

THE SYNTAX OF VERB PHRASES IN TONGA: A CORPUS-BASED STUDY

BY

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**A dissertation submitted to the University of Zambia in partial fulfilment of the
requirements of the degree of Master of Arts in Linguistic Science**

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DECLARATION

I, **Lillian Muntanga Mwiinga**, declare that this dissertation:

- a) Represents my own work;
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APPROVAL

This dissertation of **Lillian Muntanga Mwiinga** has been approved as fulfilling the requirements for the award of the degree of Master of Arts in linguistic sciences by the University of Zambia.

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ABSTRACT

This study investigated the syntax of verb phrases in Tonga language which is one of the Bantu languages found in Southern Province of Zambia. The descriptive study was carried out to examine whether or not verb phrases in Tonga can be analysed using insights from Government Binding (GB). Data was collected from Tonga written texts and interactions with native Tonga speaking people while noting down the Verb Phrases. During the investigation, a number of PS rules were identified which describe the structural typologies of VPs in Tonga. Analysis was done using the Government Binding Theory. The analysis revealed that some of GB models do apply to Tonga Verb Phrase and that the structure of and meaning expressed in Tonga revolves around the verb word. These results cast confidence on the efficacy of contributing to the existing linguistic studies and help in the teaching of Bantu Languages at both secondary and tertiary levels in Zambia.

Keywords: *Tonga, Verb Phrases, Government Binding Theory, Syntactic rules.*

DEDICATION

This dissertation is dedicated to my husband, Alfred Sianjase whose vision was to see me attain academic excellence through education even when the going seemed tough. I thank him most sincerely and pray that the almighty God may richly bless him with success and long life because without his financial and moral support this study would not be a reality.

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LIST OF ABBREVIATIONS

A	Adverb
Adj	Adjective
Adv	Adverbial
AP	Adverbial Phrase
Arg	Argument
Comp	complement
Det	Determiner
d-structure	Deep Structure
ECP	Empty Category Principle
Enum	Enumeration
GB	Government and Binding
INFL	Inflection
IO	Indirect Object
LF	Logical Form
Move $-\alpha$	move alpha
N	Noun
NP	Noun Phrase
P	Preposition
PP	Preposition Phrase
PP	Principles and Parameters
PS	Phrase Structure Rules
S	Sentence
s-structure	Surface structure
V	Verb Phrase
Θ	Theta
PF	Phonetic Form
Spec	Specifier

CHAPTER ONE: INTRODUCTION

1.1 Introduction

This chapter introduces the study by providing background information to the investigation, stating the specific problem under study and pointing out the significance of the study. The chapter also spells out the objectives of the study, methodology, and theoretical framework. It ends with an outline of the scope of the study and the structure of the dissertation.

1.2 Background

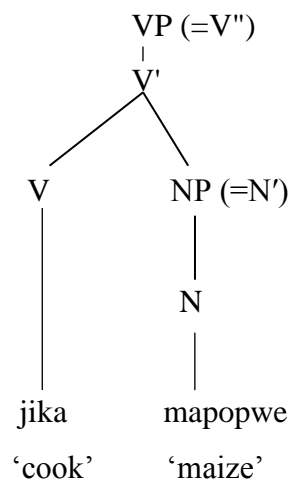
Since the twentieth century, there has been an overwhelming interest to study Bantu Languages in African Universities. This has been motivated by the multilingual situation in most African countries like Zambia. Zambia is situated in Southern Africa and it is divided into ten provinces namely; Eastern Province, Copperbelt Province, Lusaka Province, Central Province, Northern Province, Luapula Province, Southern Province, Western Province, Muchinga Province and North-western Province. It is within the above named provinces that we find approximately seventy three ethnic language varieties which are recognized. Out of these, only seven languages have been chosen as languages of instruction in educational circles. Tonga is among the seven chosen languages and it has a recognised orthography.

This study will focus on Tonga as a language spoken in the Southern Province. Tonga, like other six languages spoken in other nine Provinces, is one of the semi-official languages used in the media and education circles at both primary and secondary school levels. According to Malcolm Guthrie's (1948) classification of Bantu Languages puts Tonga in the M64 group. Torrend (1931:83) show that Tonga is among the several geographical dialect clusters of Bantu Botatwe group; a unit comprising Ila, Lundwe, Soli, Tonga, Twa and Lenje. According to Fortune (1959: 38) Sala was added later. Some scholars believe that the exact number of clusters and the dialects within each cluster in Tonga is not known. However, two major ones have been identified. These are the Valley and Plateau Tonga. The former is spoken in the Zambezi Valley, which includes Gwembe, Sinazongwe, Siavonga, Chirundu and the southern parts of Kalomo, while the latter is spoken in the plateau area which includes Choma, Kalomo, Monze, Mazabuka and Pemba Districts. The target of the present study is the plateau Tonga.

Linguists assume that the phrase is an important unit of grammar of a language. It is for this reason that the phrase is studied at the four levels of linguistics namely; syntax, morphology, semantics, and phonology. In most cases these four levels of linguistics interface. The literature done by Aitchison, 1992, Crystal, 2010, Yule, 2006, identifies different typologies of phrases such as; verb phrase, adverb phrase, noun phrase, and adjectival phrase. Among the identified typologies, the verb phrase is the most important and widely described phrase because the structure of and meaning expressed in many languages revolves around the verb word (Yule, 2006, Crystal, 2010, Lyons, 1992).

All Bantu languages including Tonga also comprise four levels of linguistics namely; morphology, syntax, phonology and semantics. Thus, Tonga language which is one of the Bantu Languages which is found in the Southern Province of Zambia is also governed by the above four levels of linguistics. The syntax of Tonga is the syntax of Bantu languages. Previous studies have not sufficiently described and explained the syntax of Verb Phrases (VPs) in Tonga Language. Therefore, there seems to be no study whatsoever in the Bantu literature dealing with the syntax of verb phrase in Tonga, a Bantu language spoken in the Southern Province of Zambia. It is for this reason that the research examines the syntax of verb phrases in Tonga by establishing a typology of VPs in terms of their constituency, analyse the various VPs established using insights from Government Binding Theory (GB) and analyse the argument structure of VPs leading to the actual study of the syntax of Verb Phrases in Tonga. Thus, the phrase being examined which is the Verb Phrase is also headed by a verb word. Consider one of the verb phrases collected:

- a) Jika mapopwe ‘cook maize’



In English all predicate phrases have a verbal phrase. However, this is not the case with Tonga and other Bantu languages. In Tonga just like any other Bantu language, it is very possible to have a predicate without a verb. Consider the example below.

b) Aba bantu mbabotu. ‘These people are beautiful’

In most cases, in Tonga, a predicate phrase is always a verb phrase. It is for this reason that this research only deals with the most frequent type of a predicate phrase which is made up of the verbal phrase as shown in 1.2 (a) the above syntactic tree has been built under the conditions of X – bar theory which states that a verb phrase is headed by one verb word.

In order to carry out a study of grammar of a language, Bloomfield (cited in Crystal 1989:83), recommends the approach of using levels as best. Therefore, this justifies the reason this study carried out a syntactic analysis of verb phrases in Tonga since syntax is one of the four levels of linguistics.

1.3 Verb Phrase Functional Formula

Head +Post – Modifier(s)

The above formula is further elaborated in simple terms as follows:

Head + (objects*) + (complement*) + (modifier*)

This formula states that a VP must contain a head, optionally preceded by one or more auxiliaries, and optionally followed by object(s), complements, and/ or modifier(s). Crystal (1991:163) has defined the ‘head’ as “A term used in the grammatical description of some types of phrases (endocentric phrases) to refer to the central element which is distributionally equivalent to the phrase as a whole” This formula clearly shows that the head is the only obligatory element in a VP.

1.4 Argument structure in the verb phrase

The VP functional formula which is also applicable to Tonga as a language clearly shows that the verb is the head in Tonga VPs, as in other languages. Crystal, (1991:163) has defined ‘head’ as “A term used in the grammatical description of some types of phrase (endocentric phrase) to refer to the central element which is distributionally equivalent to the phrase as a whole”. Such constructions are sometimes referred to as headed (as opposed to non-headed)”. An endocentric construction is a construction which functions syntactically in the same way as one of its constituents. Thus, verb phrases behave syntactically like the verb. The dependent elements in a Tonga VP relate differently with the head verb. There are those

elements that the head needs while others are not obligatory. The elements that are obligatory are known as arguments/complements. On the other hand those that are non-obligatory are referred to as modifiers in syntactic terms which Aitchison (1992) referred to as adjuncts. In semantic terms the obligatory elements are referred to as arguments.

Complements or arguments can be words, phrases or clauses that add to the meaning of a verb but are not necessary because the head verb does not require them in completing its meaning. They are non-central to the expression of the verb's eventuality. We therefore say that the verb assigns roles (we call them thematic roles or theta-roles) to its arguments (the role player). The verb is combined with a number of arguments (including complements and the subject as earlier stated. Their maximum number is usually three.

In traditional grammar, verbs are classified according to the number of arguments they select. Furthermore, traditional grammar refers to arguments with the function that they have in the sentence such as subject, object, and indirect object. According to traditional grammar, we have intransitive verbs (with only one argument) notably the subject, transitive verbs with two arguments (subject and object), ditransitive verbs with three arguments (subject, direct object, indirect object).

In order to carry out a study of the grammar of a language, Bloomfield (cited in Crystal 1989:83), recommends the approach of using levels as best. Therefore, this justifies the reason this study carried out a syntactic analysis of verb phrases in Tonga since syntax is one of the four levels of linguistics.

1.5 Statement of the problem

Tonga, like other Languages of the world has Verb Phrases (VPs) used in verbal communication and written texts. However, various publications in Tonga have not sufficiently described and explained them. Verb phrases in Tonga exist but none of the scholars have used insights from Government Binding (GB) to describe and explain the Tonga verb phrases. GB is a major back bone of syntax and it is made up of different theories and principles. Additionally, GB was established using English language and therefore, these theories and principles embedded in GB will be applied in analysing the VPs in Tonga. In view of the above, this study is seeking to establish the syntax of the Verb Phrases in Tonga.

1.6 Aim of the study and Objectives of the study

1.6.1 Aim of the study

The aim of the study was to establish the syntax of Verb Phrases in Tonga using Government Binding model. The study is a corpus – based one.

1.6.2 Objectives of the study

To achieve this goal, the study sought to meet the following objectives;

- (1) To establish a structural typology of Verb Phrases in Tonga in terms of their constituency.
- (2) To analyse the various Verb Phrases established in objective (1) using insights from Government Binding Theory.
- (3) To analyse the argument structure of Verb Phrases in Tonga.

The findings of objective one and two will be discussed in detail in chapter two, while those of objective three will be discussed in detail in chapter three.

1.6.3 Research questions

In order to meet the above stated objectives, the following questions were addressed;

- 1) What are the common typologies of Verb Phrases in Tonga and their constituency?
- 2) How can these Verb Phrases in Tonga be analysed using insights from Government Binding Theory (GB)?
- 3) How can an argument structure of Tonga Verb Phrases be analysed using GB theory?

1.7 Significance of the Study

While there are various studies on the linguistic aspect of Tonga, none of these publications have sufficiently described and explained the syntax of Verb Phrases in Tonga although they exist. Tonga has Verb Phrases (VPs) used both in verbal communication and written texts. Therefore, there is insufficient knowledge on the syntax of VPs in Tonga. Studies on Tonga language have focused on other levels of linguistics and not on the syntax of VPs. As a result, very little is known about the syntax of VPs in Tonga because no one has used insights from Government Binding to describe and explain them. To date, there is lack of knowledge concerning the syntax of Verb Phrases in Tonga. Therefore, this study is significant as it is contributing to the resolution of the problem raised on the VPs in Tonga and help improve

language teaching and scholarly understanding of VPs in Tonga through provision of valuable data on the syntax of Verb Phrases in Tonga using insights from Government Binding.

In view of the above, this study sought to establish the syntax of VPs in Tonga because this area of linguistics has not been given adequate attention in previous studies.

