

**PROJECTION PRINCIPLE AS A SOURCE OF CONSTITUENT AGREEMENT IN  
SYNTAX: THE CASE OF TSHIVENDA**

by

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RESEARCH

Submitted in fulfilment of the requirement for the degree;

**MASTER OF ARTS**

in

**TRANSLATION AND LINGUISTICS STUDIES**

in the

**FACULTY OF HUMMANITIES**

**(School of Languages and Communication Studies)**

at the

**(UNIVERSITY OF LIMPOPO)**

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**2022**

## DECLARATION

I, **Govhola Annah Thomani**, declare that the mini-dissertation entitled: *The projection principle as a source of constituent agreement in syntax: the case of Tshivenda* hereby submitted to the University of Limpopo, for the degree of Masters in Translation Studies and Linguistics has not previously been submitted by me for a degree at this or any other university; that it is my work, and that all material contained herein has been duly acknowledged.

.....

.....

**Signature**

**Date**

**(GOVHOLA, A.T.)**

## **DEDICATION**

This study is dedicated to my parents who always stood by me and never ceased to emphasise the notion that, **“PFUNZO NDI IFA”**

## ACKNOWLEDGEMENTS

First and foremost, I would like to express my heartfelt gratitude's to my supervisor, **Prof. SJ. Kubayi**. Your guidance throughout the whole study was beyond remarkable, your positive criticisms sharpened my understanding of language issues. May God enhance the passion that you have in helping others. *Na nga ngoho tanzu jiswa ji tikwa nga lilala*. Patience and selfless character describes you well. *NDI KHOU LIVHUWA ZWINZHI VHO PHUROFESA*.

Special thanks to Prof. NA. Milubi. You were so pivotal during the hard times, when the work was being done.

Many thanks go to my father, Govhola Tendani Solomon and my mother, Govhola Livhiwani Jane, for their endless love, support and encouragement.

To my siblings, Sally, Rahaba and Judah, indeed nothing is impossible *Vhana vha mme anga*. It is people like you who make this world a better place.

To Rachel Mmapitso Maboja, thanks for always wiping my tears with encouragement.

Last but not least, I thank my Almighty **GOD for** the unparalleled love, opportunity, strength and wisdom to complete this study.

## **LIST OF ABBREVIATIONS**

N: Noun

AGRM: Agreement marker

S: Subject

EPP: Extended Projection Principle

V: Verb

AGRS: Subject agreement

OBJ: Object

ADJ: Adjective

NP: Noun phrase

VP: Verb phrase

SVO: Subject verb object

SM: Subject marker

PS: Phrase structure

PP: Projection Principle

AUX: Auxiliary verb

AGR1: Argument one

AGR2: Argument two

AGR3: Argument three

PRED: Predicate

Cl: Noun class

PRO: Pro drop

ADVM: Adverb of manner

ADVT: Adverb of time

ADVP: Adverb of place

S-STRUCTURE: Surface structure

D-STRUCTURE: Deep structure

SPT: Simple past tense

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## **ABSTRACT**

The aim of this study was to examine the notion of projection, as underpinned by the Projection Principle, between the subject, the verb, the object, the adjective and the adverb in Tshivenda. Data were collected through participant observation, wherein the researcher collected data in the form of clauses and sentences in Tshivenda. This study found that verbs and subject prefixes are predicates which project arguments in sentences. These arguments are characterised both linguistically and in the form of word realities. The study further found that Tshivenda is a pro drop language because the adjectival argument prefix can locate the subject argument in absentia. In turn, subject arguments and adjectival arguments carry the same class nominal prefix. The projection of elements of a sentence in Tshivenda identifies grammatical relations between constituents. Lastly, it is recommended that studies of a similar nature should be conducted in other African languages to establish how elements of a clause or sentence cohere as informed by the Projection principle.

**KEYWORDS:** Syntax, projection, argument, Predicates, Constituents, Principle, pro drop, agreement, prefix and nominals



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## **CHAPTER ONE**

### **GENERAL INTRODUCTION**

#### **1.1 INTRODUCTION**

This study examines the projection principle as a source of agreement in Tshivenda. This chapter focuses on the base components of research. First, the chapter gives the background of the study. Secondly, the research problem is stated. Thirdly, the purpose of the study is presented. This is followed by a discussion of ethical considerations of the study. In the fifth place, the quality criteria of the study are presented. Lastly, the chapter discusses the significance of the study.

#### **1.2 BACKGROUND TO THE STUDY**

Since the study is dealing with the agreement of words in sentences, it is, therefore, important to give a brief description of some of the key concepts, namely; syntax, agreement, the subject, the verb, the object and the adjective. These concepts are actually parts of speech.

Langacker (1991) notes the prevalence of differences of opinion among scholars of syntax on the definition and characterisation of lexical categories. He further comments that their views are almost as many as the languages in the world. This is so because of the variations characterising the different natural languages in as far as the notion in question is concerned.

Syntax is a branch of linguistics focusing on the arrangement of words and their relationships in sentences (Crystal, 1969). Carnie (2006) writes that the term 'syntax' refers to the rules that govern the ways in which words combine to form phrases, clauses, and sentences. Brown and Miller (1996) concur with Carnie (2006) by stating that syntax is the set of rules, principles, and processes that govern the structure of sentences in a given language, usually including word order.

The term 'Agreement' (AGR), also referred as 'concord', is used to refer to a proper connection between basics, where a form of one word needs an agreeing form of another word (Crystal, 1997:14). Agreement happens when a word changes form depending on the other words to which it relates (Cervel, 2005:378). It is an instance

of inflection, and usually involves making the value of some grammatical category (such as gender and person) between words or parts of sentences.

Subjects, verbs, objects and adjectives share grammatical relations. Owens (2004) defines the term 'grammatical relation' as the relationship obtaining between the head of a predicate and its argument phrases, particularly the subject and object. A grammatical relation is, therefore, a syntactic notion wherein syntactic rules govern proper sentence structure.

Kubayi (2013) posits that the subject (S) is identified by identifying the components that the sentence is about. The subject can also be understood to be the syntactic argument acting on the object in a simple active sentence. In a sentence, the subject is projected by the verb of the sentence and is usually the noun phrase in a sentence (Throne, 1996:33; Roberts, 1964: 5). The description given by Throne and Roberts fulfils one of the objectives of this study as it is of the interest of this study to reveal how the subject is projected by the verb in Tshivenda sentences. Thus, to recognise the subject, one needs only to question who or what is hooked in action, and the reply to this query will lead one to the subject, which takes the form of a noun or a pronoun. For instance:

(1). *Maria u /a vhuswa.*

(Maria eats pap).

(2). *Munna u rwa musadzi.*

(Man beats woman).

The word, 'Maria', in (1) and *Munna* (a man) in (2) above are components of which the sentences are about. Therefore, they are subjects of the two respective sentences. However, it has to be taken into consideration that not all sentences have subjects.

(3). *Hu khou rothola.*

( It is cold)

(4). *Zwi a vhavha.*

(It is painful).

Sentences (3) and (4) above have no participants. This makes it difficult to tell what their subjects are. However, according to the demands of the Extended Projection Principle (EPP) that says, for every sentence to be grammatical, it must have a subject of some sort (Hageman, 1998). Such sentences have subjects too since they are grammatical and acceptable Tshivenda sentences.

Richard et al. (1993: 398) hold that a verb (V) is regarded as a predicate (part of sentence) that makes a statement about the subject of a sentence which transmits grammatical markers such as tense, aspect, person, number and mood, which refer to action. Hageman and Gueron (1999:35) further explain that a verb is regarded as the most important element; therefore, it cannot be omitted.

(5). *Vha ja vhurotho.*

(They eat bread).

(6). *Mujambilu o vhulaha nowa.*

(Mujambilu killed a snake).

The verbs *ja* (eat) in (5) and *vhulaha* (kill) in (6) describe the action. These verbs are the pillar of the above two sentences due to the fact that they are the ones bringing together the other grammatical fundamentals such as the subject, *Mujambilu*, and the object, *nowa* (snake), to be meaningful. However, in Tshivenda, sentences that omit verbs are not grammatically correct. Consider the following example:

(7). \**Mujambilu o nowa.*

(Mujambilu snake)

This does not serve any purpose in Tshivenda grammar, the omission of the verb makes the subject *Mujambilu*, the subject agreement (AGRS) /o/ and the object, *nowa* (snake) not to express full thoughts. Judging from this example, it is reasonably clear that indeed the verb cannot be left out because its responsibility is to project other elements in a sentence.

Again, an examination of examples (5) and (6) gives insights that the description of the verb by Richard does not apply in all languages. For instance, in Tshivenda, the verb alone does not transmit tense, person and number, this is done by the subject agreement. Practically, the subject agreement *o* in (6) indicates that the verb is in the

past tense and yet in a singular form. The subject agreement *vha* in (5) indicates that the verb is in plurality, in present tense and in third person.

Howard (1990), Throne (1996) and Haegeman (1999) are of the view that the object (Obj) of a sentence describes something that is directly affected by the verb. One can check which part of a clause is the direct object by asking 'who?' or 'what?' the action of the verb affects.

(8). *Munna o tshipa n̄wana.*

(A man raped a child).

In this regard, *n̄wana* (*child*) is set to be the direct object of the sentence because the subject acted upon it. This brings a certain constituent agreement between the verb, the subject and the object.

Crystal (1980) defines an adjective as a term used in the grammatical classification of words to refer to the main set of items, which specify the attributes of a noun. Richards (1992) further defines an adjective (Adj) as a word that describes the thing, quality, state or action, which a noun refers to. Adjectives may appear before and after their head, but they normally come after the head.

(9). *N̄wana musekene o wa.*

(A thin child has fallen).

The adjective, *musekene* (*thin*), in the example above appears as a specifier of the head noun, *n̄wana* (*child*), in the subject position. Adjectives can also appear as complements of a noun in the object position.

### **1.3 STATEMENT OF THE PROBLEM**

Language is a tool which human beings use to communicate their ideas, feelings, opinions and experiences. However, one may not be aware that the words that he or she is using form part of certain grammatical features instituted by certain rules of that language. Thus, like English, Xitsonga, Sepedi and all other human languages, Tshivenda has its own system of rules. Words in Tshivenda belong to different grammatical features. These are nouns, verbs, adjectives, adverbs and many others. In a sentence, these parts of speech interrelate or agree in a systematic way. Therefore, it is important to investigate how parts of speech such as the subject, the auxiliary, the verb and the object relate or hang together in a sentence in Tshivenda.

