comprehensive study of complementation in Chakari Nyanja, this study makes use of Lexical Functional Grammar (LFG) theory propounded by Kaplan and Bresnan (1982) as a theoretical framework. Two of the tenets of LFG are alluded to in its name: the role of the lexicon is central and GFs are seen as syntactically primitive, that is, they are primary or basic entities. The notion of GFs occupies a central role in determining, which of the arguments semantically selected by a predicate are syntactically realized and how. This important theory is discussed in more detail in chapter three.

1.1   Research Hypothesis

In order to have a detailed research on a particular issue, there must be a statement that directs the investigation and predictions of the intended results that can be proved wrong or correct. Having no formal hypothesis at all will lead to vague and inconsistent formulations at both the theoretical and descriptive levels. Kangira (2001) notes that in order to formulate a research hypothesis, there must be a problem first which is usually in the form of a question. In this study, the underlying questions are: What are the types of complements in Chakari Nyanja? How are complements subcategorised, selected and distributed in Chakari Nyanja? From these questions, a general hypothesis has been formulated as follows: There are invariably a number of complements and complements are subcategorised, selected and distributed on the bases of their intrinsic properties in Chakari Nyanja. Some examples of complements include the following: verb phrase (VP) complements, noun phrase (NP) complements, prepositional phrase (PP) complements and sentential complements.

1.2 Justification

Apart from Hachipola (1998) who has looked at the socio- historical background of Nyanja people or language in Zimbabwe, from a linguistic point of view, no study known to the researcher has addressed the question of complementation in Chakari Nyanja with respect to their complement types, subcategorisation, selection and distribution. The study set to be the basis for further research especially in this language. Findings, questions and observations will hopefully persuade linguists and interested parties to write literature and develop Nyanja and other minority languages in Zimbabwe.

Chakari has been taken as a case to be looked at for the study of complementation in Nyanja for a number of reasons. The fact that the researcher comes from Chakari, worked in Chakari as a teacher and had once carried a pilot study of the language meant that it would be cheaper and easier to carry out research in a familiar area. Nyanja speakers are also concentrated in Chakari.

The research is also a contribution to a better understanding of the nature of complementation in Chakari Nyanja. To this effect, the study makes a contribution to the field of computational Bantu syntax whose area of reference is going to be widened. The study's challenges and shortcomings are expected to encourage more research in Chakari Nyanja and other Bantu languages.

1.3 A Brief History of Chakari Nyanja people and language

1.3.1 Chakari Nyanja people

The term Nyanja is used to describe both the people and the language. The so-called Nyanja speakers in Zimbabwe are people of Malawian, Zambian and Mozambican origin who came from different ethnic backgrounds for example, Yao, Tumbuka, Nyanja, and Chewa who came to be identified with the variety Nyanja outside their countries. What the researcher observed is that the respondents make a distinction between Nyanja and Chewa speakers though all people with Malawian, Zambian and Mozambican background have been identified with the variety Nyanja in this country.[1] They came into the country to work as migrant labourers. However, reasons for migration among others were socio-economic. It is noted that as early as 1909 recruiting agencies were also contracted to recruit labour from Nyasaland to work in plantations, commercial farms and mines in Southern Rhodesia (Hachipola, 1998). In Chakari, most of Nyanja speakers are now surviving on illegal gold panning. However there are no accurate figures on the number of Nyanja speakers in this country. Hachipola (1998) notes that no effort has been made to develop literature locally in this language. May be the reason is that it is no longer taught in schools and is a foreign African language.

1.3.2 Chakari Nyanja language

Hachipola (1998) notes that Nyanja is an official foreign minority language in Zimbabwe. He defines a minority language as a Zimbabwean African language other

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[1] People with Malawian, Zambian and Mozambican background are generally identified with the variety Nyanja by non –linguists in Zimbabwe, though they have different ethnic and language backgrounds.

than Shona and Ndebele. Chakari Nyanja is a Bantu language. As a Bantu language, it is of the structure subject verb object (SVO) in simple sentences. Syntactic or grammatical universals shared by Bantu languages do apply to Chakari Nyanja. These universals include rules for sentence formation, passivisation, cliticisation and word order.

Not much has been written about the status of Nyanja spoken in Zimbabwe since Doke's (1931) recommendations that eventually made Shona and Ndebele the only official indigenous languages. It is important to note that this recommendation has far reaching consequences on Nyanja as an official foreign minority language in Zimbabwe. Since that time no effort has been made to develop the language locally.

Nyanja speakers revealed through interviews that there is what they call 'deep' and 'diluted' Nyanja. They pointed out that 'deep' Nyanja is the one spoken in their mother countries and 'diluted' one is spoken in Chakari. Hence, they made a distinction between Chakari Nyanja (diluted) and Nyanja (deep). Chakari Nyanja is 'diluted' because it has gone through some phonological, morphological and syntactic changes. Sounds, morphemes and words from the surrounding languages had made their way into the language. So from the discussions the researcher noted that Nyanja spoken in Chakari is invariably different from the one spoken in either Malawi or Zambia.

When languages come into contact with each other, the less prestigious is most likely to be influenced (Fishman, 1967). The group exerting the influence is often a large speech community. As a result, words and structures from the dominant group make their way

into the native language. However, research to show how Shona has influenced Nyanja has not been carried out.

The researcher observed that there is a diglossic situation in Chakari. Fishman (1967) used the term to describe a situation in which two or more different languages are used in different situations in a society. One of the important features of diglossia is the specialisation of function for H (high) variety and L (low) variety. An H variety is more prestigious. The researcher has noticed that this is the situation in Chakari. The Nyanja people are invariably bilingual. Other than their first language (Nyanja), they also speak Shona. Strangers are greeted in Shona and only to switch to Nyanja after the realisation that the stranger is a Nyanja speaker. Shona is the Zimbabwean African language taught in schools in Chakari. It is also the more prestigious variety in the area; as a result it is used at meetings, political gatherings and other important meetings. Hachipola (1998) notes that Nyanja was taught in primary schools up to standard six (grade seven) but the reasons why it was removed from school have not been spelt. Hachipola further points out that one is left to speculate that maybe it was removed because of it being a truly foreign African language. As a result no effort has been made to develop literature locally in this language. However, it is quite impressive that Nyanja speakers have, to a larger extent, managed to keep their identity, at least as far as language is concerned.

Nyanja speaking people are scattered all over in Zimbabwe. However, there are areas in which they are concentrated. These include mines, farms and old high-density suburbs. Chakari as a mine town, is one of the areas where there are concentrated.

1.4 Methodology

There is no literature known to the researcher on Chakari Nyanja. Hence, elicitation from native speaker informants was taken as the best technique of obtaining data about complement systems in Chakari Nyanja. As a result the researcher embarked on a fieldwork to Chakari, a mine town in Mashonaland West Province, to collect data for the analysis of complementation in Chakari Nyanja.

1.4.1 Data collection

In order to come up with a precise linguistic analysis of complementation in Chakari Nyanja, a considerable amount of data was collected through fieldwork in Chakari. A pilot study was carried out when the researcher was a teacher at Dalny Mine Secondary School in Chakari in 2001. During this time, the investigator had time to interact with Nyanja speakers. These interactions provided some basic linguistic knowledge of the Nyanja language and people. However, this only helped as far as identifying the informants and the knowledge of where to source appropriate data for the analysis of complement systems in Chakari Nyanja.

A tape recorder was used extensively during research to record interviews as well as general discussions. It had the advantage of playing back tapes during the time of data analysis. I recorded interviews and general discussions when the speakers were at the market, mine, school, and home. Trudgill (1980) notes that it is well known that more casual styles increase the occurrences of regional accents and homelier vocabulary. He further notes that to elicit casual speech requires a close rapport being established in the

interview and that in turn requires a freer form being given to the interview, especially to encourage the informant to speak at length on matters that affect him intimately. Taking note of this, topics of discussion were ranging from socio-cultural activities and the history of Nyanja people. Informants were asked to respond to questions such as: How long have you been in Zimbabwe? What do you think on the status of Nyanja in Zimbabwe? What are the major problems that you face in this area? (See questionnaire in the appendix). Such topics involve matters that affect the informant intimately as a result a lot of ontology for the analysis of complement systems are obtained. Indirect questions were also asked to encourage informants to give responses that were more natural. The indirect questions introduced topics that involve the speaker and stimulate language style. Data, which were recorded, was first transcribed on paper and then translated into English by first language speakers of Nyanja. The two translators are proficient in the three languages, Nyanja, Shona and English. They come from Chakari. One of them is a graduate from the University of Zimbabwe and the other has form four as his highest level of education. Some of the texts were used in the analysis of complementation in Chakari Nyanja.

1.4.2 Informants

Crystal (1987) notes that informants in almost every language research are native speakers of a language who provide utterances for analysis and other kinds of information about the language. Hence, in this study informants were Chakari Nyanja speakers. Wardhaugh (1998) notes that there are basically two types of methods used in the selection of informants, the random sample method and the judgment sample method.

In the judgment sample method, the researcher chooses the informants according to a set of criteria, for example, sex, age, social class and education. The disadvantage of this method is that there is no equal chance of being chosen on the part of informants hence it is biased. The second sampling method is the random sample method. Everyone in the population to be investigated has an equal chance of being selected regardless of age, sex, social class and education. However, this has the disadvantage of failing to capture language variation across age groups, sex and social classes. As this study gives an analysis of Nyanja spoken by the people of Chakari regardless of age, sex, social class and education, the random sampling method was considered the best sampling method, as it is unlikely to show any bias. Hence, it was used in this study to look at complementation in the language spoken by the people of Chakari. As a result, informants were randomly selected.

1.4.3 Method of Analysis

1.4.3.1 Identification Methods

In order to fully appreciate the arguments which follow not only in this chapter, but in later chapters as well, it may be as well to discuss first the tests used to identify complements. Although they may be many tests for discovering complements, only five will be discussed here. The quantity of tests by itself is inconsequential. What is important is be able to recognise a phrase or clause that is functioning as a complement. The tests are within the theoretical framework, LFG. The tests have been taken as tools for the identification of complements. The tests are:

➢ Word order (c- structure)

➢ Passivisation

➢ Obligatoriness

➢ Subcategorisation

➢ Well- formedness

The first test is the word order. Many languages have different coding properties. In Bantu languages word order is one of the properties. Word order is used to ascertain the function, subject of or object of. In a neutral, simple or unmarked sentence the subject precedes and conditions agreement on the verb which is directly followed by an object. An NP strictly adjacent to the verb is an instance of an object complement (Brown and Miller, 1995). Chakari Nyanja as a Bantu language is in the subject verb object (SVO) order. In this case, the direct object is identified by its strict adjacency to the verb. The indirect object and/or clausal complement either follow the direct object. This concurs with Hopper and Thompson (1980)'s observation that 'a true object should have access to the position immediately following the verb.' However, word order only works at the level of unmarked sentences or simple sentences.

In Bantu languages, objects are promoted to the subject position after the passivisation rule is applied to sentences. Passivisation is a process that involves the promotion of the object to the subject position and the demotion of the subject to an oblique position. Once the object has been promoted to the subject status, it is capable of controlling verb agreement. Passivisation suppresses the highest role, the agent, in the sentence and the

remaining role high on the hierarchy, the beneficiary, is then assigned the subject status

as shown from Shona examples below.

1(a)   Tariro   a- rov -a *Tino*   Active
        1 Tariro SM-beat-TV 1 Tino
        'Tariro beat Tino'

(b)   Tino a- roh-w- a na- Tariro   Passive
        1 Tino SM- beat- PASS-TV by Tariro
        'Tino was beaten by Tariro'

In 1(a) Tariro the agent is assigned the subject function and Tino the patient assigned to

the object function.[2] In 1(b) Tariro the agent have been suppressed and realised as an

oblique marked by an adposition 'by'. Tino the patient is then assigned to the subject

function. The rule states that the object must be able to attain subject status after

passivisation. Failure by a NP or a syntactic category shows that it is not an object. This

then identifies complements from other grammatical functions such as adjuncts.

Obligatory constituents are considered to be complements (Brown and Miller 1991). This

has been used on the account that in most cases complements are obligatory constituents.

Consider the Shona examples shown below.

2(a)   Baba   va- uray-a *mbudzi*
        2a father SM-kill-TV 9 goat
        'Father killed a goat'

(b)   *Baba vauraya
        'Father killed'

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[2] An agent is a participant that volitionally instigates the action referred to by the predicate. A patient is a
participant that receives the action of the agent and may undergo change of state. However, there is no
agreement among linguists as to the 'correct' set of semantic roles and the role an NP has in the sentence. A
detailed analysis of thematic roles is given in chapter three.

3(a)   Murume a- end-a   *ku-basa*
        1 man   SM-go-TV 17- work
        'The man went to work'

 (b)   ?Murume aenda
        'The man went'

Absence of the obligatory constituents in the two sentences renders them ill-formed. However, (3b) can be grammatical if there is background information. Radford (1988) argues that intransitive verbs take zero complement, thus the motion verb 'went', as an intransitive verb takes no complement. The two phrases that follow the verb in (2a) '*mbudzi*' goat and (3a) '*kubasa*' to work are all obligatory constituents. Obligatory constituents are complements. They only differ in their degree of obligatoriness such that if they were to be put on a scale the NP 'the man' would be higher than the locative nominal complement 'to town'. Hence, this method is complemented by other methods such as subcategorisability to be definite that the identified phrase or clause is a complement.

Subcategorisation is the other test that will be used in the identification of complements in Chakari Nyanja. It is concerned with the lexical specification of a predicate's local phrasal context. This specification involves reference to the syntactic requirements imposed on arguments. Heads of categories impose restrictions on the range of complements they permit, but not on the range of adjuncts with which they can co-occur with. The information is presented in the form of predicate argument structures (PAS).

                'Manga' wear

(4)   Predicate Argument Structure: (PAS) <1 2>
        Grammatical Function (GF) assignment: [SUBJ, OBJ]
        Lexical form: <(OBJ)> (SUBJ)

The PAS shows that the verb 'manga' wear takes two arguments (1 2) and two GF, subject and object. More explanations on the PAS will be given in section 2.4 and chapter three. Subcategorisation might not be an empirical category that can be investigated objectively and might be an assumption about the types of information that are associated with lexical entries. However it has been included here, as it will help in establishing the number and types of categories the predicate takes as complements.

The last test or tool to be used in the identification of complements is well- formedness. Well- formedness is a principle in LFG that regulates the occurrence of lexical items in sentences. They enforce an appropriate match up or link between the predicate feature and the surrounding syntactic functions. All the other tests are within well- formedness. Well- formedness is not a separate test on its own. It is an observational criterion by means of which tests such as word order, passivisation and obligatoriness are applied. Well- formedness conditions regulate the occurrence of lexical items in lexical functional grammar (LFG). They have been included because they enforce an appropriate linking between predicate feature and the surrounding syntactic functions in f- structures. Well-formedness is explained in detail in section 3.4.

1.4.3.2 Distribution of Complements

Distribution refers to the position that complements can realise in sentence structures. The order of complements and different functional roles that complements take encompasses distribution. Thus lexical entries contain not only categorical features such

as N, V, PP, but also information on the order and function of complements. It is shown that some complements may function as subjects and objects in syntactic structures.

Apart from different functional roles that complements take in syntactic structures, it is noted that complements are hierarchically ordered. The order of complements is looked at in relation to the predicate, that is, if a predicate takes more than one complement, what order are they supposed to follow. However, the order of which complements appear in sentence structures is not included in the lexical entry since it is the automatic consequence of an independent restriction on the language's word order.

1.5 Organization of Study

Chapter 2 is a review of the relevant literature. The first section looks at literature which defines the terms complement and complementation. The researcher reviews literature on the different types of complements. The researcher also reviewed literature on subcategorisation and selection of complements. A review of these works sheds light on the understanding of the notion under investigation.

Chapter 3 focuses on the theoretical framework, LFG. It is an explanation of what the theory is and how it is used in data analysis. Chapter 4 is the identification and distribution of complements. It focuses on identifying complements and showing how they are distributed in Chakari Nyanja. Chapter 5 focuses on subcategorisation and selection of complements. The theory LFG is used in the analysis. Chapter 6 concludes the study. It gives answers to questions that have been raised in the study and suggestions of what might be done.

Chapter Two

Literature Review

2.0 Introduction

The thrust of this thesis has been pointed out in the previous chapter, thus to explore the aspect of complementation in Chakari Nyanja within the Lexical Functional Grammar (LFG) framework. To give a full account of the notion complementation in Chakari Nyanja, the researcher must be acquainted with apt concepts and arguments of what complementation is. The chapter reviews literature which defines the term complement and complementation, the one that looks at the different types of complements and on selection and subcategorisation. As aforementioned in the previous chapter, Chakari Nyanja is a Bantu language. Languages in the same family are argued to behave the same in a number of respects, though some aspects are language specific. Taking cognisance of this point, a section on complements in Bantu is given. The researcher reviews literature on complements in other Bantu languages to contextualise the research, raise questions and see any yawning gaps that would be part and parcel of the research.

The second section looks at the definitions given in literature, on a broad spectrum, on the aspect complement and complementation. A review of this literature gives a broad understanding of the aspect under investigation. From the numerous definitions that are going to be reviewed, a suitable one will be selected for the purpose of this study. Under the sub-section 2.2.1, a complement- adjunct distinction is made. This is intended to shed light on the distinction between the two terms. Radford (1988) notes that the distinction

between an adjunct and complement is still problematic. A review and analysis of literature on these terms will give a better understanding of the terms.

It is the thrust of this chapter to review literature on different types of complements. Crystal (1980) notes that the domain of complementation is still an unclear area especially on the types of complements. Knowing this problem, the researcher endeavors to review literature that will be of importance in the identification of complements in Chakari Nyanja.

The researcher also intends to review literature on subcategorisation and selection of complements. Subcategorisation and selection will be shown to represent syntactic and semantic information of predicates. It will be argued that complements as arguments of predicates, they are selected and subcategorised by the predicator. Literature to be reviewed will also show that information about subcategorisation and selection is an idiosyncratic property of a lexical item (Chomsky, 1965).

The last section is a summary of the chapter. Important issues and concepts raised in the chapter are summarised.

2.1 Complements in Bantu

This section intends to review literature on complements in Bantu. Chakari Nyanja is a Bantu language. It has been pointed out earlier on that languages of the same family behave more or less the same in a number of respects. They will only differ with those

aspects which are language specific, that distinguish one language from another. A review of literature from languages of the same family will help the researcher contextualise his research, raise questions and see any aspects which need further exploration.

Dembetembe (1976) looks at embedded sentences in Shona which are not relative clauses. He notes that these complements are of two types, noun phrase (NP) complements and verb phrase (VP) complements. He employed two tests to discover NPs in the subject position, the concordial agreement and the interrogative pro form tests. H e also employed four tests to discover NPs in the object position, passivisation, pseudo-cleft, object anaphora and the interrogative pro form tests.

Dembetembe (1976) notes that the claim made by the passive test is that the string which is made the subject by this transformation, is an object NP. He gave the following example.

5a   Jeke   a- on- a   *nyoka ku-   rukova*
          1Jeke SM- see- TV 9snake 17LOC-river
          'Jeke saw a snake by the river'

    b. Nyoka ya- on- ekw- a   *ku-   rukova* na- Jeke
        9snake SM- see- PASS-TV 17LOC- river   by- Jeke
        'A snake was seen by the riverside by Jeke'

    c. Ku-   rukova kwa- on- ekw - a   *nyoka*   na- Jeke
        17LOC- river   SM- see- PASS-TV 9snake by- Jeke
        'By the riverside a snake was seen by Jeke'

He argues that although a LOC-NP which occurs after the verb can be transposed to the subject position by the passive transformation there seem to be degrees of acceptability of

the resulting sentences depending on the number of other NPs occurring before it in the input sentence. This is a vital point in the identification of complements. He also makes another important observation regarding adverbial phrases, which he refers to as NPs. He notes that NPs which express time does not appear to be confirmed as an object NP by the passive test.

The interrogative Pro- form test involves substituting the interrogative pro-forms <u>ani?</u> and <u>chii?</u> for the NPs which are suspected to be an object NP. The form <u>ani</u> is used for human NPs and the form <u>chii</u> is used for non- human NPs. He gave the following example.

6a.   Toni   a-   no   - d   - a   *Koni*
        1Toni SM- PRES- love- TV Koni
        'Toni loves Koni'

   b.   Toni anoda ani?
        'Toni loves who?'

7a.   Mwana a-   tyok- a   *ruoko*
        1child   SM-break- TV 11hand
        'The child break a hand'

   b.   Mwana atyoka chii?
        'The child break what?'

This test identifies Koni and <u>*ruoko*</u> hand as object complements. Dembetembe (1976) notes that the LOC-NP which has been identified as an object complement under the passive test, is not a complement under this test. The NP <u>*ruoko*</u> hand which has also been identified as an object complement under the interrogative pro- form test, is not a complement under the passive test. This basically shows disagreement in tests that have been used by Dembetembe (1976).

Dembetembe (1976) notes that object anaphora test is that some NP complements of verbs may be represented by their pro- forms or object prefixes as they are often referred to in Bantu linguistics studies. This test makes the claim that a NP complement which can be represented by its pr- form by this transformation, is an object complement. Example (6a) is reproduced here under object anaphora test.

8   Toni a- no   -mu- d   - a   (Koni)
       1Toni SM-PRES-OM -love-TV
       'Toni loves her'

The object NP, Koni has been replaced by its prefix –mu- her. This shows that under this test Koni is an object NP. This is an important test as object complements are the only ones which have their prefixes within the verbal complex.

Under Pseudo- Cleft test Dembetembe (1976) points out that the NP which is suspected to be the object NP is taken out from its position and placed at the beginning of the sentence. The new position it now assumes in the sentence may be immediately before or after the subject NP. This is followed by the stabilized form of its pro- form which in turn is followed by the rest of the sentence in the perfective relative. He gave the following example.

9a.   Vana   va- ka –b- a *mango*
       2children SM- PST-steal- TV 9mango
       'The children stole some mangoes'

  b. Vana,   *mango* ndidzo dza- va- ka -b - a
       2children 9mango stabilizer OM- SM-PST-steal-TV
       'It is some mangoes that the children have stolen'

The NP mango has been identified as an object complement by this test. However it is

important to note that pseudo- cleft test is not a test to identify complements but constituents.

Harford- Perez, (1985) looks at complementation in three Bantu languages. She notes that complement is the name for a particular role (or function) played by the constituent S (embedded sentence) as shown in Kikuyu, a Bantu language spoken in Kenya:

10. Ku-   uikaine   [*ati*   *mu-*   *ndu-*   *mu-*   *rume*   *u-*   *yu*
     17 has been known that   1   person 1   man   this 1
     oorag-   ire mu- ndu]
     1 kill   past   1   person
     'It has been known that this person killed a person'

The constituent *[ati mundumurume uyu ooragire mundu*] completes the sense specified by the verb 'ukaine' known. Ncube (1996) looks at complementation in Ndebele a language spoken in Zimbabwe. He defines complementation as the addition of a sentence or predication through which the main predicate is made complete. The two definitions are only concerned with complementation as a sentence phenomenon. However Dembetembe (1979) argues that noun phrases and adverbial phrases are complements in Shona, a Bantu language spoken in Zimbabwe. This suggests that complementation is not only a sentence phenomenon, but also a phrasal phenomenon. Harford (1993) argues that in Shona, a Bantu language spoken in Zimbabwe, kuti that introduces an infinitival complement.

The NP object complements are generally divided into two, namely primary and secondary object complements (Mashiri and Warinda 1999, Fortune 1984). Dembetembe (1979) argues that object complements are said to be primary if they can have an object concord or object substitute as co- referent and also that object complements must be able

to appear in the subject position after passivisation (Jakaza 2001, Mashiri and Warinda 1999). Examples from Jakaza (2001) below:

 11 (a)　　　　　Mu-komana a- ka- tamb 　　-a Ǿ- *bhora*
　　　　　　　　1　boy　1SM-PST- play- TV 5　ball
　　　　　　　　'The boy played the ball'

　　(b)　　　　　Mu -komana a-　ka-　*ri-* tamb- a
　　　　　　　　 1　boy　1SM-PST-OM- play- TV
　　　　　　　　'The boy played it'

The example is from Karanga a dialect of Shona. From the examples, Jakaza (2001) argues that the NP *bhora* ball is a primary object complement of the verb <u>tamba</u> play. In 11(b) the object complement is optional and its object marker <u>–ri-</u> is placed in the verbal complex. The criteria used by these linguists in the identification of primary object complements in Shona and Karanga is of importance in the identification of complements in Chakari Nyanja.

Secondary object complements have been characterized by Dembetembe (1979) and Jakaza (2001) as being incapable of having object concords in the verbal complex, they cannot assume subject position after passivisation and also that the majority of them constitute an inalienable part of the subject of the clause.

12(a)　　　　　Huku yake　ya- monyorok 　　- a 　　*mutsipa*
　　　　　　　　5hen POSS　5SM- twist- 　　TV　3　neck
　　　　　　　　'His hen had twisted the neck'

　　(b)　　　　　*Mutsipa　wa- monyorok- a　huku　yake
　　　　　　　　 3 neck　　SM- twist- 　TV 5 hen　POSS
　　　　　　　　' The neck has twisted his hen'

Jakaza (2001) argues that when the NP *mutsipa* neck is promoted to the subject position and the logical subject *huku* hen relegated to oblique an ungrammatical sentence is formed. This confirms that *mutsipa* neck being part of a whole; cannot be moved to the beginning of a sentence. Hence it is a secondary object complement. However, Dembetembe (1979) proposes that secondary object complements may be given prominence only by transposing them from an object relation and turning the original subject into a possessive qualifying the new subject. Below example (12b) is repeated as (12c) to clarify the point:

12 (c) *Mutsipa* we-   huku yake wa- monyorok-   a
        3 neck POSS- hen   POSS 5SM- twist- TV
        'The neck of his hen twisted'

In the above example the NP *mutsipa* neck has been promoted to the subject status. It confirms that secondary object complements can be subjects as suggested by Dembetembe (1979).

Dembetembe (1979) points out that they are all typically but not invariably obligatory constituents. There is no agreement among linguists as to whether Bantu languages have prepositional phrases (PP). Locative PP or directional PPs are argued to be a mystery in Bantu languages. Bresnan and Kanerva (1989) argue that the Bantu language Chichewa has locative NPs as part of its nominal gender class system. Locative and directional complements are nouns; they are classified as nouns in Bantu languages (Mchombo, 2000, Dembetembe, 1979).

Apart from NP, LOC- NP and PP complements, there are different types of AdvP headed

by an adverb that function as complements (Jakaza 2001). These are classified according to different senses that they 'complete'. Generally four of the AdvP complements have been identified in different languages, namely adverbial complements of time, frequency or degree, manner, and place (Dembetembe 1979, Mashiri and Warinda 1999, Jakaza 2001, Fortune 1984). Dembetembe (1979) notes that AdvP complements of time give information about the time an event or occasion takes place, those of frequency or degree show the extend or degree of an event and those of manner show how the event or motion has occurred. With these descriptions Jakaza (2001) has classified the AdvP complements of time as the 'when complements', AdvP complements of frequency or degree as ' to what extent complements', and the AdvP complements of manner as the 'how complements'.

13.   Tino   a- end -a   *nhasi*   (AdvP = time)
         1a-Tino 1a-SM- go- TV   1atoday
         'Tino went today'

14   Dombo ra- kunguruk-a   *kamwe* (AdvP = frequency or degree)
         5-Stone 5-SM-roll- TV   once
         'The stone rolled once'

15   Ta- ka- pind-   - a   *zvakanaka*   (AdvP= manner)
         SM- PST-enter-TV without problems
         'We entered without problems'

In the above Shona examples the phrases, <u>*nhasi*</u> today, <u>*kamwe*</u> once and <u>*zvakanaka*</u> without problems are complements.

2.2 Complement (-ation)

This section looks at the aspects complement and complementation as defined and analysed from literature from other language families. This helps the researcher broaden his understanding of the aspects under investigation. The terms complement and complementation have been looked at from a different theoretical perspectives by a number of linguists. So there will be a mix of theoretical terms and assumptions from a wide range of theoretical sources. Questions raised and conclusions reached are of importance in this research.

In Generative Grammar (GG), the term complement has been used to refer to various closely related kinds of subordinate clauses (Hurford 1994). A complement is looked at as a clausal phenomenon. Brown and Miller (1991) point out that the term complement has been applied to sentential objects that are associated with a particular verb. Brown and Miller (1991) further point out that complements introduced by a covert or overt complementiser[3] is normally a sentential or clausal complement. Complementisers indicate that the subordinate clause or sentence immediately following is a complement. This definition of a complement only focuses on a complement as a sentence and leaves out a number of phrases that function as complements.