1.8 Methodology

This section discusses the methodology used in this investigation. It also presents a detailed account of the procedures employed in data collection, study area, data collection instruments and sources and analysis.

1.8.1 Research Design

As Mungenda and Mungenda (2003), puts it, a research design tells the investigator whether s/he should employ in the qualitative, quantitative or triangulation method in the process of research. The methodology employed in any research dictates the procedures that should be used, which ultimately depends on the nature of that particular research. The term qualitative should be understood to mean a research that is descriptive and does not require the use of statistics. On the other hand, a research that requires the use of statistics is known as quantitative. The one that requires the use of both descriptive and the use of statistics is known as triangulation. This research used qualitative research in collection and analysis of data as it did not seek numerical data which is arrived at through quantitative means.

1.8.2 Sampling Techniques and Data Collection Procedures

Crystal (1991:86) argues that a corpus based study is a collection of linguistic data, either written texts or a transcription of recorded speech, which can be used as a starting point of linguistic description. In this vain, two types of data was collected. These were written texts in Tonga and recorded speech as people conversed in Tonga. This was in line with the description of corpus based study by Crystal (1991:86).

Conversing pairs and groups of people in Tonga were sampled randomly. As these groups of people conversed, the researcher took note of VPs in their utterances. Written texts includes; selected Tonga literature, and these included; Masandu-Masandu by Chidwayi, M.S.(1978),

Tulengwa Twabasikale by Chiitauka, A.W. (1978), Ciyuni Cakalala by Chisangano, D. (2002), An Outline of Chitonga Grammar by Carter, H. (2002) and Chitonga 8 (1995) by Curriculum Development Centre. The researcher took note of VPs as she read through the selected literature. The literature that was collected from the above mentioned literature was then administered to informants for glossing as well as translation through simple phrase lists. This was followed by checking the VP structures by the researcher in order to ensure clarity.

1.8.3 Data collection instruments and sources

This study was a corpus-based. Crystal (1991:86), defines a ‘Corpus’ as a “collection of linguistic data, either written text or a transcription of recorded speech, which can be used as a starting point of linguistic description.” In this research, data was collected through reading written texts and transcription of recorded speech. It involved collecting data from existing sources. The researcher collected VPs and these were subjected to syntactic analysis. The University of Zambia, Zambia Adventist University and Charles Lwanga College of Education provided the much needed corpus for the desk part of the research. The researcher collected data for the study from selected Tonga literature by noting Verb phrases. The Researcher also recorded conversations using the phone as a way of collecting data. Verbal Phrases were noted from the recorded conversations. Data was also collected through listening to people conversing in public places as well as listening to Tonga programmes on Sky, ZNBC and Chikuni radio stations. Only conversations in Tonga were considered for data collection. The study also employed introspection in data collection as the researcher is a native speaker of the language in question. She identified a number of VP structures that are correct in Tonga. Because she is a native speaker of Tonga, it was hoped that her judgement of the acceptability, grammaticality and other properties of the sentences against her intuition were accurate. This is in line with Chomsky (2005) who stipulates that native speaker’s intuition cannot be undermined. Further, according to Ashers (1994) introspective reports and linguistic intuition have a special status in linguistics (particularly generative linguistics) because they are regarded as reflections of the native speaker’s internalised mental grammar and are therefore, used as primary data for theory construction. It is undeniable that such use of linguistic intuition has led to the establishment of substantial number of significant generalizations about syntactic processes of VPs.

1.8.4 Data Analysis

It is worth noting that in a qualitative research approach, the analysis of data is an on-going process from the time the researcher commences on her or his study. In this regard, data analysis commenced during data collection in both the field and desk research. The first step was identifying the Verb Phrases in general. The Second step, involved sorting data according to the typology of Verb Phrases in Tonga in terms of their constituency. That is, after collecting data, the researcher first examined it critically and put it into categories depending on whether or not it was relevant. Tonga language key informants were consulted when conducting this exercise as it was crucial in coming up with valid data.

The VPs were also examined in terms of their argument structure by establishing their salient linguistic features including their constituents and how they relate to the verbs in Tonga. Then these VPs in Tonga were subjected to Government Binding (GB) models and later were evaluated as to whether or not they could be analysed using GB models as outlined by Chomsky (1981). The morphological structures have also been dealt with at analysis level.

Since the Researcher is a native Tonga speaker, personal intuition was also utilized to distinguish between well-formed and ill formed words or string of words collected. Nkolola (1997), quoting from Atkinson et al (1982) who wrote that “the linguist is a native speaker of the language he will be able to distinguish between well-formed and ill-formed string of words....” Therefore, both Nkolola and Atkinson et al agree to this phenomenon.

1.8.5 Theoretical framework

1.8.5.1 General

This study is based on the syntax of Verb Phrases only. Therefore, only one linguistic theory was used. In this case, Government Binding (GB) Theory developed by Chomsky (1981) was used in this study as the only linguistic theory as it has syntactic aspects. The name refers to two central sub theories of the theory namely Government and Binding. Government is an abstract syntactic relation. On the hand, Binding deals with the referents of pronouns, anaphors, and R-expressions. According to Ngalande (2009:66) GB was actually the first theory to be based on Principles and Parameters modes (PP).

In this section insights from Noam Chomsky’s Government Binding Theory were used to discuss the history of GB theory. Since this theory was developed using the English language, it might not apply directly to the Tonga language that is under study. Although this theory may not completely apply to Tonga because of its genesis, the Researcher tried to apply the theory to Tonga verb phrase under study. Where it was possible, suggestions were made and it proved that a few alterations to the theory could apply when it is used to analyse Tonga VPs. The focus, however, is not on the theory but on the facts about Verb Phrases in Tonga.

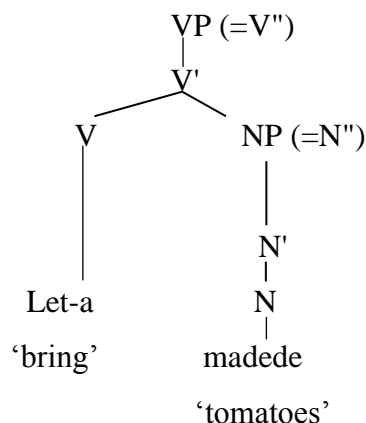
1.8.5.2 Government Theory

Government Theory is a sub theory of Government Binding Theory. According to Horrocks (1987), X is the governing category for Y, where X, is N, V, A, P, or AGR, if X and Y are dominated by exactly the same maximal projections (full phrasal integories). For example:

Gloss: bring tomatoes

Tonga: leta madede.

a)

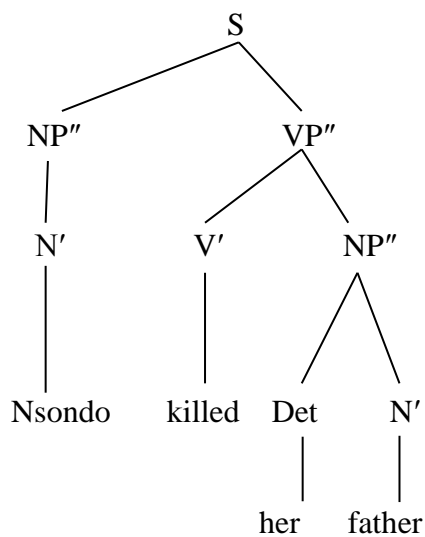


In Tonga, V governs (= is the governor of) NP (= the governee). This is a clear demonstration that verbs in Tonga govern their complements.

1.8.5.3 Binding Theory

Binding Theory is mainly concerned with the relationships between pronouns and the expressions which they are co-referential and it is the sub-theory in GB. In his lecture notes, Ngalande (2009:67) defines binding as, “an elements α binds an element β if and only if α c-commands β , and α and β are co- referent.” Consider the sentence, “Nsondo killed her father” which is diagrammed below using simple phrase structure rules.

a)



Nsondo killed her father. Nsondo c-commands her.

Nsondo and her are co-referent. (they refer to the same person), therefore, “Nsondo”binds”her”.

Nsondo c- commands she (her). Nsondo and she are co- referent.

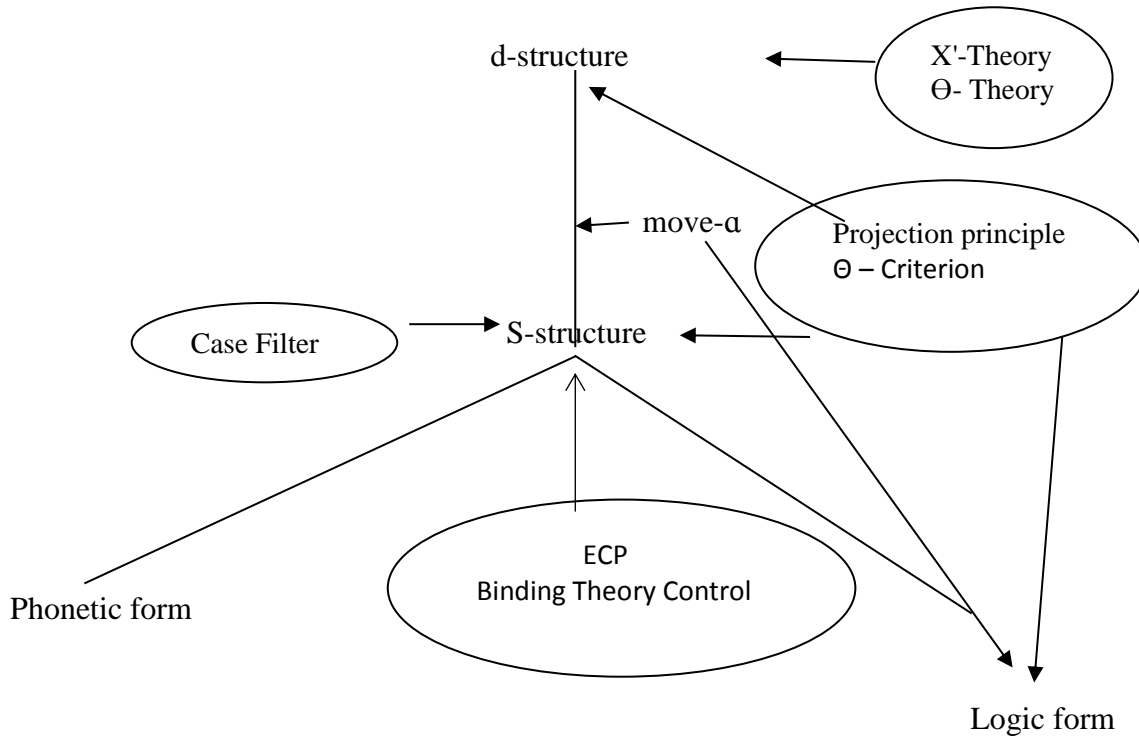
On the other hand, we can say, this theory also covers the distribution of pronouns, reflexive, pronouns and empty categories in sentences. (Horrocks 1987.108)

There are three categories of NPs namely;

- a) Anaphors= These are NPs whose reference is necessarily determined sentence internally, for example; herself, each other;
- b) Pronominals= these refer to NPs that lack specific lexical content and have only the features person, gender and Case; unlike anaphors, they may either refer to individuals independently or co-refer to individuals already named in a given sentence such as in: she,he him, it, they, them; =pro.;
- c) Referential expressions (expressions) = these refer to NPs with lexical heads which potentially refer to something such as: the president, Mary, the girl that kissed the king last year.

The figure below is a summary of the Government-Binding theory with its theories and principles.

Figure 1: *Summary of GB Theory*



This figure although is modified is from *Contemporary Syntactic Theories* by Sells, (1995:24).

Mathews (2005:148) states that,

Government and Binding Theory proposed three levels of syntax that are Logical Form (LF), d-structure and s-structure which are related to each other by move alpha. These are related to the lexicon of an individual language by projection principle.

Nevertheless, as seen in figure 1 above, there are also other linguistic levels other than the ones mentioned by Mathews. Each of these levels of GB grammar will be discussed in detail below.