It is also important to determine how tense in Tshivenda sentences is affected by other elements in the sentence. Thus far, very few scholars have attempted to undertake a study on subject-auxiliary, verb-object and adjective agreement in Tshivenda. Scholars that attempted to deal with some aspects related to this topic have not specifically focused on agreement morphologically and syntactically. As a result, no in-depth study was ever conducted in Tshivenda; hence, there is necessity to conduct this kind of study.

## **1.4 PURPOSE OF THE STUDY**

### **1.4.1 AIM**

The aim of the study was to explore the notion of projection between the subject, the verb, the object, the adjective and the adverb in Tshivenda sentences.

### **1.4.2 OBJECTIVES**

In order to achieve the aim, the study focused on the following objectives:

- ❖ To evaluate the projection of the subject, the verb and the object in Tshivenda sentences.
- ❖ To evaluate the projection between the subject and the adjective in Tshivenda sentences.
- ❖ To evaluate the projection between the verb and the adverb in Tshivenda.
- ❖ To determine how sentence constituents affect tense marking in Tshivenda.

## **1.5 ETHICAL CONSIDERATIONS**

Ethical considerations are essential in research because it directs the researcher on the ethical parameters within which he or she must conduct the study (Silverman, 2000: 201). Kubayi (2013) argues that the aim of ethics is to “prevent the participants in the research from being harmed by both the researcher and the research process”. There are wide-ranging ethical considerations that a researcher must adhere to when conducting research (Liamputtong, 2009; Creswell, 2009). These include informed consent, where the participants need to give their consent to take part in a study. Secondly, anonymity and confidentiality entail the participants’ responses which must not be used for purposes other than the research. The third ethical issue is risk and harm. This means that the participants must not be exposed to unnecessary risk and harm due to their participation in the study. Another ethical issue is the privacy of responses. At this stage, the study does not involve human

participants. Therefore, the ethical issues raised above are not something to be alarmed by. However, the researcher applied for an ethical clearance from the Turfloop Research and Ethics Committee (TREC) to enable her to proceed with the study.

## **1.6 SIGNIFICANCE OF THE STUDY**

The significance of this study lies in the fact that Tshivenda has a low status as compared to other languages that have maintained their dominance in terms of their high status and prestigious domains in which they are used. This study will benefit diverse linguists; it will help innumerable speakers of different tongues to improve their level of grammar by ascertaining the link of words in sentences.

The study will serve as a source of reference for researchers interested in this field; it will assist people who use language as their profession such as educators and language practitioners in a way that they will comprehend the grammatical relation of words they use. It will also add to the development of Tshivenda, as a standardised language in South Africa.

## **1.7 QUALITY CRITERIA**

Quality criteria is defined as “the confidence that can be placed in the truth of research findings” (Holloway & Wheelers, 2002). It represents whether the research findings signify believable data that have been analysed from different sources. The study was truthful in presenting the data and there was no manipulation of data. Various scholars believe that grammar is the most challenging phenomena which requires one to be more vigilant although the researcher will have to be open-minded when observing the data in order to produce quality and not quantity. Four quality criteria are used to ensure the trustworthiness of this study and these include: “credibility, transferability, dependability and confirmability” (Liamputtong, 2009; Hammond & Wellington, 2013).

### **1.7.1 CREDIBILITY AND TRANSFERABILITY**

Liamputtong (2009:21) proffers that credibility is used to regulate whether the research is honest, consistent or firm. Credibility is ensured by presenting data that are relevant to Tshivenda syntax, in particular the notion of agreement. Credibility also means that the results of the study are believable. To ensure that the results are believable, the researcher did not derive the results in a vacuum. Instead, she



used syntactic argumentation to ensure that the findings were credible.

Transferability refers to the degree to which the results of qualitative research can be transferred to other contexts with other respondents (Bitsch, 2005; Tobin & Begley, 2004). In other words, the theoretical knowledge that was obtained from this study must be able to be applied to similar situations. The researcher ensured transferability by making it easier for people who are interested in this field of syntax to have access to this study.

### **1.7.2 DEPENDABILITY**

Dependability needs a fit between the research results and the data from which the former has been derivative (Liamputtong, 2009). In this case, the researcher observed sentences which paraded sense, traceability and vibrant documentation.

### **1.7.3 CONFIRMABILITY**

Conformability refers to the “degree to which the results of an inquiry could be confirmed or corroborated by other researchers” (Baxter & Eyeles, 1997). The researcher ensured that data and interpretations of the results were not fabrications of the inquirer’s thoughts but were attained from the data collected.

## **1.8 CHAPTER OUTLINE**

Chapter One looks at the background to the study, statement of the problem, purpose of the study, objectives of the study, ethical considerations, quality criteria and the significance of the study. Chapter Two provides the literature review as well as the theory of the study. Chapter Three discusses the research methodology, with particular focus on the research design, research approach, population, sampling, data collection, and lastly, data analysis. In Chapter Four, data are presented and analysed. Chapter Five presents the summary, findings and recommendations of the study.

## **1.9 CONCLUSION**

This chapter has presented the background to the study. The research problem, together with the purpose of the study have been clearly stated. The chapter has also discussed the ethical considerations, quality criteria and the significance of the study. The next chapter will review the existing body of literature on the projection

principle as a source of agreement. The chapter will also present the theory of the study.

## **CHAPTER TWO**

### **LITERATURE REVIEW**

#### **2.1 INTRODUCTION**

The previous chapter presented the background of the study, wherein the base components such as the research problem, the purpose of the study and ethical considerations were deliberated. This chapter reviews the literature of a number of scholars whose works are relevant to this study. Firstly, the chapter looks at the exposition of grammatical relations in Sotho languages (i.e. Northern Sotho and Sepedi), secondly, the Nguni languages (IsiXhosa and Isizulu), thirdly, the other languages (Tshivenda, Xitsonga and Shona), fourthly the English language, in the fifth place, the Italian language, in the sixth place, the Slavonic languages and lastly, the review of the Projection Principle Theory.

#### **2.2 EXPOSITION OF GRAMMATICAL RELATIONS**

Chomsky's (1965) study pinpoints that when defining grammatical relations, it is necessary to make explicit the relational character of those notions by making language specific definitions. This is encouraged because relations are language specific and must, therefore, be handled from the angles of specific languages. This notion is also shared by Panfilov (1968) who notes that the syntactic level of language is the grammatical subject and the grammatical predicate which are developed within a specific language.

Chomsky (1965) goes further to describe subjects, objects and predicates as distinct from the noun phrase (NP) and verb phrase (VP) because they designate grammatical relations. This shows that they are syntactic relations rather than syntactic categories, the class to which the latter two belong. The former are syntactic rather than morphological notions. Ouhalla (1994) also notes that terms such as 'subject' and 'object' refer to the grammatical functions of categories. They are not categorical labels, therefore, should not be confused with the categorical labels such as NP and VP. The position is also shared by Halliday and Matthiessen (2004) who argue that the subject has the grammatical function in a sentence of relating its constituent, a noun phrase, by way of the verb to any other elements present in the sentence, that is, objects, complements and adverbials.

### 2.3 GRAMMATICAL RELATIONS IN SOTHO LANGUAGES

Louwrens (1991) conducted a study based on the concordial agreement which explains two different types of subjects and their function in Northern Sotho. These are grammatical subjects and semantic subjects. It is explained that the subject decides with the verb through the subject concord. The following examples support the foregoing statement:

10.(a) *Pula e nele maabane.*

(It rained yesterday).

(b) *Letšatši le a fiša.*

(It is hot.)

According to Louwrens (1991), *e* in (10a) and *le* in (10b) are subject concords which bring together the subject and the verb. Consequently, the semantic subject is a noun which refers to an agent which is responsible for carrying out an action expressed by the verb. From the given examples, *pula* (rain) and *letšatši* (the sun), act as semantic subjects.

Poulos et al. (1994) show how subject concords correspond with their noun class prefixes in Sepedi, as shown in Table 1 below:

**Table 1: Concord-prefix agreement in Sepedi**

| Noun classes   | Subject concord |
|--|-----------------|
| (1) <i>Mo-</i><br><i>Mosadi o apea dijo.</i><br>(a woman cooks food) | <i>o-</i>       |
| (2) <i>Ba-</i><br><i>Basadi ba apea dijo.</i><br>(women cook food)   | <i>ba-</i>      |

Poulos et al (1994). found that, in Sepedi, noun classes' morphemes have their accord subject concord. In this language, subject concords are either singular or plural. However, to enhance agreement, a singular subject concord has to match with a singular noun class morpheme. Looking at the above table, the noun class 1 *mo-* for *mosadi* (a woman) is singular and the same applies to the subject concord *o*. The same case is noted with the class 2 morpheme, where the noun class prefix *ba-* is the plural subject concord in *basadi* (women). The study further stipulates that, if a singular noun class morpheme is used with a plural subject concord, there will be no consensus and that will lead to ungrammaticality.

The study by Poulos et al (1994). does not focus fully on syntactic agreement. It focusses on subject agreement only. This opens an opportunity for other researchers to conduct studies focusing on other grammatical features. Kganakga's (2004) study on inflectional morphemes in Northern Sotho indicates that in Northern Sotho, inflectional morphemes govern each other. For example,

(11). *Morutiši o ruta bana dipalo.*

(The teacher teaches children Mathematics.)

His commentary is that, the agreement morpheme *o* governs the noun *morutiši* (teacher), the noun, *bana* (children) and the noun, *dipalo* (mathematics) in the object position. However, these nouns are governed by the verb, *ruta* (teach). In this case, the lexical head, which is the verb, governs complements. However, it is stated that in this language (Sepedi/Northern Sotho), the subject will never govern but will always be governed.

Ralushai's (2015) study purports that in Sepedi, kernel active sentences are basically of the Subject Verb Object (SVO) order. Like in other Bantu languages, the

Sepedi subject occurs before the verb whereas the object is an unmarked post-verbal noun phrase. In this language, the subject is topical, it is followed by the verbal complex and lastly, by the object.

(12). *Maropeng (SUB) o (AGRS) jele (V) mogodu (OBJ).*

(Maropeng ate tripe.)

Lee (1974) as well as Lappin, Levine and Johnson's (2000) study on word order observes that the basic sentence for a Subject- Verb- Object (SVO) language can be described as comprising of a subject (topic) and a predicate (comment). Here, the topic will be acting as the pragmatic focus. It is the most pronounced argument or participant in a piece of discourse. In simple terms, it is what the conversation is all about. As aforementioned, languages have different ways of attaching prominence onto their participants. For instance, in Ralushai's (2015) findings, it is revealed that for one to attach prominence onto the Sepedi NP *pudi* (goat) in the following example, there is need to employ the rule that results in examples 13:

(13). *Nkadimeng o bolailwe pudi.*

(Nkadimeng killed the goat.)