Fowler (1995) defines a complement as any word, phrase or clause that completes the sense of a subject, object or verb. Trask (1993) gives a working definition for the term complement. He defines a complement as any constituent which forms part of the nucleus

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[3] A complementiser is a grammatical formative which serves to mark a complement clause (Trask 1993)

of a category with a lexical head and which is subcategorised for by that lexical category. The two definitions note that a complement is part of or an obligatory constituent.

Thompson (1971) notes that it is possible to distinguish two rather different approaches to complementation:

i.   Traditional Grammar: treats complementation as properties of verbs; seeks to describe the use of, for instance, the 'bare infinitive', the 'to infinitive' or the gerund.

ii.   Modern[4] Linguistic Theory: treats complementation in terms of sentence relationship irrespective of the particular "complementiser".

Thompson (1971) however states that both traditional and modern grammar now treat complementation whether finite or infinite, as a sentence phenomenon. The conclusion given by Thompson (1971) on how to treat complementation overrides important categories that function as complements. Noonan (1985) notes that, "By complementation we mean the syntactic situation that arises when a notional sentence or predication is an argument of a predicate." Rosenbaum (1967) supports the two and notes that it is a general term for the process of embedding sentences as complements in other sentences. As argued earlier, the definition is biased towards a clausal or sentential complement. Complementation is defined, in this study, as the addition of a phrase, clause or sentence to the main predicate to make it complete. The bracketed phrases and clauses below are considered as complements (Radford, 1988).

16(a)   John kicked [*the ball*]

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[4] The term modern water down Thompson's argument. By just saying modern, Thompson had opened a Pandora box. Questions like: how modern? Which era is it ?

(b)   John sliced [*the cake] [with a knife*]

(c)   John told me [*that she went to town*]

In the example above, in 16(a) *the ball* is an NP complement, in (b) there are two complements, *the cake* and *with a knife*. *The cake* is an NP complement and *with the knife* a PP complement. In 16(c) *that she went to town* is a sentential complement introduced by the complementiser that.

2.2.1 Complement- Adjunct Distinction

Terms like complement and adjunct denote grammatical relations or functions, as terms like 'subject' and 'object' (Radford, 1988). Although these terms have been defined and widely used in literature, the distinction between 'a complement' and 'an adjunct' is still problematic. The obvious question to ask is what distinguishes a complement from an adjunct?

Chomsky (1965) states that internal post modifiers (complements) show a strong degree of cohesion to their governing verb and external post modifiers (adjuncts) have a less cohesion. In this instance, he argues that in sentences such as (17a) below, the bracketed PP is an internal post modifier whereas in the corresponding (17b) example it is an external one. This means that in (17a) the bracketed PP is a complement and in (17b) it is an adjunct.

17(a)   He will work [*at the job*]   (= internal)

 (b)   He will work [at the office] (= external)

He is arguing along the lines of the X-bar framework where we can interpret internal as designating a complement internal to V-bar (verb phrase) containing the head V, and external as designating an adjunct external to the V-bar containing the head V. Still his distinction is problematic because one will have problems in identifying internal and external post modifiers.

Another correlate of the complement – adjunct distinction is that an NP in a complement PP can generally be passivised, whereas an adjunct PP cannot (Radford 1988). Radford (1988) gave the following contrasts as good examples.

18(a)   Everyone laughed [*at the clown*]

 (b)   Everyone laughed [at ten o'clock]

 (c)   The clown was laughed at by everyone

 (d)   *Ten o'clock was laughed at by everyone

The phrase '*at the clown*' is a PP complement with the NP '*the clown'* being able to be passivised as shown in (c). Example (d) shows that [at ten o'clock] is an adjunct PP with an NP 'ten o'clock' failing to passivise. The ungrammaticality[5] of (d) confirms that [at ten o'clock] is an adjunct PP not a complement.

A further argument in support of the distinction between a complement and an adjunct formulated by Radford (1988) is in relation to ordering restrictions. This argument

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[5] A sentence is grammatical when it is consistent with all the requirements of the grammar of a particular language. Grammar is the system by which words and morphemes of a language are organized into larger units. Ungrammatical denotes a syntactic structure which is not permitted by the rules of the grammar of a particular language (Trask, 1993).

purports that in cases where the complement and the adjunct co-occur within the same verb phrase, the complement will precede the adjunct.

19 (a)   He laughed *at the clown* at ten o'clock

  (b)   *He laughed at ten o'clock *at the clown*

In this example, (9a) confirms that '*at the clown*' is a PP complement and 'at ten o'clock' is an adjunct PP. To have the phrase **'**at ten o'clock' preceding '*at the clown'* makes (9b) ungrammatical. From this argument, we can say complements will occur closer to their heads than adjuncts.

Furthermore, an additional argument in support of the distinction is formulated in relation to co-occurrence restrictions (Grimshaw 1979, Kaplan and Bresnan 1982, Bresnan 1982, Radford 1988). The argument is based on the fact that heads of categories impose selectional and subcategorisation restrictions on the range of possible complements they permit, but not on the range of adjuncts with which they can co-occur. A head of a category is the main element. The diagram below shows a distinction between complements and adjuncts, which will be made within the LFG framework. The diagram, adapted from Bresnan (1982), shows the subcategorisability of complements as a parameter to distinguish them from adjuncts.

Grammatical functions

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              Grammatical functions
                    /\
                   /  \
                  /    \
                 /      \
        Subcategorisable        Nonsubcategorisable
             /\                        |
            /  \                       |
           /    \                ADJ (UNCT)
          /      \               XADJ (UNCT)
   Semantically   Semantically
   Unrestricted   Restricted
        |              |
   SUBJ[-r,-o]    OBL [+r,-o]
   OBJ  [-r,+o]   COMPL[+r,-o]
   OBJ2[-r,+o]    XCOMPL[+r,-o]
```
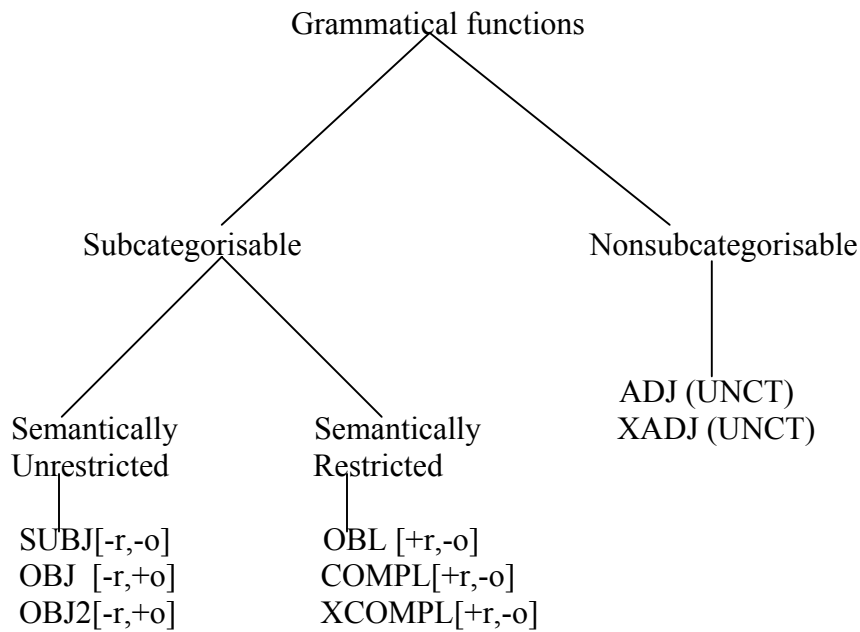
Figure 1. Classification of grammatical functions

The functions are first divided into subcategorisable and nonsubcategorisable functions.

The open (XADJ) and closed adjuncts (ADJ) are the nonsubcategorised functions. The

classification shows that there are grammatical functions restricted to particular

arguments and some which are not restricted. Subject and object are hypothesised to have

the primitive property of being semantically unrestricted. This means that they are

capable of being associated with any semantic role and even having no semantic role as

with expletive subjects (Mchombo, 1993). The oblique, closed complement (COMP) and

open complement (XCOMP) are restricted to certain semantic arguments. They can only

be mapped onto particular semantic arguments. Harford (1993) notes that this is on the

basis of cross- linguistic tendencies in the syntactic realization of some roles. Some roles

are excluded from association with certain grammatical functions (GF) on the basis of

aspects of their intrinsic properties.

Brown and Miller (1991) give a more conclusive argument on the distinction between complements and adjuncts. They point out that complements tend to be obligatory whereas adjuncts are always optional. Hence, obligatory constituents are complements and optional constituents are adjuncts.

20(a) Tariro arrived yesterday

   (b) Tariro arrived.

21 (a) Tinomudaishe kicked *the ball*.

   (b) *Tinomudaishe kicked.

In example (20) the adverbial phrase, yesterday, is an optional constituent and in example (21) the noun phrase, *the ball*, is an obligatory constituent. From the examples, the adverbial phrase is an adjunct and the noun phrase is a complement though this is subject to variation across languages.

2.3 Complementiser

Crystal (1991) notes that complementiser is a term which is used to refer to subordinating conjunctions which mark an embedded sentence of a complement type. Noonan (1985) supports this and says that complementisers typically derive historically from pronouns, conjunctions, adpositions or case markers, and, rarely, verbs. So complementisers may resemble words currently used in these capacities. Haegeman (1991) agrees with the two scholars and says that a complementiser saves to trigger an embedded sentence. Noonan (1985) further notes that complement types often have associated with them a word, particle, clitic or affix whose function is to identify the entity as a complement. For

example, the 'that complement' named after the complementiser 'that'. However, he notes that some complement types have no complementiser associated with them, for example, some infinitival complements and verbal nouns in English.[6]

Bresnan (1982) makes a distinction between closed and open complements with the use of a complementiser. Closed complements (COMP) possess a complementiser and open complements (XCOMP) do not have an overt complementiser. Noonan (1985) says that one complement type may take two complementisers, as in Yangui, *-ke* a particle that precedes the clause and *kai* a clause- final clitic; one or both of the complementisers must be present. In Lango, the *ni* complementiser is the main morphological distinguisher between the indicative complement type and the paratactic complement type which are otherwise similar morphologically (Noonan 1985).

2.4 Types of Complements

Traditionally, the names given to different types of complements relate to the roles that they take in sentence structures (Brown and Miller, 1991). A complement, as has been noted earlier, is any constituent which forms part of the nucleus of a category with a lexical head and which is subcategorised for by that lexical category (Trask, 1993). However, Crystal (1980) notes that the domain of complementation is still an unclear area especially on the types of complements. There is heated debate on the characterisation of complements. A good example is on raising verbs where some

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[6] Trask (1993) notes that a verbal noun is any form of a verb which can serve as the head of a noun phrase in a nominalization, particularly a gerund. He further notes that an infinitival complement is a complement with a non- finite form of the verb with no restrictions or marking for tense, aspect, mood or person.

linguists argue for a VP complement (Chomsky 1965) and others for a sentential complement (Bresnan 1982, Grimshaw 1979).

2.4.1 Verb Phrase Complementation

The term verb complementation refers to the description of the complement- taking properties of verbs. That is, which complements they take and how these complements are realised (Aarts, 1997). Aarts (1997) further notes that verb complementation is an area which much has been written but with great deal of disagreement among linguists. Dembetembe (1976) agrees with Arts, (1997) and notes that verb complements are not clearly defined.

As noted in the definition of a complement, sometimes all NPs that follow the verb are known as complements. Other phrasal categories (PP, AP) and clauses that complete the sense of a predicate also function as complements (Crystal 1991, Fowler 1995, Brown and Miller 1991). Josephs (1976) notes that a V heads a VP complement and that predicates are subcategorised by the type of co-occurring complementiser and occasionally by elements within the sentence. A verb phrase complement is a sentence, phrase or word, which is embedded in a verb phrase (Palmattier, 1972). Thompson (1971) notes that three types of verbs can be distinguished where complementation occurs.

    i.   'Pure' intransitive verbs, which can never take an object as in 'Our friends have arrived'

    ii.   Verbs which can be transitive or intransitive with little or no difference in

meaning or in subject –verb relationship, as in 'He smokes (cigars) everyday

iii.   Verbs which can be transitive or intransitive but with considerable difference in meaning or in subject –verb relationship, as in 'The light shone from the far corner' and 'The light shone'.

NPs that follow the verb function as object complements (Brown and Miller 1991, Maguduru 2002). Hence, NPs that complete the sense of a verb will be referred to as object complements. The lexical entry of a word shows the number of object complements it takes. Verbs are divided according to the number of arguments that they take. There are basically three types of verbs, transitive, ditransitive and intransitive. Transitive verbs require a following object while ditransitive requires two objects, for example

22   Ernest loves Tariro

23   Ernest gave Tino a book

The verb love in (22) is a transitive verb that takes a direct object (DO), Tariro. In (23) the verb give is a ditransitive verb that takes two noun phrases (NPs), Tino (DO) and a book (indirect object)[7]. Intransitive verbs do not take direct objects, thus select zero complements (Haegeman, 1991). The intransitive verb is divided into two, namely ergative and accusative. The ergative has agent argument and the accusative the patient/theme argument. For example, John fell. The verb fell takes the thematic role theme as its subject and also does not allow a following object.

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[7] Bas Aarts (1997) notes that indirect objects are usually NPs, which cannot occur without a following direct object and that they can be subjects of passive sentences.

Radford (1988) notes that apart from NPs some verbs subcategorise (take) an immediately following PP complement or both NP and PP. The PP also serves to complete the sense of a verb. Analogously, the head or main element of the PP is a preposition. The PP gives information on the place that is the end point of motion or action, the goal and direction of motion. The PP complement is divided into two, mainly, locative and directional complements (Brown and Miller 1991). It has been shown in section 2.1 that in Bantu languages there are no PP but locative and directional nominals.

Adverbial phrases, referred to as noun phrases, by Dembetembe (1976), also serve to complete the sense of the predicate. Aarts (1997) argues that AdvP are adjuncts not complements. He argues that adjuncts have the function of telling us about the how, when or why of the situations expressed by the respective sentences. The term adjunct is used as one type of adverbial (Aarts, 1997). However, literature reviewed under section 2.1, shows that adverbials are identified as complements in Bantu languages.

2.4.2 Noun Phrase Complementation

Verbs are not the only word classes that can be subcategorised (Aarts, 1997). Nouns also occur in subcategorisation frames. Noun phrase complementation is a process which introduces a sentence or phrase as a complement to a noun head under the domination of a noun phrase (Palmattier, 1972). Phrases and sentences that precede the N or are dominated by an NP are noun complements (Josephs, 1976). The head of the noun phrase complement is the constituent N of the NP which specifies its features. Noun phrase complements are generally associated with the properties of passivisation and pseudo-

cleft formation in the main sentence (Rosenbaum, 1967). Questions can also be embedded as noun phrase complement. Rosenbaum (1967) notes that in all types of NP complementation, the NP functions as a single unit under passivisation and the corresponding pseudo cleft formation. Palmattier (1972) notes that there are four types of NP complementation: subject complementation, object complementation, intransitive oblique complementation, which generates a complement of the object of a preposition in the VP of an intransitive sentence; and transitive oblique complementation, which generates a complement of the object of a preposition in the VP of a transitive sentence.

2.4.3 Sentential Complementation

Palmattier (1972) notes that sentential complementation is the embedding of a sentence as a complement within another main sentence. It is the introduction of a sentence into the immediate domination of the verb or noun. Complements that are introduced by a complementiser are normally referred to as sentential complements (Cf. Brown and Miller 1991, Grimshaw 1979, Haegeman 1991, Radford 1988, Harford 1985, Kaplan and Bresnan 1982). A complementiser is ' so- called' because its function is to indicate that the subordinate or embedded sentence structure immediately following is a complement. Jacobs and Rosenbaum (1967) states that the complementiser is actually placed before the first NP of the embedded sentence.

Radford (1988) classified these complement clauses according to their structural differences, namely, ordinary, exceptional and small clauses. He argues that ordinary

clauses are of the S-bar[8] constituent, that is, types of clauses that have an overt complementiser. An exceptional clause is regarded as the one that co-occur as a complement of a specific kind of verbs (especially cognitive verbs i.e. verbs of saying and thinking). An overt complementiser cannot introduce exceptional clauses; hence in principle they cannot contain complementisers. He also notes an idiosyncratic property of these clauses, that is, their subjects in some respects behave more like objects of the preceding verb than subjects of the following verb.

The other type of complement clauses, the small clauses, has been generally known of their canonical structure [NP XP], where XP = AdvP, NP, PP etc (Radford 1988) In other words it is a clause headed by an NP followed by other phrasal categories such as the AdvP and PP. He gives the following examples:

24.   I know [*that you hate syntax*]   (= ordinary clause)

25.   I believe [*him to be right*]   (= exceptional clause)

26.   Most people find [*syntax a real drag*]   (= small clause)

In (24) 'that' is the overt complementiser and *him* in (25) behaves more like an object of the preceding verb (believe) than a subject of the following verb (to be). In (26) *syntax a real drag* is the small clause with the canonical structure [NP XP].

Levine (1984) also considered two types of complement structures in Kwakwala a native

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[8] S- bar is the conventional label for the category which forms a complement clause. An S- bar typically consists of a complementiser and a sentence (Trask, 1993).

American language. The two structures that he looked at are: Relative and sentence level complements. He considers four representations of Kwakwala complementation, Equi, Pro and Raising[9]. He points out that Equi applies to sentences with a co- referential complement NP and a COMP, when its conditions are met, deletes not only the complement subject but the complementiser and the subordinate marker as well. However he notes that there are cases were there is no principled way to guarantee that a core-referential NP in the complement clause is the subject, rather than some other kind of constituent. As a result he concluded that Equi is the most unattractive solution under such considerations. He made the same conclusion on raising and pro, arguing that the operation of an NP movement rule is seen unlikely in Kwakwala. He says there is nothing in Kwakwala corresponding to the relative pronouns of English and other languages, so that there is no occasion to posit a rule Move WH at all. He then considered Anaphora as a logical operation for the analysis of these two types of complements in Kwakwala and hypothesized that relative complements are NPs or NPs are relative complements in Kwakwala. This suggests that NPs may function as relative complements.

However, cutting across this structural classification of complement clauses is an alternative typology of clauses based on their communicative function (Radford 1988, Noonan 1985, Grimshaw 1979). Complement clauses can be declarative, imperative, interrogative or exclamative.

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[9]Trask (1993) notes that Equi or control verb refers to a verb which takes a VP complement, such as want and promise. Pro is defined in Government- Binding Theory (Chomsky, 1980) as the empty category posited as existing in the overtly vacant subject position of the infinitival VP complement of control verbs.

27   I know [*that you would love it*]--------declarative

28.   The lecturer ordered *[that the assignments be submitted]*---imperative

29.   He asked me [*whether I was leaving*]--------interrogative

30.   I noticed [*what an innocent guy he was*]--------exclamative

From the general distinctions made on different types of clausal complements, cutting across structural and communicative classifications, a number of complements will be identified in Chakari Nyanja on the bases of their structural.