1.8.5.4 D-structure and S-structure

D- structure is one of the levels of syntax in the architecture of GB which represents the lexical properties. Magnus (2017:7 of 30), highlights on the functions of some of the levels of GB grammar when she says,

In most versions of GB, d-structure is the level which most directly reflects the structure of the lexicon. The lexicon is the list of morphemes (prefixes, suffixes and roots) and words in a language together with all the relevant information pertaining to them.

S-structure according to Haegeman, (1994:339) “encodes the result of movement transformations.” There is an interface between d-structure and s-structure such that any syntactic position required at d-structure will be present at s-structure. However, a particular category at d-structure cannot change its category at s-structure. Magnus, (2017:7 of 30) confirms this when she says that, “The word order in s-structure is the order the sentence actually appears in the languages. D- structure is mapped on s-structure by the function move alpha.” In GB, we do not say deep structure but d-structure nor do we say surface structure but s-structure. According to Naom Chomsky, this meant to bring out a distinction between Standard Theory and Government Binding Theory.

1.8.5.5 Logical Form (LF)

Logical Form (LF) is another level of representation in addition to d-structure and s-structure. Haegeman (1994:487) writes, “The transformation move α maps s-structure onto the LF. Quantifiers-raising and Wh-raising are instantiations of move α which map s-structure onto LF.” However, there is a cross linguistic variation in implementing the Wh-movement. It applies at s-structure in some languages but in others it applies only at LF. Magnus (2017:8 of 30) argues that, “Logical Form is that part of grammar that expresses logical relations within the sentence.”

1.8.5.6 Phonetic Form (PF)

Phonetic Form is the level at which Phonological properties of a sentence are determined. However, the PF is the least discussed subcomponent of GB. Haegeman (1994:493) writes, “The overt realization or the spell-out of the sentence, the way the sentence is spelt out.”

1.8.5.7 Empty category principle (ECP)

As Mathews (2005:113) puts it, Empty category principle (ECP) an element in Chomsky’s Principles and Parameters Theory (PP) which “occupies a syntactic position but has no phonetic realization.” He also emphasises that it is “strictly an element rather than a category.” Generally, traces from movement at LF are also subject to ECP. This explains it why there is an arrow pointing at LF from ECP in the overall organisation of GB. Thus; concerning ECP Haegema (1994:442) states that, “The licensing condition that traces must be properly governed is known as the Empty Category Principle.”

1.8.5.8 X-bar Theory

The part of grammar that regulates the structure of phrases is known as X’-Theory (‘X-bar theory). It was developed in the seventies by Noam Chomsky. This was meant to design phrase structures in a more theoretically sound way. According to Horrock (1987:101) “This theory provides principles for the projection of phrasal Categories and imposes conditions on the hierarchical organization of lexical categories in the form of general schemata.” X-bar theory brings out what is common in the structure of phrases making it to be the basis of syntactic structure. According to X-bar theory, all phrases are headed by one head as argued by Haegeman, (1991). A phrase in X-bar syntax may also contain other constituents. Nkolola (2004) agrees too and further argues that most phrasal constituents have ‘heads’ upon which the other elements of the constituents under consideration are dependent. X-bar theory also provides conditions on how a phrase structure tree is built and the relation between a head and “non –heads” in a constituent is reflected in the bar-level it attaches to. Heads in X-theory are terminal nodes; they dominate words. Sells, (1995:105) argues that the X-theory distinguishes two further levels of projection while the Complements combine with X to form X- projections; adjuncts combine with the topmost to form the maximal projection XP.

Below is how we can generalize PS rules:

XP → ...X...

We say that XP is the maximal projection of X.

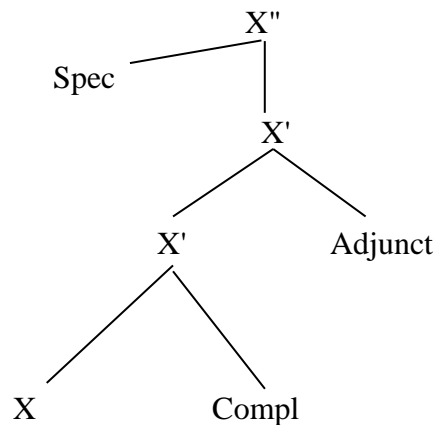
In \bar{X} theory X is an obligatory element on the right-hand side of the rule. It is called the head of "the maximal projection.

The maximal projection XP and its head X are different bar levels of X.

Source: Fokkens (2009)

It is these heads that give phrases their essential character. On the basis of this, the X- schema has been proposed by Sells (1985) in X-bar theory to account for phrasal constituents as below;

The diagram below clarifies the above explanation.



Source: Sells, (1985).

The top node (X'') is actually the mother while as the two that follow (the 'specifier' and the X') are the daughters, hence, the two are therefore, sisters. It is important to note that the X-bar rules are applied to specifiers, complements, adjuncts and conjunctions. This implies that, in X-bar theory a phrase may contain a head and optional elements which include; specifier, and a complement.

1.8.5.9 Projection principle

Projection Principle is a central principle of GB which projects properties of lexical entries on the structure of the sentence. Sells, P. (1985:33) agrees with what is said above by stating that; representations at each syntactic level are projected from the lexicon. This is so because

they observe the subcategorization properties of lexical items. For example, the complement requirements of verbs will be subcategorized for from the lexicon.

1.8.6.10 Theta Theory

Theta Theory is concerned with the assignment of semantic roles to sentential arguments. The main principle that guides this theory is called the Theta- Criterion.

1.8.5.10 Theta – Criterion

Chomsky (1981:36) states that;

- a) Each argument bears one and only one theta –role,
- b) Each theta- role is assigned to one and only one argument.

Mathews (2005:377) confirms what has been said above by stating that theta criterion “requires that every argument of a verb should be assigned one and only such role.” The theta-roles are assigned at d-structure and Sells, (1985:36) identifies two types of theta-role assignment namely; direct and indirect assignment. Additionally, Sells (1985:36) argues that although each theta-role is assigned a head within its domain, the nature of the external theta-role is determined not just by the verb but by the whole Verb Phrase.

1.8.5.11 Bounding Theory

Bounding Theory was developed by Chomsky (1981) and it is a sub- theory of GB. It takes account of what moves, that is where from and where to by the transformational rule move-alpha. This theory is guided by the subadjacency principle which states that; no movement operation can cross more than one barrier or bounding node than one barrier or bounding node.

1.8.5.12 Case Theory

Case Theory is governed by one most important principle known as Case Filter. Case is not checked at d- structure but it is assigned at s-structure. However, this does not imply that constituents at d-structure must be careless. This implies that NPs at d-structure should not be found in random positions because all the positions in d-structure are needed at s-structure.

1.8.5.13 Move- alpha

Move –alpha in GB is a single and universal movement or transformational rule and it refers to the movement of any phrasal or lexical category from one part of a sentence to another by Chomsky- Adjunction. In GB movement is allowed and not deletion. Movement is called move alpha (move a). This movement is regulated by independent universal principle and constraints which clearly states what can move, where from and where to.

1.8.5.14 Control Theory

Control Theory is concerned with the analysis of sentences with verbs taking infinitival complements that have null subjects (=PRO with capital letters I). For instance; Chipego instructed his juniors to arrest the thief is understood as **Chipego_i instructed his juniors_i PRO_i to arrest the thief** in which the ‘coindexed’ elements (Chipego_i and PRO_i) are coreferential, Chipego and PRO being the controller and the controllee, respectively.

1.8.5.15 Conclusion

From the discussion of the Government Binding Theory above, it has been observed that some of its GB models will not be used in the analysis of the verb phrases in this research. This is because their focus is to analyse different aspects of grammar and not the behaviour of the verb phrases. Those which will not be applicable in the analysis of Tonga verb phrases include; Binding theory, Empty category (ECP), Case theory, Bounding theory and Case filter. For instance, the focus of Binding Theory is to analyse pronouns as discussed above. Empty Category Principles (ECP) is concerned with the licensing condition that traces must be properly governed. Case theory discusses nominative and accusative while Bounding theory’s focus is on the limitations to be placed on the displacement of constituents by the transformation rule Schema move-alpha and not on verb phrases. Case filter’s focus is on NP with lexical content and not verb phrases. Therefore, these models will not be applied in the analysis of my research data. This is because my research’s focus is on verb phrases which are not analysed by this theory.

On the other hand, models that will be used in the analysis of the data include; X-bar theory, control theory, projection principle, theta theory, and Government theory. Below is how these models relate the verb phrase. X-bar theory regulates the structure of phrases and it brings out what is common in the structure of phrases. It also provides conditions on how a phrase

structure tree is built. Apart from this, X-bar theory states that all phrases including the verb phrases are headed by one head and heads dominate words. Control Theory is concerned with the analysis of sentences with verbs taking infinitival complements that have null subjects (=PRO with capital letters 1). A verb in principle must have a subject

The main focus for projection principle is on how properties of lexical entries on the structure of the sentence are projected. Therefore, according to projection principle, the head of a verb phrase is projected in the minimal projection. Theta theory is concerned with the distribution and assignment of theta roles. According to theta theory, every argument of a verb should be assigned one and only such role.

Government Theory is a sub theory of Government Binding Theory. According to Government Theory, X is the governing category for Y, where X, is N, V, A, P, or AGR, if X and Y are dominated by exactly the same maximal projections. In particular verb phrases, V (verb) governs (= is the governor of) NP (=the governee). X-bar theory, control theory, projection principle, theta theory, and Government theory demonstrate that they can be used to analyse verb phrases because their focus also centre on verb phrases. Therefore, the collected Tonga verb phrases will be subjected to these models during analysis stage.

1.9 Scope of the Study

This study only looks at the Verb Phrases in Tonga Language. This entails that the study generally reveals the syntax of Verb Phrases in Tonga. Therefore, the focus was to examine a typology of Verb Phrases in Tonga in terms of their constituency, analyse the various Verb Phrases established as well as their argument structures using incites from Government Binding Theory.

The investigation used both primary and secondary data. The researcher used intuition knowledge of Tonga as a native speaker. The researcher also consulted other Tonga native speakers. The libraries such as The University of Zambia, Zambia Adventist University and Charles Lwanga Collage of Education helped in providing secondary data. The researcher also used Tonga books that were borrowed from lecturers, friends and relatives.

1.10 The Structure of the Dissertation

This dissertation has five chapters. Chapter one discusses the following: background, statement of the problem, purpose of the study, significance of the study, methodology, theoretical framework, limitations and ethical consideration. Chapter two discusses literature review, chapter three has dealt with the typologies of Tonga VPs as well as their syntactic analysis. It analyses the nine types of VPs. Chapter four gives the analysis of the argument structure of Tonga VPs. On the other hand, chapter five provides a Summary of the findings on Tonga verb phrases.

CHAPTER TWO: LITERATURE REVIEW

2.1 Review of the Literature that have a bearing on the current study

The Verb Phrase in English has been sufficiently described and explained but very few scholarly works have been conducted on Bantu languages, generally Tonga as a language. The available literature does not provide sufficient data on the syntax of Verb Phrases (VPs) in Tonga. As a result, this study only reviewed studies that have a bearing to the present study since there is no available literature on Tonga VPs. This study has adopted the following description of VP as a phrase headed by a verb. The VP is usually viewed as a constituent of the predicate phrase. Jacobson, B. (1978), in his discussion of the phrase structure (PS) rules in the English Language, that included the VP, came up with rule 6 which shows different types of VPs. For example, a verb phrase can be a single verb where he put a rule as $VP \rightarrow V$. A verb phrase can be a verb plus a number the PS rule written as $VP \rightarrow V + NO$.

In dealing with the Bantu languages, Marten and Kempson (2002), looked at two central areas of Bantu grammar- agreement and verb phrase structure. Their finding was that verb phrase construction, valency and verb focus needs to include semantic-pragmatic aspects of information structure in addition to purely syntactic observation.

Although Marten and Kempson's study is generally based on Bantu grammar, the study is however, useful because it has a bearing on the current study.

Ondondo (2015), identifies and describes and describes structures that constitute verb phrases in Kisa. According to Ondondo, the Kisa verb phrase has an obligatory element, the head and some optional element. Although Ondondo's arguments are based on Kenya, they are applicable and relevant to the syntax of verb phrases in Tonga.