The most prominent entity is *Nkadimeng* since it is the occupant of the topical subject position or sentence. Nevertheless, to shift prominence to *pudi* (goat), one will then be obliged to derive the passive transformation like,

(14). *Pudi e bolailwe ke Nkadimeng.*

(The goat was killed by Nkadimeng.)

This subject raising process, demotes the semantic subject *Nkadimeng* to the role of an oblique object thereby enabling *pudi* (goat) to be promoted to a topical subject position. This is made so by the projection principle's condition that no two entities can be assigned the same role in a sentence. Therefore, in Sepedi, a topical subject is the occupant of the canonical subject position and it is also notable that all non-subject participants of the Sepedi sentence may become topical subjects and prominent sentential entities by being subjunctivised. It is, therefore, a type of status that is imposed onto an argument by changes in word order. That makes the status a characteristic of the surface structure.

## 2.4 GRAMMATICAL RELATIONS IN NGUNI LANGUAGES

Gxilise et al (2007) study looks at the noun class agreement system in IsiXhosa. The study's findings are that agreement in IsiXhosa is constituted by noun classes. The following example is given to explain the relation;

15.(a) *Umfundi omunye uyathetha.*

(One student is speaking.)

(b) *Ipolisa elinye liyathetha.*

(One policeman is speaking.)

In (15a), the subject *umfundi* (student) belongs to noun class 1; thus, the numeral and the verb both carry a noun class 1 agreement marker. In contrast, in example (15b), the noun *ipolisa* belongs to class 5, and thus the numeral and the verb carry morphemes with noun class 5 agreement features instead.

A study by Heine and Kuteva (2002) on the auxiliary status and tense marker in Isizulu indicates that the subject agreement is not just a property of clauses in a sentence; it is a property of the verb domain. This results in multiple subject agreement marking within root clauses when auxiliary verbs iterate. It is well known that in Bantu languages, tense markers originate as verbs. They show that, in Sesotho, the verb *tla* (come) is also used as a future tense marker. However, in isiZulu, the same feature pertains. Hence, the auxiliary *zo* (will) functions as the future tense marker. It is proposed that in isiZulu, tense markers retain some aspects of their verb status. This means that that they are projected as auxiliary verbs heading a VP projection.

Subject marking (SM) usually refers to elements that encode agreement features, viz. person, gender/class, and number. Most subject markers inherently encode agreement features. For example, even without any context, speakers of SiSwati know that the agreement prefix *ti-* in *tihambile* (they are gone) encodes a plural number and third person. It is only the class or gender features that are unknown outside of context. It is therefore reasonable to conclude that some subject markers inherently encode number and person phi-features. There is some evidence, however, that there is also one subject agreement marker that does not encode any agreement features (Koopman, 2000:36).

## 2.5 GRAMMATICAL RELATIONS IN OTHER LANGUAGES

A study by Mutheiwana (2000) looks at morphological adjectives in Tshivenda. The study locates that the adjectives in Tshivenda are recognised through an agreement morpheme which has to be exactly the same as the prefix of the head of the noun and an adjectival stem. For example,

**Table 2: Prefix-adjectival stem relationship**

| Class | Prefix / agreement morpheme | Adjectival stem | Adjective |
|-------|-----------------------------|-----------------|-----------|
| 1     | Mu-                         | -sekene         | Musekene  |
| 2     | Vha-                        | -tuku           | Vhatuku   |
| 3     | Mu-                         | -dala           | Mudala    |
| 4     | Mi-                         | -nu             | Minu      |
| 5     | Li-                         | -hulu           | Lihulu    |
| 6     | Ma-                         | -pfufhi         | Mapfufhi  |
| 7     | Tshi-                       | -lala           | Tshilala  |
| 8     | Zwi-                        | -denya          | Zwidenya  |

A study by Goehals et al. (1993) on subjects, verbs and objects in Xitsonga regulates agreement based on the following example:

(16). *Mufana u dya xinkwa.*

(The boy eats bread.)

According to their findings, the word *mufana* (boy) in the above sentence assigns focus and concentration as it is regarded as the initiator of the action *dya* (eat). This indicates that in Xitsonga, there is a fixed or strong relationship between the subject and the verb. Therefore, subjects and objects become passive when there is nothing to be done by the subject or nothing to act on the object. The only activity that makes them lively is the verb. A verb is the word that conveys action, feeling or experience. This implies that in every activity, something is done or happens through the actions of the subject which are realised on the object.

(17). *Vumbhoni u dlaya nyoka.*

(Vumbhoni kills the snake).

The word, *dlaya* (kills), assigns the relationship between the subject and the object in Xitsonga because 'kill' cannot stand alone and make sense, it needs the subject and the object in order to express full thoughts in a sentence.

Godi's (2002) study unearths the fact that subjects do not operate in a vacuum in Xitsonga but need an object to act on. Godi regards an object as any animate thing or instrument to which an action or a feeling is directed. The stress of objects is indicated in this manner:

(18). *Ntsako u endla tiya.*

(Ntsako makes tea.)

The word, *tiya* (tea), in the above sentence is the object on which the action is performed. It is also said that, if there is no action carried out in a sentence, there will be no object.

Ntsundeni (2002) undertook a study on the aspect of morpheme in Tshivenda. In this study, it is specified that concords serve as a link between words. The following example supports this view:

(19). *Phulu dzi a lima.*

(The oxen are ploughing.)

"*Dzi*" is the concord which serves as a link between the subject *phulu* (oxen), and the verb *a lima* (are ploughing). Godi (2002) conducted a study on constrictions in Xitsonga. He introduced the term 'stress' in grammatical relations which determined the function of the grammatical components in a sentence. The study stipulates that stress helps to assign focus on words. It can make words seem stronger than others in a sentence. In this regard, a verb in this language carries an essential role due to the fact that it brings other elements of a sentence together.

Karinga's (2001) study examined grammatical relations in Shona. The study's findings were that, the subject has to be original, preceding the verbal complex and agreeing with it. For example,

(20). *Dare rapera.*

(The court session has ended.)



Sentence (20) is considered grammatical because of the concordial agreement between the subject *dare* (court session) and the verb *ra-* (has), both of which are class 5. It is noteworthy that the Shona class 5 agreement marker is (*ri-*). When it is used together with the past tense marker, one will have it as *ra-* (has). However, if it is used together with future tenses, for example, one will have forms like *rinopera* (it will end) in which it is realised as *ri-*. The study further specified that NP's positional location makes it the automatic controller of agreement within the sentence. However, in languages like Shona, it achieves this effect by prefixing its marker onto the verbal complex. For instance, in example (20), the class 5 NP *dare* (court session) has been given the opportunity to impose the class 5 agreement marker *ra-* onto the verbal complex thereby promoting grammaticality.

Zeller (2008) research is consistent with Karinga's (2001) study because it attests that in most Bantu languages, agreement is expressed by prefixing a subject marker (SM) to the verb stem; the SM agrees with the noun class features of the preverbal subject.

Włodarczyk and Włodarczyk's (2006) study pinpoints that in languages like Shona, subjects govern agreement on the verb or on an auxiliary verb that carries the main tense of the sentence. The example below exemplifies how the Shona subject controls agreement and tense in a sentence:

(21) *Mu-komana a-no-dy-a sadza.*

(The boy eats sedza.)

*Mukomana* (boy) belongs to the Shona noun class 1 and because it occupies the subject position, it imposes its class 1 agreement marker *a-* onto the verbal complex, *anodya* (eats). In Shona, like in most Bantu languages, the subject prefix is obligatorily marked on the verb. The forms of the verbal complexes are required to match the class, number and gender of the subject NP. In the example above, the class 1 noun, *Mukomana* (boy), and the agreement marker, *a-*, share the features: number (singular), gender (male) and class 1.

## **2.6 GRAMMATICAL RELATIONS IN GERMANIC LANGUAGES**

Robin's (1991) study states that the terms 'subject' and 'object' have been variously applied in different languages with equal validity. Robins further states that in English

and German, the term subject may be applied to the noun, equivalent word or word group found in the minimal basic exocentric sentence type represented, for instance;

(22). John works.

In example 7, John is the noun phrase (NP) referring to the entity accomplishing the action specified by the verb and in agreement with it. This is, therefore, a simple sentence with a subject and a predicate. Robins further observes that in Latin, agreement may be defined by reference to the concord of person and number that is found between one noun, pronoun or corresponding word group in the nominative case and the verb, not between the verb and any other noun.

Ouhalla's (1994) study highlights that structural relations that determine grammatical functions are encoded in Phrase Structure rules. The study also specifies that the subject is the NP encoded in the phrase structure (PS) rule, which expands into:

Subject  Noun Phrase Auxiliary Verb Phrase

This is the subject in its structural sense. Lee's (1974) study similarly describes the subject relation in its structural sense as the "actor" involved in the under transformation of "actor-action-acted of the kernel sentence". A kernel sentence is that simple statement to which no optional transformational rules would have been applied. Whilst this may be true, it needs to be mentioned that these are neither the only types of sentences in all the languages nor are they available in all the languages. This makes it necessary for the situations evident in all the languages to be closely examined before people make much bigger universal conclusions on the notion.

A study by Halliday and Matthiessen (2004) reveals that the subject has the grammatical function in a sentence of relating its constituent (a noun phrase) by means of the verb to any other elements present in the sentence, that is, objects, complements and adverbials. Steel's (1978:610) study looks at agreement in the Italian language. She defines agreement as the systematic covariance between a semantic or formal property of one element and a formal property of another. To unpack the definition with reference to a specific example, the Italian phrase is provided;

(23) *I bei ragazzi.*

(The beautiful boys.)

Here, the noun *raggazi* (boys,) bears two features or properties in addition to the content morpheme 'boy', namely; Plural and Masculine. These two features also appear on the determiner and the adjective. What Steel means when she refers to 'systematic covariance', is that whenever determiners and/or adjectives modify a noun which carries the features plural and masculine, then the determiners and adjectives will also carry these features. By contrast, if the noun which they modify bears the features singular and feminine, then the modifiers would bear these features.

