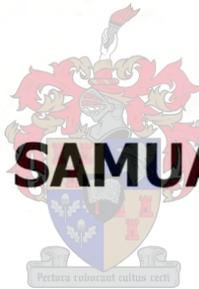


THE POLYSEMY OF MOTION VERBS IN XITSONGA

BY

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Assignment presented in partial fulfillment of the requirements for the degree of Master of Arts at the University of Stellenbosch.

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DECLARATION

I, the undersigned, hereby declare that the work contained in this assignment is my own original work and that I have not previously in its entirety or in part submitted it at any university for a degree.

ABSTRACT

This study explores selected motion verbs in Xitsonga within the framework of lexical semantics postulated by Pustejovsky (1995). This study examines the polysemy of the respective selected motion verbs in sentences with various noun subject types in Xitsonga.

The motion verbs examined are: -ya (go), -ta (come), -famba (go away), -baleka (run away), -kasa (crawl), -khandziya (climb up) and -gonya (ascend). Syntactically, these verbs occur in example sentences as evidenced below:

- The subject NP is [human] : **Sipho u ya ekaya hi milenge.**
Sipho is going home on foot.
- The subject NP is [inanimate] : **Tafula ri tile exikolweni hi movha.**
The table is delivered at school by car.
- The subject NP is [weather noun] : **Mpfula yi fambile etikweni.**
The rain has stopped in the country.
- : **Nkwangulatilo wu khandziya entshaveni.**
Rainbow climbs up to the mountain.
- : **Moya wo kasa.**
The wind is blowing slowly.
- The subject NP is [concrete noun]: **Vuswa byi fambile emasin'wini.**
Food is carried to the field.
- : **Mugayo wu gonyile emakete.**
Maize meal is expensive in the market.
- The subject NP is [abstract noun] : **Rivengo ri fambile eka vanhu.**
Hatred has ended from people.

The subject NP is [natural phenomenon]

: **Dyambu ri balekile emapapeni.**

The sun is very hot in the sky.

The study explores the selected motion verbs and establishes the specific properties of selection restrictions, assignment of arguments as well as the event structure or sentences with the motion verbs.

Lastly, the lexical conceptual paradigm is examined in order to determine the different senses or meanings of the motion verbs.

OPSOMMING

Hierdie studie ondersoek geselekteerde bewegingswerkwoorde in Xitstonga binne die raamwerk van die leksikale semantiek ontwikkel deur Pustejovsky (1995). Die studie ondersoek die polisemie van die onderskeie bewegingswerkwoorde in sinne met verskillende onderwerp tipes in Xitsonga.

Die bewegingswerkwoorde wat ondersoek word is: -ya (gaan), -ta (kom), -famba (weggaan), -baleka (hardloop), -kasa (kruip), -khandziya (klim) and -gonya (daal).. Hierdie werkwoorde verskyn sintakties in voorbeelde soos hier onder geïllustreer:

Die subjek NP is [mens] : **Sipho u ya ekaya hi milenge.**

Sipho gaan huis toe per voet.

Die subjek NP is [nie-lewend] : **Tafula ri tile exikolweni hi movha.**

Die tafel gaan na die skool per motor, d.i. die tafel word per motor afgelewer by die skool.

Die subjek NP is [weer naamwoord]: **Mpfula yi fambile etikweni.**

Die reën het weggegaan (gestop) in die land

: **Nkwangulatio wu khandziya entshaveni.**

Die reënboog klim teen die berg op.

: **Moya wo kasa.**

Die wind kruip, d.i. waai stadig

Die subjek NP is [konkrete naamwoord]: **Vuswa byi fambile emasin'wini.**

Kos het gegaan (is geneem) na die land

: **Mugayo wu gonyile emakete.**

Mieliemeel het gestyg in die mark

Die subjek NP is [abstrakte naamwoord]: **Rivengo ri fambile eka vanhu.**

Haat het geëindig by mense

Die subjek NP is [natural phenomenon]

: **Dyambu ri balekile emapapeni.**

Die son het weggehardloop uit die lug, d.i. dit is baie warm.