However not all verbs or nouns co-occur with a complement or all complement types. The question one might want to ask is, how are complements selected and subcategorized?

2.5 Subcategorisation and Selection

Aarts (1997) defines subcategorisation as the requirement of a predicate to take a category or categories of a particular type as its complement. Crystal (1991) defines subcategorisation as the sub-classification of a syntactic category. Selection(al) restrictions is defined as any of various semantic constraints reflected in the ability of lexical items to combine in syntactic structure (Trask, 1993).

Grimshaw (1979) states that from the discussion of complement selection it has generally been assumed that the selection relationships between predicates and complements are

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Raising refers to any of various phenomenon in which some linguistic element appears in a higher clause

stated over syntactic structure noting that the distribution of complement types is a function of their syntactic form. She presents and justifies an alternative conception of complement selection. She argues that predicates do not only select complements of a particular syntactic form, but rather for complements of a particular semantic type. Thus, she proposes that for a well- formed predicate- complement combination a complement must belong to a syntactic category for which the predicate is subcategorised and it must belong to a semantic type, which the predicate selects.

Information about subcategorisation and sectional restrictions is an idiosyncratic property of lexical items (see Chomsky 1965, Grimshaw 1979, 1982, Radford 1988). Grimshaw (1982) points out that each lexical item imposes certain requirements upon the phrases to which it stands in a semantic or grammatical relationship with its arguments or complements. Radford (1988) points out that in much earlier work on the lexicon (dating back to Chomsky's Aspects of the Theory of Syntax, 1965) it was argued that dictionary entries should contain not only subcategorisation information but also selectional information.

However, Grimshaw (1982) argues that though subcategorisation and selection imposes restrictions on properties of words, which are essential to their accurate linguistic description, they differ in the kind of information they encode. Subcategorisation represents syntactic requirements imposed on arguments, while selection represents semantic requirements imposed on arguments. Selection specifies semantic properties of arguments like humanness, fame, plurality, and animacy while subcategorisation

than is semantically appropriate.

expresses categorical information about the complements of a lexical item, for example, that its complement is a NP, an AP or a clause.

Grimshaw (1979) agrees with Radford (1988) that verbs might subcategorise for an object NP but impose different selectional restrictions on the NP and also that verbs might have different subcategorisation restrictions but impose very similar selectional restrictions. Dembetembe (1976) notes that the NPs have to obey the selectional restrictions imposed by the verbs. He further notes that these selectional restrictions equally apply to sentential complements which are dominated by NP. These sectional restrictions form in a way part of the meaning of the verb. The argument shows that there are clear restrictions on the choice of complements, for example, the verb 'convince' given by Radford (1988), subcategorises and selects an NP complement, but imposes restrictions on the class of NPs as shown from his examples:

31 (a)   #You have convinced my computer [10]

   (b)   You have convinced my mother

   (c)   #You have convinced my goldfish

The example shows that there are selectional restrictions on the choice of expression within a given category to complete the sense being expressed. Hence, 'convince' subcategorises for an NP complement but select a rational (mind possessing) complement. According to the meaning which convince expresses, (31b) is well formed but not (31a) and (31c). This observation by Radford (1988) and Grimshaw (1982) as well as Dembetembe (1976) is of importance in the analysis of complementation in Chakari Nyanja.

The obvious question one would want to ask is – How is the information about subcategorisation and selection represented? Chomsky (1965) proposes that both would be expressed in terms of features. However, Grimshaw (1992) notes that information about subcategorisation and selection has come to be represented in what are called subcategorisation and selection frames. An appropriate subcategorisation frame expresses a list of phrases in their normal order with a dash representing the position of the V or lexical item and selectional restrictions can be appended to argument positions.

Bresnan (1982) notes that subcategorisation information is represented in the form of predicate argument structures (PAS). The term argument structure refers to the lexical representation of grammatical information about a predicate. The argument structure of a lexical item is thus its lexical entry. Example (14) gives the notation for representing properties of the lexical item *seem* as it is used in the sentences like <u>John seems sick *to Mary*</u>.

SEEM
32 (a)   Predicate Argument Structure: <1   2>
    (b)   Grammatical Function Assignment: {(XCOMP), (OBLØ), (SUBJ)}
    (c)   Lexical form: SEEM-TO<(XCOMP)(OBLØ)>(SUBJ)

Bresnan (1982) points out that in this usage 'seem' has a dyadic predicate argument structure, whose first argument denotes a state of affairs, that is, John's being sick and whose second argument denotes a perceiver of that state of affairs. 32(b) gives the functions that are subcategorised by 'seem'. In 32(c) the grammatical function XCOMP is assigned to the state of affairs argument, and the grammatical function (OBLØ) is

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[10] # shows that a sentence is syntactically well formed but semantically deviant.

assigned to the perceiver argument. She further notes that the notation in 32(c) indicates that 'seem' subcategorises three functions but exerts its selectional restrictions only on the XCOMP and OBLǾ functions.

2.6 Summary

This chapter has noted a number of issues that are important for the study of complementation in Chakari Nyanja. It has noted that the term complement is used to apply to any word, phrase, clause or sentence that completes the sense of a verb, subject or object. The term predicate has been noted to refer to other predicating categories other than the verb. It has also been shown through literature reviewed that different types of complements have been identified in a number of languages such as Shona, Ndebele, and English. Sentential complements, NP complements, PP complements and AdvP complements have been identified in Shona a language spoken in Zimbabwe.

It has been noted that there are constraints in the selection, subcategorisation and distribution of complements in a number of languages. Subcategorisation information has been shown to be in the form of predicate argument structures (PAS). These PAS serve to show the number and type of arguments selected by a particular predicate. Distribution has been argued to refer to the arrangement of words and phrases in sentence structure. The order of complements is an idiosyncratic property of lexical items.

The next chapter is a review of the theoretical framework, Lexical Functional Grammar (LFG) and its sub- theory, Lexical Mapping Theory (LMT). The chapter lays down the mechanics and tenets of the theory to be used in analysis of Chakari Nyanja data.

Chapter Three

Theoretical Framework

3.0 Introduction

The previous chapter reviewed and examined various aspects of complementation. Literature on the term complement and on subcategorisation and selection has been reviewed. The chapter noted that a number of complements have been identified in a number of languages, apart from verbs other categories also function as predicates, and that predicates subcategorises and selects complements. This chapter lays down the theoretical principles which will be used to analyse and explain the nature of complementation in Chakari Nyanja. The chapter is based on the theoretical framework Lexical Functional Grammar (LFG) theory (Kaplan and Bresnan, 1982, Bresnan, 1982, 1995, Kaplan, 1994) and its sub theory Lexical Mapping Theory (LMT) (Harford, 1993, 1983, Alsina and Mchombo, 1993, Bresnan and Moshi, 1990, Bresnan and Karneva, 1989).

The researcher sets to explicate the mechanics of LFG thus noting and explaining the tenets of the theory. The researcher will demonstrate how the constituent structures (c-structure) are linked to the functional structures (f- structures).

Owing to what has been mentioned earlier, a brief outline of LMT is given, as it will be

used to show the relationship that exists between grammatical functions and thematic roles. Here emphasis will be given only to those aspects of LMT that meet the researcher's ultimate goal.

The last section will form the conclusion of the chapter where the researcher will note the strengths of the theoretical frameworks and some of their weaknesses, if any.

3.1 The Formalism of Lexical Functional Grammar (LFG)

Lexical Functional Grammar (LFG) is a formalism that has evolved from previous computational linguistics and psycholinguistics research (Bresnan, 1982, Kaplan, 1994). The theory derives its linguistic explications from the competence[11] module of native speakers. However, it does not limit its formulations and predictions to what is observable within the competence domain but it also incorporates observations made within the linguistic performance[12] module (Matambirofa, 2003). In this regard, LFG aims at constituting the construction of a theory of grammar that satisfies the usual internal criteria of adequacy but which is realizable as the central component of a theory of performance (Horrocks, 1987). The competence and performance module gives a better understanding of the data to be analysed as the data was collected from native speakers.

LFG is largely centered on the lexical module of language as opposed to the constituent

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[11] It is a person's knowledge of the rules governing the use of linguistic units of a language, the internalized intuitive knowledge of a language.

structure (Bright, 1992). With this respect, Collberg (1991) sees LFG shifting the weight of grammatical mechanism from the syntactic constituent structure to the lexicon and the entries found there. In essence, LFG present an expanded lexical component and a contracted syntactic component that does recognise 'a syntactic component without transformations' (Horrocks, 1987). The lexical module is of importance as it shades light on lexical items, how they select and subcategorise complements.

LFG is a theory that treats grammatical functions (GFs) as primitives rather than as positions in syntactic configurations. Mchombo (1993) explicitly notes that instead of positing rules that explicitly change grammatical functions, LFG has been proposed to treat the phenomenon of grammatical function changing as consisting in rules and principles that regulate the association of semantic roles[13] with grammatical functions. The rules and principles responsible for the linking of semantic roles with grammatical functions comprise the sub theory of lexical mapping. The knowledge of GFs helps the researcher in identifying the function of phrases and clauses in sentence structures.

LFG treats lexical entries as represented by predicate argument structures (PAS)[14] independent of phrase structure. As a result, it has devised ways to deal with assignment of surface grammatical functions with thematic roles as they arise from PAS. The link of argument structures (a- structures) and constituent structures (c- structures) is subject to a

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[12] Performance is the actual use of language. It is what the speaker- hearer actually does on the basis of his/ her knowledge of a language.

[13] Thematic roles are participants that take part in a script of play. They are at the lexical semantic structure, hence known as semantic roles in some works (Haegmen, 1991).

[14] The predicate argument structure serves to show the number of arguments subcategorised and selected by a particular predicate. The predicate expresses the state of affairs that the referents of the arguments are involved in. Arguments are the participants minimally involved in the activity.

list of constraints, one of which is function- argument biuniqueness which basically requires that a unique function be assigned to each argument that is grammatically interpreted, and that a unique argument be assigned to each function that is associated with an argument. The framework assigns three levels of syntactic representation to a sentence, the constituent structure (c-structure), the functional structure (f-structure) and the argument structure (a-structure) (Bresnan, 1995)[15]. Kaplan and Bresnan (1982) further note that the c- structure shows a well labeled bracketing that indicates the superficial arrangement of words and phrases in a sentence. The f- structure is a hierarchical attribute- value matrix that represents underlying grammatical relations (Kaplan, 1994). Kaplan (1984) further propounds that it provides a precise characterisation of such traditional syntactic notions as subject, direct object, indirect object, complement and adjunct. Aarts (1997) notes that the argument structure is a schematic representation which shows a predicate together with its arguments and their categorical status. The researcher shall explicitly look at a- structure under the sub- theory, LMT. Analysing sentences in terms of levels is of importance in this study of complementation in Chakari Nyanja. The levels help the researcher in understanding the general arrangement of words in a sentence structure and the function of words or lexical items in sentences.

LFG like relational grammar (RG) makes use of multistratal syntactic representations in which constituents of a clause may be assigned conflicting grammatical relations. On the other hand monostratal or non-transformational theories like generalized phrase structure

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[15] The argument structure is referred to as the semantic structure (s-structure) in some works. Mchombo (1993) notes another representation known as the discourse structure (d-structure) which is also associated

grammar (GPSG) and head-driven phrase structure grammar (HPSG) describe only a single representation of sentence structure. A monostratal theory is constrained to work only with what would be final grammatical relations in LFG. Multistratal representations have been claimed (Aissen & Ladusaw, 1988) to provide empirical advantages over monostratal frameworks for the description, inter alia, of certain types of grammatical agreement systems.

3.2 Syntactic Rules in LFG

The rules of LFG contain expressions known as functional schemata which are associated with the symbols that appear on the right hand side of the ⟶ arrow. The following figure shows the usual format for writing rules in LFG.

Left hand side: the mother role

Right hand side: any number of symbols
representing the daughter nodes

S ⟶ NP VP
(↑SUBJ)=↓ ↑ = ↓

Lists of functional schemata
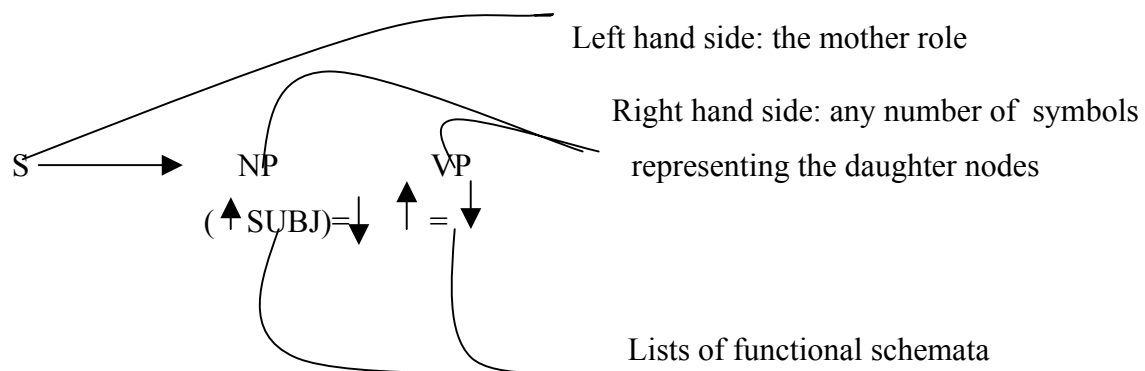
Figure 2: Format of LFG Rules

The rules for a sentence such as 'Hugh arova *Pride'* Hugh beat Pride is as follows:

33. S ⟶ NP VP
(↑SUBJ) = ↓ ↑ = ↓

with some sentences in LFG.

$$\text{VP} \longrightarrow \quad \text{V} \qquad (\quad \text{NP} \quad)$$
$$\uparrow = \downarrow \qquad (\uparrow \text{OBJ}) = \downarrow$$

$$\text{NP} \longrightarrow \quad \text{N} \quad \downarrow$$
$$\uparrow = \quad \downarrow$$
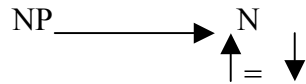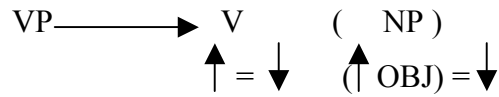
The functional schema on the NP (read up's subject is down) means that the f- structure of the NP (the down arrow) is passed up to the subject part of its mother's f-structure (the up arrow). In the annotation $\uparrow = \downarrow , \uparrow$ 'up' refers to the f- structure of the mother node and $\downarrow$ 'down' refers to the f-structure of the annotated node, the daughter node (Bresnan, 1995).[16] Bresnan (1995) further notes that the representation co-describes a partial c-structure and a partial f-structure. These rules help to show the linear order of words and their function in sentences. The linear order and function of words is of importance in analysing the distribution of complements.

Lexical entries contain three things: a representation of the form of the item, the syntactic category to which the item belongs and a list of functional schemata.

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[16] Aarts (1997) notes that a node is position in a phrase marker from which one or more branches emanate. A branch is an expansion of a node. Trask (1993) defines a daughter as a particular relationship, which may hold between two nodes in a tree. Aarts (1997) notes that a node X is the mother of node Y if X

Representation of the item

Syntactic category

Hugh   N (↑PRED) = 'HUGH'

(↑PERS) = 3

(↑NUM) = SING

List of functional schemata
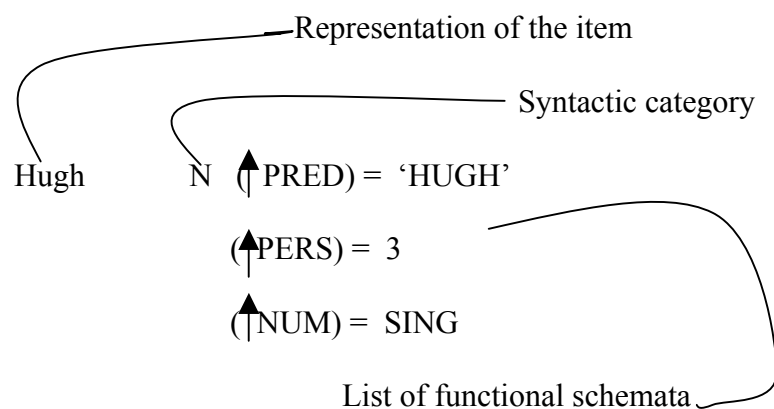
Figure 3: Format of LFG Lexical items

In creating annotated constituent structure trees, we consider syntactic rules first. When a rule is applied, a piece of the tree is constructed and the annotations prescribed by the rule are written above the appropriate nodes in the fashion schematised in Figure 4.

S ⟶ NP   VP
   (↑SUBJ)=↓ ↑=↓

S

(↑SUBJ)=↓   ↑ = ↓

NP   VP
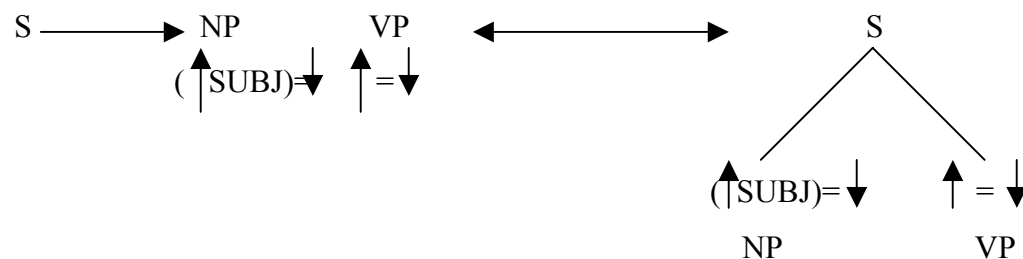
Figure 4: Relation Between Rules and Annotations in the tree

The c- structure is complete only after introducing the annotations specified by lexical entries. Figure 5 gives the complete annotated constituent structure tree for the sentence, 'Hugh arova *Pride'* Hugh beat Pride.

S

(↑SUBJ)=↓   ↑ = ↓

NP   VP

↑ = ↓   ↑ = ↓   (↑OBJ)=↓

N   V   NP

(↑PRED)= 'HUGH (↑PRED)=

(↑NUM)= SING 'ROVA<(↑SUBJ)(OBJ)>' ↑ = ↓

(↑PERS)= 3   (↑SUBJ NUM)=SING N

Hugh   (↑SUBJ PERS)= 3

        arova   (↑PRED)= 'PRIDE'

              (↑NUM)= SING

              (↑PERS)= 3

              Pride
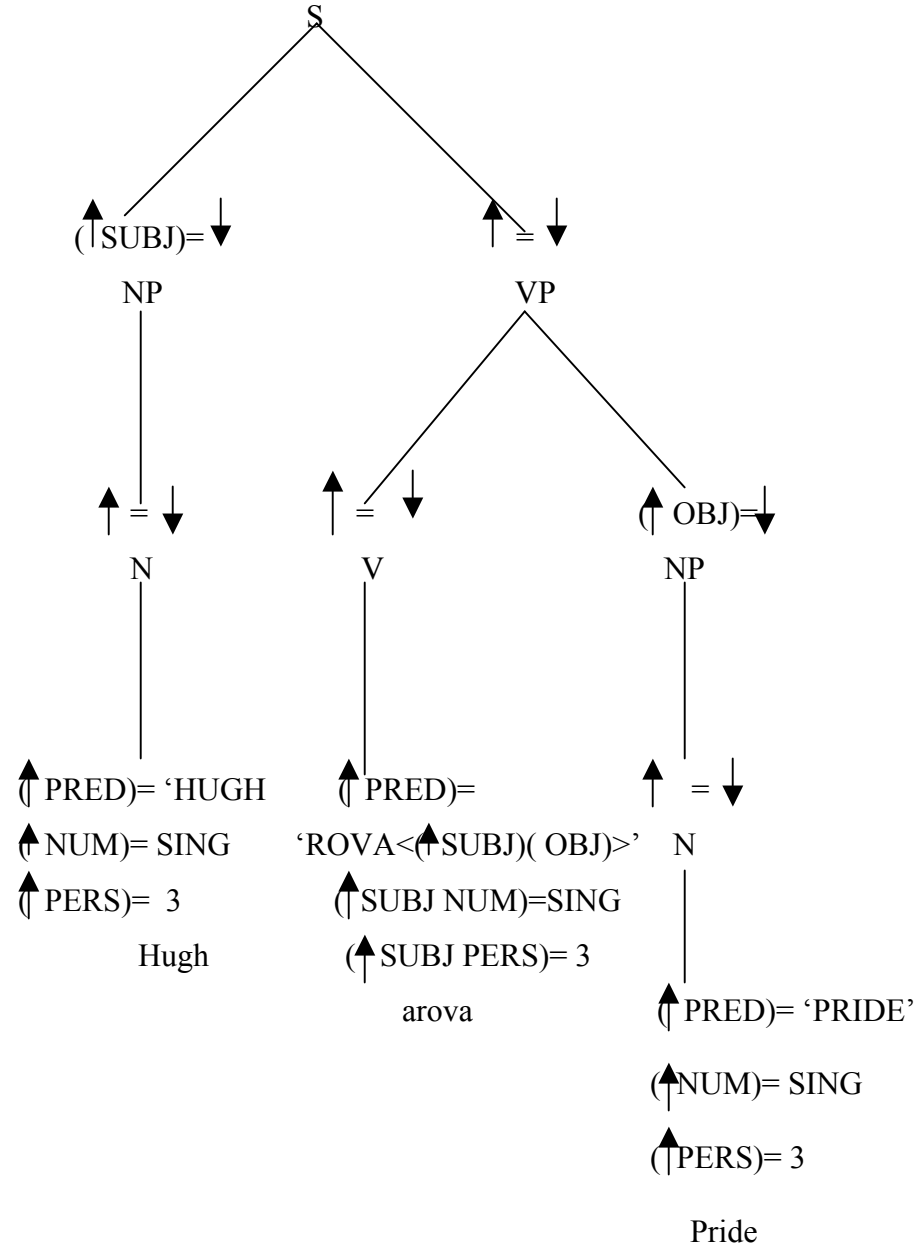
Figure 5: Completed annotated C-structure tree

3.3 Instantiation

Instantiation is the process of determining the referents of the up and down arrows and recording the information in the schemata. Completed annotations are interpretable once

to a node Y, then X dominates Y.

they are filled out with some information derived from the tree structure. The ↑ and ↓ arrows employed in the schemata assume a referential value now that the schemata have been placed into the tree. Thus from the annotated c-structure one may build f-structures, the other level of syntactic representation employed in LFG.

3.3.1 Relation Between C-structures and F- structures

Bresnan (1995) points out that the c- structure and the f- structure levels are associated by principles of functional correspondence also called linking or mapping principles. Figure 6 below shows the relation between nodes in the tree and f-structures.

S

(↑SUBJ)=↓   ↑ = ↓

NP   VP

↑ = ↓   ↑ = ↓   (↑OBJ)=↓

N   V   NP

(↑PRED)= 'HUGH'   (↑PRED)=   ↑ = ↓

(↑NUM)= SING   'ROVA<(↑SUBJ)(↑OBJ)>'   N

(↑PERS)= 3   (↑SUBJ NUM)= SING

Hugh   (↑ SUBJ PERS)= 3   (↑PRED)='PRIDE'

arova   (↑NUM)= SING

(↑PERS)= 3

Pride

f- structure brackets
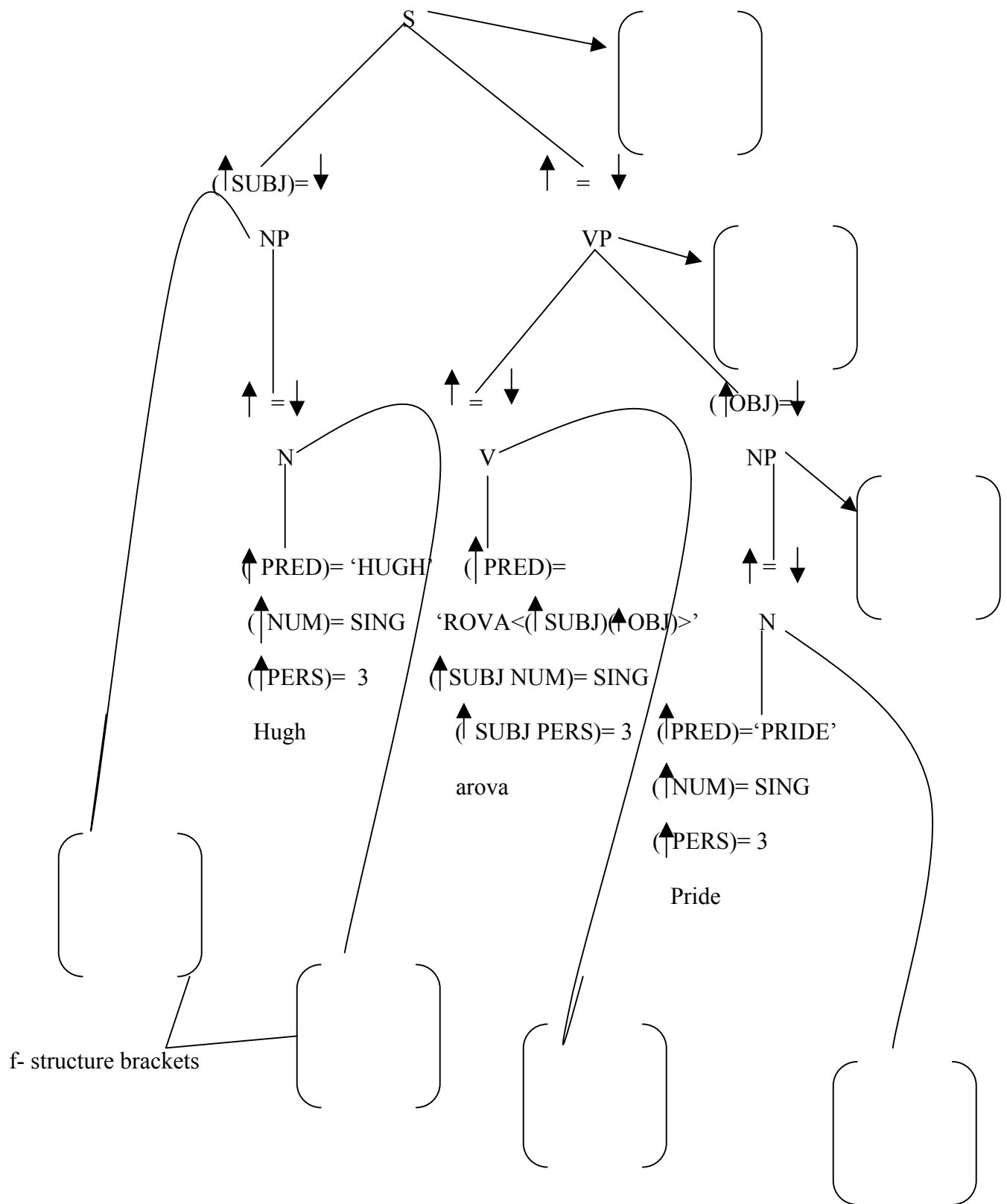
Figure 6: Relation between nodes in the tree and f-structure

Arbitrary names or variables are associated with each f-structure. f-structure variables consisting of the letter f followed by a number, for example $f20$ are used. The identifying variable of an f-structure is written immediately outside that f-structure's left bracket. To show the association of an f-structure with a node in the c-structure tree, the variable of the f-structure is recorded next to the node to which it corresponds.

S   *f1*

(↑SUBJ)=↓   ↑=↓

NP   *f2*   VP   *f4*

↑=↓   ↑=↑   (↑OBJ)=↓

N   *f3*   V   *f5*   NP   *f6*

(↑PRED)= 'HUGH'   (↑PRED)=   ↑=↓

(↑PRED)= SING   'ROVA<(↑SUBJ)(↑OBJ)>'   N   *f7*

(↑PERS)= 3   (↑SUBJ NUM)= SING

Hugh   (↑SUBJ PERS)= 3   (↑PRED)='PRIDE'

                      arova   (↑NUM)= SING

                                                         (↑PERS)= 3

f1   Pride

        f2   *f3*

f5

        f6   *f7*   *f4*

Figure 7: Providing names for f-structures and co-indexing tree nodes

To fully specify the functional equations, the variables, which name the appropriate f-structures, are put in place of the arrows. The ↑ and ↓ are often referred to as metavariables in the literature. The ↓ is known as the EGO or SELF metavariable. It refers to the f-structure associated with the node above which the schema containing the ↑ appears. The ↑ is called the mother metavariable. This refers to the f-structure associated with the mother node above which the schema containing the ↑ appears.
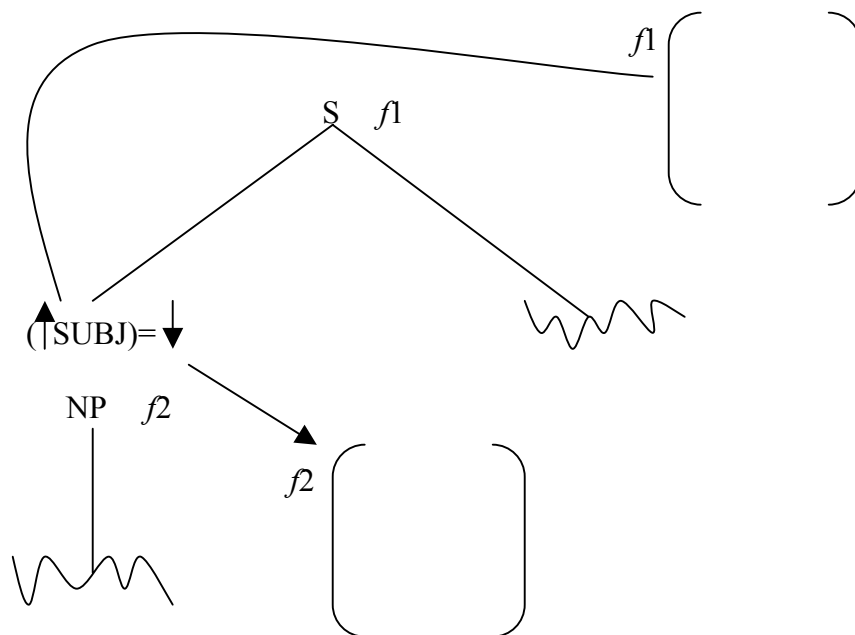
Figure 8: Determining Referents for the self and mother metavariables

The process of instantiation is completed by replacing all metavariables with the names of the f-structure to which they point to. Figure 9 below shows a finished tree for the sentence 'Hugh arova *Pride*' Hugh beat Pride