Jesensek's (2000) study focused on the characterisation of agreement in Slavonic. Typically, this language's agreement is found within the noun phrase in number and gender. Finite verbs generally agree obligatorily with their subject in person and number. Past tenses are frequently formed with the so-called I-participle, which creates a more interesting situation: here, the auxiliary verb shows agreement in person and number, while the participle shows agreement in number and gender. Some Slavonic languages, such as Russian, use a null form for the verb 'be' in its present tense, so that the former participle is the sole form in the past tense; it is said that Russian verbs agree in person and number in the present, but in number and gender in the past. Various types of pronouns, including the relative pronoun, also show agreement with their antecedents, in number and gender. In addition, most Slavonic languages readily include the determination of the form of anaphoric pronouns within agreement.

The study further found that the traditional accounts of Slavonic languages also include agreement in case. In a Russian phrase like '*v novom automobile*' (in a new car), the adjective and noun stand in the same case. Depending on one's view of syntax, this covariance may be seen as differing from that found with gender, number or person. It is less clear that case is an agreement feature, though we should recognise that it interacts strongly with agreement features. There are, however, a few constructions where there is good evidence for agreement in case. Consider a Polish expression below:

(24) *Sześć kobiet był-o smutn-ych.*

(Six women were sad.)

The verb is a third singular neuter 'by default'; the adjective appears to agree in number and gender with the quantified noun within the subject noun phrase.

## **2.9 THE PROJECTION PRINCIPLE**

According to the Projection Principle Theory, syntax is required to accommodate the characteristics of each lexical item in a sentence and projects the properties of lexical entries on the sentence structure (Cook & Newson, 1996). This view is supported by Wilkins (1988) who also observes that the Projection Principle requires that each level of syntactic representation be a projection from the lexical representation in observing the sub-categorisation properties of the lexical items heading it.

The Projection Principle ensures that aspects of the syntax of a clause are determined by the syntactic complement taking properties of the predicate heading it. Moreover, Haegeman (1998) writes that the Projection Principle is concerned with the presence of a government relationship between predicates and their grammatical relations. In other words, predicates are pre-equipped with the duty to control the type, number and ordering of the grammatical relations in a sentence. As a result, it is believed that certain parts of speech have to obey the selection restrictions imposed by the verbs. In this sense, the verb can act as a predicate that projects other elements of the sentence. In a sentence such as,

(25). John kills a snake.

The verb 'kill', is the predicate that projects the noun, 'John', in the subject position, and the object, 'a snake' in the object position. This theory is considered suitable for this kind of study because it demonstrates the rules that express how words and phrases are connected in a sentence.

## **2.10 CONCLUSION**

This chapter presented the literature review of the study. The chapter looked at the expositions of grammatical relations of the Sotho languages, the Nguni languages, the other languages, the English language, the Italian language, the Slavonic

languages and lastly, it reviewed the Projection Principle Theory. The following chapter focusses on the research methodology adopted for the study.

## **CHAPTER THREE**

### **RESEARCH METHODOLOGY**

#### **3.1 INTRODUCTION**

The previous chapter reviewed literature by scholars who wrote about agreement and/or the Projection Principle. This chapter presents an overview of the methodology implemented in the study. The discussion is based on the research approach, research design, population and sampling, data collection, data analysis, quality criteria and also ethical considerations.

#### **3.2 RESEARCH APPROACH**

Creswell (2014:2) posits that research approaches are “plans and the procedures for research that span the steps from broad assumptions to detailed methods of data collection, analysis, and interpretation”. Furthermore, the choice of a research approach depends on the nature of the research problem or issue being lectured and, on the researcher’s understanding. “There are three types of research approaches: qualitative, quantitative and mixed method” (Creswell, 2014). In this study, the researcher chose the qualitative approach. According to Creswell (1998: 15), “the qualitative approach is an inquiry process of understanding based on distinct methodological traditions of inquiry that explores social or human problems”.

The approach allows the researcher to analyse words and to conduct the study in a natural setting. In addition, Leedy and Ormrod (2013: 95) assert that the qualitative research approach's intentions are to determine and develop a thorough understanding of how and why certain things arise. This study sought to find out why and how elements of a sentence relate to each other in a systematic way, leading to agreement.

### **3.3 RESEARCH DESIGN**

Kothari (2004:31) states that research paradigms comprise of several research designs namely; narrative research, phenomenology, grounded theory, ethnographies and descriptive studies. Amongst the above, the researcher opted for the descriptive research design to determine the accords which govern the subject, the auxiliary, the verb and the object in a sentence. Descriptive research design, according to Trochim (2005), is like a formula. A formula provides an entire list of rules that one must adhere to before attempting to solve a problem. However, in this case, the formula refers to the components and the plans which were used to successfully carry out the aim of this study. Bickman and Rog (1998) suggest that "descriptive studies can answer questions such as 'what is' or 'what was'? Thus, a descriptive design was appropriate for this kind of study because it made it easy for the researcher to examine the relationship between certain aspects of grammar.

### **3.4 POPULATION AND SAMPLING**

Population refers to the total number of people, groups, organisations or units of analysis that could be included in a study (Bertram & Christiansen, 2014: 59). In the same vein, Creswell (2013) defines a population as a set of units or group of individuals with some commonality which the researcher is interested in studying. For this study, however, the population was different types of sentences in Tshivenda.

Webster (1985) states that sampling is the performance, procedure or method of picking an appropriate sample or a typical part of a population for the purpose of determining parameters or characteristics of the whole population. "It is a subset of population that is selected in order to research the population without having to collect data from its entirety" (Christiansen & Bertram , 2014:206). The sample of

this study was sentences containing dissimilar parts of speech such as nouns, verbs, auxiliaries, objects, adverbs and adjectives. These units were selected purposively by the researcher as a participant observer in the study.

### **3.5 DATA COLLECTION**

This study used participant observation as a data collection tool. Dewalt and Dewalt (2002) are of the view that “using participant observation as a method of data collection is to develop a holistic understanding of the phenomena under the study as objectively and accurate as possible”. A participant observer is one who observes the data as he or she takes part in activities as a regular member. The researcher of the present study was a complete insider as a participant, generating her own data by formulating different sentences containing various parts of speech in Tshivenda in order to evaluate how the Projection Principle brings about the agreement of elements of a sentence. This means that the researcher, as a Tshivenda speaker herself, generated her own data. Since this study was based on syntactic argumentation, it was not possible to collect data from external sources. In other words, it was up to the researcher to present relevant data and then to analyse the data at the same time as the study progressed. This is what participant observation is all about as a data collection tool in syntax.

### **3.6 DATA ANALYSIS**

Once data have been collected, they must be analysed, interpreted, findings must be offered, and conclusions should be drawn. “Data analysis is a process of turning the data into a clear, understandable, insightful, trustworthy and even original analysis” (Liamputtong, 2009: 277). A common type of data analysis in qualitative research is thematic analysis, sometimes called interpretative thematic. According to Liamputtong (2009), thematic analysis is a way of classifying, analysing and broadcasting patterns (themes) within the data and is perceived as a foundational method for qualitative analysis. This study analysed data thematically because it permitted the researcher to discover meanings, develop an understanding and realise visions relevant to the research objectives. The researcher analysed different types of sentences from the data collected, characterised by different parts of speech to try and carry out the objectives of the study through inductive reasoning.

This was underpinned by the Projection Principle as a theoretical framework of the study.

### **3.7 QUALITY CRITERIA**

Quality criteria is defined as “the confidence that can be placed in the truth of research findings” (Holloway & Wheelers, 2002). It represents whether or not the research findings signify believable data that have been analysed from different sources. The study was truthful in presenting the data and there was no manipulation of data. Various scholars believe that grammar is the most challenging phenomena which requires one to be more vigilant, although the researcher has to be open-minded when observing the data in order to produce quality and not quantity. Four quality criteria were used to ensure the trustworthiness of this study. These included “credibility, transferability, dependability and confirmability” (Liamputtong, 2009; Hammond & Wellington, 2013).

#### **3.7.1 CREDIBILITY AND TRANSFERABILITY**

Liamputtong (2009: 21) avers that credibility is used to regulate whether the research is honest, consistent or firm. Credibility was ensured by presenting data that are relevant to Tshivenda syntax, particularly the notion of ‘agreement’. Credibility also means that the results of the study are believable. To ensure that the results are believable, the researcher did not derive the results from a vacuum. Instead, she used syntactic argumentation to ensure that the findings are credible.

Transferability refers to the degree to which the results of a qualitative research can be transferred to other contexts with other respondents (Bitsch, 2005; Tobin & Begley, 2004). In other words, the theoretical knowledge that was obtained from this study must be applicable to similar situations. The researcher ensured transferability by making it easier for people who are interested in this field of syntax to have access to this study.

#### **3.7.2 DEPENDABILITY**

Dependability implies that there is a fit between the research results and the data from which the former has been derived (Liamputtong, 2009). In the case of this study, the researcher observed sentences which paraded sense, traceability and vibrant documentation.



### **3.7.3 CONFIRMABILITY**

Confirmability refers to the “degree to which the results of an inquiry could be confirmed or corroborated by other researchers” (Baxter & Eyeles, 1997). The researcher ensured that data and interpretations of the results were not fabrications of the inquirer’s thoughts but were attained from the data collected.

### **3.8 ETHICAL CONSIDERATIONS**

Ethical considerations are essential in research because they direct the researcher on the ethical parameters within which he or she must operate (Silverman, 2000: 201). Kubayi (2013) argues that the aim of ethics is to “prevent the participants in the research from being harmed by both the researcher and the research process”. There are wide-ranging ethical considerations that a researcher must adhere to when conducting research (Liamputtong, 2009; Creswell, 2009). These include informed consent, where the participants need to give consent to take part in a study. Secondly, anonymity and confidentiality necessitate that the participants’ responses must not be used for purposes other than the research. The third ethical issue is risk and harm. This means that the participants must not be exposed to unnecessary risk and harm due to their participation in the study. Another ethical issue is privacy of responses. At this stage, the study did not involve participants. Therefore, the ethical issues raised above are not a cause of alarm. Nevertheless, the researcher applied for an ethical clearance from the Turfloop Research and Ethics Committee (TREC) to enable her to proceed with the study.

### **3.9 CONCLUSION**

This chapter outlined the methodology adopted in the study. Qualitative research approach and descriptive research design were discussed as they were considered to be suitable for the study. This was followed by the population and sampling section. Thematic analysis was offered as the ideal method of data analysis in the study. Moreover, a segment on quality criteria and issues relating to ethical considerations were deliberated. The next chapter presents the analysis and interpretation of data collected.