Die studie ondersoek die geselekteerde bewegingswerkwoorde en stel vas wat die spesifieke eienskappe is van seleksiebeperkings, toekenning van argumente en die gebeurtenis struktuur van sinne met die bewegingswerkwoorde.

Laastens word die leksikale konseptuele paradigma ondersoek ten einde die verskillende betekenisonderskeidings van die bewegingswerkwoorde vas te stel.

DEDICATION

I dedicate this thesis to my wife and the entire Baloyi family.

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The completion of this thesis would have been a mountain to climb without the help and support of a number of people.

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CHAPTER 1

INTRODUCTION

1.1 AIMS OF STUDY

The main aim of this study is to examine the lexical semantics of the following motion verbs in Xitsonga: -ya (go), -ta (come), -famba (go), -baleka (run away), -kasa (crawl), -khandziya (climb up) and -gonya (ascend) in sentences with various nouns types in order to analyse polysemy of each verb. The argument structure of these motion verbs will be investigated taking into account, the argument assignment of these verbs. Attention will also be given to the applicative affix (-el-) with some of the motion verbs which will be affixed to the verb stem, for instance -famba (go) > -fambela (go to). In addition the selection restrictions of the arguments of motion verbs will be thoroughly examined, and the event structure as well as the lexical conceptual paradigm will be addressed in order to analyse different senses of these selected motion verbs.

1.2 THEORETICAL FRAMEWORK

For the purpose of this study I adopt Generative Lexicon theory of Pustejovsky (1995). This theory states that the main thesis underlying the generative lexicon is that words do not have fixed enumerable number of senses but rather that their meanings are potentially infinitely flexible and depend on the contexts in which they occur. According to this theory words in a language have more than one meaning, a property usually called polysemy.

The following example sentences, according to Pustejovsky, highlight the issue of a word with more than one sense depending on the word context.

- (1) (a) Mary walked along the bank of the river
(b) ABSA is the richest bank in the city

- (2) (a) John crawled through the window
(b) The window is closed

- (3) (a) Grace painted the door
(b) Given walked through the door

The word bank in (1a) above refers to an institution while the word bank in the example sentence marked (1b) refers to a building.

In the example sentences marked (2a) and (2b) above the word for window can refer to both an aperture and a physical object. The nouns door and window as used in the foregoing example sentences could be part of a larger set of alternation called figure – ground reversals which include a larger class of nouns in the language such as fire places, pipe room, gate etc. These example sentence illustrated above shows a different sense in novel context.

1.3 ORGANISATION OF STUDY

Chapter 1 will outline the purpose of the study, i.e. the lexical semantics analysis of motion verbs such as -ya (go), -ta (come), -famba (go), -baleka (run away), -kasa (crawl), -khandziya (climb up), and -gonya (ascend) in Xitsonga, taking into account its range of complements.

Chapter 2 will review the generative lexicon approach. The chapter will deal with natural language semantics, and in particular the semantics of words, both alone and in combination, i.e. the problem of compositionality.

Chapter 3 examines the lexical semantics analysis of the verbs -ya (go) and -ta (come) with its range of complements, analysing different senses of these motion verbs, including the external arguments in the subject position and the internal argument NP in the object position. Salient arguments include:

- a. **Agent:** The animate being that actively deliberately performs the action expressed by a verb.
- b. **Theme:** A theme of motion as the thing which moves or is moved in an event.

Chapter 4 will examine the polysemy of the motion verbs -famba (go) and -baleka (run away) with its range of complements, including the external argument in the subject position and the internal argument to the NP in the object position. The applicative affix (-el-) will be affixed to the verb stem e.g. -famba (go) > -fambela (go to).

Chapter 5 examines the polysemy of the motion verbs -kasa (crawl), -khandziya (climb up) and -gonya (ascend) with its range of complements, including the external argument in the subject position and the internal argument NP in the object position. The applicative affix (-el-) will be affixed to the verb stem, e.g. -kasa (crawl) > -kasela (crawl to).

Chapter 6 concludes the study of the thesis chapter by chapter.