Coupez (1961:91-6) has made a distinction between radical complements and verb extension complements. According to Coupez's distinction, the Tonga words **muntu** 'somebody' and **cintu** 'something' as in:

Kulomba (ku-lomb-a) cintu

(lit. to-ask- somebody something)

'to ask for something from some body'.

In this case, the radical -lomb-a is the verb head in lomb-a cintu 'ask for something'

Although Coupez's arguments are based on Rwanda, they are applicable and relevant to the study of the syntax of Tonga verb phrases.

Hyman's study was based on the existence of cyclic extensions in Bemba. His data on the existence of cyclic derivation in Bemba clearly states that a cyclic derivation is achieved first by adding the causative extension /-l-/ to the verb root. The applied or perfective verb extension /-il/-e/ is added by insetting it between the verb root and the causative suffix, -i-, as shown below;

- a) -pol- → -pol-il-pol-el-i → * -pol-es-i-(* -polish-)
- b) 'be healed' 'heal for'

Hyman's findings have a bearing to the current study because it also touches on the verb which is the minimum type of verb phrase in Tonga.

In his classification of Bemba verbals, Givon (1969:154) considered the causative a supplement or an addendum to the various verbals. He treats the morphology of the causative suffix in Bemba is-l-or-y- although on the surface it is realized as such only following very few final consonants. He indicates in many instances the suffix is-enshya or -lnshga and that in some transitive verbs, the causative can also be marked by the suffix -ika or -eka. Although Givon (1969) does not provide details on the syntax of verb phrases, his study is significant to my study because he attempted to explain on the head word (verb) of a verb phrase.

In response to Guthrie's (1970) account of the functions of the verb extension -il-, Chanda (1985) described the phonological variations and provided some light on the functions of the verb extensions -il- in Bemba. He argued that Guthrie's account of the functions of the extension was not adequate. While Guthrie mentioned three functions of extensions, Chanda showed that the extensions is used to signal at least several grammatical relations, namely, the benefactive, locative, possessive, goal, causative, instrumental and manner. Chanda showed in particular that what Guthrie called the 'directive' -il-, must be included in wider conception of locative.

Although Chanda's work was not in Tonga, the researcher found his arguments and revelations on the -il- verb extensions in Bemba to be relevant and applicable to Tonga as well because it also touches on the verb which is key to the current study. Apart from this, it also gives a bearing on the concept of locative which is useful in the current study in

discussing and analysing the argument structure of verb phrases in Tonga under ditransitive verbs.

Horton (1949:87-96) gives an inventory on the realisation of extension. He stated that while the applied extension is realised as -ila, -ela, -ina or -ena, the passive is realized as -wa, and that in most cases an intervocalic -i- or -u- is used with the passive - thus making it seem as if the passive is realised as -iwa, or -uw. He pointed out that the realisations of the verb extensions vary according to the verb extensions are attached to.

According to Mwisuya (1977:110), the choice of the extension shape to be used is dependent on the shape of verb endings.

The analysis of the applied, causative and passive verb extensions by Horton (1949) and Mwisuya (1977) are mainly concerned with providing the various realisations of the verb extensions. None of the two attempted a deeper analysis of the syntax of the verb phrases using insights from Government Binding Theory

Jimaima (2008) carried out a study on the concept of Determination and Modification in English and Tonga. His study revealed that in terms of word order, determiners and modifiers in Tonga virtually always come after a noun they modify. His study does not sufficiently describe and explain the syntax of VPs in Tonga.

Musale (2009) looked at The Grammar of Compound Nouns. She discovered that a language grammar can be done using a grammar of compound nouns. Musale (2009) like Jimaima (2008) does not pay particular attention to the syntax of VPs in Tonga.

There are still other scholars such as Sibajene (2013), Chitebeta (2007), Collins (1962), Hopgood (1953), O'Brien (1992) and Thompson (1989) who have also conducted studies on Tonga Language.

Chitebeta A. M. (2007) looked at the noun phrases (NPs) of Tonga and Lenje. Her effort was to contrast the Tonga and Lenje noun phrases. In her work, Chitebeta discovered that both Tonga and Lenje have similar morphological structures with interrelated class system and the difference lies in phonology. Equally, Chitebeta does not fully describe and explain the syntax of Verb Phrases in Tonga.

Sibajene (2013), conducted a Dialectological study of Tonga, where he investigated some linguistic differences between the two dialects of the Tonga language spoken in the valley and plateau parts of Southern Province. His study reveals that there are a number of variations between valley Tonga and plateau Tonga. Sibajene does not give an insight on the syntax of Verb Phrases as well.

Collins (1962) has attempted an extensive analysis of verb forms in Tonga where he paid particular attention on applied, causative and passive verb extensions. He came up with different verb forms such as primary and secondary verbals. He notes that the first person is always in the present tense and this occurs in the primary verbal form. On the other hand, he notes that in secondary form, verbals are irregular in formation. Thus, since his main interest on verbs is on verbal forms, he does not provide much detail on the syntax of Verb Phrases in Tonga.

Another scholarly work on Tonga has a language has been conducted by O'Brien (1992). In his study he views the extensions as particles that are added to the verb root before the final vowel so as to change the meaning of the verb to a greater or lesser extent. Equally, O'Brien's study does not provide much detail on Verb Phrase in Tonga.

Thompson (1989), in his book 'Chitonga- Phrase Book' only translated English words, phrases and sentences into Tonga equivalents. This means that his main area of concern is on how different phrases including Verb Phrases can be practically used to give some insight into local society and situation. His study does not pay particular attention on the syntax of VPs in Tonga. However, this text was useful as it offered some collect equivalents where necessary.

Hopgood (1953) has attempted an extensive analysis of verbal extensions. In his study he refers to the verb extensions as derivations, where the term 'derivations' is used to refer to a verb which has been altered by the addition of either a suffix or an infix to give a shade of meaning different from that of the verb root. However, since the study is mainly focusing on the analysis of verbal extension, it does not provide sufficient information on the syntax of VPs in Tonga.

Therefore, the studies conducted by Sibajene (2013), Chitebeta (2007), Thompson (1989), O'Brien (1992) and Hopgood (1953) do not pay particular attention on the syntax of VPs in Tonga.

The other literature reviewed is a study on analysis of applied causative and passive verb extensions in Tonga by Nkolola Mildred M. (1997). In her study, she discovered that Tonga verb extensions can be derived within the lexicon and that inflection which encompasses verb extensions is handled both by syntax and the lexicon. However, her study equally does not sufficiently deal with the syntax of VPs in Tonga.

2.2 Conclusion

Although the Verb Phrase is the most important phrase because the structure of and the meanings expressed in many languages revolves around the verb word as advanced by (Crystal, 2010), all the above scholarly work reviewed has shown that, there have been no attempt in the literature at the analysis of VPs in Tonga using insights from GB. Therefore, there is no study whatsoever in the Tonga literature dealing with the syntax of VPs in Tonga. Instead, they all concentrated on various aspects of linguistics and never attempted to present a deeper insight of the syntax of Verb Phrases (VPs) in Tonga using insights from Government Binding Theory. Although the available literature does not provide sufficient data on the syntax of VPs in Tonga, they have however, helped in providing a gist of what the research is examining. Therefore, this research examines the syntax of VPs in Tonga using insights from GB, a study that has not been given adequate attention by other scholars.

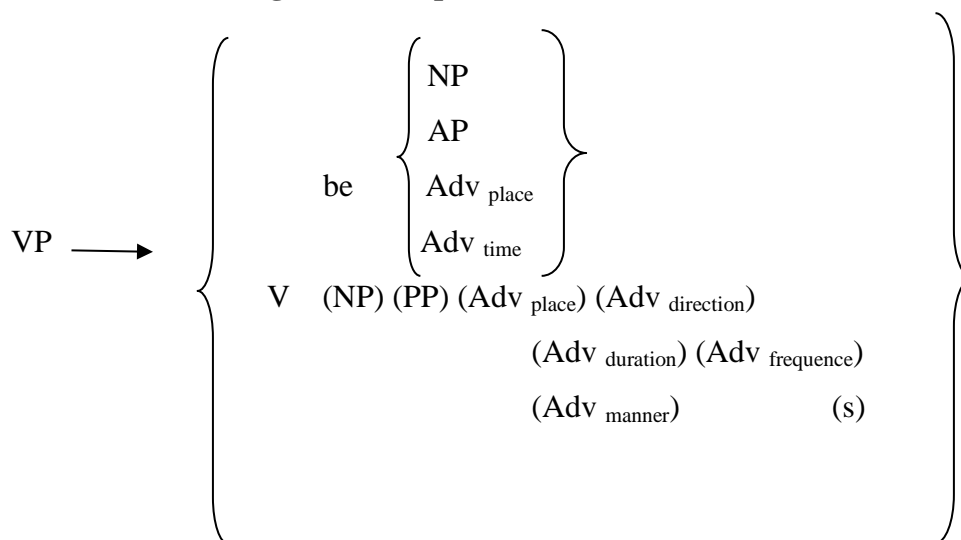
CHAPTER THREE: THE STRUCTURE OF VERB PHRASES

3.1 Introduction

This chapter contains the relevant data that were collected. The data in this chapter are organised according to the typologies of Tonga verb phrases. The data are in the main text because the study was a corpus-based one meaning; the researcher has been referring to it very much in order to help with the analysis. As earlier mentioned in chapter one, the aim of the study was to establish the syntax of Verb Phrases in Tonga using Government Binding models. It is worth noting that the syntax of Verb Phrases mainly lies in their structure. Hence, this chapter presents the types and syntactic structures of Tonga Verb Phrases; and the application of the GB theory. The structures of VPs in the GB theory are presented within sentences. This discussion basically focuses on VP and its immediate constituents (IC). In This study, tree diagrams (phrase markers) are used to illustrate the order of constituents in a Verb Phrase particularly in Tonga language under investigation. A general rule of the VP structure is given by collapsing as follows:

3.3.1 Phrase structure rules for VPs

Figure2: Illustration of generalized phrase structure rules for VPs



Source: Jacobsen, B. (1978: 97)

The above Generalized phrase structure rules for VPs brings to our attention that, in any natural language, a verb may be preceded by a variety of constituents such as verb plus noun, verb plus adverb, and verb plus preposition.

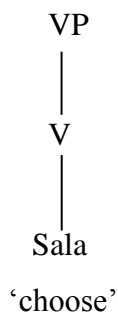
3.3 Types and Syntactic structures of literal translations of Verb Phrases in Tonga

This section discusses the types and Syntactic structures of literal translations of Verb Phrases in Tonga. In Tonga just like any other Bantu language, a minimal VP always consists of a single – word that is an intransitive verb. The other types of verb phrases demands that a verb as head should comprise object(s)/ complement. It is for this reason that a phrase that follows a verb head is called an object, argument or complement. The terms, object and complement are sometimes interchangeable, although tradition has intended to attach “object” to some constructions. Below is a syntactic presentation of the types of VPs in Tonga including their gloss.

1. VP→V

English: choose

Tonga: sala



As indicated in (1) the VP shows a verb phrase with only one word (intransitive verb phrase or imperatives) which is a verb. The syntax of this VP is fixed in Tonga just as it is even in the literal and abstract meaning within the sentence.

2. VP→V+NP

A Verb Phrase can be a verb plus a noun. This reveals that NPs can serve the function of an object, as shown in the syntactic rule. For example:

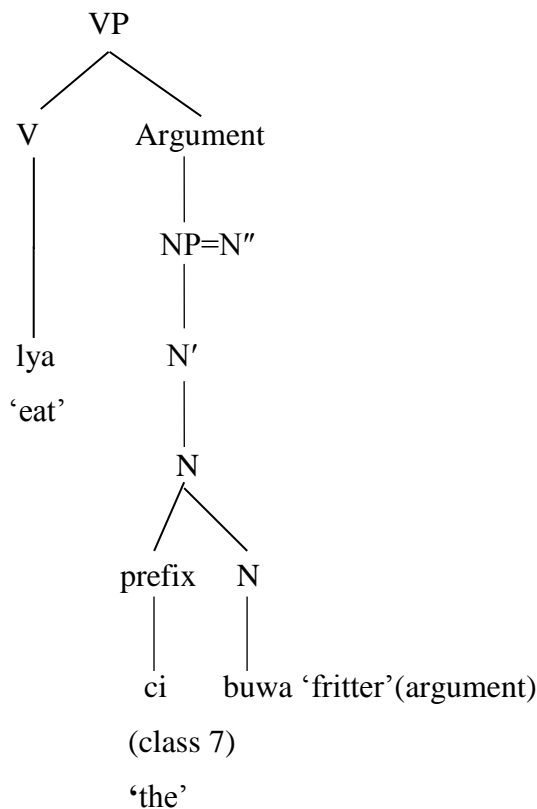
English: eat the flitter.