**CHAPTER FOUR**  
**DATA PRESENTATION AND ANALYSIS**

**4.1 INTRODUCTION**

Whereas the core concern of the previous chapter was to analyse the methodology adopted in the study, this chapter analyses and interprets data. Its prime goal is to evaluate the notion of projection between the subject, the verb, the object, the adjective and the adverb in Tshivenda sentences. Thematic analysis is used to analyse data. Firstly, the chapter looks at the projection between the subject, the verb, the object, the adjective and the adverb. Secondly, attention is paid to how the projection of elements of a sentence are manifested when sentences are in the present and past tense in Tshivenda.

As it is emblematic of Bantu languages, Tshivenda has a large system of noun classes. The following table illustrates noun classes in Tshivenda and their agreement markers in the present tense and in the past tense:

**Table 3: Noun classes in Tshivenda**

| Noun | Noun prefix | Subject AGR marker in present tense | Subject AGR marker in past tense | Example of noun    |
|------|-------------|-------------------------------------|----------------------------------|--------------------|
| 1    | Mu-         | U                                   | O                                | Muthu<br>(Person)  |
| 2    | Vha-        | Vha                                 | Vho                              | Vhathu<br>(People) |
| 3    | Mu-         | U                                   | Wo                               | Muri<br>(Tree)     |
| 4    | Mi-         | I                                   | Yo                               | Miri<br>(Trees)    |

|    |       |      |      |                          |
|----|-------|------|------|--------------------------|
| 5  | Ḷi-   | Ḷi   | Ḷo   | Ḷiivha<br>(Dove)         |
| 6  | Ma-   | A    | O    | Maivha<br>(Doves)        |
| 7  | Tshi- | Tshi | Tsho | Tshikolo<br>(School)     |
| 8  | Zwi-  | Zwi  | Zwo  | Zwikolo<br>(schools)     |
| 9  | N-    | I    | Yo   | Nngu<br>(Ram)            |
| 10 | Dzi-  | Dzi  | Dzo  | Dzinngu<br>(Rams)        |
| 11 | Lu-   | Lu   | Lwo  | Luvhone<br>(Bulb)        |
| 13 | Ku-   | Ku   | Kwo  | Kuvhone<br>(Small bulb)  |
| 14 | Vhu-  | Vhu  | Ho   | Vhutsi<br>(Smoke)        |
| 20 | Ku-   | Ku   | Kwo  | Kuthu<br>(little person) |
| 21 | Ḷi-   | Ḷi   | Ḷo   | Ḷitsi<br>(Huge<br>Smoke) |

Adapted from Milubi (1996:71)

The above table comprises noun classes and their agreement makers in both present and past tenses. All AGR markers must match with the prefixes of their noun classes. Thus, AGR markers are not used haphazardly within sentences. Some of the noun classes are paired. For instance, noun class 1 is paired with noun class 2. Noun class 2 is the plural form of noun class 2. Specifically, odd noun classes (1,3,5,7 and 9) represent the singular category and even noun classes (2,4,6,8, and

10) represent the plurality of the odd noun classes. This table will be used throughout this chapter to refer to some of the grammatical features.

Subjects, verbs, objects, adjectives and adverbs share grammatical relations. The relationship between these elements of a sentence are informed by the Projection Principle (PP).

According to the Projection Principle, syntax is required to accommodate the characteristics of each lexical item in a sentence and projects the properties of lexical entries in the sentence structure (Cook & Newson, 1996). Wilkins (1988) states that in terms of the Projection Principle, predicates are pre-equipped with the duty to control the type, number and ordering of grammatical relations in a sentence. A predicate is the part of a sentence that makes a statement about the subject (*Longman Dictionary of Contemporary English*, 1987). However, according to Wilkins (1988), certain parts of speech have to obey the selection restrictions imposed by the verbs. In this sense, the verb usually acts as a predicate that projects other elements of the sentence. The following sections and sub-sections are illustrative:

## 4.2. SUBJECT-VERB-OBJECT PROJECTION IN TSHIVENḐA

This section looks at the projection between the subject, the verb and the object of a sentence in TshivenḐa. There are three types of verbs. These are intransitive, transitive and ditransitive verbs.

### 4.2.1. Subject-verb-object projection in intransitive sentences

An intransitive sentence is a sentence that does not have a direct object (Rundell, 2002:112). In other words, there is no word in a sentence that tells who or what received the action of the verb. Elements of a sentence in TshivenḐa carry logic even when the object is in absentia. Consider examples 25 and 26 below:

(25). ***Thomani***(ARG1) *u a* ***gidima***(PRED).

Cl.1-Thomani AGRM AUX run.

(Thomani runs).

In the sentence in 25 above, the intransitive predicate *gidima* (run) projects only one entity, that is, the argument *Thomani* in the subject position. The meaning of the

predicate *gidima* (run) means that the entity in the subject position must be capable of running. So, it can be said that the predicate *gidima* (run) brings the subject argument *Thomani* into the picture.

(26). ***Mmbwa*(ARG1) i khou *boḍa*(PRED).**

Cl.9-Dog AGRM COPV belch.

(The dog is belching).

In example (26) above, the intransitive verb, *boḍa* (belch) is the predicate because it projects the subject *mmbwa* (dog) in the above sentence. This is simply because we cannot have a situation where we say, '*boḍa*' (belch) unless something has the abilities of belching. Here, the subject, *mmbwa* (dog), becomes the argument of the sentence.

The arguments presented above also apply to the following list of intransitive verbs:

(27). (a). ***Emma*(ARG1) u a *hatsamula*(PRED).**

Cl.1-Emma AGRM AUX sneezes

(Emma sneezes).

(b). ***Vhashumi*(ARG1) vha a *hona*(PRED).**

Cl.2-Employees AGRM AUX snore.

(The employees snore).

(c). ***Muri*(ARG1) wo *nukala*(PRED).**

Cl.3-Tree AGRM wet.

(The tree is wet).

(d). ***Marandela*(ARG1) u khou *alamula*(PRED).**

Cl.1-Marandela AGRM COPV yawning.

(Marandela is yawning).

From the above discussed examples, the structure of intransitive sentences can be presented as follows:

**PRED**

|

## ARG1(SUBJ)

### 4.2.2. Subject-verb-object projection in transitive sentences

According to Madadzhe and Matla (2002), transitive verbs are two place predicates because they assign two theta roles, namely; the subject and object argument (cf. Yates, 2006: 23). Transitivity is traditionally thought of as a global property of a clause by which activity is transferred from an agent to a patient. The following examples constitute a transitive verb:

(28). (a) ***Marandela***(ARG1) *u namela*(PRED) ***muri***(ARG2).

C.I.1-Marandela AGRM climb tree.

(Marandela climbs the tree).

In example 28(a), the verb, *namela* (climb), is the predicate because it projects two nouns in the above sentence. The first noun is *Marandela* simply because we cannot have a situation where we say *namela* (climb) unless something is climbing. So, it is the verb *namela* (climb) which projects *Marandela* in the subject position. This noun is the first argument of the sentence, which is predicated by the verb *namela*. In other words, it is the predicate that brings the argument into existence. *Marandela* is animate with the ability to climb. For instance, we cannot have a situation where a stone climbs the tree because it does not have the capacity to climb a tree. For this reason, the following sentence is anomalous:

(b) \**Tombo ji namela muri.*

(A stone climbs the tree).

The object, e.g. *muri* (tree), must be capable of being climbed. We cannot have a situation in linguistics where *Marandela* climbs water because water is not a solid object. Therefore, the relationship between the subject, the verb and the object is characterised by two realities, namely; the linguistic reality and the world reality. Sentence 29 is also illustrative on transitive projection:

(29). ***Tshiṇoni***(ARG1) *tshi nwa*(PRED) ***maḍi***(ARG2).

CI.-7 bird AGRM drink water.

(A bird drinks water).

The subject noun, *tshinoni* (bird) is the first argument of the sentence, whereas *maḍi* (water) is the second argument of the sentence. These two arguments are projected by the predicate, *nwa* (drink). Similarly, in example (28), the predicate *nwa* (drink) positions arguments which are characterised by the linguistic realities and the world realities. In this sense, the first argument *tshinoni* (bird) has the ability to drink *maḍi* (water) and *maḍi* (water) has the ability to be drunk by *tshinoni* (bird). The following example holds a similar argumentation with examples (28) and (29):

(30). ***Ṃwana*(ARG1) u *vhala*(PRED) *bugu*(ARG2).**

Cl.1-child AGRM read book.

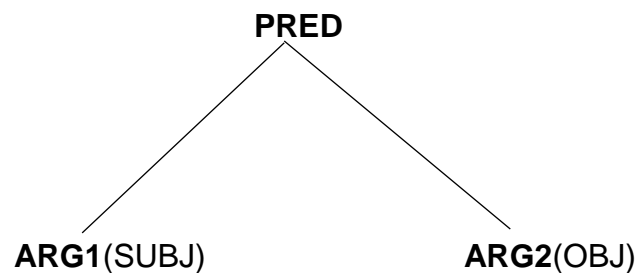
(A child reads a book).

(31). ***Mbudzi*(ARG1) i *ḷa*(PRED) *mavhele*(ARG2).**

Cl.9-goat AGRM eat corn.

(A goat eats corn).

From the above illustrations, the transitive sentences can be structured as follows:



#### 4.2.3. Subject-verb-object projection in ditransitive sentences

Du Plessis (2016) asserts that ditransitive verbs appear in a structure with the same categories as with other verbs, but each time with two internal arguments. In the same vein, Madadzhe and Matla (2002) indicate that ditransitive verbs are called three place predicates because they subcategorise an NP subject and two objects. Consider the following examples:

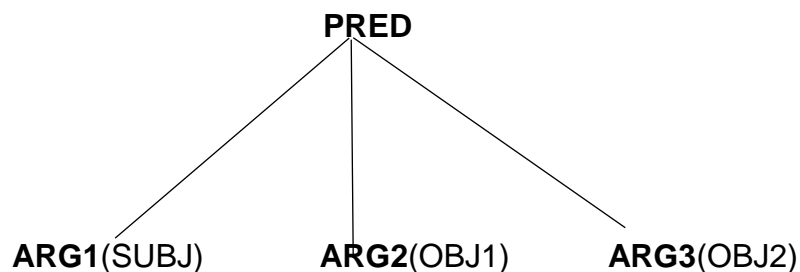
(32).(a) ***Baba*(ARG1) *vha fha*(PRED) *vhana*(ARG2) *maḷegere*(ARG3).**

Cl.1- father AGRM give children sweets.