CHAPTER 2

2.1 INTRODUCTION

In this chapter the lexical semantics framework developed by Pustejovsky (1995) is reviewed, of which the main thesis underlying the Generative Lexicon states that words do not have a fixed enumerable number of senses. Rather their meanings are potentially infinitely flexible and depend on the contexts in which they occur. In this chapter, the nature of the contexts and the ways in which they shape word meanings will be addressed and the nature of lexical knowledge addressing the semantic classification of lexical category such as verbs, nouns, and adjectives, which indicates how a number of alternation patterns are context-conditioned will be taken into cognisance. The problem of polysemy will be discussed in depth. The chapter will also address Pustejovsky's views on the issue of limitations of sense enumeration lexicons, looking into the nature and treatment of homonymy and polysemy. The chapter will further discuss the issue of semantic type system of four levels of meaning representation according to Pustejovsky's theory of the Generative Lexicon.

2.2 THE GENERATIVE LEXICON APPROACH

Many issues accounted for in the theory of generative lexicon as a component of grammar were neglected until Pustejovsky's postulation of Generative Lexicon Theory.

Generative Lexicon Theory has developed into a prominent paradigm of research in lexical semantics.

Computational and theoretical linguists have according to Pustejovsky (1995) treated the lexicon as static set of word senses, labeled with features for syntactic, morphological, and semantic information. Different word senses have been associated with distinct lexical items. However, formal theories of natural language semantics have not done enough to address two vital issues:

- The creative use of words in novel contexts
- An evaluation of lexical semantic models on the basis of compositionality.

Pustejovsky examined the influence of word meaning and compositionality as they relate to these concerns. Pustejovsky (1995) argues that by sufficiently accounting for the problem of creative word senses, one directly addresses the issue of compositionality. He states that a theory of lexical meaning will affect the general design of a semantic in several ways. Pustejovsky argues that if we view the goal of a semantic theory as being able to recursively assign meanings to an expression, accounting for phenomena such as synonymy, antonymy, polysemy and metonymy, then compositionality depends ultimately on what the basic lexical of the categories of the language indicates.

Pustejovsky points out that the traditional view has been that words behave as either active factors or passive arguments. He suggests that if we change the way in which categories can denote then the form of compositionality itself changes. Pustejovsky states that lexical semantics can be a means of reevaluate the very nature of semantic composition in a language in order to satisfy the goals of semantic theory. He reviews some basic issues in lexical representation and presents current views on how to represent lexical ambiguity, both in terms of theoretical and computational models. He discusses views that incorporate sense enumerative techniques, which distinguish word senses on the basis of finite feature distinctions.

Pustejovsky (1995) argues that there is no vast difference between what Weinreich (1964) calls contrastive and complementary ambiguity. The former refers to homonymy, where a lexical item carries several distinct and unrelated meanings whereas the latter, refers to logically related word sense of the same lexical item.

Pustejovsky identifies some problems with the enumeration method for lexical description addressed in his chapter 3. He argues that the representation advanced by different theories is inadequate to account for the richness of natural language semantics. He states that the semantic weight in both lexical and compositional terms usually falls on the verb. He discusses (in his chapter 4) several devices which simplify semantic description, but which fall outside the conception of enumerative lexical semantics. Pustejovsky considers these devices and he notes that they point to a very different view of lexical semantics and how word meanings are combined. Pustejovsky refers to his theory of organization as generative lexicon theory, and the operations, which generate these extended senses as generative devices. Included in these generative operations are type coercion and co-composition. Pustejovsky argues that our framework of knowledge of

lexical items must be guided by a concern for semanticity in addition to grammaticality. He argues that natural language falls within the weakly polymorphic languages rather than being monomorphic. He further states that this particular characterization is rich enough to accommodate the behavior of logical polysemy as well as effects of compositionality.