Tonga: lya cimbuwa

In the above VP the literal and symbolic meaning is identical.

Verbs that contain objects may imply end products and/ or bounded activities as in the above structure; *lya cibuwa* ‘eat a fritter’. It shows that the eating of the fritter as having an end point, namely the completion of eating a fritter. On the other hand, verbs without objects as in; (1) *sala* ‘choose’ often imply no natural end-point. In other words, it implies no particular end in the choosing. The structure of VPs that consists of a verb plus a noun in Tonga is presented in the tree diagram as below.

lya cibuwa



It is interesting to note that, articles (‘a’ or ‘the’) do not exist in Tonga.

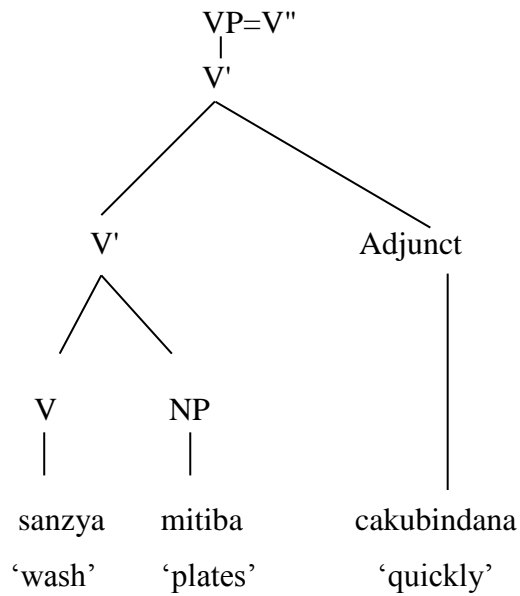
3. VP→V+NP+ADV

The above shows a VP that is made up of a verb plus a noun plus adverb. For example;

English: wash the plates quickly.

Tonga: *sanzya mitiba cakubindana*.

In the above example, the literal and symbolic meaning of the VP is not identical and is presented as follows in the tree diagram.

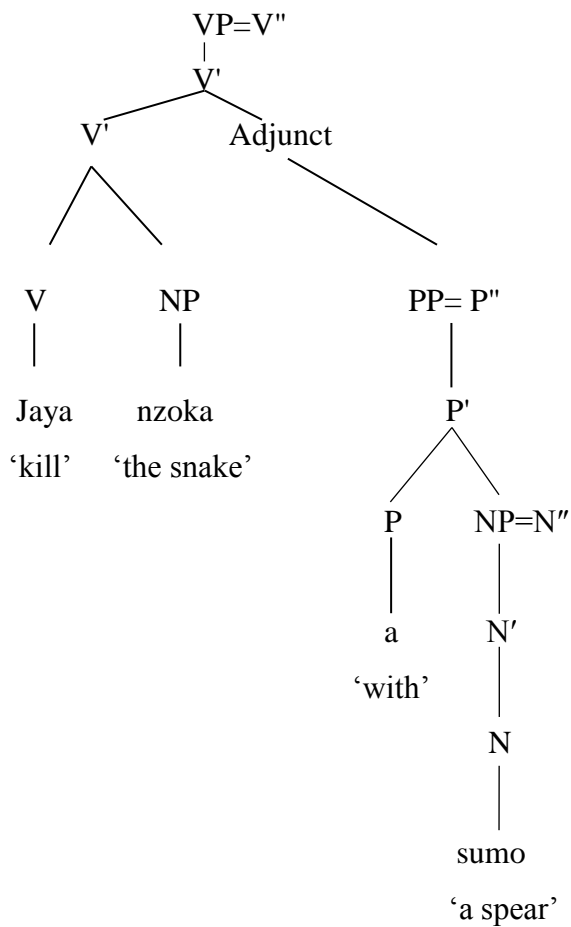


4. VP → V + NP + PP

This is a VP that has a verb plus a noun plus a preposition. For example;

English: kill the snake with a spear.

Tonga: jaya nzoka asumo. The structure in Tonga is presented as follows:

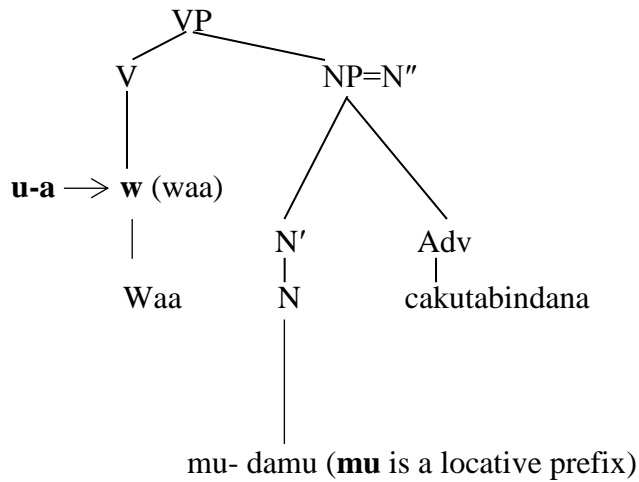


5. VP → V + PP + Adv

The above shows that a verb phrase consists of a verb plus a preposition plus adverb as shown in the syntactic rule. The structure in Tonga is presented in the tree diagram below.

English: fall into the dam slowly.

Tonga: waa mudamu cakutabindana.



It is interesting to note that in Tonga language, semi vowels are formed when certain vowels from the combining morphemes follow each other as in the case of the verb 'waa'.

u-aa

u+a=w semi vowel formation

Hence, the sequence of u+a gives rise to w. hence the verb 'waa'. Additionally, it is important to note that, agreement is not only in number but also in form.

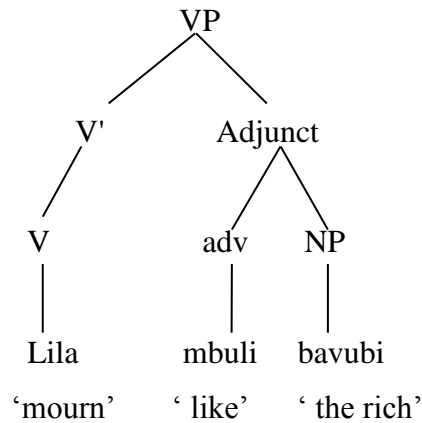
6. VP → V + Adv

The above shows that a verb phrase can be a verb plus adverb. For example;

English: mourn like the rich.

Tonga: lila mbuli bavubi.

The structure in Tonga is presented in the tree diagram as below:



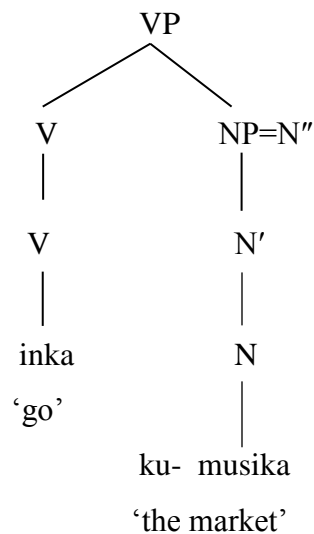
7. VP → V + PP + NP

This shows that a verb phrase can consist of a verb plus preposition plus noun as shown below;

English: 'go to the market'.

Tonga: inka kumusika.

The structure in Tonga is presented in the tree diagram as below:



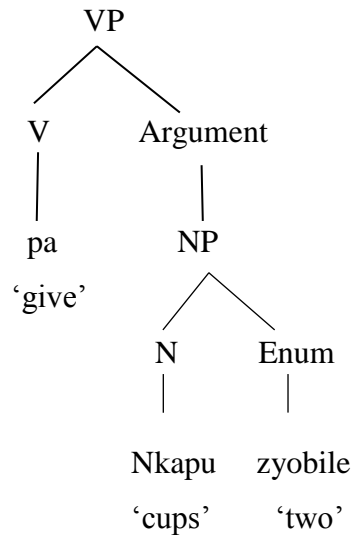
'Ku' in **kumusika** is a locative prefix which belongs to class 17

8. VP → V + Enum

The above shows that a verb phrase can be made up of a verb plus a numeral. For example;

English: give two cups.

Tonga: pa nkapu zyobile.

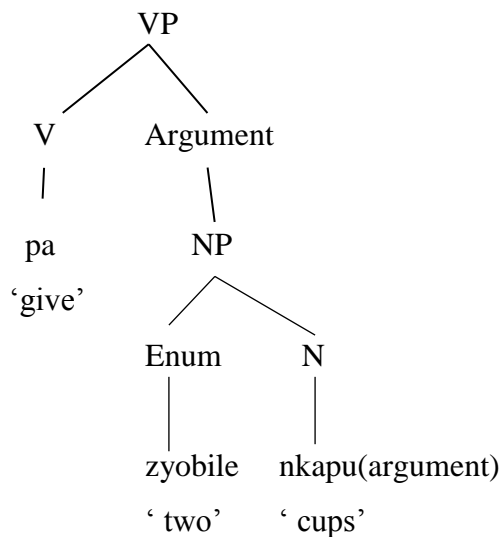


It is interesting to note that the verb plus enumeration in Tonga can alternate. This brings in the application of dative movement. This is exemplified as below;

Tonga: pa zyobile nkapu.

In Tonga such is used for emphasis.

Syntactically the structure of the former version before the application of dative movement can be presented as below on the tree diagram.

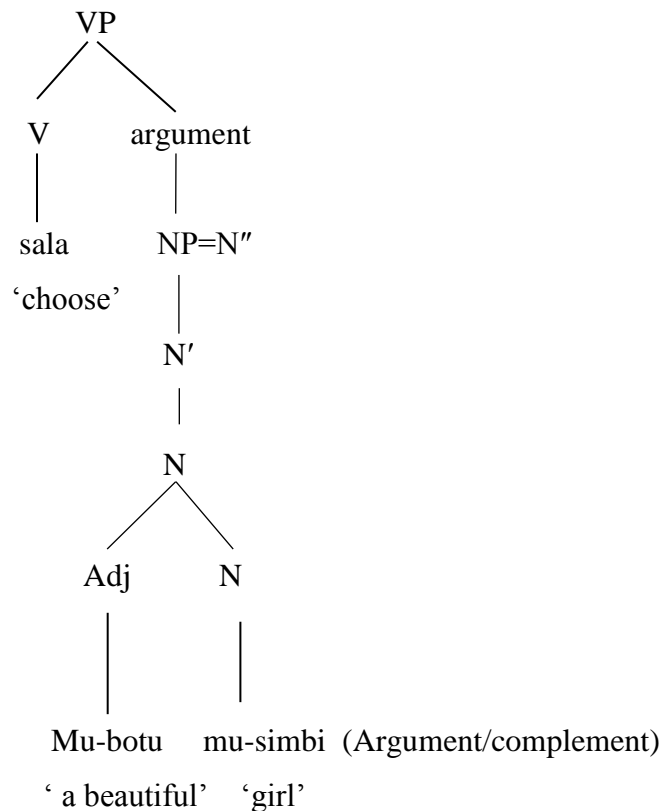


9. VP → V + Adj

A verb phrase can be a verb plus adjective. This structure can be presented on the tree diagram as follows:

English: choose a beautiful girl.

Tonga: sala mubotu musimbi.