(The father gives sweets to children)

- (b) **Muano**(ARG1) **rumela**(PRED) **tshelede**(ARG2) **tshikhuwani**(ARG3).  
 Cl.1-Muano sends money Johannesburg.  
 (Muano sends money to Johannesburg)
- (c) **Martha**(ARG1) **u** **hadzima**(PRED) **tshelede**(ARG2) **tshikoloni**(ARG3).  
 Cl.-Martha AGRM borrow money school.  
 (Martha borrows money at school).
- (d) **Denga**(ARG1) **u guda**(PRED) **mbalo**(ARG2) **tshikoloni**(ARG3).  
 Cl.-Denga AGRM learn maths school.  
 (Denga learns maths at school).
- (e) **Ndi**(AGR1) **vhea**(PRED) **penisela**(ARG2) **mukhwamani**(ARG3).  
 Cl.-I put pencil schoolbag.  
 (I put pencil in schoolbag).
- (f). **Mudededzi**(ARG1) **u funza**(PRED) **vhana**(ARG2) **tshikoloni**(ARG3).  
 Cl.-1 teacher AGRM teaches children school.  
 (A teacher teaches children at school).

In sentence (32a), the ditransitive verb *pha* (give), also known as the predicate, projects three arguments. The first one is the external argument *Baba* (father), the second argument is the recipient *vhana* (children), which is immediately adjacent to the predicate, and the last argument is *malegere* (sweets). The recipient argument, *vhana* (children), is considered as the direct object whereas the second argument, *malegere* (sweets), is an indirect object. This argumentation also applies in examples 32(b) to 32(f). In each sentence, the predicate projects three arguments. In short, the structure of ditransitive sentences can be illustrated as follows:



This means that a predicate projects three arguments: one subject and two objects.



### 4.3. SUBJECT-ADJECTIVE PROJECTION IN TSHIVENḐA

This section looks at the projection relationship between the subject and the adjective in Tshivenda. Firstly, it is important to define an adjective. An adjective is defined by Crystal (1991:18) as a term used in the grammatical classification of words to refer to the main set of items which specify the attribute of nouns. A similar explanation is offered by Bursman (1996:7) who says that an adjective is a grammatical category (part of speech) that is used attributively with nouns. Hartmann and James (1998:7) further define an adjective as a part of speech which serves primarily to specify the quality of a noun or a noun phrase. It can be said that adjectives are a group of words that are used to modify, supplement or restrict the meaning of nouns.

The following table consists of Tshivenda adjectives which are marked by a noun class prefix on the adjectival stem. The adjectival prefix agrees with the noun to which it refers:

**Table 4: Prefix-adjectives agreement**

| Noun class | Prefix | Adjective                |
|------------|--------|--------------------------|
| 1          | Mu-    | <i>Mu-sekene</i> (thin)  |
| 2          | Vha-   | <i>Vha-sekene</i> (thin) |
| 3          | Mu-    | <i>Mu-denya</i> (thick)  |
| 4          | Mi-    | <i>mi-hulu</i> (bigger)  |
| 5          | Ḑi-    | <i>Ḑi-tswu</i> (black)   |
| 6          | 2Ma-   | <i>Ma-lapfu</i> (taller) |
| 7          | Tshi-  | <i>Tshi-ḑuku</i> (small) |
| 8          | Zwi-   | <i>Zwi-nzhi</i> (many)   |
| 9          | N-     | <i>N-thihi</i> (one)     |
| 10         | Dzi-   | <i>Thanu</i> (five)      |
| 11         | Lu-    | <i>Lu-vhi</i> (evil)     |
| 14         | Vhu-   | <i>Vhutete</i> (soft)    |
| 15         | U-     | <i>Huvhi</i> (unholy)    |
| 20         | Ku-    | <i>Kutuku</i> (smaller)  |

|    |     |                 |
|----|-----|-----------------|
| 21 | Ḑi- | Ḑidenya (thick) |
|----|-----|-----------------|

The following example looks at the noun C1 prefix **Mu-**:

- (33). **Mu-tukana**(ARG1,PRED2) **mu-sekene**(ARG2) u **tamba**(PRED1)  
**bola**(ARG3). Cl.1-prefix-boy thin AGR play soccer.  
(A thin boy plays soccer).

In the example (33) above, the class 1 noun, *mutukana* (a boy), and the object noun, *bola* (soccer), are predicated or triggered by the transitive verb, *tamba* (play). In turn, it can be observed that the noun, *mu-tukana* (a boy), and the adjective, *mu-sekene* (thin), have the same class 1 nominal prefix, *mu-*. It can further be noted that the adjective, *musekene*, qualifies the class 1 noun, *mutukana*, in the subject position of the sentence. Therefore, the prefix *mu-* in the adjective, *musekene*, is predicated by the prefix *mu-* in the subject, *mutukana*. This means that this sentence carries two predicates. The first one is the verb, *tamba* (play), which predicates the subject *mutukana* (a boy) and the object *bola* (soccer). The second predicate is the prefix *mu-* in the subject *mutukana*, which ensures that the adjective *musekene* begins with the same prefix. If we change the prefix of the adjective into something else, the sentence becomes ungrammatical. For example:

- (34) \***Mu-tukana vha-sekene** u **tamba bola**.  
(A boy thin they play soccer).

Sentence (34) above is grammatically deviant because the subject, *mutukana*, has projected an adjective whose prefix is different from its prefix. Whereas the prefix *mu-* refers to class 1 nouns, the prefix *vha-* relates to class 2 nouns. This means that the projection of elements in a sentence cuts across not only verbs and their subjects and objects, but also projects correct adjectives in terms of shared prefixes. The following example looks at the noun class 2, **vha-**:

- (35). **Vha-tukana**(ARG1,PRED2) **vha-sekene**(ARG2) **vha tamba**(PRE1)  
**bola**(ARG3).  
Cl.2-prefix-boys thin AGRM play soccer.  
(Thin boys play soccer).

Example (35) is the plural form of example (34). In this example, the transitive predicate, *tamba* (play), projects two arguments. The first argument is the subject *Vhatukana* (boys) and the second argument is the object *bola*. In this case, the adjective, *vhasekene* (thin) is also noted. This adjective is characterised by the same noun class 2 prefix, **vha-** as in the subject **vha-tukana** (the boys). Therefore, the prefix **vha-** on *vhatukana* (the boys) itself becomes the predicate which project the adjective **vha-sekene** (thin). Similarly, with the example (34), sentence (35) conveys two predicates, the first predicate is the verb *tamba* which predicate the subject *Vhatukana* (the boys) and the object *bola* (soccer). The second predicate is the prefix **vha-** in the subject *vhatukana* (the boys) which ensures that the adjective prefix **vha-sekene** (thin) agrees in class with the noun it refers to. Likewise, if we replace the adjective prefix **vha-** of Cl.2 to Cl.1 or any other class, it will result in ungrammaticality, For example:

- (36) \* **Vha-tukana mu-sekene vha tamba bola.**  
 (The boys thin play soccer).

Example (36) is unacceptable in Tshivenda, simply because the adjectival prefix **mu-** of Cl.1 does not follow the principles imposed by the subject prefix **vha-** of Cl.2. It has been proven in the example (34) that agreement markers are bound to agree with both the subject and the adjective in Tshivenda, but in this case, there is no consistency between the Cl.1 adjectival prefix **mu-**, the Cl.2 subject prefix **vha-** and the AGR marker *vha*.

The arguments presented above also apply to the following noun classes, except for the noun classes 9,10,15 and 21 because their prefixes are not visible:

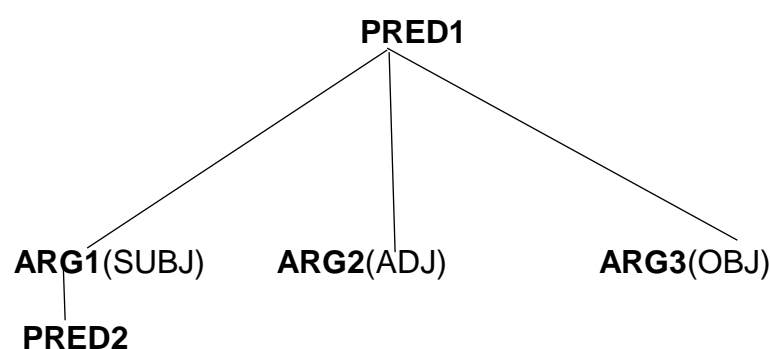
- (37). **Mu-ri(ARG1,PRED2) mu-denya(ARG2) wo wa(PRED1).**  
 Cl.2-prefix-tree big AGRM fall. Noun class 3  
 (A big tree has fallen).
- (38). **Mi-ri(ARG1,PRD2) mi-hulu(ARG2) yo wa(PRED).**  
 CL.4-prefix-trees big AGRM fall. Noun class 4  
 (Big trees has fallen)

- (39). **Li-ivha**(ARG1,PRED2) **li-tswu** (ARG2) **li a fhufha**(PRED1).  
 Cl.5-prefix-dove black AGRM AUX fly. Noun class 5  
 (A black dove flies).
- (40). **Ma-ivha**(ARG1,PRED2) **ma-nzhi**(ARG2) **a khou fhufha**(PRED1).  
 Cl.6-prefix-doves many are fly. Noun class 6  
 (So many doves are flying).
- (41). **Tshi-ḥoni**(ARG1,PRD2) **tshi-tuku**(ARG2) **tshi a lea**(PRED1) .  
 Cl.7-prefix-bird small AGRM AUX eatable. Noun class 7  
 (A small bird is eatable).
- (42). **Zwi-mange**(ARG1,PRED2) **zwi-nzhi**(ARG2) **zwi a shavha**(PRED1).  
 Cl.8-prefix-cats many AGRM AUX running. Noun class 8  
 (Cats are running away)
- (43). **Dzi -Kholomo**(ARG1) **ḥhanu**(ARG2) **dzo fa**(PRED).  
 Cl.9-prefix-cow five big AGRM are dead. Noun class 10  
 (Five cows are dead cow).
- (44). **Ngu-vho**(AGR1) **nḥu**(ARG2) **i a rothola**(PRED).  
 Cl.10-prefix-blanket wet AGRM AUX cold. Noun class 9  
 (The wet blanket is cold).
- (45). **Lu-fu**(ARG1,PRED2) **lu-vhi**(ARG2) **lu a vhaisa**(PRED1).  
 Cl.11-prefix-funeral evil AGRM AUX painful. Noun class 11  
 (An evil funeral is painful).
- (46). **Vhu-swa**(ARG1,PRED2) **vhu-tete**(ARG2) **vhu a difha**(PRED1).  
 Cl.14-prefix-pap soft AGRM AUX delicious. Noun class 14  
 (Soft pap is delicious).
- (47). **Fhethu**(ARG1) **huvhi**(AGR2) **ndi fthano**(PRED1).  
 Cl.15-prefix-place evil is here. Noun class 15  
 (This place is evil).