Pustejovsky states that generative theory of the lexicon embodies multiple levels of representation for the different types of lexical information needed. The different types of lexical information include inter alia:

- Argument structure (for the representation of activity information of functional elements)
- Events structure (for the representation of information related to Aktionsarten and event type in the sense of Vendler, 1967, and related work)
- Qualia structure (for the representation of the defining attributes of an object, such as its constituent parts, purpose and function mode of creation etc)
- Inheritance structure (for the representation of the relation between the lexical item and others in the lexicon)

2.3 THE NATURE OF LEXICAL KNOWLEDGE

Pustejovsky (1995) states that computational and theoretical linguists recommend that much of the structural information of sentences is best reconciled from lexicalized perspective. He explores some of the most vital problems for lexical semantics, including the following:

- Explaining the polymorphic nature of language
- Characterizing the semanticity of natural language utterances.
- Capturing the creative use of words in novel context.
- Developing a richer, co-compositional semantic representation.

Pustejovsky points out that linguistic studies can be informed by computational tools for lexicology as well as an appreciation of the complexity of large lexical database. He further observes that computational research can profit from grammatical and syntactic distinctions of lexical items where natural language processing systems account for these differences in their lexicons and grammars.

Pustejovsky states that it will be difficult to carry out serious computational research in the field of linguistics without the help of electronic dictionaries and computational lexicographic resources. He discusses two assumptions for lexical semantics framework.

The first assumption is that without an appreciation of the syntactic structure of a language, the study of lexical semantics will not succeed. Pustejovsky argues that there is no way in which meaning can be divorced from the structure that carries it.

The second assumption of Pustejovsky is that the meaning of words should reflect the deeper conceptual structures in the cognitive system, and the area it operates in. Pustejovsky states that computational lexical semantics should be guided by specific principles:

The first principle is that a clear notion of semantic well formedness is important to characterize a theory of possible word meaning. The second principle is that lexical semantics must look for representation that is richer than thematic role descriptions. The third principle is that lexical semantics must study all syntactic categories in order to characterize the semantic of natural language.

Pustejovsky points out that recent studies have attempted to clarify the nature of verbs classes and the syntactic constructions that each allows. He further states that even if the nature of verbs are classified, we are not yet clear whether we are closer to the understanding and the meaning of words and why the classes develop as they do, and what result these distinctions have for the rest of the lexicon and grammar.

Pustejovsky points out that little knowledge exists of semantic nature of adjective predication and even less of the semantics of nominals. He proposes that the representation of context of an utterance should be looked at involving many different generative factors such as (lexical semantics, compositional semantics, discourse structure, temporal structure) that account for the way that language users create and manipulate the context under constraints in order to be understood.

Pustejovsky states that it is the ideal of any lexical semantic theory to classify the lexical items of a language into classes predictive of their syntactic and semantic expression. He proposes that the theory should not merely map the meanings of lexical item per sentence,

on an individual basis but it should capture the semantics relations between words in such a way which facilitates this mapping.

2.3.1 Semantic classes and categorial alternation

Pustejovsky (1995) states that the grouping of words according to their semantic type and selectional classes due to context is needed. He argues that categorial or type information determines not only how a word behaves syntactically, but to what the element of the category refers. For example, the verbs love and hate would be viewed as a relation between individuals in the world whereas the noun woman would mean all individuals in the world who are women. The nouns dog and book partition into different selectional classes due to contexts involving animacy, while the nouns book and literature partition into different selectional classes due to at least to a mass/count distinction.

2.3.2 Verbal alternation

Pustejovsky (1995) states that the idea of grouping the meanings of words into semantic classes is to study the syntactic constructions that words are involved in, for example, the verbs sink, roll and break. All have both transitive and intransitive forms as in (1)- (3) below:

- (1) (a) The boat sank in stormy weather
 (b) The plank sank the boat in stormy weather
- (2) (a) The ball rolled down the hill
 (b) Bill rolled the ball down the hill.
- (3) (a) The bottle broke suddenly
 (b) Mary broke the bottle suddenly.

The above example sentences from (1)-(3) illustrate verbal alternation of intransitive (in(a)) and transitive causative (in (b)).

Pustejovsky (1995) states that another alternation pattern includes the conative, as illustrated in example sentences as in (4)-(7) below:

- (4) (a) Mary shot the target
(b) Mary shot at the target
- (5) (a) The cat touched my leg
(b) *The cat touched at my leg
- (6) (a) Mary scraped the window
(b) Mary scraped at the window
- (7) (a) Mary shot the arrow (at the target)
(b) * May shot at the arrow.