In the adjective **mubotu** ‘beautiful’ the prefix ‘**mu**’ belongs to noun class 3 and **-botu** is the root. On the other hand, the prefix ‘**mu**’ in **musimbi** ‘girl’ belongs to noun class 1 while as **-simbi** is the root

3.3.1 Conclusion

The Tonga verb phrases, like other Bantu languages, have both properties of a single word and a sentence as we learn from the nine different structural typologies established in this chapter. It was also observed that apart from displaying total syntactic properties, some of the established typologies of verb phrases, also exhibit some morphological characteristics.

3.4 Government –Binding theory applied

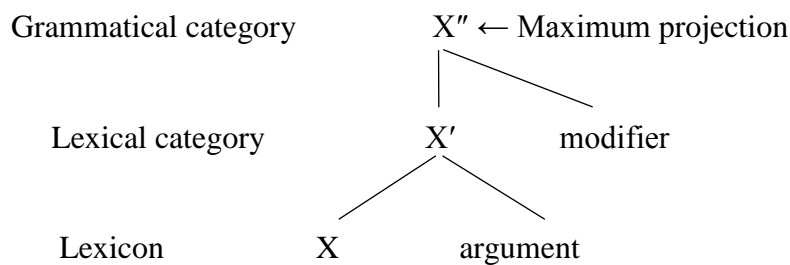
3.4.1 General

In this section, GB theory is applied in the follow up discussions. The GB theory is made up of different theories. However, some of the theories will not be applied in this analysis. The theories applied in this section include; the X- Bar Theory, Projection Principle, Control

Theory, Theta Theory and Government Theory. The verb phrases will be exemplified within tree diagrams of sentences.

3.4.2 Phrase rules and structures

In application of the models from Government Binding Theory, a general schema of a phrase will be used to show the headedness of each verb phrase. A general representation of Tonga phrase structures is as follows:



It is important to note that the slot for specifier (determiner) is not applicable in Tonga since the language has no morphemes for an article (**the** or **a**).

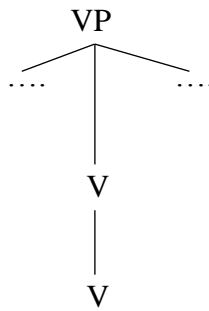
This schema identifies;

- a) The grammatical categories of the phrases.
- b) The lexical categories of parts of speech used.
- c) The lexicon.

3.4.2 X-Bar Theory

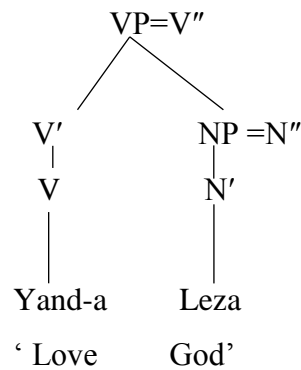
X-bar theory as one of the models in Government Binding Theory brings out a general structure of phrases and it provides conditions under which syntactic tree diagrams are built. The structure of the phrase in Government Binding Theory is known as the schema commonly known as X' - schema. According to X-bar theory, all phrases are headed by one head and heads dominate words. These heads provide phrases their essential character.

The general structure of verb phrases is presented as below.



Using the above general structure of a verb phrase, the Tonga verb phrase is syntactically presented as below.

a) Yanda Leza ‘love God’

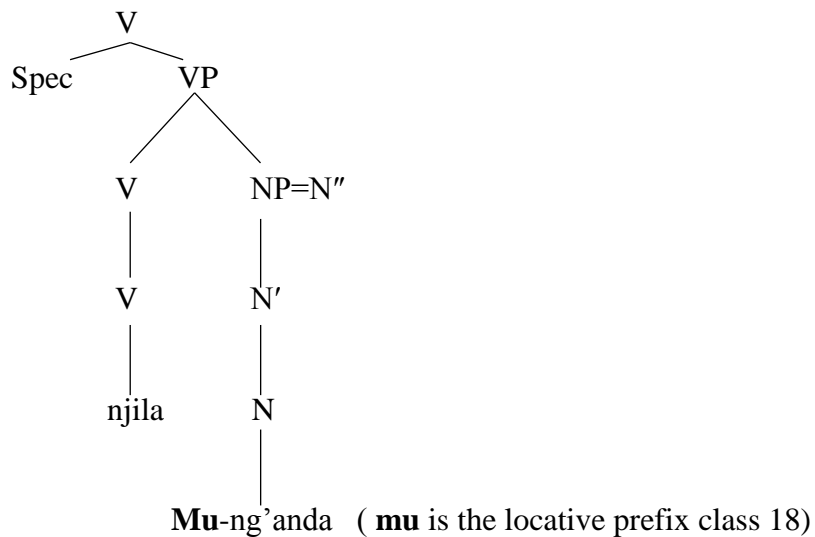


The above syntactic tree diagram 3.4.2 (a) prove that the verb phrase yanda Leza is headed by one head yanda ‘love’. Therefore X' bar theory is applying to Tonga verb phrases since it states that, all phrases are headed by one head and this is what the verb phrase yanda Leza has displayed.

As earlier mentioned, X' bar theory deals with issues relating to phrases in a language and Horrocks (1987:101) states that the theory does this by providing

Principles for the projection of phrasal categories from the lexical categories and imposes conditions on the hierarchical organisation of categories in the form of general schema.

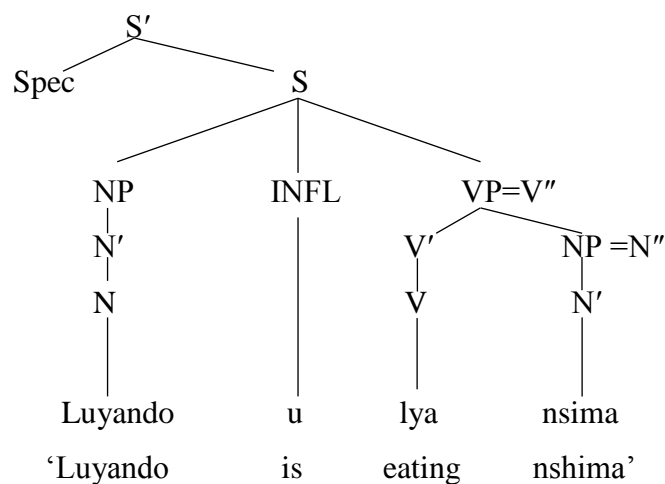
In order to substantiate what Horrocks (1987) states above, the general structure of a sentence would be presented as follows using X-bar theory.



3.4.3 Projection principle

In the schema above 3.4.2, X'' is the highest order of Tonga verb phrases. On the other hand, X' is the phrasal category containing X the lexical head. In addition, X'' is the phrasal category containing X' , the optional specification (determiner) and modification (modifier). X' and X'' are said to be projections of X the lexical head the ultimate projection X'' referred to as the maximal projection. Consider the example below.

- a) Luyando ulya nsima. 'Luyando is eating nshima'



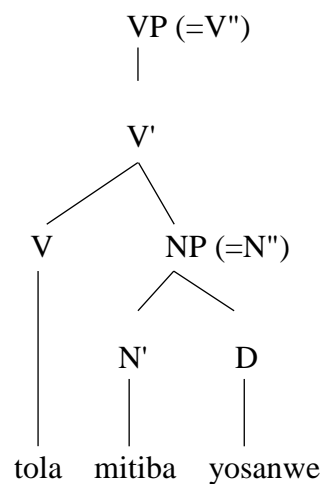
The sentence in 3.4.3(a) has a verb 'lya' and two noun phrases made up of N, these are; Luyando and nsima. This clearly shows that in Tonga, the position of the verb phrase in a simple sentence is in the middle. The head 'lya' of the verb phrase lya nsima 'eat nsima' is projected in the minimal projection which is controlled by the maximal projection 'Luyando' (NP). There is also subject agreement, 'u' 'is' shows agreement. The structure in 3.4.3 (a) above, prove that the head of the verb is projected in the minimum projection, which is controlled by the maximum projection. Therefore, this shows that X- bar theory is applying in this respect to Tonga verb phrases.

3.4.4 Government Theory

Gloss: take five plates

Tonga: tola mitiba yosanwe.

Syntactically the verb phrase tola mitiba is presented as below when subjected to syntactic rules:



The verb 'tola' governs (= is the governor of) NP (= the governee). This demonstrates that Tonga verb phrases conform to government theory.

3.4.5 Control Theory

Control Theory is concerned with the analysis of sentences with verbs taking infinitival complements that have null subjects (=PRO with capital letters 1). This means that the theory

is mainly about a missing subject. The subject is not explicit but implied or understood. The implied subject of a non-finite verb is referred to as ‘PRO’ in GB constructions. For instance;

- 1) Mwiinga waka kulwaizya bantu balikulubazu lwakwe [kuti babatame].

‘Mwiinga urged all her supporters [to remain calm].’

The components in square brackets although they seem not to have a subject for instance; [kuti babatame] ‘to remain calm’, it is understood as though they have a subject. According to Ashers (1994: 744), the term control;

can alternately be used in the relation between an unexpected subject and a controller. The specification of the nature of the controlled predicate and the identification of the controller are the major issues in any analysis of control.

Thus, the construction; Mwiinga urged all her supporters_i[to remain calm] is understood as **Mwiinga_i urged all her supporters_i PRO_i to remain calm** in which the ‘coindexed’ elements (Mwiinga_i and PRO_i) are coreferential, Mwiinga and PRO being the controller and the controllee, respectively.

Other examples of how control works

- 2) Sibajene wakasoleka kumujaya mubbi
‘Sibajene tried to kill the thief.’
- 3) →Sibajene_i wakasoleka_{PRO_i} kumujaya mubbi
→Sibajene_i tried _{PRO_i} to kill the thief.
- 4) Sibajene wakasoleka kujaya kutegwa afutule bayisha nyina
‘Sibajene tried to kill to save her uncle.’
Sibajene_i wakasoleka_i kujaya_i kutegwa afutule bayisha nyina
→ Sibajene_i tried PRO_i to kill PRO_i to save her uncle.

In (2), Sibajene is the controller and PRO is the controlled understood subject. The explanation is supplied by, ‘..... to kill the thief,’ which is the argument of ‘Sibajene tried.....’In (3), Sibajene again is the controller and PRO is the controllee. PRO₁ controls PRO₂. It is worth noting that (3) is an example of chain control with the same referent and that a verb phrase in principle must have a subject.

Control theory has applied in Tonga because the above examples; (1), (2), (3),and (4) illustrates how Tonga verb phrases fit in control theory.

3.4.6 Theta Theory

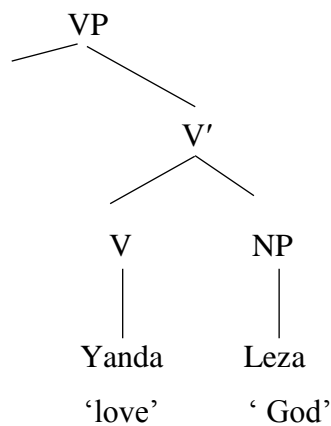
Theta Theory is concerned with the distribution and assignment of the theta-roles. The main principle that guides this theory is called the Theta- Criterion which states that; each argument bears one and only one theta –role. It also requires that every argument of a verb should be assigned one and only such role. Theta Criterion describes the specific match between arguments and theta – roles (θ – roles) in logic form (LF). In other words, a theta-role describes the connection of meaning between a verb and a constituent. In the example below the verb phrase, yanda Leza ‘love God’ has one theta – role to assign: (the entity being loved). In accordance with the theta- criterion, each theta – role must have its argument counterpart as illustrated below.

Table 1 Theta –role applied

Theta- role	<AGENT>		<THEME>
(1a)		Yanda ‘love’	Leza ‘God’

In example (1a), Leza ‘God’ is the argument that the verb assigns theme theta-role to, respectively. Since there is a one-to-one mapping of argument to theta-role, the theta-criterion is satisfied and the phrase is deemed grammatical. It is worth noting that, although each theta-role is assigned a head within its domain, the nature of the external theta-role is determined not just by the verb but by the whole Verb Phrase. Below is the underlying representation of the phrase;

yanda Leza ‘love God’ by a syntactic tree.



This reveals that verbs in Tonga conform to theta theory because as heads in a verb phrase they do assign theta – roles to their noun phrases.