```
                          S        f1


    (f1 SUBJ)= f2                              f1=f4

         NP    f2                        VP    f4


    f2= f3                 f4= f5                  (f4 OBJ) =f6

        N        f3            V        f5            NP     f6


  (f3 PRED) ='HUGH'        (f5 PRED) =              f6= f7

  (f3 NUM)= SING        'ROVA<(f5SUBJ)(f5 OBJ)>'        N

   (f3 PERS) = 3          (f5 SUBJ PERS) = 3

       Hugh             (f5 SUBJ NUM) = SING

                           arova            (f7 PRED)= 'PRIDE'

                                            (f7 NUM)= SING

                                            (f7 PERS) = 3

                                                 Pride
```
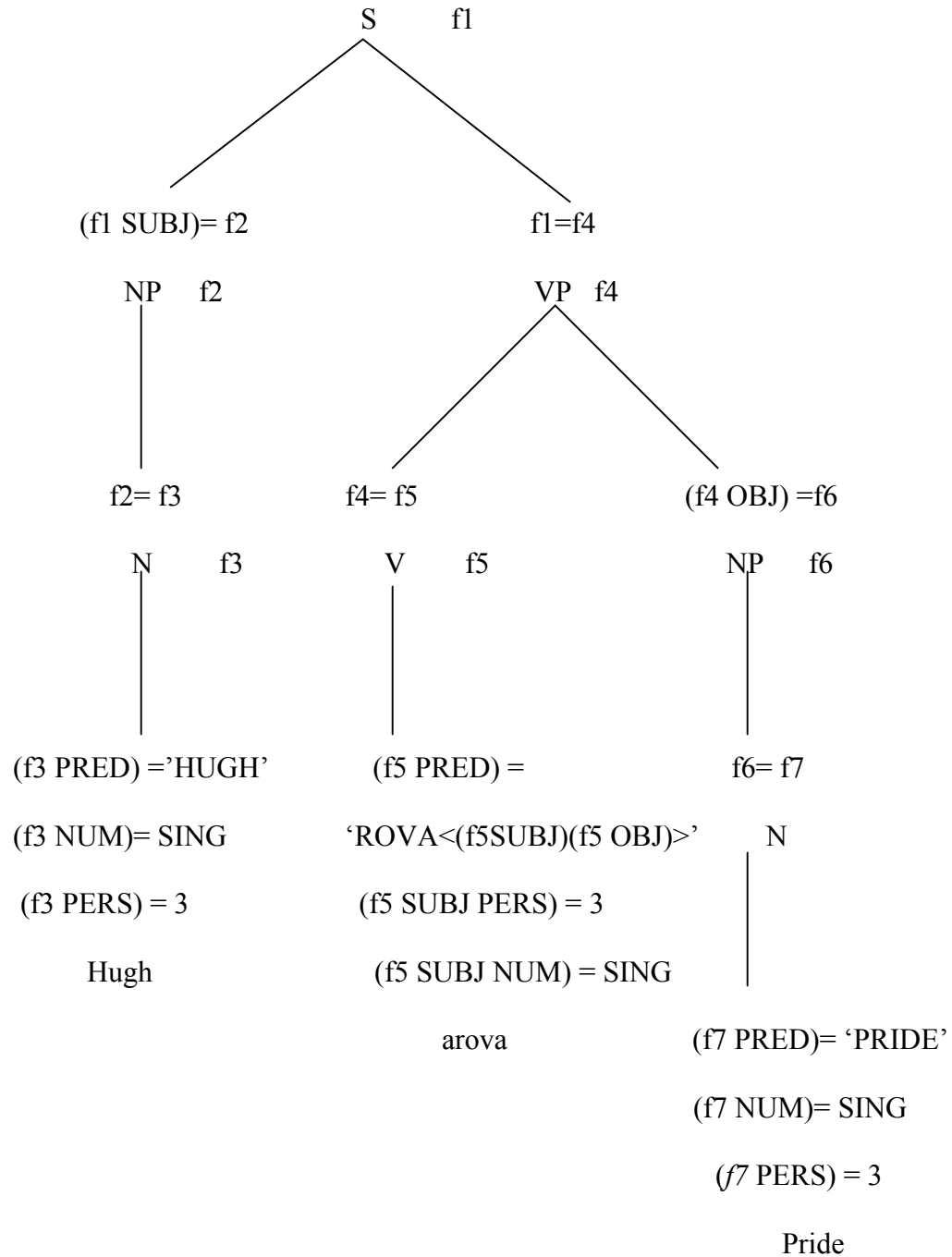
Figure 9: Finished tree with instantiated equations

The set of the instantiated function equations in the tree is called the functional description. It is from the functional descriptions that f- structures are constructed. Only

information present in the equations of the functional descriptions is incorporated into the

f-structure. The functional description for figure 9 is listed below.

34a. (f1 SUBJ) = f2

  b.   f2=f3

  c.   (f3 PRED) = 'HUGH'

  d.   (f3 NUM) =SING

  e.   (F3 PERS) = 3

  f.   f1 = f4

  g.   f4= f5

  h.   (f5 PRED) = 'ROVA<(f5 SUBJ) (f5 OBJ)>'

  i.   (f5 SUBJ NUM) = SING

  j.   (f5 SUBJ PERS) = 3

  k.   (f4 OBJ) = f6

  l.   f6 = f7

  m.   (f7 PRED) = 'PRIDE'

  n.   (f7 NUM) = SING

  o.   (f7 PERS) = 3

An f-structure has the following form:

.

attribute ⌒   ⌒ value

$$
f\text{n} \begin{bmatrix} A & f\text{m} \begin{bmatrix} B \\ D \end{bmatrix} & \begin{bmatrix} C \\ E \end{bmatrix} \\ \\ F & G \\ \\ H & I \end{bmatrix}
$$
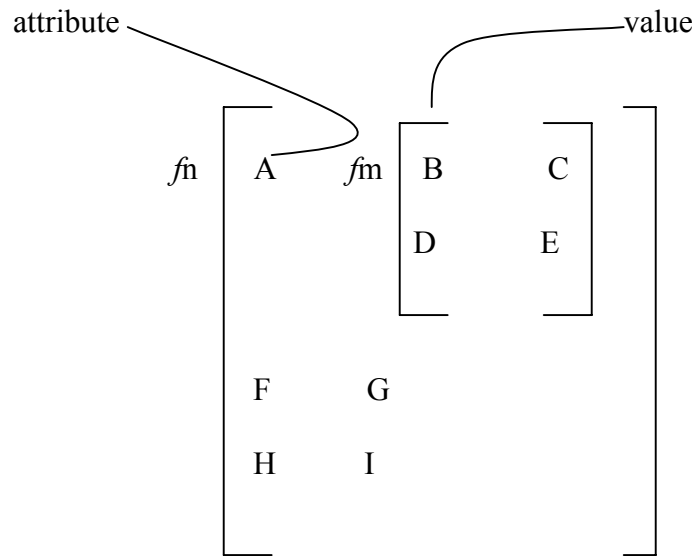
Figure 10: The form of F-structures

The structure consists of entries enclosed in large square brackets. The left hand column contains what are known as attributes and the right hand column contains values. Attributes and values are paired and the members of a pair are written on the same horizontal line. Attributes are always simple symbols, like SUBJ, PRED. Values may be simple symbols, subordinate f- structures, or semantic forms.

Functional equations are meaningful expressions in formal language which convey information about f-structures. A concrete example of the f-structure given in figure 10 is as follows:

35                $(f\text{n H}) = G$

In the example above, the f-structure *f*n contains a line where H is the attribute and G is the value.

A completed f- structure for the sentence *Hugh arova Pride* 'Hugh beat Pride', with its attribute and values are given below.

$$
f1 \begin{bmatrix}
\text{PRED} & \text{'ROVA<(f5 SUBJ) (f5 OBJ)>'} \\
f4\ \text{SUBJ} & f2 \begin{bmatrix} \text{PRED} & \text{'HUGH'} \\ f3\ \text{NUM} & \text{SING} \\ \text{PERS} & 3 \end{bmatrix} \\
\text{OBJ} & f6 \begin{bmatrix} \text{PRED} & \text{'PRIDE'} \\ f7\ \text{NUM} & \text{SING} \\ \text{PERS} & 3 \end{bmatrix}
\end{bmatrix}
$$
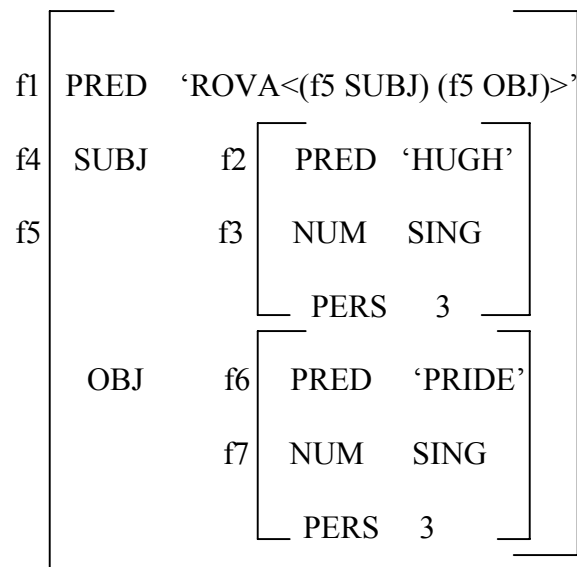
Figure 11: A finished f-structure

Some of the equations that hold for figure 11 above are enumerated in (31).

36a.   (f1 PRED) = SEE

   b.   (f1SUBJ) = f2

   c.   (f1 OBJ) = f6

   d.   (f2 PRED) = JOHN

   e.   (f2 NUM) = SING

   f.   (f2 PERS) = 3

   g.   (f6 PRED) = MARY

h.   (f6 NUM) = SING

i.   (f6 PERS) = 3

The equations help in the description of the function of a category in a sentence structure. Knowledge of f- structures helps the researcher to fully describe the function of a phrase or clause in a sentence.

3.4 F-Structures and Grammaticality of Sentences

In LFG there are conditions on the well- formedness of f- structures. These are principles that regulate the occurrence of lexical items in sentences. They enforce an appropriate match up or linking between the PRED feature and the surrounding syntactic functions of the f- structure (Bresnan 1995). Bresnan (1982) argues that the conditions are on uniqueness, completeness and coherence.

Trask (1993) states that functional completeness is stated as follows: an f-structure is locally complete if and only if it contains all the governable grammatical functions that its predicate governs. An f- structure is complete if and only if all subsidiary f-structure are locally complete. The completeness condition ensures that all subcategorised arguments are present in the f-structure. Thus it rules out structures lacking required grammatical functions such as,

37.   *Tino gave me

The example lacks one of the participant roles required by the verb, one of the class of functions designated by the PRED element. The class of function designated by PRED

element is referred to as the argument function (Bresnan, 1995). Argument functions include among others SUBJ, OBJ, COMPL, but exclude ADJ, FOC, TOP. This condition is of importance in designating whether the function is an argument function (complement) or not (adjunct).

Bresnan (1995) states that coherence condition requires that every argument function in an f- structure is designated by a PRED. Trask (1993), in support of the above observation, notes that the purpose of this constraint is to rule out structures containing additional elements which cannot be functionally interpretated. For example, it blocks structures like 33.

38.   *Lisa smiled me

In the example, the NP *me* receives no functional interpretation.

Functional uniqueness of argument assignment requires a one to one relation between grammatical functions and arguments (Bresnan, 1982). Trask (1993) notes that functional uniqueness constrains a particular attribute to at most one value in a given f- structure. This constraint prevents the assignment of two different NPs to one function such as subject in one clause.

3.5 Lexical Mapping Theory (LMT)

As noted earlier, the researcher sets to engage Lexical Mapping Theory (LMT), a sub-theory of LFG, to show the correspondence between thematic structure and syntactic

functions. The rules and principles responsible for linking of the thematic roles with grammatical functions (GFs) consist the (sub) theory of Lexical Mapping Theory (LMT). There is no doubt that the selection and distribution of complements can be aptly examined showing the link between thematic structure and syntactic structure. Since the impetus behind the research is not elaboration of LMT as such, definitions and general treatment of concepts will be brief.

In the theory (LMT), the predicate among, other grammatical functions, takes a centre stage. The predicate is of crucial importance in the selection and mapping of roles onto grammatical functions. The arguments of the predicator are mapped onto different thematic roles such as the agent, beneficiary, patient, locative and many others. The roles are mapped or used on the basis of significance or importance. The arrangement of thematic roles in order of importance is referred to as the Universal Thematic Hierarchy (UTH)[17]. The hierarchy plays an important role in the mapping of thematic roles of predicators and syntactic functions. Matambirofa (2003) points out that the hierarchy imposes particular constraints that strictly allow or disallow certain associations between thematic roles and syntactic or grammatical functions.

Of essence to note is that there is no agreement among linguists as to the correct set and order with which these roles have to appear in the hierarchy. So many versions of the hierarchy have been proffered, for example by Bresnan and Kanerva, (1989), Harford, (1993), Jackendoff, (1972). For the purpose of this study, the version to be used is the one

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[17] The hypothesized hierarchical ordering of thematic roles which is according to significance is supposed to be universal as supported by cross- linguistic and cross- theoretical evidence (Matambirofa, 2003).

given by Harford (1993). The hierarchy is given below.

Agent>Beneficiary/Maleficiary>Goal/Source/Experiencer>Instrument>Theme/Patient>

Motive>Location

The representation '>' means 'the preceding is higher than' while the slash symbol '/' indicates 'is at the same level with the thematic role it is separated by the slash'. The role that is higher on the hierarchy takes precedence over the next role for such purposes as subjecthood in active sentences. For example, the role agent has precedence over the role patient, as it is higher on the hierarchy than the role patient.

Mchombo (1993) notes that on the basis of cross- linguistic tendencies in the syntactic realisation of thematic roles, some roles are excluded from association with certain GFs on the basis of their intrinsic properties. However, assignments are decomposed into two binary features, [$\pm$ r] (for thematically restricted or not) and [$\pm$o] (for objective or not) yielding four possible combinations of values. (Cf. Mchombo 1993, Bresnan and Karneva 1989) As noted earlier, these argument structure features, [$\pm$r] and [$\pm$o], constrain the way in which the roles are mapped onto syntactic functions in f-structures. Below is a diagram showing syntactic functions grouped into classes.

$$\begin{bmatrix} -o \\ -r \end{bmatrix} \text{SUBJ} \qquad \begin{bmatrix} +o \\ -r \end{bmatrix} \text{OBJ}$$

$$\begin{bmatrix} +r \\ +o \end{bmatrix} \text{OBJØ} \qquad \begin{bmatrix} -o \\ +r \end{bmatrix} \text{OBLØ}$$
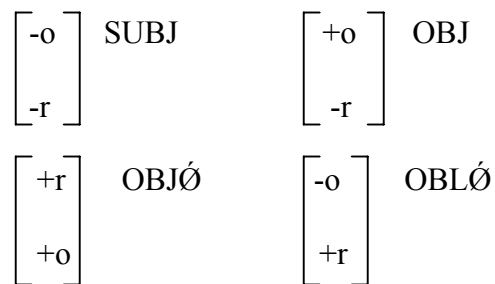
Figure12: Syntactic functions in their classes

The feature [+r] is used with thematically restricted grammatical relations. The oblique and the secondary object can only be linked to specific thematic roles, since they are thematically restricted. The feature [-r] is used with grammatical relations that have the 'freedom' to be linked with any thematic role. The subject and primary object enjoy this 'freedom' of being associated with any thematic role. The feature [+o] is associated with syntactic functions that have access to object properties. The feature [-o] is linked to grammatical functions that have no access to object properties. Mchombo (1993) points out that from this classification, [-r, -o] = subject, [-r, +o] = object1, [+o, +r] = object2 and [+r, -o] = oblique.

Harford (1993) notes three ways in which these values of features are assigned, namely, Intrinsic Classification (IC), Morpholexical rules and Default Classifications (DC). IC involves assigning a value for a feature to a thematic role on the basis of what role it is (Harford, 1993). It partially specifies syntactic functions according to the intrinsic semantic properties of arguments as determined by their thematic roles. Morpholexical classifications or rules are operations that alter lexical argument structures by additions, suppression or binding of thematic roles (Bresnan and Moshi, 1993). They are operations that derive predicates with differing argument structures from that of base forms or underived predicates (Mchombo, 1993). Mchombo (1993) further notes that their effects upon argument structures have seen them being referred to as grammatical function changing rules. The default role classification (DC) apply last after all the other preceding rules have been brought to bear upon the entire argument structure of a given predicate (Matambirofa, 2003). Defaults dictate that the highest thematic role of a predicate be

associated with the subject grammatical function and the lower roles will be associated with non- subject grammatical functions. Default Classifications (DC) assign [-r] to the highest role and [+r] to the remaining role unless they have already been previously assigned the same feature with the opposite value (Mchombo, 1993). Mchombo (1993) argues that if IC assigns the patient role [-r] it would not get [+r]. These classifications are of importance in the mapping of thematic roles to grammatical functions. Grammatical functions, syntactic primitives of LFG, will be of importance in analysis of complementation in Chakari Nyanja. The knowledge of LMT helps the researcher in analysing how complements are selected in Chakari Nyanja.

3.5.1 Types of Thematic Roles

Thematic roles are labels given to arguments indicating their semantic relationships to predicates. There are a number of thematic roles that have been identified cross-linguistically and cross- theoretically. Some of the roles are given below with their definitions.

a) **Agent (Ag)-** This is a participant that is intentionally, volitionally involved in the action that is referred to by the predicate (Haegeman, 1991). The agent normally participates in the action from its insertion to the end. Below is an example from Chichewa a Bantu language spoken in Malawi.

39   Anyani   a- na- yend- er-   a *ndodo*
        2-baboons 2SM- PST- walk- APPL- TV 9-stick
        'The baboons walked with the stick'

In the above example, <u>anyani</u> baboons are the agent who performs the action of walking the stick.

b) **Patient (Pt)-** This is a participant that receives the action of the agent and may undergo change of state (Spencer, 1991). An example from Chichewa with a patient role is given below.

40   Chitsiru   chi- na- gul- *mphatso*
        7-fool   7-SM-PST-buy- TV   9-gift
        'The fool bought a gift'

In the above example, *mphatso* gift is the patient that receives the action of the agent chitsiru fool.

c) **Theme (Th)-** This is a participant that receives the action of the agent and may undergo motion. It is the entity that moves (Katamba, 1993). The following Swahili example has vikombe *vitatu* three cups as the Theme:

41   Vikombe   *vi-*   *tatu*   vi-   li-   anguk- a
      8-cups   8-SM-three 8-SM- PST-fall-   TV
      'Three cups fell'

d) **Beneficiary/ Benefactive (Ben)-** This is an entity that gains or benefits from the action referred to by the predicate. Filmore (1968) describes it as the case of an individual who gains or benefits from the action or process described by the verb. In the Chichewa example below, the entity *mvuu* hippo is the one that benefits from the action of the agent mlembi secretary.

42   Mlembi   a-   na- gul- ir-   a *mvuu*   *maungu*
      1-secretary 1-SM- PST- buy- APPL- TV 9-hippo   6-pumpkins
      'The secretary bought the hippo some pumpkins'

e) **Maleficiary (Mal)-** This is the entity that suffers or loses from the action referred to by the predicate or the entity that is disadvantaged by the action referred to by the predicate.

It is semantically the opposite of the benefactive. An example from Shona is given below.

43   Tino a-   b-   ir- w-   a   *mari*
       Tino 1SM- stole- APPL-PASS-TV 9money
       'Tino's money was stolen'

Tino is the disadvantaged role (Maleficiary) because he loses his money.

f) **Instrument (Instr)-** It is the inanimate object that is used to carry out the action referred to by the predicate. It is sometimes referred to as the inanimate agent. mwala stone is the instrument in the following example:

44   Anyani   a-   ku-   phwany- ir-   a *mwala dengu*
       2-baboons 2-SM- PRES- break-   APPL- TV 3-stone 5- basket
       'The baboons are breaking the basket with a stone'

g) **Goal (Go)-** Spencer (1991) defines it as a participant that is the end point of motion. The girls *atsikana* is the end point of motion in the Chichewa example below:

45   Alenje   a- na- tum- ir- a   *atsikana mphatso*
       2-hunters 2-SM- PST- send-APPL- TV 2-girls   9- gift
       'The hunters send a gift for the girls'

h) **Source (So)-** This is the starting point of motion (Haegeman, 1991). Alenje hunters is the source in the following Chichewa example:

46   Alenje   a-   na- tum- ir- a *mphatso*
       2-hunters 2-SM- PST-send-APPL-TV 9-gift
       'The hunters send a gift'

i) **Location/ Locative (Loc)-** This is the place where the action, whether in the abstract or concrete sense is referred to by the predicate takes place or is situated. In the Chichewa example below *pamchenga* on the beach is the location or place where the action of weaving is being done.

47   Alenje   a-   ku-   luk-   ir-   a *mikeka   pa- mchenga*
        2-hunters 2-SM-PRES- weave- APPL- TV 4-mats   16- 3-sand
        'The hunters are weaving mats on the beach'

j) **Motive (Mo)-** Refers to the reason behind the performance of an action as exemplified

in the following Shona sentence which explains why people work.

48   Vanhu   va-   no-   shand- ir-   a *mari*
        2-people 2-SM- PRES-work- APPL- TV 5-money
        'People work for money'

In the above example, <u>*mari*</u> money is the motive or reason why people work.

The above-defined thematic roles are of importance in the analysis of predicate argument

structures (PAS). Thematic roles are arguments selected and subcategorised by

predicates. It has been pointed out earlier that complements are arguments. Hence, these

thematic roles will be used to show how complements are selected and subcategorised in

Chakari Nyanja.

3.6 Summary

This chapter has outlined LFG as the theoretical framework of this study. The theory has

been shown to recognize three levels of grammatical representation comprising the c-

structure, f-structure and the a- structure. It has been demonstrated how c- structures are

developed and their relation with f- structures. The whole process of creating f- structures

and how they can be used to figure out the function of categories in syntactic structures

has been laid out. The a- structure has been shown to be linked to f- structures in which

syntactic functions are viewed as being made up of more primitive distinctive binary

features. A grammatical function has been argued to be either restricted or unrestricted, objective or nonobjective.

The link of grammatical functions onto semantic roles has been argued to be subject to a list of constraints. The constraints are, intrinsic classification, morpholexical operations/ rules and default classifications/ rules. These mechanisms have been argued to be a bridge through which a stringent association between a- structure and syntactic functions is effected. Intrinsic classifications only partially associate thematic roles with certain grammatical functions. Default classifications are used to fully specify under specified roles by stating that the highest expressed role for a lexical form must have a [-r] as its default classification while the lower roles for a lexical form must be classified with [+r]. The association or link of a- structure with syntactic functions is under the sub- theory, Lexical Mapping Theory (LMT). Thematic roles are mapped onto syntactic functions on the basis of their position in the hierarchy.

The next chapter focuses on the identification of complements and analysis on how they are distributed in Chakari Nyanja.

Chapter Four

Identification and Distribution

4.0   Introduction

The thrust of this chapter is to identify complements, analyse how they are distributed in Chakari Nyanja sentence structures. The researcher sets to identify complements and analyse how they are distributed through the provisions of LFG theory. The five tests outlined in chapter one are employed in the identification of complements.

The chapter is divided into four sections. The first section is the identification of complements. The researcher will first look at verb complements and then noun complements. The second section is the complementarity scale. The researcher has observed that complementation is a matter of degree. The third section is on how these complements are ordered in sentences. The last section is the summary.

4.1 Identification of Complements

It has been noted in the previous chapters that the researcher set to identify complements, among other objectives. It has already been noted in chapter two that a syntactic category is accorded the term complement on the basis of its relationship with other words or phrases. Using the tests given in chapter one, the researcher set to identify complements on the bases of the predicate that they complete. The tests are within the theoretical framework, Lexical Functional Grammar (LFG).

4.1.1 Verb Complementation

Verb complementation is a process that introduces a phrase, clause or sentence as a complement to a verb. A verb as a predicate subcategorises and selects the type and number of arguments it requires. Information on the type and number of arguments is included in the predicate's (verb) subcategorisation frame. A phrase or clause that completes the sense of a verb is identified as a verb complement.

Some verbs in Chakari Nyanja, which are traditionally called transitive and ditransitive, take an immediately following noun phrase (NP) as complement. Radford (1988) notes that there is no way one can predict which verb do or do not take a following noun phrase complement because it does not seem to depend only on the meaning of the verb. NP complements are identified on the basis of their function in sentences. Hence, this intends to identify NPs that function as complements to transitive verbs in Chakari Nyanja. Chakari Nyanja sentences are given below.

49a.   Amai   a- phik-   a   *sima*   Actve
           2b-mother 2b-SM-cook –TV   5-sadza
           'Mother cooked sadza'

 b.   Sima   ya- phik- idw   -a ndi-amai   Passive
           5-sadza 5-SM-cook-PASS-TV by-mother
           'Sadza was cooked by the mother'

50a.   Ababa   a- meny- a   *amai*   Active
           2a-father 2a-SM- beat- TV 1-mother
           'Father beat mother'

 b.   Amai   a- meny- edw -a   ndi- ababa   Passive
           2b-mother 2b-SM- beat- PASS-TV by- father
           'The mother was beaten by the father'

51a.   Wakuba wa-   b- -a   *mbuzi*   Active

9-thief   9-SM-steal-TV   9-goat'
        'The thief stole a goat'

b.   *Mbuz*i   ya-   b   –idw   -a   ndi-   wakuba   Passive
            9-goat   9-SM-   steal-   PASS-TV   by-   thief
            'The goat was stolen by the thief'

52a.   Bambokazi   a-   ka-   mang-   a   *tauro*   Active
            1a-aunt   1a-SM-PRES–wear   –TV   5-doek
            'The aunt is wearing a doek'

b.   *Tauro*   ra-   ka   - mang-   idwa-   a   ndi-   bambokazi   Passive
            5-doek   5-SM-PRES-   wear-   PASS-   TV   by-   1a-aunt
            'The doek is weared by the aunt'

The structure of the simple sentences in the (a) sentences above is of a noun phrase (NP)

followed by a verb (V) and a noun phrase (NP). From this word order the researcher

identify the noun phrase following the verb as a complement. This suffices with Brown

and Miller (1991)'s criterion that any noun phrase that follows a verb is a complement.

Another observation which can be made from the simple active sentences given above is

that they satisfy the requirements for a transitive clause. The direct object immediately

follows the verb. The above noun phrases *sima* sadza, *amai* mother, *mbuzi* goat and

tauro doek immediately follow the verbs phika cook, menya beat, -ba steal and manga

wear. The noun phrase that immediately follows the verb is a complement (Brown and

Miller, 1991).

The constituent structure in LFG has phrasal categories like: noun phrase, prepositional

phrase and verb phrases, which express properties of word order and phrasal structure.

This is subject to variation across languages. The organisational structure of a sentence is

given in terms of rules. Rules that capture the structure of sentences (44a- 47a) are given

below.

53.   S ⟶   NP   VP

(↑SUBJ)=↓   ↑ = ↓

VP ⟶   V   NP

↑ = ↓   (↑OBJ) =↓

NP ⟶   N

↑ = ↓

The rules above show that the NP following the verb is an instant of an object

complement. Annotated constituent structure tree for (49) is given below.

S

(↑SUBJ) =↓

NP

↑ = ↓

N

(↑ PRED) = 'AMAI'
(↑NUM) = SING
Amai

↑ = ↓

VP

↑ = ↓

V

(↑PRED) =
'PHIKA<(↑SUBJ)(↑OBJ)>'
(↑SUBJ NUM) = SING

aphika

(↑OBJ)= ↓

NP

↑ = ↓

N

(↑PRED)= 'SIMA'
(↑ NUM) = SING

sima
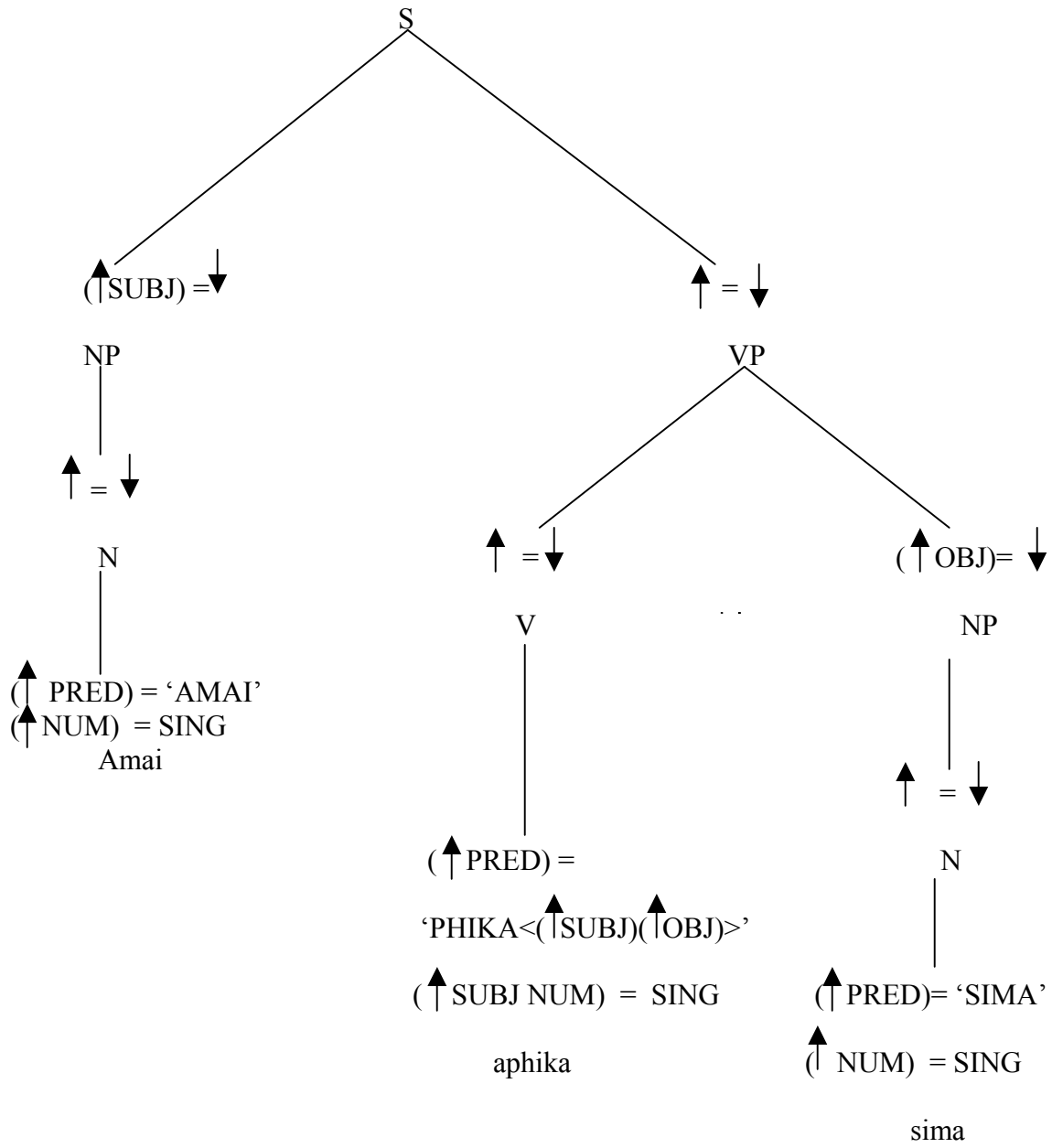
Figure 12: C-structure tree for example (49)

The ontology under each of the terminal nodes comes from the lexical entries for each word. The up ($\uparrow$) refers to the functional structure of the mother node and the down $\downarrow$ arrow refers to the functional structure of the node itself. The constituent structures with functional annotations above show that the post-verbal syntactic category is a noun phrase. Hence, *sima* sadza, *amai* mother, *mbuz*i goat and *tauro* doek are NPs functioning as objects to verbs <u>phika</u> cook, <u>menya</u> beat, -<u>ba</u> steal and <u>manga</u> wear and the sentence as a whole. They complete the sense of the preceding verb.

The variables, which name the appropiate f-structures, are put in place of the arrows. All of the instantiated function equations in the tree are called the functional descriptions. Finished tree for (44) with instantiated equations is given below.

```
                          S       f1


        (f1 SBUJ)=f2                          f1= f4

             NP                                 VP


    F2= f3                    f4= f5                      (f4 OBJ)= f6

      N                         V                              NP



(f3 PRED)= 'AMAI'       (f5 PRED)=                       f6= f7

(f3 NUM)= SING      'PHIKA<(f5 SUBJ)(f5 OBJ)>)'              N

   Amai               (f5 SUBJ NUM)= SING

                      (f5 PRED TENSE)= PST

                            aphika              (f7 PRED)= 'SIMA'