The above example sentences (4)–(7) show that not all grammatical alternations sufficiently determine the semantic class of the verb.

Pustejovsky (1995) states that polyadicity illustrates the argument changing as well as the argument dropping alternation in the verbal alternation in (8) –(10) below:

- (8) (a) The woman ate her meal quickly
(b) The woman ate quickly
- (9) (a) The dog devoured the cookie
(b) *The dog devoured
- (10) (a) John drank his beer feverishly
(b) John drank feverishly

In the example above (8)–(10) the possibility of object-drop is related to an aspectual difference between the verbs being contrasted.

Pustejovsky (1995) states that the oldest semantic classification for verbs, that of aspectual class or Aktionsarten could be a useful example to indicate the semantic classification of verbs. The important idea behind this classification is to illustrate that verbs and verb phrases differ in the kinds of eventualities in the world they denote.

According to Pustejovsky (1995) there are at least three aspectual types recognized: state, activity and event, where the last class is itself broken down into accomplishment and achievement. For example, the verb walk illustrated in sentence (11) denotes an activity of unspecified duration. The sentence illustrated in (11b) denotes an accomplishment event. This sentence shows the logical culmination whereby the activity comes to an end when Mary is at home; hence the accomplishment event is realized.

- (11) (a) Mary walked yesterday
(b) Mary walked to her house yesterday

Pustejovsky (1995) states that an achievement is an event that results in a change of state, just as an accomplishment does, but where the change is thought of as occurring suddenly. Hence, modification by point adverbials, such as 3pm, is suggestive that a sentence shows an achievement.

The following example sentences as in 12(a)-(c) below indicate achievement.

- (12) (a) John died at 3pm
(b) John found his wallet at 3pm
(c) Mary arrived at noon.

Pustejovsky points out that the semantic classification for verbs entails that of aspectual class or Aktionsarten is that of the state. According to Kearns (2000), state is unbounded or atelic, states are durative, they occupy time and can be said to last for minutes, weeks, years and centuries.

Pustejovsky observes that state can be distinguished from two kinds of stative predictions, namely individual level and stage level. The following example sentences as in (13)-(14) below will illustrate the matter.

- (13) (a) John is tall (individual - level)
(b) James is intelligent (individual- level)
- (14) (a) Mary is ill (stage- level)
(b) The bucket is full (stage- level)

Pustejovsky (1995) states that he assumes the following categorization of aspectual types for verbs and verb phrases:

- Activities: Walk, run, swim, drink
- Accomplishment: build, destroy, break
- Achievements: die, found, arrive
- States: sick, know, love, think, resemble.

Pustejovsky states that it should be taken into account that the aspectual properties of a sentence may change as a result of factors, such as adverbial modification, the structure of the NP in an argument position (e.g. definite verbs bare plural) or the presence of a prepositional phrase.

2.3.3 Nominal alternations

Pustejovsky (1995) states that nouns have their own characteristic grammatical behaviors, which depend on their semantic category. The most recognizable studied for nominal semantics is that of count versus mass this type of distinction which dates back to Aristotle who played an important role on the structuring of the semantic model for language. The following example as in (15) will illustrate this property:

- (15) (a) Mass nouns: much sand, more water
(b) Count nouns: several houses, every child

Pustejovsky states that there are nouns that have both mass and count interpretations. They include nouns such as beer where we can talk about amounts of (16a) or quantities of (16b) the substance as in (16) below:

- (16) (a) John drank a lot of beer
(b) Jane relished every beer she drank.