(48). **Ku-bwanana**(ARG,PRED2) **ku-tshena**(ARG2) **ku a takadza**(PRED).  
 Cl.20-prefix- puppy white AGRM AUX pleasing. Noun class 20  
 (A white puppy is pleasing).

(49). **Dithu** (ARG1 **lidenya**(ARG2) **lo** **fhira**(PRED).  
 Cl.21-prefix-big thick AGRM passed. Noun class 21  
 (A big thick thing passed).

In the above examples, the noun classes 9,10,15 and 21 prefixes are invisible. Therefore, there is no morphological projection between subjects and adjectives. The structure of the subject-adjective sentences is as follows:



Tshivenda can remain grammatical in sentences beginning with adjectives in the absence of subjects. Consider the following examples:

(50).(a) **Vha-hulwane**(ARG2) **vha dzhena**(PRED1) **kereke**(ARG2).  
 Cl.2-prefix-big AGRM goes church. *S-structure*  
 (The big ones goes to church).

(b) **Pro**(ARG1,PRED2) **Vha-hulwane vha dzhena kereke**.  
 Cl.2-prefix-big AGRM goes church. *D-structure*  
 (The big ones goes to church).

The s-structure in 50(a) above points out that Tshivenda is a pro-drop language. Du Plessis (1997) writes that, a pro drop language allows its subject to remain unexpressed in certain cases. Within the generative framework, a language is generally said to be a pro-drop language when the empty category *pro* is posited in the subject position, and its referent is specified by the agreement morphology (Cook & Newson,1996:115) *vha-* which is attached to the adjective *vha-hulwane* (big). This

is illustrated in the D-structure in 50(b). The predicate can be recognised as the element in the subject position even if it is not there. This element is represented by *pro*. The noun class 2 prefix **vha-** which is attached to the adjectival stem *-hulwane* (big) implies a class 2 subject which is absent in the sentence. In other words, the prefix tells us that the subject of the sentence is a class 2 noun such as *vhathu* (people) or *vhanna* (men). This explains why Tshivenda can be regarded as a pro-drop language because it is not compulsory for sentences to have subjects, since adjectives are able to point out the absent subjects which project them (the adjectives).

The same argument applies in the following examples;

(51).(a) *Tshi-tsu(ARG2) tshi a reremusa(PRED1). Noun class 7*  
 Cl.7-black AGRM is slippery. *S-structure*  
 (The black one is slippery).

(b) ***Pro(ARG1,PRED2) Tshi-tsu tshi a reremusa.***  
 Cl.7-black AGRM is slippery. *D-structure*  
 (The black one is slippery).

(52).(a) *Zwi-hulwane(ARG2) zwi a fhufha(PRED1). Noun class 8*  
 Cl.8-prefix-big AGRM AUX flies. *S-structure*  
 (The bigger one's flies).

(b) ***Pro(ARG1,PRED2) Zwi-hulwane zwi a fhufha. Noun class 8***  
 Cl.8-prefix-big AGRM AUX flies. *D-structure*  
 (The bigger one's flies).

#### 4.4 VERB-ADVERB PROJECTION IN TSHIVENDA

This section looks at the projection between the verb and the adverb in a sentence. Firstly, it is important to define what adverb is. Secondly, three examples of verb-adverbs projection, i.e. adverb of time, adverb of place and adverb of manner are discussed.

Hartmann and James (1997) write that, although general definitions of adverbs vary, they all formulate the core function of adverbs as describing or modifying a clause or action in terms of time, place and manner. Rundell (2002) defines an adverb as a

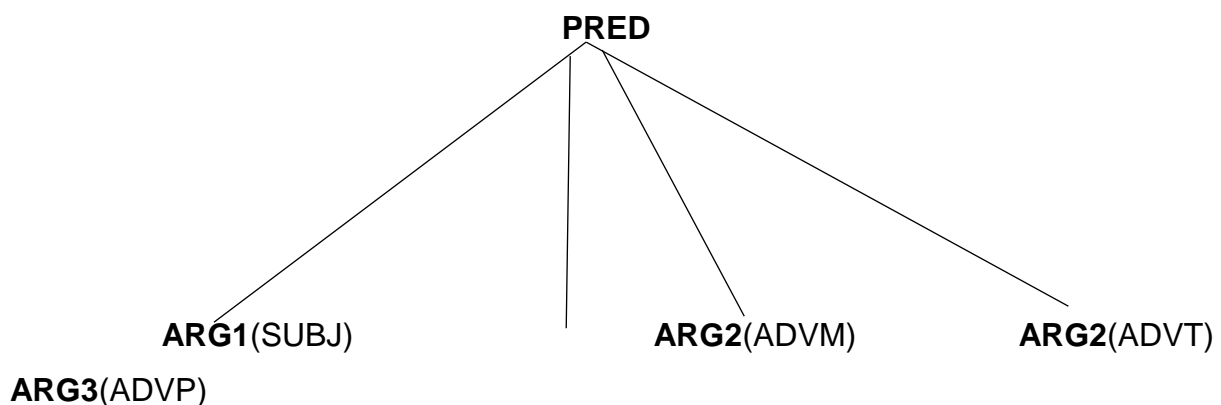
word used for describing a verb, an adjective, another adverb or a whole sentence. This finds expression in Van Wyk et al. ( 1992), who argue that adverbs are words which qualify or describe verbs, adjectives and other adverbs in some other way. Adverbs also describe how, where, when or how often something happens (Protector, 1995:20). The following linguistic data identifies the verb-adverb projection in Tshivenda:

(53). *Ḑuvha(ARG1) ḽi khou fhisa(PRED) nga maanḑa(ARG2) ḽamusi (ARG3) ngei Tshirenzheni(ARG4)*. Adverb of manner, time and place.

Cl.1-sun AGR hot too much today there *Tshirenzheni*.

(It is extremely hot today at *Tshirenzheni*).

In example (53), the verbal predicate *fhisa* (hot) predicates four arguments; the first argument is the subject *Ḑuvha* (sun). The meaning of the predicate *fhisa* (hot) implies that the element in the subject position must be capable of being hot. The second argument is the adverb of manner, *nga maanḑa* (extremely). The third argument is the adverb of time *ḽamusi* (today) and the fourth argument is the adverb of place *Tshirenzheni*. These three arguments modify the subject *Ḑuvha* (sun) and the predicate *fhisa* (hot). Unlike adjectives, adverbs in Tshivenda are not bound to carry prefixes of their subjects. In other words, there is no morphological projection between subjects and adverbs. The structure of Subject-Adverb sentences is as follows:



#### 4.5. TENSE MARKING IN TSHIVENḐA

This section looks at how the projection of elements of a sentence are manifested when sentences are in the simple past tense (SPT) in Tshivendḓa because pretty much everything that has been discussed in the above sections entailed the simple present tense. First and foremost, it is important to define tense, and in particular, the simple past tense.

The concept 'tense' is used to refer to time, i.e. past and present (Kein, 1994:16). Richard et al. (1993) describe tense as the relationship between the form of a verb and the time of action or state it describes. Cowan (2008) states that the simple past tense indicates a finished or a completed action or a task that occurred at a specific point in time. Milubi (1996:65) indicates that past tense in Tshivendḓa can be realised or marked through the linguistic element *o*. For example:

- (54).      *Ḑwana(ARG1) o ʒa(PRED) vhuswa(ARG2).*  
            Cl.1-prefix-child AGR ate pap.                      *S-structure*  
            (A child ate pap).

In example (54) above, the element *o* is both the subject- AGR marker and a simple past tense marker. The verb *ʒa* (eat) projects the subject *ḥwana* (a child) into the subject position and *vhuswa* (pap) into the object position. In this sense, *ʒa* (eat) is the predicate whereas *ḥwana* (a child) and *vhuswa* are arguments. Subject arguments are guided by the noun classes when choosing the AGR markers. For instance, the AGR marker for the noun class 1 **mu-** is *u* in the present tense and *o* in the past tense. Before alveolarization, every subject is forced to carry a noun class prefix. *Ḑwana* (a child), which was *Muḥwana* (a child) forms part of a noun class 1 **mu-**. The subject *ḥwana* (a child) is in accord with the AGRM in terms of number (singular) and person (2<sup>nd</sup> person).

The past tense marker *o* can point out the noun class 1 subject in absentia. For instance:



- (55). **Pro**(ARG1) *O* *la*(PRED) *vhuswa*(ARG2).  
 Cl.1-AGRM eat pap. *D-structure*  
 (He or she ate pap)

In example (55), the argument is the absent element in the subject position which is represented by the empty category *pro*. The AGR marker, which is also the past tense marker *o* implies the noun class 1 subject. With that being said, the AGR marker *o* refers to any human in the singular form, such as *nwana* (child), *munna* (man) and etc. Again, it can be concluded that Tshivenda is a pro-drop language because the predicate *la* (eat) successfully projected the subject argument in absentia. This also applies to plural noun classes AGR markers. For instance:

- (56). **Pro**(ARG1) *vho* *la*(PRED) *vhuswa*(ARG2).  
 Cl.2-AGRM ate pap. *D-structure*  
 (They ate pap).

In example (56), the element *vho* (they) is a noun class 2 AGR marker in the past tense. *Vho* entails the plural noun class 2 absent subject, which is represented by *pro*. This includes subjects such as *vhana* (children), *vhanna* (men) and many more. Again, this symbolises that Tshivenda is a pro-drop language.

#### 4.6. CONCLUSION

This chapter presented and analysed data from the observations. The foremost focus was paid on unpacking the projection of elements between the subject, the verb, the adverb, the object and the adjective in Tshivenda sentences. Secondly, attention was paid to how the projection of elements of a sentence are manifested when sentences are in the present and past tense in Tshivenda. The relation was, however, examined through the Projection Principle. Thematic analysis was used to analyse data. The next chapter presents the summary, findings, recommendations and conclusion of the study.