3.5 Conclusion

This chapter has dealt with typologies and syntactic analysis of Tonga verb phrases. What has applied mostly when analysing VPs syntactically is more of syntax, though some morphology also applied at analysis level due to the agglutinating native of the verbal system. This is because of the structure of some units in Bantu languages that render themselves more attainable to morphosyntax. Therefore, morphosyntactic analysis is implied in the analysis although this was not a morphosyntactic study. However, this chapter in its analysis to find out whether or not Tonga verb phrases can be analysed using Government Binding model though it was developed using the English language, proved that some of its models do apply to Tonga language because when subjected to syntactic analysis, the verb phrases conformed. We do deduce from what Mathews says in 1.6.6.3 of this study that the GB Theory does apply to the lexicon of an individual language by Projection Principle, Tonga inclusive. This study has proved that; the Tonga verb phrases conform to some of the models from Government Binding like; the X- bar theory, projection principle, control theory, Government theory, and Theta when subjected to syntactic analysis (rules of syntax).

CHAPTER FOUR: THE ARGUMENT STRUCTURE OF VERB PHRASES

4.1 Introduction

This chapter discusses the argument structure of verb phrases (functional structure) in Tonga, enlightening us on the elements of argument structure in Tonga verb phrases. It is also informing us on the head and dependent elements, how they combine and how they relate to each other. According to Fromkin and Hyams, (2010), there are different types of dependent elements conditioned by the type of phrase. The concept of argument structure is covered in verb phrases.

The argument structure is necessary because it is the internal structure of VPs. It may be in form of the object or complement. Therefore, arguments are necessary in order to complete the meaning of the verb.

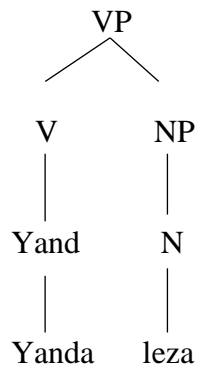
There are six types of post- modifiers in Tonga verb phrases. These include; noun phrases, locatives, enumeration, prepositional phrases, adverb phrases and adjectival phrase. All these post-modifiers are headed by the head (verb) and are regulated by Verb Phrase Functional Formula.

4.1.1 Transitive verbs

In Tonga, just like in other Bantu languages, the transitive verbs must be followed by an object which is normally a noun phrase (complement). In Tonga, an object noun phrase occurs as a post- head element in a Tonga verb phrase. For example;

1.
 - a. Tonga: yand-a leza. ‘love God’
Leza ‘God’- AUG
 - b. Let-a mali ‘bring money’
Mali ‘money’-AUG

The structure in Tonga is syntactically presented in the tree diagram below;



In the above example, the noun phrase is the object of the head verb and must occur with it to help complete the meaning of the verb. In this case, this noun phrase is a complement and therefore, closely related to the verb that precedes it.

Though transitive verbs must take complements, as pointed out in the preceding discussion, they can also take adjuncts in addition as illustrated in (2) below.

2.

(a) Bikka bbuku atebule

Bikka= VERB bbuku= AUG a= locative -tebule

‘Put the book on the table’

Put AUG=book on the – table.

(b) Bikka bbuku amusankwa

Bikka =VERB bbuku=AUG a=preposition AUG- musankwa

‘Put the book with the boy’

Put AUG= book with AUG-boy

(c) Bikka bbuku cakubindana

Bikka=VERB AUG-bbuku ADV=cakubindana

Put AUG-book AVB= quickly

‘Put the book quickly’

It is worth noting that the locative in (2a), the prepositional phrase in (2b) and the adverbial phrase in (2c) are not obligatory. Even when they are left out, the meaning of these verb phrases cannot be affected.

4.3.2 Intransitive verb phrase

According to Aitchison, (1992), intransitive verbs do not require any complements across linguistically, the case in Tonga as illustrated below.

1. leta 'bring'

Although intransitive verbs do not take complements as Aitchison states in (3.3.2), in Tonga, they can be followed by adjunct, as the following examples show.

- a) Ona kabotu
'Sleep well'
- b) Ona kabotu acuuno
'Sleep well on the chair'
- c) Ona amwana
'Sleep with the baby'

However, the adverb phrase in (a) *well*, the locative (b) *on* and the prepositional phrase in (c) *with*, are not needed by the head verb, in these verb phrases, for it to have complete meaning. These modifiers can be got out of these phrases. They are therefore, loosely linked to the head verb. It is worth noting that these modifiers can all occur in the same verb phrase, illustrated below.

Ona acuuno amwana kabotu
Sleep on the chair with=Aug-baby well
'Sleep on the chair with the baby'

4.3.3 Ditransitive verbs

Ditransitive verbs in Tonga, as in other languages, take two objects in the form of noun phrases as complements as in:

1. English version: put water in a cup.

Tonga version: bikk-a mend-a mu-nkap-u.

The above explanation and example given gives a clear indication that the verb is the most important part that determines the presence of any other element in the VP.

Though ditransitive verbs take complements, in Tonga these can also take adjuncts in addition to the complements. Consider (2).

2. Pa musankwa mali mumanza cabulemu cakubindana

Pa AUG= musankwa AUG=mali locative=mu-manza ADV= cabulemu cakubindana

Give AUG=boy AUG= money, in- hand with- AUG- respect quickly.

‘Give the boy the money in the hand with respect quickly!’

The locative, prepositional phrase and the adverb phrase in example (2) above are not needed by the head verb for its meaning to be complete. These are loosely linked to the head verb. As a result, they can be left out of these phrases without affecting the meaning of the verb.

There are verbs in Tonga that must be followed by a noun phrase and a locative as complements. Such, also take adjunct as (3) illustrates below.

3.

Siya nkapu atebule cabulemu cakubindana

Leave AUG= cup on- table with=AUG- respect quickly.

Siya nkapu atebule ya mudala abbeke cabulemu cakubindana

‘Put the cup on the table for the old man on the bag with respect quickly.’

The locative *a-tebule* ‘on the table’, prepositional phrase *abbeke* ‘on the bag’ and adverb phrase *cakubindana* ‘quickly’ in these examples can be left out of the verb phrase without affecting the meaning. They are therefore, non-obligatory and are loosely linked to the head verb.

4.3.4 Conclusion

This chapter has analysed the Tonga argument structure. It clearly brings it out that two elements occur in Tonga verb phrases. These include; the head element and dependent elements. The verb is the only obligatory element in a Tonga VP. All the dependent elements in a Tonga VP are post-headed. These include; noun phrases, prepositional phrases, adjectival, adverb phrases, enumeration, and locatives. The NPs, as post-headed elements in a Tonga VP function as direct and indirect objects. The head verb needs them to complete its meaning. Therefore, they are obligatory in the VP they occur and are closely linked to the head verb. This indicates that, they are in a dependency relationship with the head verb.

Locatives, as post- elements in a Tonga VP, are obligatory and are needed by the head verb to complete its meaning only when they function as oblique. In this way they are closely linked to the head verb and are in a dependency relationship with it. When functioning as adjuncts, locatives are not required by the head verb. Such locatives are loosely linked to the head verb because they can be omitted from the VP. They are therefore, not in a dependency relationship with the head phrase given that the head verb does not depend on them for its meaning to be complete.

On the other hand, prepositional phrases and adverb phrases are always optional in a Tonga verb phrase. They are not required by the head verb to complete its meaning. As such they are loosely linked to the head verb. They are therefore, not in a dependency relationship with the head verb and exist independent of the head verb in the verb phrases.

CHAPTER FIVE: FINDINGS AND DISCUSSIONS

5.1 Overview

In chapter three and four, the findings of the study have been presented without any effort to discuss or comment on specific features. Each chapter ended with a summary of the contents of the chapter as a whole.

This chapter has presented only the findings that will help address the research objectives. The findings have been arranged according to the subcategorization, that is; structural typologies and PS rules of Tonga verb phrases, argument structure of Tonga verb phrases, morphological implication in Tonga verb phrases as well as the application of Government Binding models. From the discussion made in the main body, recommendations have been drawn in line with the research objectives raised in chapter one.

The study involved a syntactic investigation into the Tonga verb phrases as a contribution to the existing linguistic information in Tonga. Although this was not a morphosyntactic study, some morphology applied at analysis level.

5.2 Structural Typologies of Tonga Verb Phrases

During the investigation, a number of Phrase Structure (PS) rules were identified which describe the structural typology of Verb Phrases in Tonga. It was established that Tonga verb phrases like any other language, are made of different structural typologies. The results indicate that there are nine (9) structural typologies of verb phrases in Tonga. These are; verb, verb plus noun, verb plus noun plus adverb, verb plus noun plus preposition, verb plus preposition plus adverb, verb plus adverb, verb plus preposition plus noun, verb plus enumeration plus noun, and verb plus adjective. The structural typology of VPs highlights the components of VPs in the language under investigation. The PS rules representing the structural typology and components of Tonga VPs are summarized in Table 1 below. However, further research is likely to discover more PS rules that means this list may not be exhaustible.

5.3 Application of Government Binding Models

Findings from the study also reveal that when collected Tonga verb phrases were subjected to the rules of syntax, results show that some of the models from Government Binding Theory like X-bar theory, control theory, projection principle, theta theory, and Government theory apply to Tonga verb phrases.

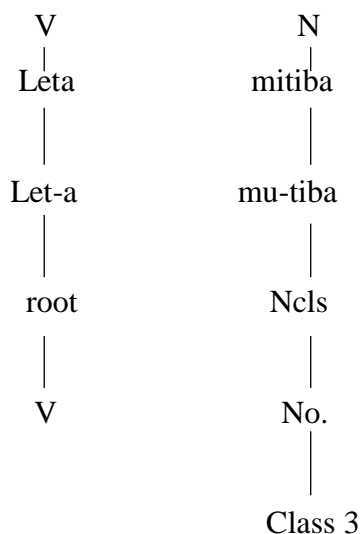
5.4 The Argument Structure of Tonga Verb Phrases

The grammatical investigation of the argument structure of Tonga VPs, indicate that they are two types of elements that occur in Tonga verb phrases, namely; the head element and dependent elements. It also shows that the argument structure is necessary because it is the internal structure of VPs. It may be in form of a complement or an object. This survey has also discovered that in Tonga, object phrases are the most frequently occurring arguments of a verbal predicate. Findings also show that the syntax of VPs lies in their structure.

5.5 The Morphological Implication in Tonga Verb Phrases

Findings of the research also reveal instances of morphology in some of the Tonga verb phrases collected. This shows that Tonga like any other Bantu language has a rich verb morphology which interfaces with syntax. This is what we call morphosyntax. The verbal word in Tonga, as the case in other Bantu languages, is highly complex in structure. This is due to the agglutinative nature of Tonga verbs, their syntax, like in other Bantu languages are always on the boundary with morphology. For example;

a) Leta mutiba ‘bring the plate’



The morphological structure shown in **5.4 (a)** above for the VP leta mutiba ‘bring the plate’ has the following PS rule $V \rightarrow V+N$. The verb **leta** ‘bring’ is divided into two components,

let-a. Let- is the root while as ‘**a**’ completes the tense aspect. On the other hand, the noun mutiba is also divided into two. **Mu-** belongs to noun class (Ncls) 3 while as –tiba is the root. The phrase structure (PS) rule for leta mutiba ‘bring the plates’ is $V \rightarrow V+N$.

b) Waa mudamu

Waa could be analysed as shown below:

u-aa

u + a =w semi vowel formation

= waa

c) ‘mudamu could be analysed as shown below:

mu- damu

mu= prefix under noun class 18

It has been observed that verbals have a grammar founded on prefix and suffix agreement. prefixes play a primary grammatical part in Tonga. As is the case in all Bantu languages, nouns in Tonga are divided into classes. The sign of a class is a prefix, but in a few cases a prefix is null (zero prefix). The verb agrees in class with its subject.

Therefore, the above examples; (a) and (b), reveals that, when an affixal agreement is reached or satisfied, the morphological operation has equally been operational.

The morphological structures presented above in **5.4(a), (b), and (c)**, qualifies the finding that in some cases syntax was at boundary with morphology.