2.3.4 Adjective Classes

Pustejovsky (1995) states that semantic classification could also be realized from adjective classes. He further observes that adjectives are generally taken to denote states. The

type of activity, e.g. the individual level verbs stage level distinction is illustrated in (17) below:

- (17) (a) John is being tall today (individual -level)
(b) The boy is frightened (stage-level)

2.3.5 Interlexical Relations

Pustejovsky defines lexical semantics as the study of how words are semantically related to one another. According to Pustejovsky there are five distinguishable classes of lexical relations:

- a) Synonymy
- b) Antonymy
- c) Hyponymy and lexical inheritance
- d) Meronymy
- e) Entailment and presupposition

Pustejovsky states that synonymy is generally taken to be a relation between words rather than concepts for example in context of carpentry, plank and board might be considered synonyms. He points out that if synonymy is defined by substitutability of expressions then it is an intra-category e.g. nouns for nouns, verbs for verbs and so on. Pustejovsky defines antonymy as a relation characterized in terms of semantic opposition and like synonymy is properly defined over pairs of lexical items rather than concepts for example of antonymy are: Rise/fall/heavy/light/fast/slow. He states that by far the lexical relation most studied in the computational community is hyponymy, essentially the taxonomic relation defined in inheritance networks. The examples in (18) below illustrate the above distinctions:

- (18) (a) Car is hyponymy of vehicle
(b) A rose is hyponymy of flower
(c) A lion is a hyponymy of animal or carnivore

According to Pustejovsky (18a) above specifies that car is hyponymy of vehicle, and is equivalent to saying that vehicle is a super concept of the concept car, or the car is a

subset of these which are denoted by the set of vehicle. This is similar to example 18 (b) and 18 (c)

Pustejovsky states that Meronymy is defined as the relation of parts to the whole. For example a book has a distinct sense of relation such as chapter, paragraph and sentences. These are realized as the relations of parts to the whole. When one reads a chapter in a book one is also concentrating on the sentences within that chapter as well as the paragraphs which are used in that chapter. Hence, the relation of parts to the whole.

Pustejovsky (1995) states that lexical relations could also be related through entailment and presupposition. However there is no complete agreement reached as yet to define these relations. The following example sentences in (19) help to define the concepts explicitly:

- (19) (a) John killed Bill
(b) Bill died
c) Bill is dead

Pustejovsky argues that in the foregoing example if there is a killing event, there is also a dying event. This is in an example of the entailment relations. In the following example sentences in (20)–(22) we notice that the verb manage entails the complement event but also carries a presupposition that the person attempts to do the action in the complement whether it becomes successful or not. Thus the lexical sentences of a verb like manage must presuppose that the agent of the managing event also attempts to bring this event about.

- (20) (a) Mary managed to finish the exam
(b) Mary finished the exam
- (21) (a) Mary didn't manage to finish the exam
(b) Mary didn't finish the exam
- (22) Mary attempted to finish the exam.

Thus, Pustejovsky argues, the lexical senses of a verb like manage must presuppose that the agent of the managing event also attempts to bring this event about.

2.4 THE LOGICAL PROBLEM OF POLYSEMY

According to Pustejovsky the focus on the problem of lexical ambiguity can be surveyed on two dimensions.

2.4.1 Varieties of sense extension

Pustejovsky (1995) states that words in a language have more than one meaning, a property usually called Polysemy. Pustejovsky continues to say that the ways in which words carry multiple meaning can differ. He refers to Weinreich (1964) who identifies two types of ambiguity. The first he calls contrastive ambiguity. This is realized where a lexical item accidentally carries two distinct and unrelated meaning (i.e. homonymy)

According to Pustejovsky the following example sentences in (1)–(3) below illustrate homonymy.

- (1) (a) Mary walked along the bank of the river
(b) Harbor bank is the richest bank in the city
- (2) (a) Drop me a line when you are in Boston
(b) We built a fence along the property line
- (3) (a) Our discussion turned on the feasibility of the scheme.
(b) The bull turned on the matador.

In the example sentences above, for whatever reason the underlined items have more than one lexical sense. For example the word bank in 1(a) refer to an institution while the word bank in line 1(b) refer to a building. These show the different of meaning due to context.

The other type of ambiguity Weinreich refers to is illustrated in (4) –(7) below:

- (4) (a) The bank raised its interest rates yesterday
(b) The store is next to the newly constructed bank
- (5) (a) John crawled through the window
b) The window is closed
- (6) (a) Mary painted the door
(b) Mary walked through the door
- (7) (a) If the store is open, check the price of coffee
(2) Jane tried to open her mouth for the dentist.