## **CHAPTER FIVE**

### **FINDINGS, CONCLUSIONS AND RECOMANDATIONS**

#### **5.1 INTRODUCTION**

The previous chapter analysed and interpreted data. Firstly, it evaluated the notion of projection between the subject, the verb, the object, the adjective and the adverb in Tshivenda sentences. Secondly it unpacked how the projection of elements of a sentence are manifested when sentences are in the present and past tenses in Tshivenda. Furthermore, structures in which forms of projection appear in sentences have been drawn. This chapter presents the findings, conclusion remarks and recommendations of the study. Firstly, it restates the aim and objectives of the study; secondly, it looks at the summary of the study; thirdly, the findings of the study; fourthly, the limitations to the study; fifthly, conclusion to the study and in the sixth place, it gives the recommendations.

#### **5.2 RESTATEMENT OF THE AIM AND OBJECTIVES OF THE STUDY**

##### **5.2.1 Aim of the study**

The aim of the study was to explore the notion of projection between the subject, the verb, the object, the adjective and the adverb in Tshivenda sentences.

### 5.2.2 Objectives of the study

The following were the objectives of the study:

The first objective was to evaluate the projection between the subject, the verb and the object in Tshivenda sentences. This objective was achieved in Chapter 4, in section 4.2.1, 4.2.2 and 4.2.3 by identifying three types of sentences in Tshivenda. Namely; intransitive, transitive and ditransitive sentences.

The second objective was to evaluate the projection between the subject and the adjective in Tshivenda sentences. This objective was achieved in Chapter 4, in section 4.3, where sentences which are characterised by the subject and the adjective in Tshivenda were identified.

The third objective was to evaluate the projection between the verb and the adverb in Tshivenda. This objective was achieved in section 4.4 of Chapter 4. This was achieved by identifying sentences which are characterised by the verb and the different types of adverbs, i.e. adverb of manner, adverb of time and adverb of place.

The fourth objective was to determine how sentence constituents affect tense marking in Tshivenda. This objective was met in Chapter 4, in section 4.5 by identifying various sentences in both the past and present tenses in order to see how the projection of elements of a sentence are manifested.

## **5.3 SUMMARY OF THE STUDY**

### 5.3.1 Chapter 1: Outline of the study

Chapter 1 provided the outline of the study with a specific focus on the background, the definition of elements of a sentence such as the subject, the verb, the adjective, the adverb and agreement. It was indicated that those elements of a sentence share grammatical relations. The research problem of this study was also expressed in this chapter. The aim of the study, which was to explore the notion of projection between the subject, the verb, the object, the adjective and the adverb in Tshivenda sentences, was also stated in this chapter. The chapter also presented the study's objectives.

### 5.3.2 Chapter 2: Literature review

Relevant literature related to the research problems were reviewed in this chapter. The reviewed literature revealed that elements of a sentence are somehow linked to each other. The Projection Principle Theory was discussed as the main theoretical framework of the study. This theory contributed greatly in unpacking the relationship between the elements of a sentence.

### 5.3.3 Chapter 3: Methodology

Chapter 3 elucidated the research methodology that was used in the study. Qualitative research approach was used as the appropriate research approach of the study. This type of approach helped the researcher to broadly evaluate the notion of projection in Tshivenda sentences. It assisted the researcher to seek detailed argumentations and to attain understanding of factors that lead to projections of elements in various sentences.

A descriptive research design was used in this study. The descriptive design was appropriate because it helped the researcher to elaborate on elements that trigger agreement in sentences in Tshivenda. This was in line with Neumann's (2000:22) suggestion that "the descriptive design helps in giving the correct picture associated with the context under scrutiny". Participant observation was used to collect data, where the researcher formulated different kinds of sentences guided by the aim and objectives of this study.

### 5.3.4 Chapter 4: Data presentation and analysis

Chapter 4 presented the analysis and interpretation of the data that were collected through participant observation. Thematic content analysis was used to analyse data as indicated in Chapter 3. Sentences and structures were presented and analysed, guided by both the aim and objectives of the study.

### 5.3.5 Chapter 5: Findings, Conclusions and Recommendations

Chapter 5 presents a summary of the previous chapters, namely, Chapters 1, 2, 3 and 4. This chapter also discussed the findings of the study and made recommendations. It further provided the limitations of this study.

#### 5.4 FINDINGS OF THE STUDY

This section discussed the findings of the study. Section 4.2.1 discussed the subject-verb-object projection in intransitive sentences. In the example: **Thomani**(ARG1) *u a gidima*(PRED) (Thomani runs), it was observed that the intransitive verb, *gidima* (run) is a predicate which projects only one entity, that is, the argument, *Thomani*, in the subject position. It was further observed that the meaning of the predicate entails that the argument identified in the subject position is a real-life object. Therefore, the predicate, *gidima* (run), brings the argument, *Thomani*, into picture. This finding is in line with the finding by Kganakga (2004), who found that the predicate governs complements (subject argument) in Sepedi sentences.

Section 4.2.2 discussed the Subject-verb-object projection in transitive sentences. In the linguistic data: **Marandela**(ARG1) *u namela*(PRED) **muri**(ARG2) (Marandela climbs the tree), it was found that the transitive verb is identified as the predicate which projects two arguments. The first argument is *Marandela* in the subject position and the second argument is *muri* (a tree) in the object position. It was further established that the relationship between the subject argument, the predicate and the object argument is characterised by two realities. These are: linguistic realities and world realities. In this case, the subject argument, *Marandela*, should have the capabilities of climbing and the object argument, *muri* (a tree), should be able to be climbed. This finding is in line with the study findings of Goehals et al. (1993) on subjects, verbs and objects in Xitsonga. The study found that the predicates assigns the relationship between the subject and the object in Xitsonga. It was indicated that a predicate cannot stand alone and make sense, it needs other constituent to express full thoughts in a sentence.

Section 4.2.3 looked at the subject-verb-object projection in ditransitive sentences. In the linguistic data: **Denga**(ARG1) *u guda*(PRED) **mbalo**(ARG2) **tshikoloni**(ARG3) (Denga learn maths at school), it was observed that the predicate *guda* (give) projects three arguments. The first argument is, *Denga*, in the subject position, the second argument is the direct object *mbalo* (maths) which is immediately adjacent to the predicate and the third argument is the indirect object, *tshikoloni* (at school).

Section 4.3 examined the subject-adjective projection. The linguistic data; *Mu-tukana(ARG1,PRED2) mu-sekene(ARG2) u tamba(PRED1) bola(ARG3)* (A thin boy is playing soccer), has revealed that the subject argument and the adjective are bound to carry the same class nominal prefix and the adjective should qualify the subject argument in a sentence. The study also found that subject-adjective sentences carry two predicates in Tshivenda. The first one is the predicate, *guda* (learn), which predicates the subject argument, *mutukana* (the boy) and the object argument *tshikoloni* (at school). The second predicate is the prefix **mu-** in the subject argument which ensures that the predicate starts with the same prefix, e.g. **mu-** on the adjectival stem *-sekene* (thin). This finding is in accord with the finding by Muthewana (2000), who indicates that adjectives in Tshivenda are recognised through an agreement morpheme which has to be exactly the same as the prefix of the head of a noun and an adjectival stem.

The study further established that the adjectival argument prefix can locate the subject argument in absentia. For example, in *Pro(ARG1) Vha-hulwane vha dzhena kereke* (the big ones attend church), the prefix **vha-** on the adjectival stem *-hulwane* is a noun class 2 prefix. Therefore, because the prefix **vha-** represents humans in a plural form, it is then concluded that Tshivenda is a pro drop language. Moreover, it was observed that in noun classes 9,10,15 and 21, there is no morphological projection between the subject's arguments, prefixes and the adjectival argument prefixes. If the adjective does not inherit the exact prefix of the subject, the sentence becomes grammatically deviant.

In the example: *Duvha (ARG1) li khou fhisa (PRED) nga maanda(ARG2) namusi (ARG3) ngei Tshirenzheni(ARG4)* (It is very hot today at Tshirenzheni) (see section 4.4), it was revealed that the predicate, *fhisa* (it is hot) predicates four arguments. Unlike the adjectives, adverbs in Tshivenda are not bound to carry prefixes of their subjects. This means that there is no morphological projection between the subject and adverbs.

Section 4.5 revealed that subject arguments are guided by noun classes when choosing the AGR markers. For instance, in the example: *Nwana(ARG1) o la(PRED) vhuswa(ARG2)* (The child ate pap), the AGR marker is *u* in the present tense and *o*

in the past tense. Furthermore, it was established that sentences in the present and in the past tenses can be considered to be null subjects. For example: *Pro(ARG1) O la(PRED) vhuswa(ARG2)* (He or she ate pap). In this case, the predicate *la* (eat) successfully projected the subject argument in absentia. As a result, the AGR marker *o* refers to any human in the singular form. This finding is in line with the study by Demuth and Johnson (1990), which found that Setswana agreement markers represent subject arguments, and that, as a result, Setswana is considered a pro-drop language.

### 5.5 LIMITATIONS OF THE STUDY

Although the study managed to address issues that trigger the projection of elements in Tshivenda sentences, the researcher found it difficult to find literature based on the projection of constituents in African languages. In other words, this field of study is dominated by literature on Western languages.

### 5.6 CONCLUSIONS

The research findings revealed that verbs in Tshivenda are the predicates of a sentence, and that the subject, the object, the adverbs and the adjective are the arguments of a sentence. Arguments in Tshivenda should be characterised by the linguistic reality and the world reality in order to be successfully projected by the predicates. In the example: *Mu-tukana(ARG1,PRED2) mu-sekene(ARG2) u tamba(PRED1) bola(ARG3)*, the subject ARG prefix **mu-** is also regarded as the predicate of the sentence because it ensures that the adjective begins with exactly the same prefix, for instance: **mu-** on the adjectival stem *-sekene* (thin). It was further noted that the adjectival argument prefix and AGR markers can locate the subject argument in absentia. For example: *Pro(ARG1) Vha-hulwane vha dzhena kereke*. And *pro(ARG1) O la(PRED) vhuswa(ARG2)*. The prefix **vha-** on the adjectival argument represents the noun class 2 subject argument, and the agreement marker *o* represents the noun class 1 subject argument. Therefore, it is concluded that Tshivenda is a pro-drop language.

## 5.7 RECOMMENDATIONS

Since there is limited literature on the projection of constituents in African languages, it opens a gap for other researches to conduct either a comparative study or a non-comparative study of projection principles in African languages in this field of syntax. This study did not explore all elements of a sentence, for instance: the projection of an auxiliary verb was not examined, and this on its own can be considered a research topic. Therefore, it is recommended to future researchers to also document this aspect.

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