                                                (f7 NUM)= SING

                                                      sima
```
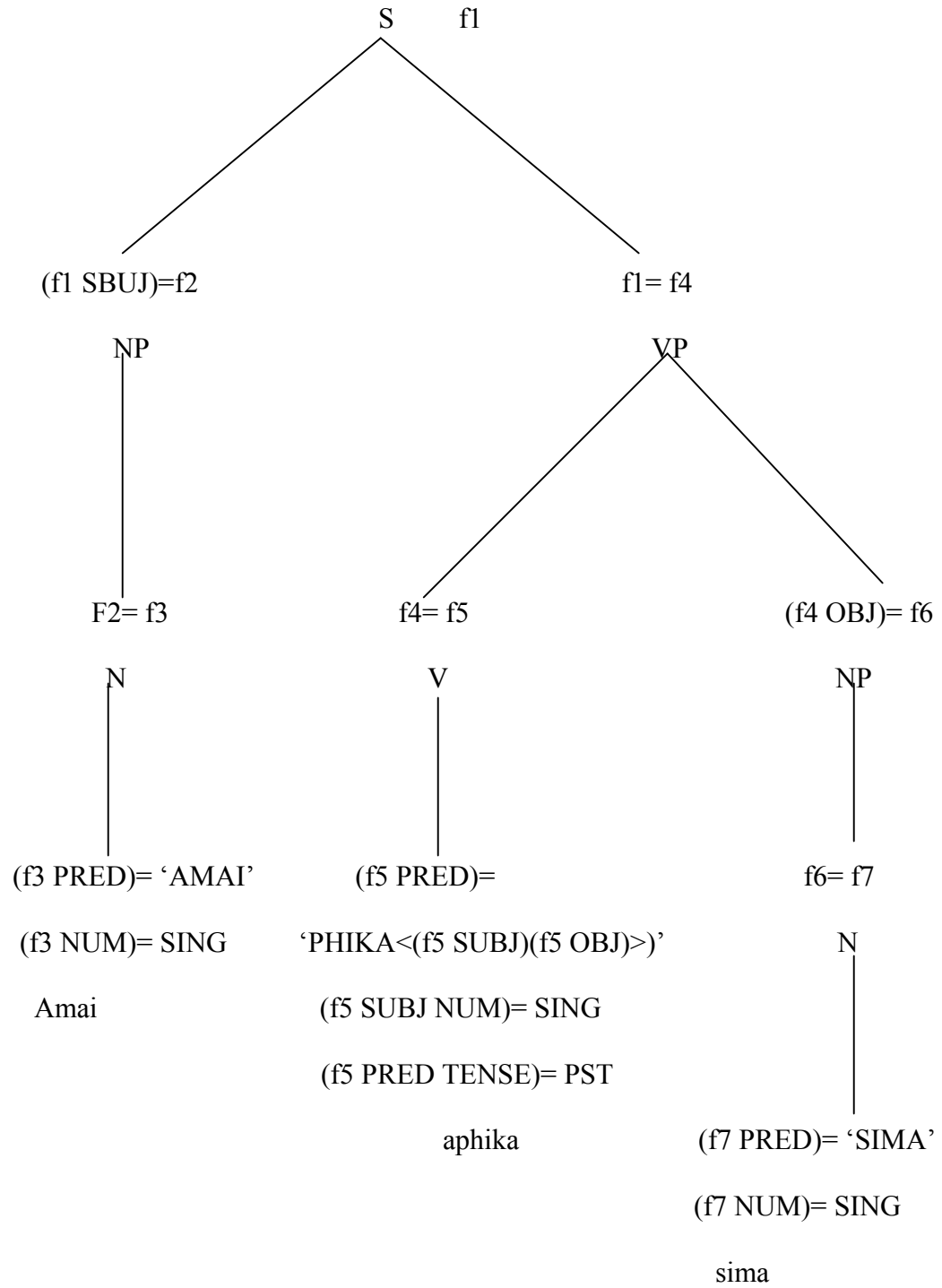
Figure 13: Completed tree with instantiated equations

What we have done in the above tree is a functional description of nodes using numbers and symbols. We now construct our functional structures using the functional descriptions. Only information present in the equations of the functional descriptions is incorporated into the f-structure. The functional description for (49) is listed below.

54a. (f1 SUBJ)= f2

b. (f2= f3)

c. (f3 PRED)= Amai

d. (f3 NUM)= SING

e. f1=f4

f. f4= f5

g. (f5 PRED)= 'PHIKA<(f5 SUBJ)(f5 OBJ)>'

h. (f5 SUBJ NUM)= SING

i. (f5 PRED TENSE)= PST

j. (f4 OBJ)= f6

k. f6= f7

l. (f7 PRED)= 'SIMA'

m. (f7 NUM)= SING

The letter *f* and a number is a name for a metavariable. In the list above (f1 SUBJ)= f2 indicates that *amai* mother is the subject in the sentence. (f4 OBJ) = f6 shows that *sima* sadza is the object in the sentence. A completed f-structure with its attribute and values is given below.

$$
f1 \begin{bmatrix}
\text{PRED} & \text{'PHIKA<(f5 SUBJ)(f5 OBJ)>'} \\
f4 \quad \text{SUBJ} & f2 \begin{bmatrix} \text{PRED} & \text{'AMAI'} \\ f3 \quad \text{NUM} & \text{SING} \end{bmatrix} \\
f5 & \\
\text{TENSE} & \text{PST} \\
\text{OBJ} & f6 \begin{bmatrix} \text{PRED} & \text{'SIMA'} \\ F7 \quad \text{NUM} & \text{SING} \end{bmatrix}
\end{bmatrix}
$$
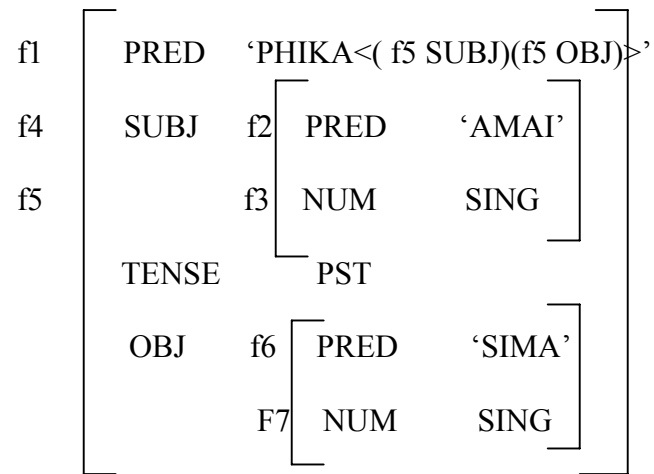
Figure 14: A completed f-structure with features and values

Bresnan (1995) notes that a symbol- valued attribute is called a feature. An f-structure-valued attribute is called a (grammatical) function. In (Figure15) NUM and TENSE are features, while SUBJ, and OBJ are (grammatical) functions.

As aforementioned in section 1.4.3.1, passivization is another test to be used in the identification of complements. The process involves the promotion of the direct object to the subject position (Perlmutter and Postal, 1984). It is a process that promotes the direct object of an active sentence to the subject position and deletion or demotion of the original subject to an oblique position. If the object function can be promoted to the subject function and the sentence remains grammatical, the object is a complement of the verb. The universal lexical rule for the passive is repeated here:

55.   SUBJ ⟶ Ø / OBLI

         OBJ ⟶ SUBJ

The ability of an object to attain subject status is one of its properties (Hyman and Durant, 1982). The rule given above shows that a subject is either deleted or demoted to an oblique function and the object promoted to the subject function. In the identification of noun phrases as complements, active Chakari Nyanja sentences in (49a) to (52a) are passivised. In (49b) to (52b) the noun phrases following the verb in the active form have been promoted to the subject position and the noun phrases preceding the verb demoted to an oblique position.   The grammaticality of the passive sentences confirms that the noun phrases are also identified as complements through the passivization test.

What more evidence can be given in support of the claim that the identified noun phrases are complements of verbs that they precede? Radford (1988) notes obligatoriness as a test for complements.   The above Chakari Nyanja sentences are restructured below without the noun phrase:

56.   ?Amai   a-   phik- a
           2b-mother 2b-SM –cook -TV
           Mother cook

57.   *Ababa a   -meny -a
           2a-father 2a-SM-beat -TV
           Father beat

58.   ?Wakuba wa   –b-   a
           9-thief   9-SM-steal- TV
           The thief stole

59.   *Amai   a-   ka-   mang -a
           2b-mother 2b-SM-PRES-wear -TV
           Mother is wearing

Sentences (56) to (59) are incomplete with the absence of the noun phrase following the verbs. The absence of the noun phrases following the verb resulted in ungrammaticality of the above structures. The sentences have violated the completeness condition, which states that all of the functions specified must be present. It has been pointed in literature review that obligatory arguments are complements. The examples serve to confirm that the noun phrases are identified as complements under the obligatoriness test.

It has already been mentioned that there is no way one can predict which verb do or do not take a following noun phrase complement and that there is need to include this information in lexical entry of each verb. Subcategorisation as the other test of a complement involves the specification of the syntactic requirements imposed on arguments. LFG presents this information in the form of predicate argument structures showing the number of arguments and functions a particular verb takes. In sentences (56) and (58) the verbs can be both transitive and intransitive. Chomsky (1965) notes that the lexicon and the categorical component both specify the range of possible complement structures. The lexical forms of Chakari Nyanja verbs as used in (49) to (52) are:

60(a)   phika 'cook'   (SUBJ)   (OBJ)

                               ↑ | ↑ |

                          AGENT   PATIENT

 (b)   menya 'beat'   (↑ SUBJ)   (↑ OBJ)

                          AGENT   PATIENT

(c)   ba 'steal'   (↑SUBJ)   (↑OBJ)

              AGENT   PATIENT

(d)   Manga 'wear'   (↑ SUBJ)   (↑ OBJ)
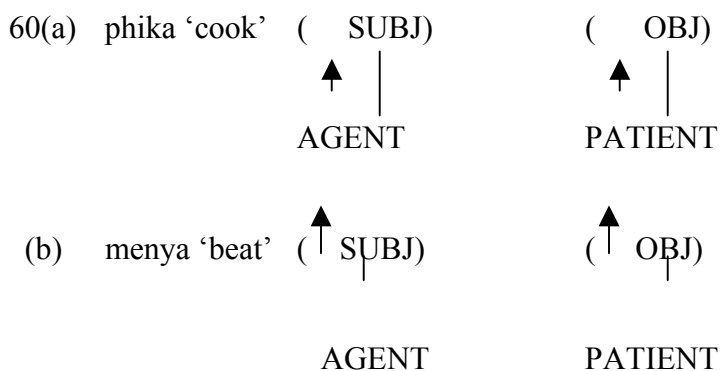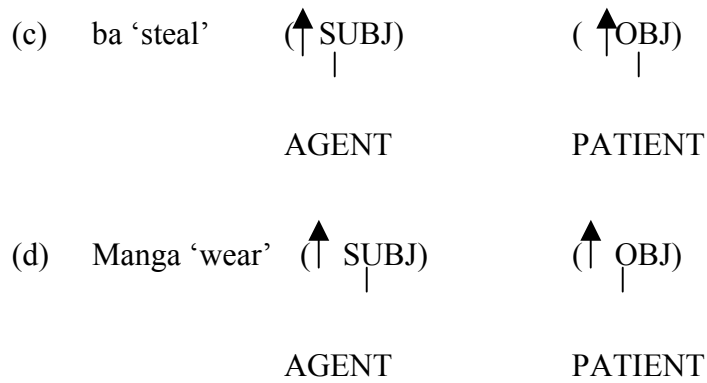
              AGENT   PATIENT

The representation encodes that these verbs take arguments bearing the theta roles Agent and Patient respectively. Arguments in the theta grid, which are agent and patient, have been annotated to indicate the grammatical function the corresponding noun phrase will bear in syntax. The theta criterion requires that each variable in the predicate argument structure be evaluated by corresponding to a syntactic constituent of the appropriate sort. Rappaport and Levin (1988) argues that the lexical representation must include a specification of how each corresponding noun phrase argument is assigned its theta role apart from the number of arguments.[18] The predicate argument structure shows that the verbs above are dyadic verbs. Hence, the noun phrases *sima* sadza, *amai* mother, *mbuzi* goat and *tauro* doek have been identified as complements in Chakari Nyanja. NPs following the verb function as complements in Chakari Nyanja.

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[18] Principle mapping argument structures to syntactic functions will be dealt with in section three

Locative nominals that follow the verb in Chakari Nyanja function as complements. They give information on the place that is the end point of motion or action and the direction of motion.

61(a)   Ababa ababa   a-   na- kar - a   *mu-mthunsi*
        2b-grandfather 2b-SM-PST-sit-TV   18 –3-shade
        'The grandfather set in the shade'

  (b)   ? Asekuru   a-   na-   kar-   a
          2b-grandfather 2b-SM-PRES-   sit-   TV
          'The grandfather set'

62(a)   Atsikana a-   ri-   kuphuns- ir   -a   *ku-U.Z.*
        2-girl   1-SM-PRES- learn – APPL- TV   17-U.Z
        'The girls are learning at the U.Z'

  (b)   ?Atsikana a-   ri-   kuphuns- ir   -a
           2-girl   1-SM-PRES-learn-   APPL-   TV
            'The girls are learning'

63(a)   Nyamata   a-   na-   kar- a   *pa-mpando*
        1-boy   1-SM-PRES- sit- TV 17- 3-bench
        'The boy is sitting on the bench'.

  (b)   ?Nyamata   a-   na-   kar- a
          1-boy   1-SM-PRES -sit- TV
          'The boy is sitting'

64a.   Abambo   a-   phit   -a   *ku- munda*
        1-father   1-SM-return –TV 17- 3-field
        'The father return from the field'

 b.   Abambo   a-   phit-   a
        1-father   1-SM- return- TV
        'The father return'

65a.   Agogo   a-   ku -end- a   *ku-chechi*
        1-grandmother 1-SM-PRES -go- TV   17-9-church
        The grandmother is going to church'

b.   Agogo   a-   ku- end- a

1-grandmother 1-SM- PRES- go- TV

'The grandmother is going'

66a.   Goridhe ri- ku- end - a   *ku-miru*

5-Gold   5-SM-PRES-go -TV 17- 9-mill

'Gold is going to the mill'

b.   Goridhe ri-   ku-   end- a

5-gold   5-SM- PRES- go – TV

'Gold is going'

The word order of the (a) examples above shows a noun phrase preceding the verb and a noun phrase following the verb (NP V NP). The italicised phrases are nominals showing the location and direction of the activity being specified by the predicate. Thus nominals serve to show the location of the activity and the path of motion specified by the predicate. Under the word order test, the phrases following the verb are identified as complements.

The verbs in (61) to (63) above are intransitive. However, (b) counterpart shows that the absence of the locative nominal is of question to the grammaticality of the whole sentence. The c-structure annotated with functional schemata, indicates how the functional information contained on a node in syntax participates in the f-structure. The functional annotation gives information on the function of the locative and directional nominal following the verb. The c-structure of example (61) to (66) is given below with the functional schemata:

67.   S ⟶ NP   VP

            (↑SUBJ)=↓   ↑ = ↓

VP $\longrightarrow$ V
$\uparrow = \downarrow$

NP
$(\uparrow OBJ) = \downarrow$

NP $\longrightarrow$ N
$\uparrow = \downarrow$
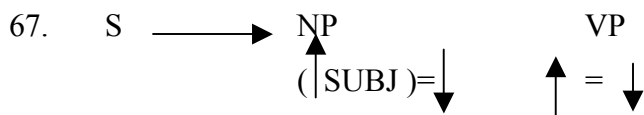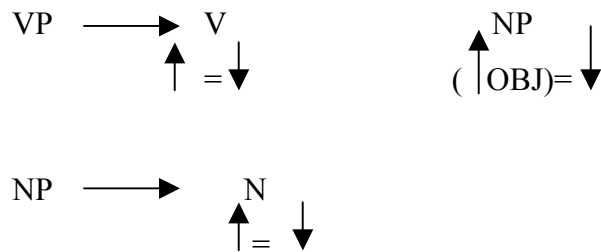
The schema encodes information on the various functional relations in the Chakari Nyanja syntactic structures. The schema shows that the verbs kara sit, phita return, enda go and phunsa learn take a subject and an object. The locative nominal with its locative affix serves to give information on the location of the object. The c-structure with the metavariables specifies the function of words and/or phrases in the above sentences. The absence of the locative and directional nominal in the above syntactic structures results in incomplete structures. The (b) examples show that under the obligatoriness test, the locative and the directional nominals are complements. The nominal phrases following the verbs in example (64) to (66) functions as an infinitival complement. Infinitives in Chakari Nyanja are in class 17. Infinites also function as complements in Shona (Zimbabwe), Kikuyu (Kenya) and Kiruundu (Burundi) (Harford, 1985).

The constituent structure tree for 63(a) and 64(a) is given below.

S

(↑SUBJ)=↓   ↑ = ↓

NP   VP

↑ = ↓   ↑ = ↓   (↑LOC OBJ)=↓

N   V   NP

(↑PRED)= 'NYAMATHA'   (↑PRED)=

(↑NUM)= SING   'KARA<(↑SUBJ)(↑OBJ)>'   ↑ =↓

Nyamatha   (↑SUBJ NUM)= SING   N

(↑PRED TENSE)= PST

anakara   (↑ PRED)= 'PAMPANDO'

(↑ NUM) = SING

pampando
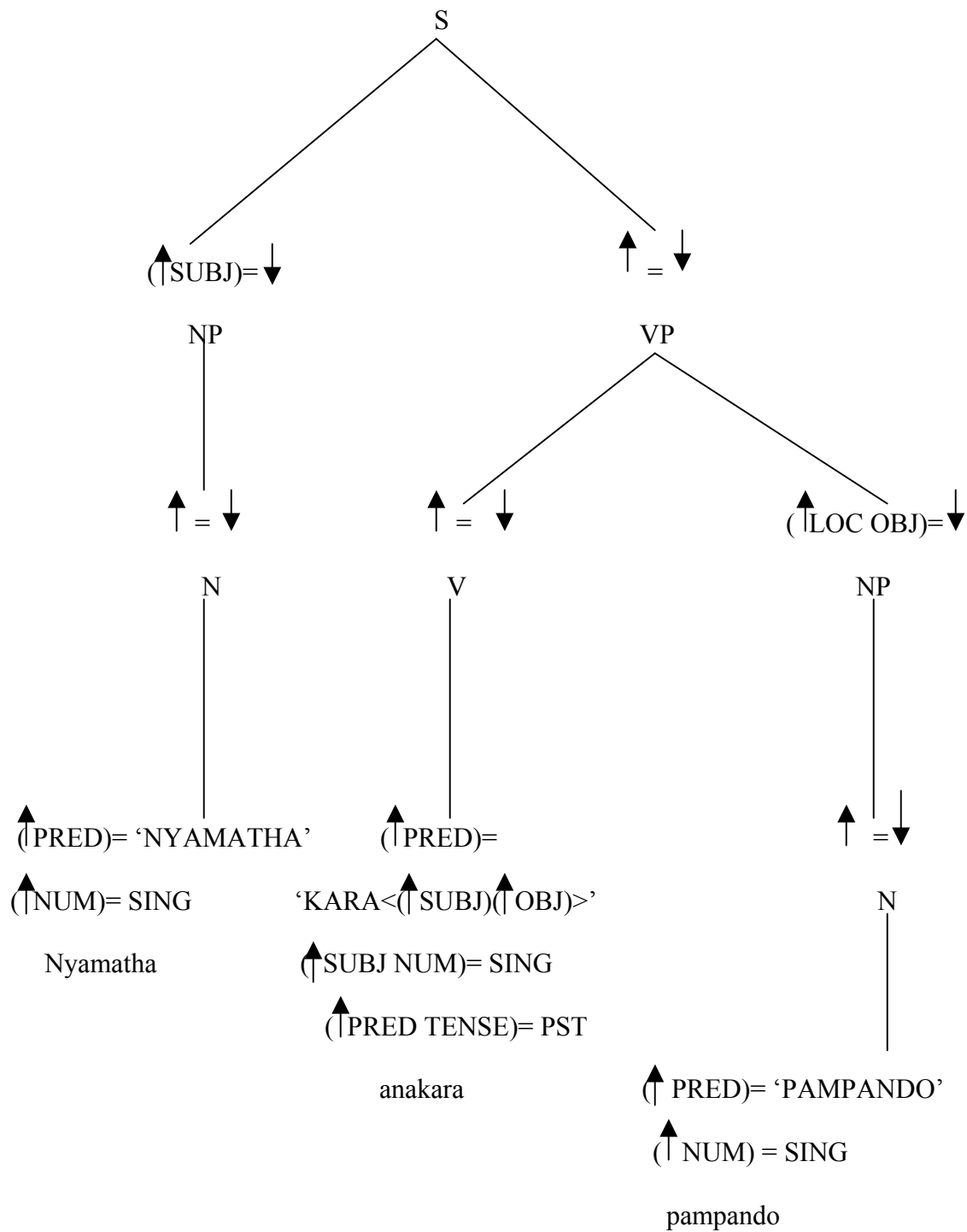
Figure 15: A tree with a locative nominal complement

S

(↑SUBJ) =↓   ↑ = ↓

NP   VP

↑ = ↓   ↑ = ↓   (↑LOC OBJ)=↓

N   V   NP

↑ = ↓

N

(↑PRED) = 'ABAMBO'   (↑ PRED) = PITA   (↑ PRED) ='KUMUNDA'

(↑ NUM) = SING   'PHITA<(↑SUBJ)(↑OBJ)>'   (↑ NUM) = SING

Abambo   (↑PRED TENSE) = PST   kumunda

(↑ SUBJ NUM) = SING
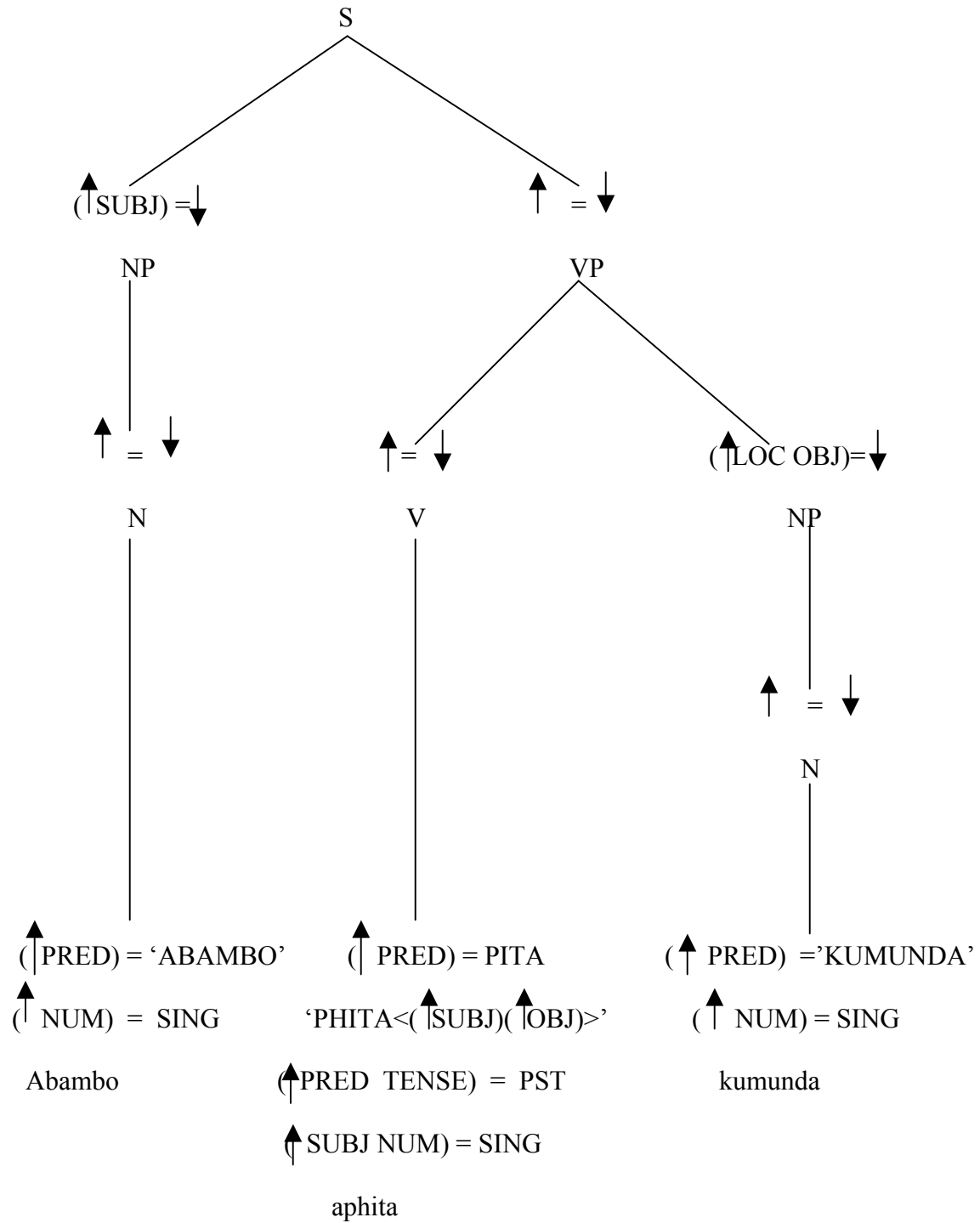
aphita

Figure 16: Annotated c-structure for 48a

The tree diagrams with functional schemata show that the verbs phita return and kara sit; both take a following object. The object in both cases is a nominal phrase. The arrows ↑=↓ under the nominal phrase node shows that the nominal phrase as a whole functions as the object of the verb above. The tree diagram shows that the nominal phrase is immediately dominated by the verb phrase, and is a sister of the V node. Being a sister of the V node, the nominal phrase serves to complete the sense of its sister. Hence, the nominal phrase in the above sentences is a complement of the verb and the whole sentence. All the requirements of the main predicate have been satisfied with all appropriate function arguments present. For instance, the verb enda go takes two arguments, the agent and location/goal, which are mapped onto grammatical functions subject and object, the matrix functional structure contains these functions; hence the requirements of the main predicate are satisfied. A completed f- structure with attribute and values for 63 (a) is given below.

f1   PRED   'KARA<(f5 SUBJ)(f5 OBJ)>'

f4   SUBJ   f2 PRED   'NYAMATHA'
f5   f3 NUM   SING

            TENSE   PRES

LOC OBJ   f6 PRED   'PAMPANDO'
            f7 NUM   SING
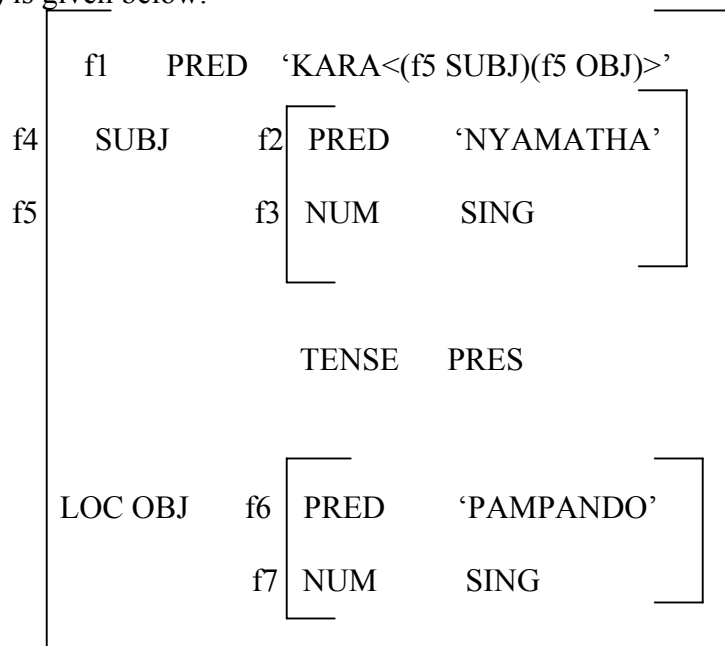
Figure 17: A complete f-structure for 63 (a)

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A concrete example of the f-structure given above is given below.

68.   (f1LOC OBJ)= f6

In the example above the f-structure f1 contains a line where LOC OBJ is the attribute and f6 is the value. In the f-structure given in figure 19 (f6 PRED)= 'PAMPANDO'. This shows that the nominal *pampando* on the bench is the locative object in the sentence.

Hyman and Durant (1982) view the ability of object to attain subject status as its property. A noun phrase immediately following the verb and prepositional phrase functioning as an object which can be promoted to a subject position is a complement of a verb. Some of the sentences given above are restructured here showing the promotion of a noun phrase to the subject position.

69(a)   The Active Voice
                         Ababa ababa   a-   na- kar -a   *mu- mthunsi*
                         2a-grandfather 2a-SM-PST-sit- TV   18-   3-shade
                         'The grandfather is sitting in the shade'

                         The passive voice
  (b)   Mu-mthunsi   mu-   na -kar –idw   -a   ndi-ababa ababa
                         18 –3-shade   18-SM-PST-sit-PASS- TV   by-2a-grandfather
                         'In the shade sat the grandfather'

                         The active voice
70(a)   Abambo   a-   phit   -a   *ku- munda*
                         2a-father   2a-SM-return-TV   17- 3-field
                         'The father return from the field'

                         The passive voice
  (b)   Ku-munda kwa -phit-   idw-   a   ndi-bambo
                         17-3-field   17-SM-return-PASS-TV by-father.
                         From the field returned the father.

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Sentences (69) and (70) show that the verbs above retain the number of arguments and functions they take and that in the passive voice the object function is deleted and the oblique function introduced. The phrase which is functioning as the object in the active voice is raised to the front or beginning of the sentence. A passive rule showing the change of one of the verbs above from an active voice into a passive voice is as follows:

ACTIVE   PASSIVE

71. phita   return   (↑ SUBJ)   (↑ OBJ) ⟶ 'phit-idw-a' (↑OBLǾ) (↑SUBJ)

THEME   LOCATIVE   THEME   LOCATIVE
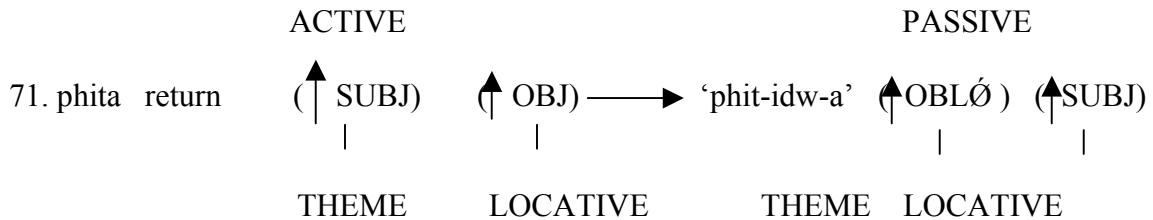
The passive rule given above shows that in the active form the theme, which was the subject in the active sentence, is demoted to an oblique function. The locative, which is the object in the active sentence, has been promoted to the subject function. This identifies the locative and/ directional nominals as complements in Chakari Nyanja. Well formedness conditions have been satisfied.

Adverbial phrases have been argued to function as complements in Shona (Dembetembe, 1987), but are classified as adjuncts in English (Radford, 1988). There are invariably four types of adverbial phrase headed by an adverb classified according to different sense that they 'complete'. The four are the adverbial phrase of time, frequency or degree, manner and place. The adverbial verb of place, as noted earlier, is also a locative nominal complement. Chakari Nyanja sentences are given below.

72(a)   Atsikana a-   za- phit -a *makuseni*   AdvP ⟶   Time
              2-girl   1-SM-FUT-return-TV Adv-morning
              'The girls will return in the morning'
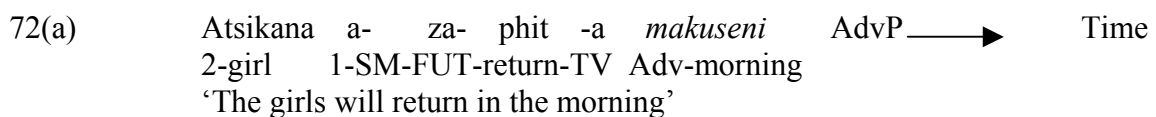
(b)   ?Atsikana   a   -za   -phit   -a
         2-girl   1-SM-FUT-return-TV
         'The girls will return'

73(a)   A   -na -phez -a *pakuru*   AdvP ⟶ Degree
         1-SM-PST-get -TV   Adv.big
         'He got big'

 (b)   ?A   -na- phez- a
         1-SM-PST-get-   TV
         'He got'

74(a)   Ndi- na -badur-idw   -a *muno* AdvP ⟶ Place
         1-SM-PST-born-PASS-TV   here
         'I was born here'

  (b)   ?Ni- na- badur-idw   -a
         1-SM-PST-marry-PASS-TV
         'I was married

75(a)   Ndi- na- kwatur -a *kudhara*   AdvP ⟶ Time
         1-SM- PST- marry –TV long ago
         'I married long ago'

 (b)   ?Nda - na-   kwatur -a
         1-SM- PST- marry -TV
         'I married'

76(a)   Atsikana a- na- phit   -a *ndimasana* AdvP ⟶ Time
         2-girls   2-SM-PST-return-TV yesterday
         'The girls returned yesterday'

 (b)   ?Atsikana a-   na -phit -a
         2-girls   2-SM- PST-reutn -TV
         'The girls returned'

Using the word order test, we can read from the above sentences that (72a) to (76a) has

adverbial phrases following verbs <u>phita</u>, return, <u>pheza</u> get, <u>baduridwa</u> born, and <u>kwatura</u>,

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marry. The adverbial phrases are showing the time, degree and place in which the action took place. This points to fact that under word order test adverbial phrases are identified as complements in Chakari Nyanja. The obligatoriness test has been employed to complement the word order test. In the (b) counterparts, the adverbial phrase has been left out. The absence of an adverbial phrase in Chakari Nyanja sentences results in ill formed structures. In some sentences, the subject or topic must have been introduced earlier. That is, if the subject has been introduced earlier, one is at liberty to drop the adverbial phrase. Sentences (72b) to (76b) are grammatical, however, if said out of context, they require an elaboration. For instance, if the speaker, says 'Ndakakwatura', the listeners or learner will still ask for the information left out, the AdvP.

The fact that the adverbial phrase completes the sense of the preceding verb shows that it is a complement of the verb it follows. Hence the above sentences satisfy the requirements for a complement to be completing the sense of a preceding verb for it to be a verb complement. This points to the fact that under the obligatoriness test the verbs phita return, pheza get, kwatura marry, and badurwa born take adverbial phrase as complements.