CHAPTER SIX: CONCLUSION AND RECOMMENDATIONS

6.1 Conclusion

The investigation has concluded that although Government Binding (GB) was developed using English language, some of its theories which include; X- bar theory, projection principle, control theory, theta theory and Government theory do apply to Tonga verb phrases when subjected to syntactic analysis. The structural typologies that have been established will improve language teaching and scholarly understanding of Tonga VPs because the meaning of and structure expressed in Tonga revolves around the verb word which is the head in a verb phrase. Additionally, this paper will bring in new knowledge to the teaching and understanding of verb phrases in Tonga because the phrase structural rules (PS rules) with components established using Tonga Verb Phrases will provide a guide line on the structure of verb phrases in Tonga.

6.2 Recommendations

The general approach of teachers in teaching Tonga take it that a verb is always followed by a noun in a sentence. In this research, it was found that a verb is not always followed by a noun in Tonga language. It can be followed by different post-modifiers as shown by the PS rules that have been established using the structural typologies of Tonga Verb Phrases. There are nine structural typologies (shown in table 1 below) that were established. Therefore, we can conclude that, if the teaching of Tonga as a language in schools is to achieve the intended objective, then it would be plausible for teachers to carefully consider the PS rules established above. This is because the structure of and meaning expressed in Tonga language revolves around the verb word.

6.3 Limitations

- i. This research only looked at the Tonga VPs. It did not endeavour to compare the Tonga VPs to the VPs of other Bantu languages to see how they relate. The results obtained, therefore, may not necessarily be in comparison with other Bantu languages within or outside Zambia.
- ii. The collected data was only analysed using syntax but were not subjected to the other three levels of linguistics namely semantics, morphology and

phonology. This was because the focus of the research was centred on syntactic analysis of the VPs.

6.4 Need for Further Research

- 1) This research concentrated on Tonga VPs. Therefore, there is need for further research to look at the comparative investigation with other Bantu languages.
- 2) Since in this research data was only subjected to syntactic analysis only there is need for another study that will subject these Tonga Verb Phrases to the other three levels of linguistics namely semantics, morphology and phonology.

6.5 Ethical Considerations

Much of the data collected was from published books which are meant for public use. However, the confidentiality of the groups of people who voluntarily participated in this research during their group conversations shall be upheld as per their request. In this regard, the data collected shall entirely be used for academic purpose and shall not be meant to demean any individual or groups of people.

TABLE 1: PS RULES WITH COMPONENTS

TYPE OF RULE	COMPONENTS OF THE VPs
1. VP→V	Verb
2. VP→ V+NP	Verb plus Noun
3. VP→ V+NP+ADV	Verb plus Noun plus Adverb
4. VP→ V+NP+PP	Verb plus Noun plus Preposition
5. VP→ V+ PP+ ADV	Verb plus Preposition plus Adverb
6. VP→ V+ADV	Verb plus Adverb
7. VP→ V+ PP+NP	Verb plus Preposition plus Noun
8. VP→ V+ ENUM	Verb plus Enumeration
9. VP→ V+ ADJ	Verb plus Adjective

Having identified the verb phrases from the data collected and produced as shown in table 1 above, Tonga VPs are made up of different types of verbs as discussed in chapter two.

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APPENDICES:

Appendix A: Sample Data

VERB PHRASES IN TONGA

1. Types of Verb Phrases

1.1 VP→V

1.1.1 Gloss: choose

Tonga: sala

1.1.2 Gloss: cry

Tonga: lila

1.1.3 Gloss: work

Tonga: beleka

1.1.4 Gloss: write

Tonga: lemba

1.2 VP→VNP

1.2.1 Gloss: eat the nshima.

Tonga: lya insima.

1.2.2 Gloss: love the girl.

Tonga: yanda musimbi.

1.2.3 Gloss: send the boy.

Tonga: tuma musankwa.

1.2.4 Gloss: write a letter.

Tonga: lemba ilugwalo.

1.2.5 Gloss: smoke tobacco.

1.2.6 Tonga: fweba tombwe.

1.3 VP→VNP Adv

1.3.1 Gloss: eat nshima quickly.

1.3.2 Tonga: lya nsima cakubindana.

1.4 VP→VNP PP

1.4.1 Gloss: sing a song in church.

Tonga: imba lnyimbo mucikombelo

1.4.2 Gloss: put the cup on the table.

Tonga: bikka nkapu atebule.

1.5 VP→VPP ADV

1.5.1 Gloss: fall into the well slowly.

Tonga: waa mucikaala cakutabindana

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More sentences with the Verb Phrase

1.6 VP→VADV

1.6.1 English Gloss: Mourn like the rich.

Tonga: lila mbuli bavubi

1.6.2 Gloss: Fall down slowly.

Tonga: waa ansi ashoto shoto.

1.6.3 Gloss: sit down.

Tonga: kala ansi

1.7 VP→VPP NP

1.7.1 Gloss: go to the market.

Tonga: inka kumusika.

1.8. VP→VPP NP

1.8.1 Gloss: sleep on the mat.

Tonga: oona amuseme.

1.9 VP →V+ Enum

1.9.1 Gloss: give me two cups.

1.9.1 Tonga: kondipa nkapu zyobile.

1.9.2 Gloss: steal three goats.

Tonga: bba mpongo zyotatwe.

1.10 VP → V+Adj

1.10.1 Gloss: bring a red cup.

Tonga: leta nkapu isubila.

1.10.2 Gloss: Choose a beautiful girl.

Tonga: Sala musimbi mubotu.

1.10.3 Gloss: work diligently.

Tonga: beleka cabunkutwe.

Appendix B-Sample Data: From Public places

Verb Phrases in Tonga

TONGA	ENGLISH EQUIVALENT
Sala madede mabotu	Choose nice tomatoes
Jalila sabata	Close the Sabbath
Boola kucikombelo cesu	Come to our church
Lima muunda mupati	plough/Cultivate a big field
Kaka	Refuse
Pikka awa	Put here
Syanga nyemu	Plant groundnuts
Jata kabotu	Hold properly
Lunduka	Run
Fwambaana	Hurry up
Paila kumwami	Pray to God
Pa kwakumi	Give tithe
Ambila baiyi	Tell the teacher
Tila mabisi munkapu	Pour sour milk in the cup
Jila	Enter/come in
Bbika camutuzya	Apply fertilizer
Swanga aChileleko	Meet Chileleko
Koya kumunda	Go to the field
Nyamuka	Stand up
Balika	Run
Saya	Swim
Bona	See
Imba	Sing
Swaya banyoko	Visit your mother
Ida mumbeu	Water in the garden
Sobana tenesi	Play tennis
Sama ngowani	Wear the hat
Sika aciindi	Come on time
Ula magwaba osanwe	Buy five guavas

Ambaula adime	Talk to me
Lela kabotu bantu	Govern people properly
Luma	Bite
Anga	Tie
Angulula	Untie

Appendix C: Sample Data: From Radio stations

Tonga	English equivalent
Yobola	Keep
Belesya	Use
Tongoka	Complain
Tamikizya	Accuse
Kuswiilila kung'anda yasikapepele yasky	Listen to radio sky
Leta	Bring
Ambilizya makwebo	Advertise your products
Nywa musamu	Drink medicine
Nyonyoona	Destroy
Bbadela	Pay
Tola kubbelekela aamwi	Take to cooperatives
Sanga mali	Contribute money
Lwana	Fight
Endelezya	Lead

Appendix D: Sample Data: From Tonga Books

Source: Chitonga 8 by Curriculum Development Centre PP.1-125

Tonga	English equivalent
Bala lugwalo olu	Read this letter
Teelela kabotu-kabotu	Listen attentively
Pa mukozyanyo mubotu	Give a better example
Vuba mpongo	Rear goat
Ingula mibuzyo iccilila	Answer the following questions
Lemba mulaso	Write a composition
Lenga	Create
Enda	Walk
Lila	Cry
Beleka	Work
Tobela mwana	Follow the child
Teka meenda	Fetch water
Sya	Dig
Anga	Tie
Layilila	Give instructions
Sika musondo	Come on Sunday
Lindila	Wait
Leta mali	Bring the money
Jika	Cook
Uma	Beat
Sondela	Pip
Zyana	Dance
Ona	Sleep
Belesya kabotu	Use properly
Doneeka	Lit
Tambula	Receive
Sandulula muchitonga	Interpret in Tonga
Nywa Fanta	Drink Fanta
Nomoona mamba maciti	Choose adverbs

Yeeya	Think
Lya nyama yangulube	Eat pork
Unka	Go
Loba	Fish
Yaka	Build
Sowa doti	Throw the dirty
Pandulula	Explain
Mana nsima	Finish the nshima
Fwa	Die
Imba	Sing
Vwima	Hunts
Samba	Bath
Nyona	Turn
Sobana cisobano	Play the game
Seka	Laugh

Source: An Outline of Chitonga Grammar, by Carter, H. pp.47-66

Tonga	English equivalent
Sala	Choose
Amba	Speak
Nyema	Get angry
Kasya	Prevent/forbid
Iya	Learn
Penga	Be in distress
Yeeya	Think
Swaya	Visit
Penzya	Make suffer
Kondwa	Become pleased
Ula	Buy
Seka	Laugh
Zyiba	Know
Beja	tell lies

Joka	Return
Yoowa	Be afraid
Mwaya	Scatter
Bona	See
Unka	Go away
Anga	Bind/tie
Leka	Let go
Jala	Shut
Yuba	Hide
Sama	Put on clothes
Kotama	Bend/bow
Vunga	Fold up
Simpa	Plant
Zyoka	Return
Jilimana	Become erect
Lemana	Become deformed
Sumpuka	Lift up/improve
Sosoloka	Move out of the way
Bbabbanuka	Peel off
Enzemuka	Melt

Source: Masandu-Masandu by Chidwayi,M.S. PP. 14-55.

Tonga	English equivalent
Kkala abana bako	Live with your children
Pola	Extend to
Sama	Put on
Sandula nzila zyinji zyakusama	Change many ways of dressing
Sampaula	Despise
Swaya	Visit
Yaka	Build
Bamba zyintu zyakweendela	Manufacture vehicles
Lemeka mwaambo wesu	Respect our culture

Tobela zyintu zyeenzu	Follow our way of life
Komena	Be mature
Mvwa babati	Listen to elders
Bumba zyibiya	Mould clay pots
Sanduka	Reform

Source: Chiyuni Cakalala by Chisangano, D. PP.1-50

Tonga	English equivalent
Soleka kuyiisya	Try to teach
Kalala	Get angry
Uulika	Name
Yoosya	Frighten
Langa miswaangano amali asoweka	Look at meetings and money wasted
Katala	Get tired
Juba mazuba	Reduce number of days
Teelela mipailo yangu	Hear my prayers
Koma	Defeat
Abanya lubono	Share wealth
Kolanga bana bamucaala	Look at the orphans
Gwasya myoyo yesu	Help our souls
Jokela kuli ndime	Return to me
Lwana kazunda	Fight the virus
Wida aansii	Fall down
Lesya	Prevent/stop
Beja	Lie
Tola bantu kucuumbwe	Take people to the grave
Caala	Remain
Tongooka	Complain

Source: Tulengwa Twabasikale by Chiitauka, A. W. PP. 1 -36

Tonga	English equivalent
Jula cibiya	Remove the clay pot from the fire
Somba muntu	
Kambila banyoko	Clap for your mother
Wela buci	
Langa kumeso	
Leka	Stop
Koya ukalye mamvu	Go and eat soil
Jana	Find
Cela muncile	
Syoma	Believe
Ambila mukaintu	Tell the woman
Sisa nsima	Hind nshima
Tola	Take
Unka	Go
Bweza	Get
Jokela kumukwasyi	Return to your family
Buzya	Ask
Tola nyama eeyi	Take this meat
Leta	Bring
Sola mazuba manji-manji	Try for many days
Leka kulya	Stop eating
Tila nyama	Pour the meat
Jata kakuku	Catch a chicken
Lomba cimbi cisyu	Ask for some more relish
Sindikila basimbi	Accompany the girls