It has been pointed out in the previous chapters and sections that complements can be subjects in sentences after passivisation. Passivisation is the other test which has been chosen by the researcher to identify complements in Chakari Nyanja. Passivisation as a test is also being used to complement the word order and obligatoriness test. The

adverbial phrases in some of the above sentences are put under the passivisation test below.

<div style="margin-left:2em;">

77   Makuseni kwa- phit-   idw   - a ndi atsikana
             Morning   SM- return- PASS- TV by- girl
             'In the morning has returned the girls'

78.   *Pakuru pa- na -phez- edw -a ndi- Tinto
             Big   SM- PST-get- PAS-TV by- Tinto
             'Big was got by Tinto'

79   *Muno ma- badur- idw   -a   ndiHugh
             Here   SM- born- PASS-TV by Hugh
             'Here was born by Hugh'

</div>

Examples (78) and (79) show that the promotion of the adverbial phrase to the subject position forms ungrammatical sentences in Chakari Nyanja. The sentences show that the adverbial phrases of degree and place cannot be subjects in passive sentences. In (77) the adverbial phrase of time has been promoted to the subject position and the subject demoted to the oblique position. The sentence is grammatical. This shows that the adverbial phrase of time is a complement under the passivisation test. On the other hand, we can see that ungrammaticality of (78) and (79) serves to confirm that the adverbial phrases of place are not complements under the passivisation test.

Sentences (72b) to (76b) have been classified as ill formed in the absence of a following adverb. The clauses are classified as ill formed without an explanation or reason of why they are not grammatical. Why do they require a context for them to be well formed? The verbs in the above examples subcategorise for a following adverbial phrase. The absence of the adverbial phrase renders the sentence incomplete. As it will be noted under subcategorisation section, the number of arguments or phrases a formative takes

can be shown in what are called subcategorisation frames. The subcategorisation frame for <u>pheza</u> got is as follows:

80.   'pheza'   [------AP]

The completeness condition ensures that this argument is present in the syntactic structure for the sentence to be grammatical. The absence of this argument in (73b) renders it ill formed. Subcategorisation expresses categorical information about the complements of a lexical item, for example that its complements must be an AdvP or NP. Selection specifies semantic properties of argument, for example, humanness and plurality.

Subcategorisation shows that the AdvP *pakuru* big *muno* here, *kudhara* long ago and *ndimasana* yesterday are complements in the above sentences. Well-formedness conditions noted above have put it clearly that the AP is conceptually necessary to the verb or the whole sentence. As complements, they complete the senses of the verbs <u>phita</u> return, <u>pheza</u> get, <u>baduridwa</u> born, <u>kwatura</u> marry respectively.

If the obligatoriness criteria stand, that is, obligatory NPs or PPs are arguments and that optional categories are adjuncts, adverbs of time, degree and manner are not complements. However, the argument that not all optional arguments are adjuncts allows adverbs of manner, time and degree to be complements. What then distinguishes optional arguments from adjuncts? Van Valin Jr (2001) argues that under such a situation NPs and PPs which refer to participants which are conceptually necessary to the meaning of the

verb are arguments and those that refer to participants which are not conceptually necessary are not. Hence, the failure by the adverbial phrases of manner, time, degree to satisfy the other methods such as the passivisation rule and obligatoriness do not bar them to be identified as complements because they refer to participants which are conceptually necessary to the meaning of the verb as shown in the examples (72) to (76). However, it has to be noted that the degree of complementarity seems to vary with categories.

Embedded sentences also function as complements in Chakari Nyanja. A complement has been defined in section 2.2.3 as a word, phrase or sentence that complete the sense of a predicate. Syntactic categories NP, LOC-NP and AdvP have been noted to function as complements to verbs in Chakari Nyanja. The question now is the ability of sentence – like constructions to function as complements. If they do, what kinds of complements are allowed? Below are Chakari Nyanja sentences:

81(a)   Atsikana a- ku- ganiz -a kuti *wakuba a- ku- bisar -a   mphanga*
         2girls 2SM-PRES-think-TVCOMP 9thief 9SM-PRES-hide-TV in the cave
         'The girls are thinking that the thief is hiding in the cave'

  (b)   *Atsikana a-   ku   -ganiz -a
         2-thief   2-SM-PRES -think- TV
         'The girls are thinking'

82(a)   Zvi- da -bwits -a   kuti   *John   mtando*.
         8-SM-FUT-amaze-TV COMP   John   healthy
         'It will be amazing that John is healthy'

  (b)   *Zvi-da -bwits -a
         8-SM- FUT- amaze- TV
         'It is amazing'

From the word order presented in the above examples, the verb is followed by an

embedded sentence. Note that from the examples (81a) and (82a) <u>kuti</u> that is the overt

complementiser. Under word order, the category that immediately follows the verb is an

object. Using this criterion, the embedded sentence is a complement in the above

sentences. The obligatoriness test is employed to complement the word order. The

absence of the embedded sentence in the (b) examples results in ungrammatical structures

being formed. The embedded clauses *wakuba anabisala mphanga* is hiding in the cave

and *John mtando* completes the sense of the verbs <u>ganiza</u> think and <u>bwitsa</u> amaze in the

main clause. This suggests that the embedded sentences or clauses are obligatory

constituents. Obligatory constituents are arguments of a predicate. Complements are

arguments. In simple terms, the embedded sentences are identified as complements under

the obligatoriness test. C- structure rules for (81) and (82) are as follows:

83.

S ⟶ NP   VP

(↑SUBJ) =↓   ↑ =↓

NP ⟶ N

↑ =↓

VP ⟶ V   S
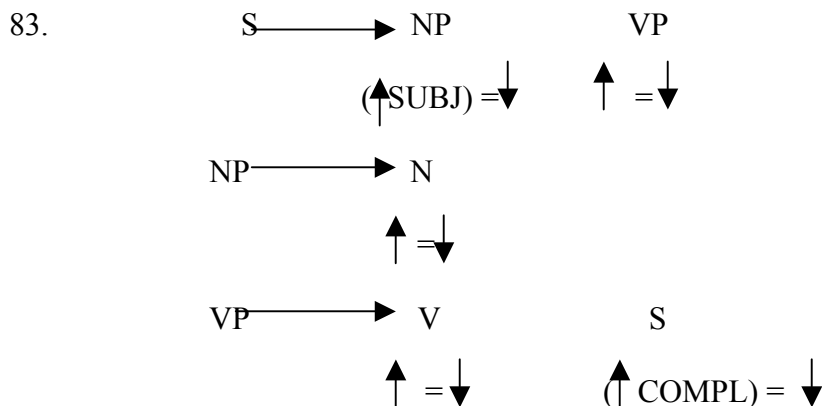
↑ =↓   (↑ COMPL) = ↓

The metavariables (↑ COMPL)=↓ below the S symbol points to the function of the

embedded sentence in example (81) and (82). The embedded sentence is an instance of a

sentential complement. To make it clear, a tree showing functional descriptions of (83) is

drawn below.

S   f1

(f1 SUBJ)= f2
NP

f1=f4
VP

f2= f3
N

f4= f5
V

(f4 COMPL)= f6
Ś

(f3 PRED)= 'ATSIKANA'
(f3 NUM)= PLU
Atsikana

(f5 PRED)=
'GANIZA<(f5SUBJ)(f5OBJ)
(f5 SUBJ NUM)= PLU
(f5 PRED TENSE)= PRES

akuganiza

(f6 COMP)=f7

f6= f8
S

(f8 SUBJ)= f9
NP

f 8= f11
VP

(f6 COMP)= 'KUTI'

kuti

f9= f10

f11=f12

(f11OBJ)=f13

N

V

NP

(f10 PRED)= 'WAKUBA'

(f10 NUM)= PLU

wakuba

(f12 PRED)=

'BISARA<(f12SUBJ)(f12OBJ)>'

(F12SUBJ NUM)= PLU

(f12 PRED TENSE)= PRES CO

akubisara

f13= f14

N

(f14 PRED)=

'MPHANGA'

Figure 18: A c-structure tree with functional descriptions

The c-structure above shows that the node with functional descriptions (f4 COMPL) = f6. In the tree, f6 is the embedded sentence. The embedded phrase is a complement in the sentence *Atsikana akuganiza kuti wakuba akubisara mphanga* The girls are thinking that the thief is hiding in the cave. LFG ensures that sentences 81(b) and 82(b) are ungrammatical. The sentences above confirm that <u>Wakuba akubisara mphanga</u> The thief is hiding in the cave and <u>John mtando</u> John is healthy are complements. Sentences 81(b) and 82(b) are incomplete without the embedded clauses. The completeness condition renders them ungrammatical. The clauses give information conceptually necessary to the meaning of the verbs.

Consider some more Chakari Nyanja sentences below:

84a.   Ni- ganiz- a   kuti *a- na- bwer -a*
        1a-SM-think- TV COMP PRO-PRES-come-TV
        'I think that he is coming'

 b.   *Kuti a- na- bwer- e zi- ganiz -idw -a ndi-ni
         COMP 1a-SM-PRES-come- TV SM- think- PASS- TV by- me
        'That he is coming thought by me'

85a.   John a- na- simikiz -a *Mary kuti* *a- za- siy -a ntchito*
        John 1a-SM-PST-promise-TV Mary COMP 1a-SM-FUT-leave-TV job
        'John promised Mary that he will leave the job'

 b.   *Kuti a- za- siy- a ntchito zvi- na- simikiz- idw- a Mary ndi- John
        COMP1SM-FUT-leave-TVjob 8SM-PST-promise-PASS-TVMaryby John
        'That he will leave the job it was promised Mary by John'

86a.   Taulo a -pheny -a *Nelson a* *-ku- meny -a Tinto*
        Taulo 1a-SM-see -TV Nelson 1a-SM-PRES -beat- TV Tinto
        'Taulo saw Nelson beating Tinto'

b.   *Nelson a-   ku   -meny -a Tinto   a - peny- edw   -a ndi- Taulo
                       Nelson 1a-SM-PRES   -beat-TV Tinto1-SM-see- PASS-TV by Taulo
                       'Nelson beating Tinto he was seen by Taulo'

Examples (84) and (84) has the same complementiser, <u>kuti</u> that, that triggers an embedded sentence. The subordinate clause in (84) has a pronoun in the subject position. It has got independent reference. In (86) there is a covert subject. The subject was originally there in the deep structure and has been equi deleted in the surface structure. The subject marker in the embedded clause refers back to the subject of the main clause showing that the two clauses have the same subject.

In (86) the subject of the embedded sentence, Nelson, is also the object of the main clause. The example shows that a complementiser does not only introduce sentential complements. It brings in evidence in support of the fact that in Chakari Nyanja there are also sentential complements, which are not introduced by an overt complementiser but by a covert one. This also supports Noonan (1985)'s observation that there is more than one sentential complement in many languages.

Sentences in (84) to (86) have been subjected to the passivisation test. The subject is demoted to the oblique position and the embedded sentence promoted to the subject position. However, the whole process results in grammatical structures being formed. Evidence from the examples above shows that embedded sentences are not complements under the passivisation test.

Noonan (1985) argues that not all embedded sentences may be considered complements

since not all embedded sentences are arguments. Thompson (1971) supports this view. She notes that there is a significant but generally overlooked set of structural distinctions between relative clauses and those complex sentences which are clearly realisations of structures containing embedded sentences, namely those containing sentential subject or object. The above-identified sentential complements are arguments of verbs: <u>ganiza</u> think, <u>simikiza</u> promise, and <u>phenya</u> see. They play a role with respect to the verb which Fillmore (1968) has called the objective role and without which the verb cannot stand. Thompson (1971) notes that the verb governs both the occurrence of clause and the type of the clause which can occur. These conditions do not hold for relative clause sentences. Apart from being arguments, the embedded sentences in example (84) to (86) above complete the senses of predicates that they are arguments. Relative clauses play no role whatever with respect to the main verb and no morpheme is marked as requiring it. The argument structure of the verb <u>phenya</u> see is as follows:

'PHENYA' SEE

87.   Predicate Argument Structure (PAS): <1   2 >

Grammatical Function (GF) assignment: {(COMPL), (OBJ), (SUBJ)}

Lexical form: phenya 'see' <(COMPL), (RECIPIENT)>(SUBJ)'

The notion above shows that <u>phenya</u> see subcategorises for three functions, the subject, the object, the complement and two arguments. The verb subcategorises for a sentential complement. Thus, under subcategorisation the embedded sentence is a complement.

4.1.2 Noun Phrase Complementation

As noted in chapter one, apart from the verb, other lexical categories can be predicators as well. Nouns are predicators in Chakari Nyanja. Noun complementation is a process which introduces a sentence, a word or phrase as a complement to a noun head under the domination of a noun phrase. The noun is the head of a NP complement. In all types of NP complementation, the NP functions as a single unit. A sentence or phrase that is embedded in the noun phrase, which is generally associated with the properties of passivisation and pseudo cleft formation in the main sentence is a noun phrase complement.

Under subject complementation a sentence or phrase is embedded in a subject noun phrase. The sentence or phrase functions as the complement of a noun in the noun phrase subject of an underlying structure. Below are Chakari Nyanja sentences:

88(a)　　　　　　　Nyamatha　*a- phez -a　pakuru* a-　　mwarir -a
　　　　　　　　　1-boy　　　1-SM-get-TV　big　1-SM -die- TV
　　　　　　　　　'The boy that got big died'

　(b)　　　　　　　Nyamatha　a- mwarir -a
　　　　　　　　　1-boy　　　1-SM -die-　TV
　　　　　　　　　 'The boy died'

89(a)　　　　　　　Ana　　*a-tatu*　　*a- phit*　　*-a* ku-sikuru
　　　　　　　　　2-child　2-three　　2-SM-go- TV　17- school
　　　　　　　　　'Three children return to school'

　(b)　　　　　　　Ana　　a-　　phit　　-a　ku-sikuru
　　　　　　　　　2-child　2-SM-return-TV　17- school
　　　　　　　　　 'The children return from school'

90(a)　　　　　　　Mombe *zakuda*　　za -end　　　-a　　ku-dhibha
　　　　　　　　　10-cow　black　　10-SM-go- TV　　17-dip tank
　　　　　　　　　'Black cows went to the dip tank'

(b)   Mombe   za-   end -a   ku-dhibha
                  10-cow   10-SM-go-TV   17-dip tank
                    'The cows went to the dip tank'

In example (88a) the sentence is of the structure N-COMP-S. Using word order, the clausal complement immediately precedes the noun. The clausal complement saves to complete the sense of the head noun Nyamatha boy. The subject complement is then followed by a verb phrase. The noun Nyamatha boy and its complement functions as a subject of the main clause. In (89a) and (90a) the structure is different from that in (88a). In (89a) and (90a) the subject complement is of the form N- Adj. The noun heads, ana children and mombe cows are inserted before the adjectival complements *atatu* three and *zakuda* black. All the two structures serve as subjects in the sentence structure. The c-structure rules for example (88a) and (89a) are given below.

91.   S⟶ NP   VP
               (↑ SUBJ)=↓   ↑ = ↓

       NP   N   S
                ↑ =↓   (↑COMPL)=↓

       VP   V
                ↑ =↓

92.   S ⟶ NP   VP
              (↑SUBJ)=↓   ↑ =↓

NP ⟶ N   AP

      ↑=↓   (↑COMPL)=↓

VP ⟶ V   NP

      ↑=↓   (↑OBJ)=↓
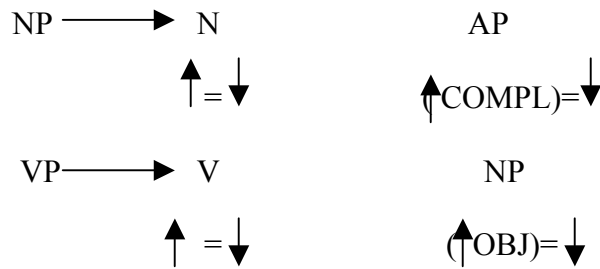
The c- structure or phrase structure rules given above shows that the AP and embedded sentences are complements of the noun heads that they follow.

In (88b), (89b) and (90b) the embedded sentences and phrases have been subjected to the obligatoriness test. Omittion of the clause or phrase is a test to show whether the presents or absence of that clause or phrase is obligatorily required by the predicator. To leave out an obligatory argument renders a structure ungrammatical. In the above sentences omittion of the clauses or phrases do not result in ungrammatical structures. This points to the fact that under obligatory test the AP, AdvP and embedded sentences are not complements.

Rosenbaum (1967) argues that in all types of noun phrase complementation, the noun phrase functions as a single unit under passivisation as well as pseudo cleft formation. Examples (88) and (89) are restructured below under passivisation:

93.   A-mwarir   -a ndi- nyamatha a-   phez -a pakuru
             1a-SM -die-   TV by -boy   1a-SM-get-TV big
             'The one who died is the boy who got big'

94.   Ku -sikuru   kwa   –phit -idw   -a   ndi -ana   atatu
             17-7School   17-SM- went-PASS-TV   by-   children three
             "To the school went three children"

95.   Ku -dhibha kwa -end-edw -a ndi- mombe zakuda
                             17-5-dip   17-SM- go- PASS- TV by-   cows   black
                             'To the dip went black cows'

In the above sentences, the noun phrase complement had been moved to a position after the verb of the main sentence. The subject complement has been moved to a position after the verb and the object promoted to a position before the verb. The fact that the noun phrases moved as a unit shows that it is an example of a subject complement.

Sentences and/ phrases also function as object complements. An object complement is a sentence or phrase embedded as a complement in a noun phrase, which is the direct object of a verb of a main sentence. The noun is the head of this noun phrase complement. The embedded sentence is an obligatory constituent of the head noun and the sentence as a whole. Chakari Nyanja sentences are given below:

96(a)   John ari ndichokwadi kuti *Tariro   a   -bwer -a*
                         1a-John Aux.-has truth COMP 1a-Tariro 1a-SM-came-TV
                         'John has the truth that Tariro came'

 (b)   John   a- r-   i ndichokwadi
                         1a-John 1a-SM-has-TV truth
                         'John has the truth'

97(a)   Mombe ziri   *mu- munda ma-bambo*
                         10-cow   Aux   18-3-field   of father
                         'The cows are in the father's field'

 (b)   Mombe ziri   mu-munda
                         10-cow Aux-are 18-3-field
                          'The cows are in the field'

In example 96(a), the embedded sentence, <u>*Tariro abwera*</u>, is a complement of the noun <u>chokwadi</u> the truth and the sentence as a whole. In example 96(a), the possessive NP,

mabambo of the father, is the complement of the object noun phrase, *mumunda* in the field. Though examples 96(b) and 97(b) are grammatical they are vague. For example the absence of the possessive NP <u>mabambo</u> of the father, leave the reader or listener with a question, whose field? This suggests that the clauses and/ phrases are of importance in the sentences. Under a situation like this, the embedded clause and the phrase are identified as complements. The c-structure rules that hold for the examples above are:

98.　　S　　　　　NP　　　　　　VP
　　　　　　　　（↑SUBJ) =↓　　↑=↓

　　　NP　　　　N　　　　　　(AP)
　　　　　　　↑=↓　　　　（↑COMPL)=↓

　　　VP　　　　V　　　　　　NP
　　　　　　　↑ =↓　　　　（↑OBJ)=↓

99.　　S　　　　　NP　　　　　VP
　　　　　　　　（↑SUBJ)=　　↑=↓

　　　NP　　　N　　　　(S)
　　　　　　↑ =↓　　　（↑COMPL)= ↓

　　　VP　　　V
　　　　　　↑=↓

The c-structure rules in (98) show that (97) is made up of an NP and VP. The NP is made up of an obligatory N and optional AP. C-structure rules in (99) are for example (96). The rules show that the subject NP contains a sentence. A C- structure tree for (90) is given below with functional descriptions.

```
                              S      f1


        (f1 SUBJ)= f2                              f1= f6

              NP                                        VP


    f2 = f3          (f3 COMPL)= f4        f6 =f7          (f6 OBJ)=f8

         N                  AP                  V                  NP


(f3 PRED)= 'N'OMBE'         f4 = f5        (f6 PRED)=            f8 = f9

(f3 NUM)= PLU                 A       'ENDA<(f6 SUBJ)(f6 OBJ)>'        N

 Mombe                                 (f6 SUBJ NUM)= PLU

                                        (f6 PRED TENSE)= PST

                                            zaenda


              (f5 PRED)= 'ZAKUDA'        (f9  PRED)= 'KUDHIBHA'

                (f5 NUM)= PLU              (f9 NUM)= SING

                  zakuda                       kudhibha
```
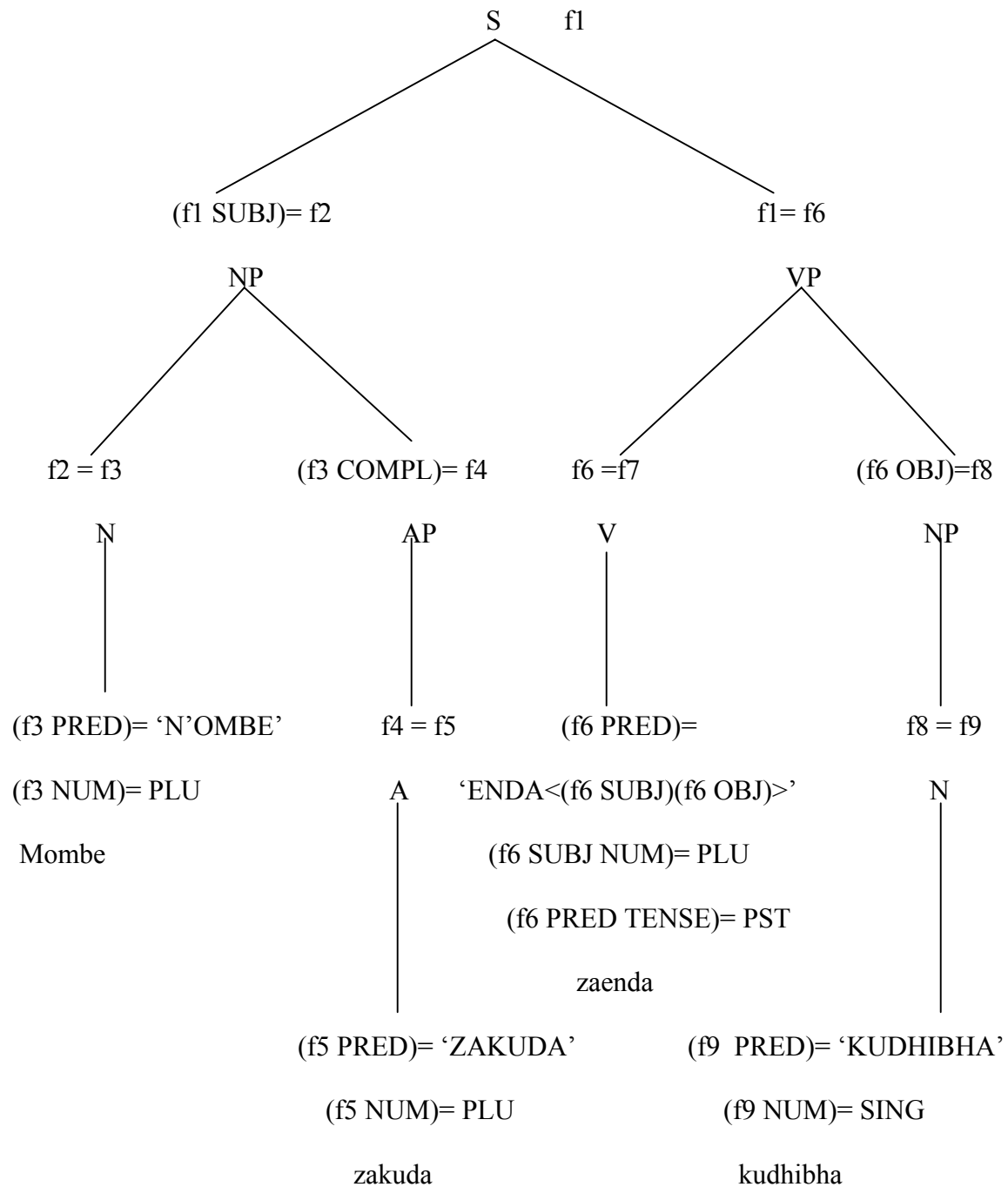
Figure 19: C-structure tree for (90) with functional descriptions

From functional descriptions, f-structures are constructed. An f-structure for (90) is constructed below.
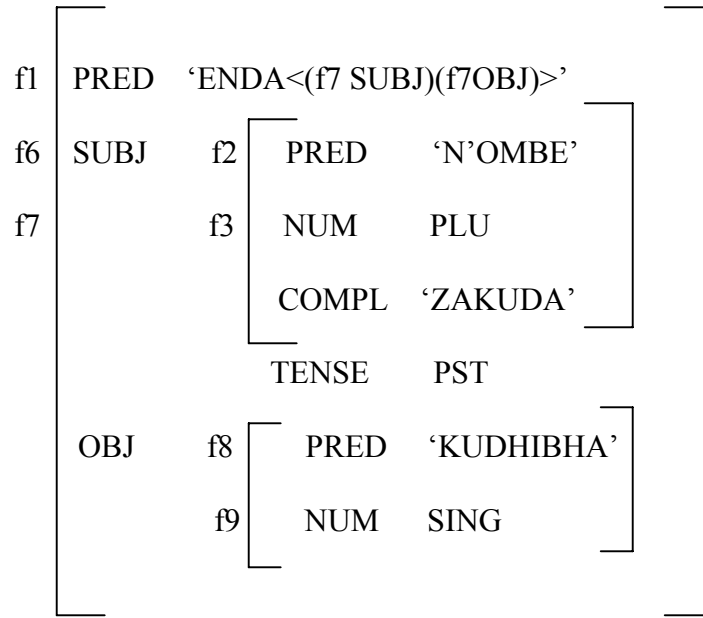
$$
\begin{array}{ll}
\text{f1} & \text{PRED} \quad \text{'ENDA<(f7 SUBJ)(f7OBJ)>'} \\
\text{f6} & \text{SUBJ} \quad \text{f2} \left[\begin{array}{ll} \text{PRED} & \text{'N'OMBE'} \\ \text{f3} \quad \text{NUM} & \text{PLU} \\ \text{COMPL} & \text{'ZAKUDA'} \end{array} \right] \\
\text{f7} & \quad\quad\quad \text{TENSE} \quad \text{PST} \\
& \text{OBJ} \quad \text{f8} \left[\begin{array}{ll} \text{PRED} & \text{'KUDHIBHA'} \\ \text{f9} \quad \text{NUM} & \text{SING} \end{array} \right]
\end{array}
$$

Figure 20: F-structure for (90)

The f-structure above shows the function of syntactic categories in example (90). The adjectival phrase _zakuda_ black is shown to function as a complement of the noun mombe cows. The locative nominal, _kudhibha_ to the dip tank, is shown to function as an object complement.

4.2 Complementarity Scale

In the identification of complements, the researcher has observed that complementation is a matter of degree. In the analysis, the researcher notes that one cannot put NP complement and the AdvP complement on the same level of complementarity. The observation brings us face to face with discreteness and continuity. We cannot draw a line and say this and that makes up a complement. The different tests used in the

identification of complements in Chakari Nyanja rank phrases and clauses on a scale, the complementarity scale. Phrases and clauses are ranked on the basis of the number of tests that they satisfy. Less number of tests satisfied ranks the phrase or clause low on the complementarity scale while high number of parameters ranks the phrase or clause high on the complementarity scale. The AdvP satisfies all but two of the tests. It is identified as a complement in Chakari Nyanja but ranked low on the complementarity scale. The NP satisfied all the tests and has been ranked high on the complementarity scale. The other phrases and clauses that are identified as complements in Chakari Nyanja are given in the table below with the number of tests they satisfied.

In the table below the positive mark (+) indicates that the complement type satisfied the test, the negative mark (-) indicates that it failed to satisfy the test and a question mark (?) indicates that the complement type do not wholly satisfy the test. A prototypical complement is the one that satisfies all the tests. So prototypical complements in Chakari Nyanja have been identified as the NP complement. Other complements lie in the middle.

Parameters (Tests)					
Complement Type	Word order	Obligatoriness	Passivisation	Subcategorisability	Well formedness
NP	+	+	+	+	+
LOC- NP	+	?	?	+	+
AdvP and AP	+	?	_	?	+
Clausal or Sentential	+	+	?	+	+

Table 1. Complementarity scale.

The table serves to show that complementation is a matter of degree. NP complements are high on the complementarity scale and AdvP complements low at the same scale. The next sections will show how these complements are subcategorised and selected.

4.3 Order of Complements

The order of complements in syntax presents a curious paradox. In earlier sections NP complements, locative nominal complements, clausal or sentential complements and adverbial complements have been identified. In instances where two or more complements occur in the same sentence, do they appear haphazardly or there are hierarchically ordered? If there is any hierarchy, is it rigid and does it apply to all complement types? These are some of the questions to be addressed in this section.

Given the above questions, let us consider the following examples:

100a. Ababa a- meny -a *amai* *ku- munda*.
   2a-father 2a-SM-beat -TV 2b-mother 17- 3-field
   'Father beat mother in the field'.

 b. *Ababa a- meny- a ku- munda amai
   2a-father 2a-SM- beat- TV 17- 3-field 2b-mother
   'The father beat the field mother'

101a. Tinto a -dj -a *sima mu-nyumba*.
   Tinto 1a-SM-eat-TV sadza 18-9-house
   'Tinto ate sadza in the house'

 b. *Tinto a- dj- a mu -nyumba sima
   Tinto 1a-SM- eat- TV 18-3-house 5-sadza
   'Tinto ate in the house sadza'

102a Ernest a- ku- puns- is -a *ana* *kuUZ*.
   Ernest 1a-SM-PRES- teach-CAUS-TV 2-children 17-U.Z.
   'Ernest is teaching the children at the U.Z.'

 b. *Ernest a- ku- puns- is- a ku- U.Z ana
   Ernest 1a-SM- PRES- teach- CAUS- TV 17- U.Z 2-children
   'Ernest is teaching at the U.Z the children'

The above three examples contain two types of complements, NP and LOC- NP complements Keyser (1968) notes a general tendency to prevent anything from intervening between a verb and the following noun phrase, the strict adjacency principle. Given the Adjacency Principle, it follows that when a verb subcategorises both an NP and LOC- NP Complement, the NP Complement must precede the LOC- NP complement.

Accordingly, we might argue that verbs such as <u>menya</u> beat; <u>-dja</u> eat and <u>punsisa</u> teach (when used in structures such as the above) should have a lexical entry along the following lines:

103   a.   menya: Categorical features: [+V, -N]

                        Subcategorisation frame: [-NP, LOC-NP…ku…]

        (b)   dja: Categorical features: [+V,-N]

                        Subcategorisation frame: [-NP, LOC-NP… mu…]

        (c)   punsisa: Categorical features: [+V,-N]

                        Subcategorisation frames: [-NP, LOC-NP… ku…]

103 (a-c) above contain information about the relative linear ordering of the verbs, <u>menya</u> beat, <u>-dja</u> eat and <u>punsisa</u> teach and their complements. Thus, (103) specifies that the three verbs [+V] can take both an NP and a LOC-NP complement, +[NP, LOC-NP] and that when it does, verbs occur first, the NP complement occurs after the verbs, and LOC-NP complement occurs last.   These are word order facts, which follow general linearisation principles, which are in part universal and in part language specific.

The adjacency principle shows that there is a rigid hierarchy in the order of NP and LOC-NP complements. In the above examples, the LOC-NP complements have been placed at a position after the verb and the NP complement occurs last. Though the unacceptability might seem marginal, the most acceptable complement order is when the NP complement appear first before the LOC-NP complement. The (b) examples violates the Adjacency Principle and the sentences become ungrammatical.   The ungrammaticality of the

sentences lends strong empirical support to the claim that the NP complement must be strictly adjacent to the verb and that the claim is rigid. A violation of the adjacency principle in Chakari Nyanja results in ill-formed structures. Well-formedness conditions in LFG ensure that there is no violation of the principle.

The Strict Adjacency Principle does not only apply to LOC-NP complements, but it also predicts that when a verb subcategorises both a NP and an S-bar Complement, the NP complement must precede the S-bar complement. There are sentences in Chakari Nyanja that contain an NP and a sentential or clausal complement. Chakari Nyanja sentences are given below:

104a.   John a-   n -e   *chokwadi kuti   Tariro a   -bwer -a*
            John 1a-SM-is-TV   7-truth   COMP Tariro 1a-SM-return-TV
            'John has the truth that Tariro returned.'

  b.   *John a-   n -e   [*kuti Tariro a   -bwer -a]   chokwadi.*
            John   1a-SM-is -TV COMP Tariro 1a-SM-return-TV   5-truth
            'John has that Tariro returned the truth'.

105a.   Zvi   -dabwits -a *Tino kuti   John a   -end -a ku- munda*
            8-SM –amaze- TV Tino COMP John 1a-SM -go -TV 17-3-field
            'It amazed Tino that John went to the field'.

  b.   *Zvi- dabwits -a   [kuti John a-   -end- -a   ku- munda] Tino
            8-SM -amaze -TV COMP John 1a-SM-go- TV 17- 3-field   Tino
            'It amazes that John went to the field Tino'

106a   Nyamatha   a-   uz -a   *atsikana kuti   a   -bwer -e*
            1-boy   1-SM-tell-TV 2-girl   COMP 1-SM-return-TV
            'The boy told the girls to come.'

  b.   *Nyamatha a- -uz   -a   [kuti a-   -bwer -e]   atsikana
            1-boy   1-SM-tell- -TV COMP 1-SM-return- -TV   2-girl
            'The boy told to come the girls'

113

In all the (a) examples above, the NP complements, _chokwadi_ the truth, _Tino_ and _atsikana_ the girls occurs immediately after the verbs <u>ane</u> has, <u>dabwitsa</u> amaze and <u>uza</u> tell. The sentential complement occurs after the NP complements and in the above examples introduced by an overt complementiser <u>kuti</u> that. Hence the examples again give evidence in support of the strict adjacency principle: Thus in sentences where the NP complement and sentential complement occur, the NP complement come first. Violation of the above principle results in ungrammatical as would seem to be suggested by the (b) counterparts (where the bracketed expression are sentential complements).

It is clear, then, that in Chakari Nyanja linearisation principles impose a fixed order in the ordering of NP and sentential complements. A violation of the order or principles results in ungrammatical structures being formed in Chakari Nyanja.

As with LOC-NP and clausal complements, NP complements also precede Adverbial complements when a verb subcategorises both an NP and Adverbial complement. Chakari Nyanja sentences are given below (adverbial complements are in brackets).

107a.   Amai   a-   -ku-   -mang- - a   _tauro [mu-musoro]_ –------- place
           2b-mother 2b-SM-PRES -wear-   -TV   5-doek   17-3-head
           'The mother is wearing a doek on the head'

  b.   *Amai   a-   -ku-   -mang- -a   mu-musoro   tauro
            2b-mother 2b-SM- PRES -wear-   -TV   17-3-head   5-doek
           'The mother is wearing in the head the doek'

108a.   Taulo   a-   -na- -kwatur- -a   _Mary_   [_kudhara_]---------Time
           Taulo   1a-SM-PST- marry- -TV   Mary   long back
            'Taulo married Mary long back'

  b.   *Taulo a-   na- -kwatur- a   kudhara   Mary
           Taulo 1a-SM- PST- marry- TV   long back Mary
           'Taulo married long back Mary'

114

The verbs above subcategorises for an NP and AdvP complement. The NP complement is immediately following the verb and the AdvP complement comes after the NP complement. The subcategorisation frame of the above verbs is as follows:

109.   'Manga' wear: Categorical features [+V, -N]
                    Subcategorisation frame [-NP, AdvP … place…]

       'Ine' has: Categorical features [+V, -N]
                    Subcategorisation frame [-NP, AdvP … time …]

Verbs in the frames above allow two types of complements, NP and AdvP complement. The NP comes before the AdvP complement.

The rule that applied to the LOC-NP and clausal complements also applies to the AdvP complements. A violation of the strict adjacency principle will also result in ungrammatical structures being formed as shown by the ungrammaticality of the (b) counterparts in examples (107) and (108).

The ongoing discussion presents sufficient evidence in favour of the NP complement appearing before other complement types. The order of the NP complement appearing immediately after the verb has been shown to be rigid: to change the order results in ungrammatical structures. This has been shown by ungrammatical structures formed after the LOC-NP, AdvP and clausal complements were fronted or put immediately after the verb.

In sentences where there are LOC-NP and sentential or clausal complements, the clausal complement comes after the LOC-NP complement. Radford (1988) argues that with the LOC-NP and clausal complement, the Clause-Last Principle comes into work. The principle is on the account that an S-bar complement must occur at the right most periphery in languages like Chakari Nyanja. Chakari Nyanja sentences are given below.

110. Abambo a- bwer- -a *ku- hosipitari a- -pheny -a amai*
      2a-father 2a-SM-go- -TV 17-1a-hospital 17-SM-see -TV 2b-mother
      'The father who went to the hospital saw the mother'

111. Atsikana a- -pit- -a *ku-munda kuti a -phik -e sima*
      2-girl 1-SM-return-TV 17-3-field COMP 1-SM-cook-TV 5-sadza
      'The girls returned from the field so that they cook sima'.

The above motion verbs <u>bwer-</u> and <u>phit-</u> categorises for directional LOC-NP complements and clausal complements. Below are subcategorisation frames for (110) and (111).

112.   Bwera: Categorical features: [+V, -N]
     Subcategorisation frame [LOC-NP… ku… S$^{|}$]

     Phita: Categorical features: [+V,-N]
     Subcategorisation frame [LOC-NP-----ku--- S$^{|}$]

The above contains information about the relative linear ordering of the verbs <u>bwera</u> came and <u>phita</u> return and their complements. It is clear that the verbs can take both a LOC-NP and a clausal complement and that the verbs occur first, the LOC-NP complement occurs after the verb and the clausal complement occurs last. Radford (1988)'s Clause-Last Principle concords with the general linearisation or word order in

the subcategorisation frames given above. Given the Clause-Last Principle, which has been satisfied by the above example, it follows that when a verb in Chakari Nyanja subcategorised both a LOC-NP and Clausal complement, the LOC-NP complement must come before the clausal complement and consequently the Clausal complement comes last. This becomes an automatic consequence of an independent restriction in Chakari Nyanja word order. As a restriction, to put the Clausal complement before the LOC-NP complement would be a violation of the Clause-Last Principle and the restriction. Ungrammatical or ill-formed structures are formed as confirmed by the restructured examples below:

113.   ?Abambo a -bwer -a a-   -pheny -a amai   ku- hosipitari
          2a-father 2a-SM-return- TV 2a-SM-see -TV 2b-mother 17-1a-hospital
          'The father who returned saw the mother at the hospital'.

114.   ?Atsikana a-   -pit- -a kuti   a- -pik   -e sima   ku- munda.
           2-girl   1-SM-come- TV COMP 1-SM-cook-TV   5-sadza 17-3-field
          'The girls returned that they cook sima from the field'.

The Clause-Last Principle does not only apply to the LOC-NP complement, but also to the AdvP complement. Thus in Chakari Nyanja, if an AdvP and a Clausal complement occur in the same proposition, the AdvP comes before the Clausal complement. Chakari Nyanja sentences are testimonies of the above claim.

115.   U ka- -phez -a *pakuru u -n -a   gura mabhaghedhe e-chibage*
          1-SM-PRES –get -TV big 1-SM-PRES-TV   buy buckets   of- maize
          'If you get big you buy buckets of maize'

116.   Asekuru a   -na   -kar -a *mu- mthunsi masikati   paribe ari kuita*
          2a-father 2a-SM-PRES-sit –TV 17-3-shade afternoon doing nothing
          'The grandfather sits in the shade in the afternoons doing nothing'

The verbs above, <u>pheza</u> get and <u>kara</u> sit return subcategorises for an AdvP and a Clausal complement. The subcategorisation frames for the above verbs used in sentences like the above are:

117 (a)   pheza: Categorical features: [+V, -N]
                                  Subcategorisation frame: [-AdvP, (S$^|$)]

     (b)   kara: Categorical features: [+V, -N]
                                  Subcategorisation frame: [-AdvP, AdvP, S$^|$]

The subcategorisation frames above contain information about the type of complements allowed by the verbs <u>pheza</u> set and <u>kara</u> sit. Though subcategorisation frames must not contain information on the order of complements, the above frames show the order in which the AdvP and Clausal complement occur in Chakari Nyanja sentences. The stipulation that one complement type precedes the other complement type is redundant, since it follows from independent facts about word order in languages such as English (Radford 1988). However, the order of complements has to be figured out and shown clearly though the information might not be presented in subcategorisation frames. It will be clear that a verb takes a particular complement.

Example (116) and its subcategorisation frame (117b) serve to confirm that the LOC-NP complement occurs before the AdvP complement. In the sentences, (116), *mumthunsi* in the shade is a LOC-NP complement showing the place where the subject is located. It occurs immediately after the verb. The AdvP complement, *masikati* in the afternoons

giving information on the time the subject had done the act specified by the verb occurs after the LOC-NP complement.

Still a question may be asked. How are two or more LOC-NP complements ordered? Revealing the complement system of English, Radford (1988) assets that the relative ordering of the two complements is free. This would seem to be suggested by Chakari Nyanja examples given below.

118(a)   Asekuru   a   -ku -kar- a *[mu-mthunsi] [pa-mpando]*
            2-agrandfather 2a-SM-PRES-sit -TV 17-3-shed   17-3-bench
            'The grandfather is sitting in the shed on the bench'.

 (b)   Asekuru   a   -ku -kar -a *[pa-mpando] [mu-mthunsi]*
            2-agrandfather 2a-SM-PRES-sit–TV   17-3-bench 17-3-shade
            'The grandfather is sitting on the bench in the shed'.

119(a)   Ana   a-   fund -is   -iw   -a   *[ku-nyora] [ku-sikuru]*
            2-children 2-SM-teach-CAUS-PASS-TV   17-write   17-school
            'The children were taught to write at school'.

 (b)   Ana   a-   -fund -is   -iw   -a   *[ku-sikuru] [ku-nyora]*
            2-children 2-SM-teach-CAUS-PASS-TV   17-school   17-write
            'The children were taught at school to write'.

The above verbs <u>kara</u> sit, and <u>fundisa</u> teach subcategorises for two LOC-NP complements. The examples show that though the verbs take the two following LOC-NP complements, there is free ordering in Chakari Nyanja. Hence, a generalisation on the ordering of LOC-NP complements in Chakari Nyanja may be that the relative ordering of LOC-NP complements is free. C- structure trees are drawn showing the order of the two LOC-NP complements in Chakari Nyanja.
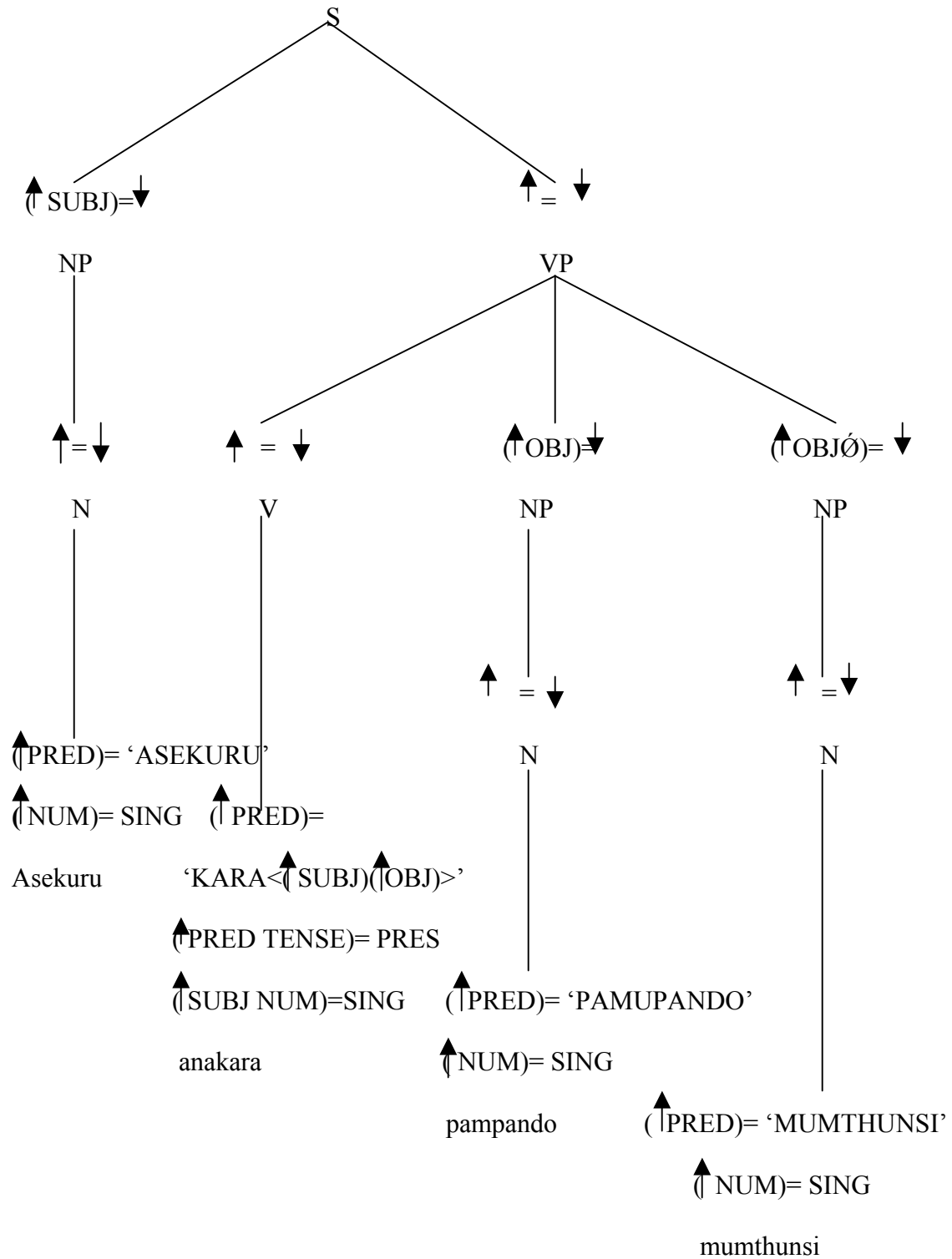
S

(↑SUBJ)=↓   ↑=↓

NP   VP

↑=↓   ↑=↓   (↑OBJ)=↓   (↑OBJǾ)=↓

N   V   NP   NP

                      ↑=↓   ↑=↓

(↑PRED)= 'ASEKURU'   N   N

(↑NUM)= SING   (↑PRED)=

Asekuru   'KARA<(↑SUBJ)(↑OBJ)>'

               (↑PRED TENSE)= PRES

               (↑SUBJ NUM)=SING   (↑PRED)= 'PAMUPANDO'

               anakara   (↑NUM)= SING

                                  pampando   (↑PRED)= 'MUMTHUNSI'

                                                     (↑NUM)= SING

                                                     mumthunsi

Figure 21: C-structure tree for 118(b)

S

(↑SUBJ)=↓   ↑=↓

NP   VP

↑=↓   ↑=↓   (↑OBJ)=↓   (↑OBJÓ)=↓

                 V   NP   NP

                            ↑=↓   ↑=↓

(↑PRED)= 'ASEKURU (↑PRED)=

(↑NUM)= SING   'KARA<(↑SUBJ)(↑OBJ)>'   N   N

Asekuru   (↑SUBJ NUM)= SING

                (↑PRED TENSE)= PRES

                anakara   (↑PRED)= 'MUMTHUNSI'

                                    (↑NUM)= SING

                                    mumthunsi   (↑PRED)= 'PAMPANDO'

                                                     (↑NUM)= SING

                                                     pampando
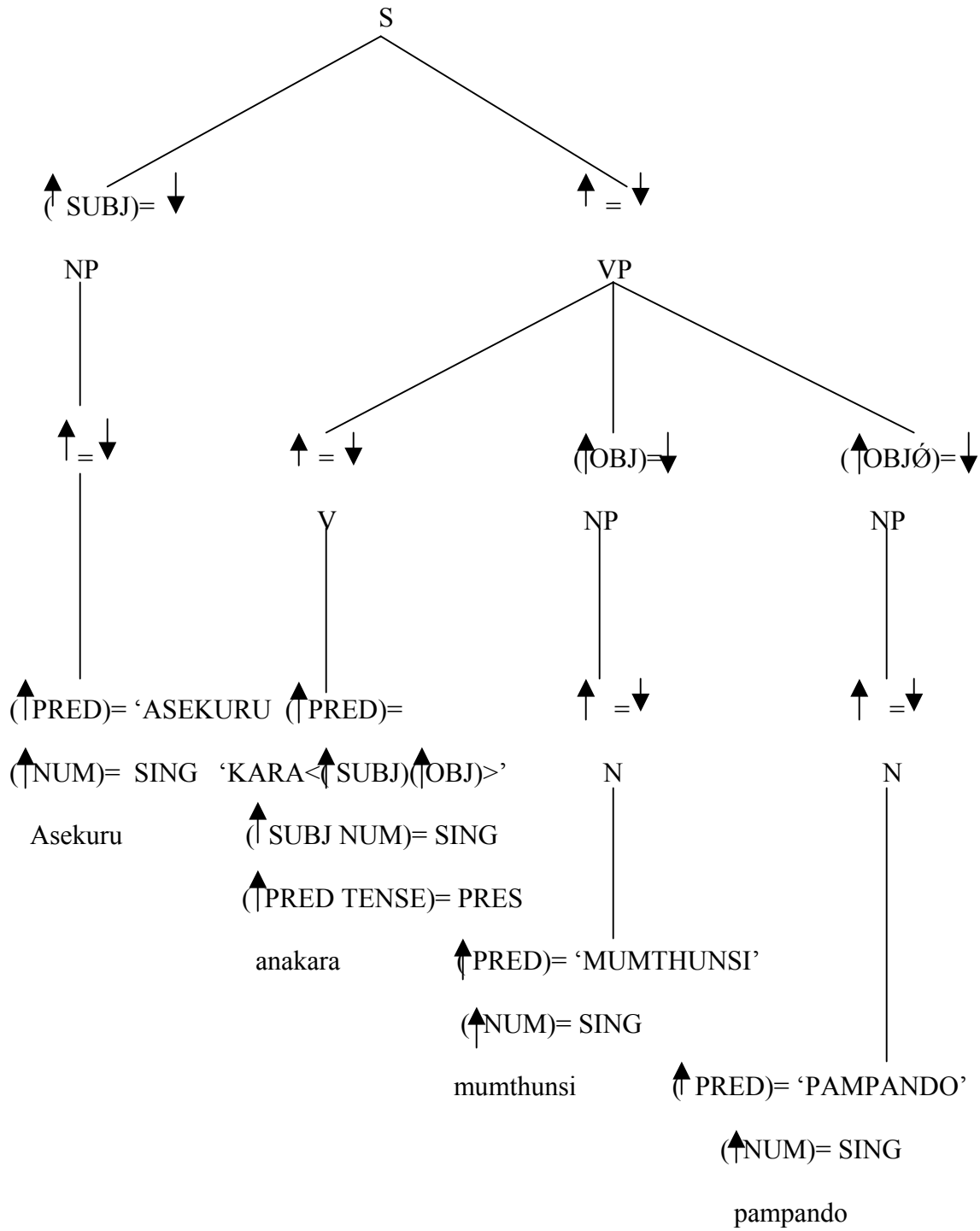
Figure 22: C-structure tree for 118(a)

The diagram shows that all the two LOC-NP complements are directly under the VP node and sisters to the V node. In 118(a) the LOC-NP complement *mumthunsi* in the shed is adjacent to the verb and the LOC-NP complement *pampando* on the bench comes after. However, the tree diagram for 118(b) shows that though the two LOC-NP complements and V are sisters, the LOC-NP complement *pampando* on the bench, is adjacent to the verb and *mumthunsi* in the shed comes last. Evidence from the trees saves to substantiate what have been revealed earlier in examples (118 to 119). There is free ordering of LOC-NP Complements in Chakari Nyanja.

The ongoing discussion on the ordering of complements in Chakari Nyanja is of valuable importance in the analysis of complements in general and in the ordering of complements in particular. It has been shown clearly that complement ordering is not an idiosyncratic property of particular lexical items, but the type of a complement. Hence subcategorisation frames had only to show or give, idiosyncratic information of a lexical item. The relative position of the verb or predicate with respect to its complements or of the complements with respect to each other is not specified in subcategorisation frames since such word-order principles are predictable from more general principles. Important facts about Chakari Nyanja complements have been unveiled.

4.4 Summary

The researcher had identified complements, analysed how there are distributed in Chakari Nyanja. It has been shown that in Chakari Nyanja there are verb complements. Noun phrases, adverbial phrases and embedded sentences function as complements to verbs in

Chakari Nyanja. Apart from verbs, nouns have been noted to function as predicates in Chakari Nyanja sentences. Adjectival phrases and embedded sentences function as complements to nouns. The identification of complements has been carried out in the LFG framework in which five methods were employed. Thus a phrase, clause or sentence is regarded as a complement to a predicate if and only if it passes four of the identification methods. For example, the adverbial complements of time, degree and manner failed to pass the passivisation test but partially satisfied all other methods. This then entails that these adverbs are complements in Chakari Nyanja.

Complements have shown to play a wide variety of roles in syntactic structures. Apart from being complements, NP and LOC-NP complements have been shown to function as objects and subjects in sentences. Clausal or sentential complements may also be subjects after the passivisation rule has been applied. AdvP complements have been shown to be a different type of complement. AdvP complements cannot be subjects or objects in sentence structures.

There is order in the appearance of complements in sentence structures. In all cases, the NP complement comes first, adjacent to the predicate followed by the LOC-NP complement. With the Clause Last Principle at work, the clausal complement has been shown to be the last to appear or to occur in the syntax of complements in Chakari Nyanja. In the case of two LOC-NP complements, the relative free ordering has been unveiled in Chakari Nyanja. However, information on the relative ordering of complements is not included in subcategorisation frames. Only idiosyncratic information

is put in subcategorisation frames. The relative ordering of complements is not an idiosyncratic property of lexical items, but language specific or syntactic category specific.

Chapter Five

Subcategorisation and Selection

5.0 Introduction

The last chapter identified and analysed how complements are distributed in Chakari Nyanja. It has identified five types of complements, shown that there is a degree of complementation and that complements may also function as subjects and objects.

This chapter sets to analyse how complements are subcategorized and selected. Subcategorisation is looked at in the Lexical Functional Grammar framework. Lexical Mapping Theory, a sub- theory of LFG is used to show how complements are selected.

The chapter is divided into three sections. The first section is the Subcategorisation of complements. This section will be looking at the number of complements a verb takes. The second section is the selection of complements. In this section the researcher looks at how complements are selected and linked to thematic roles. The last section is the summary.

5.1 Subcategorisation of Complements

Subcategorisation, as earlier noted in section 2.4, is concerned with the lexical specification of a predicate's local phrasal context. In general this specification involves reference to the semantic arguments of the predicate. For example the verb -dja eat

subcategorises for two noun phrases. Semantically it can be characterised as the set of all participant pairs which stand in the <u>kudyiwa</u> eating relation. Hence it is concerned with the specification of phrases, which are in the local context of a predicate because they are selected by the predicate syntactically. Because of the importance of semantic selection in subcategorisation, LFG frame work which do not include a level of semantic representation provide a level of linguistic description which expresses the semantic argument structure of predicates in syntactic terms. As the name alludes, the notion of grammatical functions occupies a central role in determining which of the arguments semantically selected by a predicate are syntactically realised and how. The requirements of a predicate to take a category or categories of a particular type as its complements constitute subcategorisation (Aarts, 1997).

Grammatical relations are associations of grammatical functions with thematic roles or with non-thematic roles. These associations are encoded in the lexicon where each verb is represented as a lexical form consisting of a predicate argument structure and a grammatical function assignment. The predicate argument structure of a lexical form is a list of the arguments for which there are selectional restrictions. The grammatical function assignment of a lexical form is a list of its syntactically subcategorised functions.

Bresnan (1982) argues that information on subcategorisation is represented in form of PAS in LFG. PAS have the following form:

Predicate

120   Predicate Argument Structure (PAS): <1 2>

        Grammatical Function (GF) Assignment: (SUBJ, OBJ, COMPL etc)

        Lexical form: Agent, Patient, and Beneficiary etc

The PAS gives the number of arguments allowed by a particular predicate. An argument is an NP bearing a specific grammatical or semantic relation to a verb and whose overt or implied presence is required for well- formedness in structures containing that verb (Trask, 1993). These grammatical function lists serve as subcategorisation frames giving us information about the kind of complements, which a given lexical item allows. The most fundamental requirement of all lexical entries is that we should minimise redundancy (Radford 1988). Chomsky (1965) notes that 'only properties of a formative that are essentially idiosyncratic will be specified in the lexicon'. In LFG, complements are subcategorisable functions, meaning they are idiosyncratic properties of formatives.

A schematic picture of the grammatical functions in LFG framework is given in Table 2

GRAMMATICAL FUNCTIONS		
SUBCATEGORISABLE		**NONSUBCATEGORISABLE**
Unrestricted	Restricted	ADS (Controlled from within)
SUBJ	OBL	XADS (Controlled from without)
OBL	COMPL (Controlled from within)	
OBJǾ	X COMPL (controlled from without)	
TOPIC FOCUS		

Table 2. Grammatical Functions in LFG

The table has been restructured here showing subcategorisable and non-subcategorisable grammatical functions. Noun phrases, prepositional phrases and sentences that have been identified are subcategorisable grammatical functions. Chakari Nyanja sentences are reproduced below:

121.   Ababa   a- meny- a   *amai*
          2a-Father 2a-SM-beat- TV 2b-mother
          'The father beat the mother'

122.   Nyamatha a- phit -a   *ku -sikuru*
                1-boy   1-SM-go-TV   17-5-school
                'The boy went to school'

123.   Amai   a-   ku-   mang –a *tauro*
                2b-Mother 2b-SM-PRES-wear- TV 5-doek
                'The mother is wearing a doek'

Each lexical item imposes certain requirements upon the phrases to which it stands in a semantic or grammatical relation, its arguments or complements. Subcategorisation and selection encode these requirements (Grimshaw, 1979). The grammatical function lists of the above sentences are as follows: -

                    'Menya' beat

124.   Predicate Argument Structure: <1 2>
                 Grammatical Function Assignment: (SUBJ), (OBJ)
                 Lexical form   menya: Agent   Patient
                                            SUBJ   OBJ

                    'Phita' return

125.   Predicate Argument Structure: <1   2>
                 Grammatical Function Assignment; (SUBJ), (OBJ)
                 Lexical form   phita: Theme   Goal
                                         SUBJ   OBJ

                    'Manga' wear

126.   Predicate Argument Structure: <1   2   3>
                 Grammatical Functions:(SUBJ), (OBJ), (OBJǾ)
                 Lexical form   manga: Agent Patient Locative
                                          SUBJ   OBJ   OBJǾ

The predicate argument structure (PAS) of the verbs above indicates the number of arguments they take with a variable corresponding to each argument. The identified complements are subcategorisable grammatical functions as shown in the frames above. Violation of the requirements of a lexical item will render a sentence ill formed. Grimshaw (1992) points out that standard examples include omission of an obligatory argument or occurrence of the wrong kind of argument.

The assignment of functions is subject to a number of universal conditions. For example, all nomadic predicates are assigned a SUBJ, and all dyadic predicates are assigned a SUBJ and an OBJ. A very important condition on grammatical function assignment is the Biuniqueness of function argument assignments. It establishes a one-to-one relation between grammatical functions and arguments within the PAS of a lexical form (Bresnan 1982:163). As a result, subcategorised function may differ with respect to the range of argument types with which they can be associated.

Rappaport (1983) notes that, grammatical functions which are not inherently tied to specific selectional restrictions are semantically unrestricted while those which can be paired with arguments of specific semantic types are semantically restricted. He further notes that the subject function can be linked to any thematic role and can also occur as a non-thematic function when encoding the subject-subcategorisation of raising verbs such as 'seem' and 'appear' (in English) and are generally more sensitive to selectional restrictions. In (124) above the verb 'menya' beat, takes two participants, the one doing the action of beating (Agent) and the one receiving the action (patient). The agent is

assigned to the subject argument and the patient to the object, argument?[19] This satisfies the argument that each variable in the PAS be evaluated by checking its correspondence to a syntactic constituent of the appropriate sort (Chomsky 1981). Subcategorisation is checked in functional structure for completeness and coherence (Kaplan and Bresnan 1982).

Completeness ensures that all subcategorised arguments are present in the functional structure, for example, it rules out sentences like *Baba amenya, the father beat, *aphita kusikuru went to school. Coherence restricts the occurrence of subcategorisable grammatical functions to those listed in the predicate's Lexical form, for example, it rules out sentences like *Zvidabwitsa kuti John muntu. It will be amazing that John is a person, *Taulo arikupunzira Tinto. Taulo is learning for Tinto.

Completeness and coherence conditions refer crucially to subcategorisation and selection information and since it is formulated in terms of grammatical functions (GF), they can be satisfied by a well-formed f-structure. Completeness and Coherence conditions have been used in the identification of complements in Chakari Nyanja. Noun Phrases, adverbial phrases and embedded sentences have been identified as complements in Chakari Nyanja using these conditions.

The following section will show how complements are selected in Chakari Nyanja. It will be shown that the predicate do not only selects a complement of a particular syntactic form, but rather for complements of a particular semantic type.

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[19] The assignment of theta roles is looked at under Lexical Mapping Theory

5.2 Selection of complements

Lexical representation must include a specification of how each corresponding NP argument is assigned its theta role (Rappaport and Levin, 1988). Instead of positing rules that explicitly change grammatical functions, LFG has been proposed to treat the phenomenon of grammatical change as consisting of rules and principles responsible for linking of the semantic roles with the grammatical functions, this comprise the theory of lexical mapping, as sub theory of LFG (Mchombo, 1993). It recognises the essence of semantic roles in linguistic theory

In example (124) and (125), the verbs <u>menya</u> beat and <u>phita</u> return, take two thematic roles, Agent and Patient, Theme and Goal respectively. It has been noted in chapter three that in the thematic hierarchy the role that is higher on the hierarchy takes precedence over the next role for such purposes as subjecthood in active sentences. In other words the role patient cannot have precedence over the role agent, as it is lower on the hierarchy (Kangira 2001). The agent role is higher than patient on the hierarchy as a result in (121), <u>baba </u>father is intrinsically assigned (IC) to the subject function and *<u>amai</u>* mother to the object function. In the case of a locative nominal phrase, the locative prefix assigns the thematic role to its complement. Matambirofa (2003) notes that prefixes also function as predicates. Chakari Nyanja sentences are given below:

127.　　　　Taulo　　a-　pfur- a　*kanyoni　mthunsi*
　　　　　　1a-Taulo　1a-SM-shoot-TV　12-bird　　18-3-tree
　　　　　　'Taulo shot the bird in the tree'

128.　　　　Taulo　　a-　　nyamur- a　*kanyoni　mdzenje*
　　　　　　1a-Taulo 1a-SM- take-　TV 12-bird　18 –5-pit
　　　　　　Taulo took the bird from the pit'.

The verb *pfura* shot has three arguments and thematic roles. The verb assigns the thematic role agent to the subject Taulo with the features [-r,+o] and patient to the direct object complement *kanyoni* bird with the features [-r,+o]. The locative nominal *mthunsi* tree is an object complement of *kanyoni* bird and the sentence as a whole. Hence, the locative nominal phrase as a whole is an indirect object of the verb *pfura* shoot. Example (128) has the following lexical representation or subcategorisation frame.

'nyamura' take

129.　Predicate argument structure: <1　2　3>

　　　Grammatical function assignment; (SUBJ), (OBJ), (OBJǾ)

　　　Lexical form: nyamura 'take' Agent　　Patient　　　Locative
　　　　　　　　　　　　　　　　SUBJ　　OBJ　　OBJǾ

As shown by the subcategorisation frame above, the verb nyamura "take" selects three thematic roles and assigns (IC) them to NP arguments in syntax. Though the verb selects three thematic roles, it only assigns two, the Agent and patient, to grammatical functions. The verb can intrinsically assign more than three thematic roles or a thematic role to its sisters. Chakari Nyanja sentences are given below.

130.　　　　　　　Kanyoni ka-　　ku　-kar -a　*mu- mthunsi*
　　　　　　　　　12-bird　　12-SM- PRES-sit-　TV　　18-3-tree
　　　　　　　　　"The bird in sitting in the tree".

131.　　　　　　　 Atsikana　　a-　　end- a　*ku-munda*
　　　　　　　　　2-girl　　　1-SM -go- TV　　17 –3-field
　　　　　　　　　"The girls went to the field".

The subcategorisation frames for the two verbs in 130 and 131 are:

'Kara' sit

132.　　　　　　　Predicate argument structure: <1　2>

　　　　　　　　　Grammatical function assignments: (SUBJ), (OBJ)

　　　　　　　　　Lexical form:　kara 'sit'　　　Agent　　　　Location
　　　　　　　　　　　　　　　　　　SUBJ　　　　OBJ

'Enda' go

133.   Predicate argument structure: <1   2>

                           Grammatical function assignment: (SUBJ), (OBJ)

                           Lexical form: enda 'go'   Theme   Goal

                                                        SUBJ   OBJ

The verbs <u>kara</u> sit and <u>enda</u> go have two arguments, NP and locative NP. The arguments have thematic roles Agent and Locative, Theme and Goal respectively. They are intrinsically assigned (IC) to the grammatical functions subject and object complement. A table showing the linking of thematic roles and syntactic functions is given below.

Predicate Argument Structure

Predicate	Argument 1	Argument 2
-menya- -kara- -enda-	Baba [agent] Kanyoni [agent] Atsikana [theme]	amai [patient] mumthunsi [locative] kumunda [goal]

Table 3: Argument Selection

The table shows the thematic roles selected by the verbs, <u>menya</u> beat, <u>kara</u> sit, and <u>enda</u> go. The features [± r] and [±o] in LMT links thematic roles with grammatical functions. The highest thematic role on the hierarchy with the feature [-r] is assigned the subject function and the remaining high thematic role with feature [+o] is assigned the object function. A table showing the function of the phrases above is given below.

Functional Structure

Predicate	Argument 1	Argument 2
-menya- -kara- -enda-	Baba [subject] Kanyoni [subject] Atsikana [subject]	amai [object] mumthunsi [object] kumunda [object]

Table 4: Function of phrases in sentence structure

Table 3 shows that the verb <u>menya</u> beat takes two thematic roles, agent and patient and table 4 shows that the same verb takes the functions, subject and object. The subject condition requires every sentence to have a subject. The agent role has the feature [-r] and high on the hierarchy is assigned the subject function. The patient role has the feature [+o] and is the remaining role on the hierarchy is assigned the object function. The thematic roles agent and patient have been assigned to the functions subject and object. The same applies to the verbs <u>kara</u> sit and <u>enda</u> go which have the thematic roles agent and locative, theme and goal in table 3. The highest role on the hierarchy with the feature[-r] has been assigned the subject function and the remaining role with the feature [+o] has been assigned the object function.

Haegeman (1991) postulates that, observation advanced in the literature is for treating subject arguments as different from object arguments. The role assigned to subject is assigned compositionally. Thus, it is determined by the semantics of the verb and the other verb phrase constituents. Below are Chakari Nyanja sentences.

134.   Anyani   a-   na- phwany -a   *damba*   <Agent>
              2-baboons 2-SM-PST- break- TV   5-fruit
              'The baboons broke a fruit'

135.   Anyani   a-   na -pwany -ik-   a   <u>makumbo</u>   <Patient>
              2-baboons 2-SM-PST-brake-NEUT TV 6-legs
              'The baboons broke legs.'

Examples (134) and (135) have the verb, <u>phwanya</u> break and noun phrase subject *Anyani* baboons. In (134), the object noun phrase is *damba* fruit. In (134) the verb <u>phwanya</u> break takes an Agent subject and in (135), the verb takes a Patient subject. The changes

in the thematic role of the subject noun phrase shows that the choice of the object affects the theta role of the subject while the choice of the subject does not affect the theta role of the object. The question one might ask is, what is the thematic role assigned to the Adverbial Phrase (AdvP) complements? In Chakari, Nyanja speakers observe time at which something happens, the manner in which it happens and the degree of action. There are lexical items, which are used to refer to time, manner and degree in Chakari Nyanja. These lexical items function as complements to verbs. The verb assigns thematic roles on the different types of adverbs. Examples are reproduced below:

136.   Mamuna   a-   na- kan -idw-   a *dzuro*   Time
        1-men   1-SM-PST-beat-PASS –   TV yesterday
        'The men was beaten yesterday'

137.   Ni- na -badur-idw   -a   *muno*   Place
        SM-PST-born- PASS -TV   here
        'I was born here'

The adverbial phrases *dzuro* yesterday and *muno* here is evidence of controversy on the number and hierarchy of thematic roles. In Chakari Nyanja, the adverbs are arguments to the verbs, giving information on the time and place of action. The AdvP of place is assigned the locative role and what about the adverbial phrase of time, manner and degree? They are thematic roles of time, manner and degree, are assigned (IC) to arguments of verbs in Chakari Nyanja. The grammatical function list of (112) is given below.

'Kanedwa' beaten

138.   Predicate argument structure: <1   2>
            Grammatical function assignment: (SUBJ, Adv. COMPL)
            Lexical form: kanedwa   Patient   Time
                                SUBJ   Adv. COMPL

This list shows that the predicate selects two theta roles, Patient and Time and grammatical functions subjects and adverbial complement. I suggest that time and other adverbs of manner and degree be realised as a thematic roles.

Auxiliary verbs have been defined as verbs that cannot stand on their own. In most cases (in a number of languages) they are attached to have a fuller meaning. Apart from this they function as any other verbs. Haegmen (1991) notes, "Though morphologically like verbs in that they are inflected for tense, number and person, they do not assign any theta roles of their own." What assigns theta roles in a sentence where the auxiliary is the only verb? Mugari (2003) argues that in such a scenario, the adjective and /or any other predicate assigns theta roles to categories or arguments in Shona. Chakari Nyanja sentences are as follows:

139.   Nyamatha   a- r- i   *mu-nyumba*
                            1-boy   1-SM-is-TV   18-3-house
                            'The boy is in the house'

                            ari   <Agent/Theme   Locative>
                                    SUBJ   OBJ

The auxiliary verb ari is, in the above example takes two theta roles, which are assigned, to the arguments, *Nyamatha* boy and *munyumba* in the house. The auxiliary is the predicate in the sentence. There is no adjective or other predicate that can assign thematic

roles. It is then clear from the example that the auxiliary verb <u>ari</u> is intrinsically assigns (IC) thematic roles to the arguments *Nyamatha* boy and *munyumba* in the house. Hence, in Chakari Nyanja, the auxiliary verb as a predicate assigns thematic roles.

How are roles assigned after syntactic rules such as passivisation rule has applied? It is important to note that prior to passivisation, the patient and agent roles of the verbs such as <u>menya</u> beat are intrinsically associated with partially specified grammatical functions as shown below.
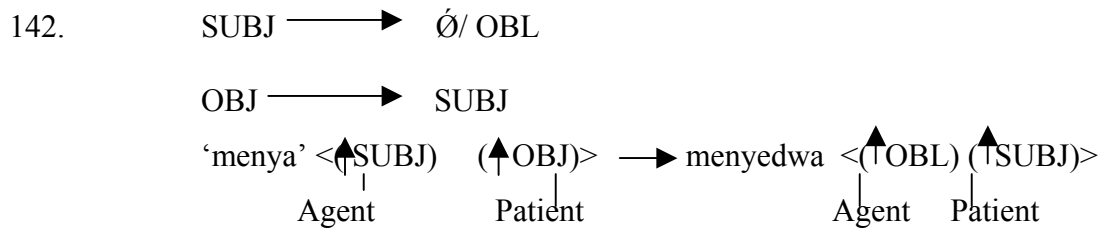
140.   Anyani   a-   meny- a *nyamatha*
                             2-baboons 2-SM- beat -TV 1- boy
                             'The baboons beat the boy'

                             menya 'beat' <Agent   Patient>
                                            SUBJ   OBJ

Example (140) is repeated below as (141) after the passivisation rule has been applied. Passivisation has been defined in earlier sections as the promotion of the direct object to the subject position and the relegation of the subject to the oblique position.

141.   Nyamatha a-   -meny- edw   -a   ndi- anyani
                             1-boy   1-SM-beat- PASS- TV by- 2-baboons
                             'The boy was beaten by the baboons'

                             menyedwa 'beaten' <Patient   Agent>
                                                  SUBJ   OBL

When passive applies to the predicate argument structure in (141), the agent role acquires the specification [+r], which in conjunction with [-r] defines an oblique function. The agent role of a passive verb is thus realised as an oblique complement, while the patient can be either subject or object. Well formedness constraints induced by the subject

condition require that the subject option be chosen under such a situation. The subject condition requires every lexical form to have a subject. Example (142) below provides a schematic representation of the passivisation rule as a whole.

142.   SUBJ ⟶ Ǿ/ OBL

OBJ ⟶ SUBJ

'menya' <(↑SUBJ) (↑OBJ)> ⟶ menyedwa <(↑OBL) (↑SUBJ)>
         Agent   Patient   Agent   Patient

The highest thematic role agent has been suppressed and relegated to an oblique position and the thematic role patient remains the highest on the hierarchy. Well formedness condition assigns the patient role the subject function.

5.3 Summary

Subcategorisation has been shown to refer to the further sub classification of syntactic categories. Subcategorisation frames save to give information on the type of complements allowed by a particular verb or predicate. Only idiosyncratic information of a particular lexical item is given in subcategorisation frames. Transitive verbs have been shown to allow a following NP complement, LOC-NP complement, AdvP complement and sentential complement. Intransitive verbs or verbs of motion allow all other types of complement except the NP and sentential complements.

Selection has shown that predicates impose different selectional restrictions on the choice of complements. It represents semantic requirements imposed on arguments. Grammatical functions and arguments structures have been linked through linking

principles. The predicate have been shown to be of crucial importance in the selection and mapping of arguments onto grammatical functions. The roles have been mapped on the basis of significance or importance. It has also been shown that on the basis of their intrinsic classification, some roles are excluded from association with certain grammatical functions. These assignments are decomposed into two binary features, [± r] and [± o] to yield four possible combinations of values. There are three ways in which these values of features are assigned. These are Intrinsic Classification, Morpholexical rule and Default Classification.

The predicate has been argued to assign roles to its arguments. However, the role assigned to subject is assigned compositionally. Thus, it is determined by the semantics of the verb and the other verb phrase constituents. Shedding light on the controversy that surrounds the number of thematic roles, the researcher suggests that the adverbial phrases of manner, time and place be realized as thematic roles

It has been shown that in sentences with the auxiliary verb as the only predicate, the auxiliary verb assigns theta roles to lexical items. Subcategorisation frames with information on the number and type of complements taken by a particular auxiliary verb have been shown. This suggests that in Chakari Nyanja auxiliary verbs have been shown to select, assign and subcategorise lexical items.

The next is the conclusion. In this chapter, arguments raised will be rounded up and suggestions given. Findings and observations made are given. It also shows the

importance of engaging Lexical Functional Grammar (LFG) and its sub- theory, Lexical

Mapping Theory (LMT) and their shortcomings if any.

Chapter Six

This study set out to analyze complementation in Chakari Nyanja. The main objective was to identify, analyze how they are selected, subcategorised and distributed through the provision of Lexical Functional Grammar (LFG) theory and its sub-theory Lexical Mapping Theory (LMT). It was a study based on a language encompassing speakers from invariably different ethnic backgrounds. In the process of unveiling the notion complementation in this language, vital observations were made and conclusions reached in the previous chapters.

Literature has shown that the distinction between an adjunct and a complement is not clear-cut. A number of tests have been carried out to make this distinction. The tests are within the theoretical framework, LFG. It has been shown that LFG can be used in the identification of complements and their analysis in terms of their subcategorisation, selection and distribution. The constituent structure has been used to identify different phrasal categories. The functional structure has been used to show the function of these phrases and clauses in syntactic structures. It has been demonstrated that well-formedness conditions in LFG clear all irregularities. The completeness condition made sure that all arguments subcategorized by a predicate are present. Complements are arguments of predicates they complete. Phrases and clauses that are not arguments are not complements. The bi-uniqueness condition ensured that there is one to one relation between arguments and phrases. Thus it ruled out ungrammatical sentences.

Five types of complements have been identified in Chakari Nyanja, namely, NP, LOC-NP, AdvP, AP and clausal complements. Nouns, verbs and prepositions have been shown to function as predicates in Chakari Nyanja. Noun phrases have been shown to complete the sense of verbs. Thus NPs that follow the verb and LOC-NP in Chakari Nyanja have been identified as complements. The LOC-NP has also been shown to function as a complement to verbs and nouns. The LOC-NP has been shown to save two functions in syntactic structure: to show direction of the course of action and the place of action or activity. Clauses have been shown to function as complements to verbs, nouns and prepositional phrases. A covert or overt complementiser either introduces clausal complements in Chakari Nyanja. Thus Chakari Nyanja exhibits open and closed complements. Infinite is also a feature of some clausal complements in Chakari Nyanja. The adjectival phrase has also been identified as a complement to nouns in Chakari Nyanja. Lastly the Adverbial phrase has been identified as a complement to verbs. The adverbial phrase has been shown to indicate, place, manner, time and degree of the action specified by the verb.

The adverbial complement evoked the suggestion that there is a complementarity scale in Chakari Nyanja. The number of tests measured the degree of complementarity that a phrase or clause satisfied. The tests are obligatory, subcategorisability, passivisation, word order and well formedness. The tests have been taken as parameters for the identification of complements in Chakari Nyanja. Phrases or clauses that satisfied or have more of these parameters have been described as being more definite (complement) than those which satisfied less of these tests or parameters. A prototypical complement

satisfied all the tests or have all the parameters while a prototypical non-complement satisfied none of the tests or have none of the parameters. To come up with a continuum, it has been shown that complements or phrases have varying degrees of complementarity depending on the number of parameters they have. Noun phrase complements are high on the complementarity scale satisfying all the tests. The LOC-NP and clausal complements are in between the poles while the adverbial phrase was ranked low at the complementarity scale. The distinction between complement and non-complement phrases or clauses has not been clear-cut in literature or among syntacticians. Distinguishing adjuncts from complements is evidence of the problem that have been nurtured in linguistics. The suggestion of a complementarity scale as with Hopper and Thompson's (1980) Transitivity scale might heal the sole in the distinction of complements from non-complements. It should be noted that the complementarity scale goes a step further in the identification of complements. It is beyond the proposed theoretical framework, LFG and its sub- theory, LMT. I then suggest that to have a fuller exploration of complementation, LFG should be used in conjunction with complementarity theory (scale) that suggests that complementarity is a matter of degree.

The study has also focused on how complements are subcategorised and selected in Chakari Nyanja. Complements have been shown to be subcategorisable functions. Subcategorisation frames have been used to show the idiosyncratic information of a particular lexical item. These subcategorisation frames have been used to give information on the type, and number of complements allowed by a particular predicate.

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The completeness and coherence conditions have been argued to refer crucially to subcategorisation information.

Lexical Mapping Theory (LMT), a sub theory of LFG, has been used to show how complements are selected in Chakari Nyanja. Rules and principles in this theory have been used to link semantic roles with grammatical functions. Syntactic functions have been decomposed in terms of features [+/-r] and [+/-o]. The features have been used to describe grammatical functions. Verbs, auxiliary verbs and prepositions have been argued to assign theta roles to their complements in Chakari Nyanja. The argument with the features [-o] and [-r] was assigned to subject while the one with [+o] and [-r] was assigned to the object complement. A clausal complement has the features [+r] and [+o]. After the passive rule, the highest role on the thematic hierarchy acquires the specification (+r] which in conjunction with [-o] defines an oblique function. It has been shown that well formedness constraints induced by the subject condition require every lexical form to have a subject. After the highest role has been deleted or realised as an oblique function the remaining highest role is intrinsically assigned the subject function.

The analysis of Chakari Nyanja data has shown that complements may function as subjects and objects in syntactic structures. However, it has been noted that not all complements satisfy these functions. NP, and LOC-NP complements may function as both subjects and objects in Chakari Nyanja. Sentential complements can be subjects, though they carry the feature [+r]. Adverbial phrases serve no other function apart from being complements.

There is order in the appearance of complements in Chakari Nyanja sentence structures. The NP complement come first, adjacent to the predicate followed by the LOC-NP, then the AdvP and lastly the clausal complement. When there are more LOC-NP complements in the same sentence, there is free ordering. Information on the ordering of these complements was not included in subcategorisation frames. This was done on the basis that only idiosyncratic information of a lexical item is included in subcategorisation frames.

This study puts an indelible mark on linguistics in general and Chakari Nyanja in particular. Laid investigations and suggestions are of vital contributions in the exploration of the notion complementation. The theory, LFG, has been shown to be of vital importance in the analysis of the aspect complementation. The study also invokes further research in Chakari Nyanja and other minority languages.

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Appendices

I. Questionnaire

1. Would you like to narrate a short Nyanja folktale or a poem?

2. Describe some of the culture practices of the Nyanja people in this area.

3. How has Nyanja been influenced by other languages such as Shona?

4. How long have you been in this country?

5. Do you often visit your relatives back home?

6. Tell me about your social life here in Chakari.

7. What do you think must be done to raise the status of Nyanja in this country?

8. What do you think about the educational policy that restricts the use of Nyanja as a medium of communication in schools?

9. Tell me about the history of the Nyanja people in Zimbabwe.

II. Sample of Chakari Nyanja Sentences

Amai aphika sima 'Mother cooked sadza'

Ababa amenya amai 'Father beat mother'

Mbavha yaba mbuzi 'The thief stole a goat'

Amai akamanga tauro mumsoro 'Aunt is wearing a doek on her head'

Ababa anakara mumthunsi 'Father is sitting in the shade'

Atsikana arikupunsira kuU.Z 'The girls are learning at the U.Z'

Nyamata anakara pampando 'The boy is sitting on the bench'

Abambo aphita kumunda 'Father returned from the field'

Agogo arikuenda kuchechi 'Grandmother is going to church'

Atsikana aphita makuseni 'The girls returned in the morning'

Akapheza pakuru 'He got big'

Ninabaduridwa muno 'I born here'

Ndakakwatura kudhara 'I married long back'

Atsikana akaphita ndimasana 'The girls returned yesterday'

Wakuba anagazidwa kuti anabisara mphanga 'The thief is thought to be hiding in the cave

Wakuba anabisara mphanga 'The thief is hiding in the cave'

Zvidabwitsa kuti John mtando 'It is amazing that John is Health'

Niganiza kuti anabwera 'I think that he is coming'

John anasimikiza Mary kuti azasiya ntchito 'John promised Mary that he will leave the job'

Taulo apenya Nelson arikumenya Tinto 'Taulo saw Nelson beating Tinto'

Ana atatu aphita kusikuru 'Three children returned from school'

Mombe zakuda zaenda kudhibha 'Black cattle went to the dip'

Ababa adja sima ndinyama 'Father ate sadza with meat'

Abambo abwera kumuzi 'Father returned home'

Atsikana agwera mtsime 'The girls fell into the well'

Nyamatha akaniwa nimkango 'The boy had been eaten by a lion'

Tino mphunsitsi paU.Z 'Tino is a teacher at the U.Z'

Tiri kudja sima ndinyama 'We are eating sadza with meat'

Taulo apfura kanyoni mumthunsim 'Taulo shot a bird in the tree'

Taulo anyamura kanyoni mdzenje 'Mary took a bird from the pit'

Kanyoni kanakara mumthunsi ' The bird is sitting in the tree'

Anyani aphwanya damba 'The baboons broke a fruit'

Anyani aphwanyika mkumbo 'The baboon broke a leg'

Nyamatha ari munyumba ' The boy is in the house'

Amai anaphika sima munyumba 'Mother cooked sadza in the house'

Dabwitsa kuti John abwera 'It is amazing that John returned'

Tidziva kuti ndimunyamatha 'We know that it is a boy'

John aziwa kana pane muntu woufunta 'John knows if there is a mad person'

Nyamatha auza nsikana kuti abwere 'The boy told the girls to come'

Abambo abwera kuchipatara aphenya amai 'Father who returned from he hospital saw the mother'

Atsikana aphita kumunda kuti aphike sima 'The girl returned from the field so that she could cook sadza'

Ukapheza pakuru unagura mabhagedhe achibage *'If you get big you can buy buckets of maize'*

Tinto akaphita ndimasana kuti aende kusikuru 'Tinto returned yesterday so that he could go to school'

Abambo abambo anakara pampando mumthunsi 'Grandfather is sitting on the bench in the shade'

Ana afundisiwa kubhara kusikuru 'The children are taught to write at school'

Mombe ziri mumunda mabambo 'The cattles are in the father's field'

Mwana arikurira kumuzi 'The child is crying at home'