Pustejovsky refers to the above sense distinctions as complementarity polysemies. He further indicates that a model of lexical meaning must be able to account for how the word for bank can refer to both institutions and building, and the word for window can refer to both an aperture and a physical object as in (4)–(7) above.

Pustejovsky (1995) states that there are two types of sense complementarity. The two type of sense complementarity are (a) category preserving and (b) category changing. He defines logical polysemy as a complementary ambiguity where there is no change in lexical category, and the multiple senses of the word have shared meanings. He argues that complementary polysemy is a wider term than logical polysemy. The former also explains how cross-categorial senses are related, for example with the use of hammer as both noun and verb.

2.4.2 Contrastive ambiguity

Pustejovsky (1995) refers to the strategy of sense enumeration lexicons (SEL), which accounts for sense differentiation, for both ambiguity types. He further considers factors that are at play in the disambiguation process for lexical items that have contrastive senses. Pustejovsky considers first the ambiguities in the sentence in (8) below:

- (8) John shot a few bucks

He points out that both the verb shoot and the noun buck are contrastively ambiguous. This sentence either means that John was successful on a hunting trip or that he spent some money gambling. The example above illustrates what could be called pragmatically constrained disambiguation.

2.4.3 Complementary polysemy

Pustejovsky states that, unlike ambiguity, complementary polysemy entails a very different type of relation between senses.

For example the nouns door and window are part of a larger set of alternation called figure ground reversals, which include a large class of nouns in the language such as fireplace, pipe room, gate etc. The ambiguity in such nouns embodies the two senses of aperture and physical object used to frame this aperture.

Pustejovsky suggests that this sense alternation is one of many nominal alternations that can be explained as logical polysemies, where the noun have systematically related sense. Consider the example in (9)–(11) below presented by Pustejovsky:

- (9) Count / mass alternation; lamb
- (a) The lamb is running in the field
 - (b) John ate lamb for breakfast
- (10) Container/ containee alternations, bottles
- (a) Mary broke the bottle
 - (b) The baby finished the bottle
- (11) Figure/ground reversals; door, window
- (a) The window is rotting
 - (b) Mary crawled through the window

Pustejovsky (1995) argues that complementary polysemy can also be seen in other categories. For example, adjectives such as good have multiple meanings depending on what they are qualifying

Pustejovsky considers the example in (12) below:

- (12) (a) A good car
(b) A good meal
(c) A good knife.

Pustejovsky observes that logical polysemy can also be seen as relating the multiple complement types that verbs select for, as demonstrated by the example sentences as in (13) below:

- (13) (a) Mary began to read the novel
(b) Mary began reading the novel
(c) Mary began the novel

Verbs such as begin in (13) above are polysemous in that they select for multiple number of syntactic and semantic contexts. Pustejovsky proposes that verbal alternations are examples of related senses, which could be possibly regarded as polysemies. The following example sentences as in (14)-(15) below are considered by Pustejovsky:

- (14) (a) The bottle broke
(b) John broke the bottle
- (15) (a) The window opened suddenly
(b) Mary opened the window suddenly

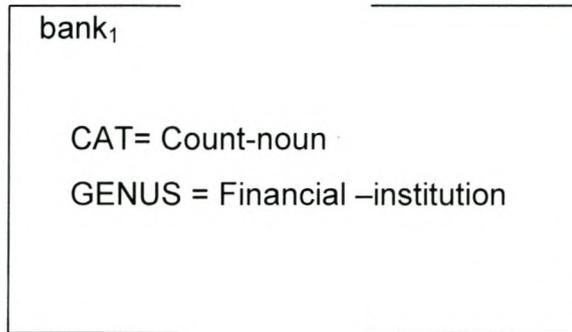
2.4.4 An elementary lexical Semantic theory

According to Pustejovsky (1995) state that the concept of lexical semantics could be explained if the polysemies in the foregoing section allow a model of lexical description in which the lexicon remains a separate and independent component from the computational perspective. This approach has been accepted by many researchers with both computational and theoretical traditions

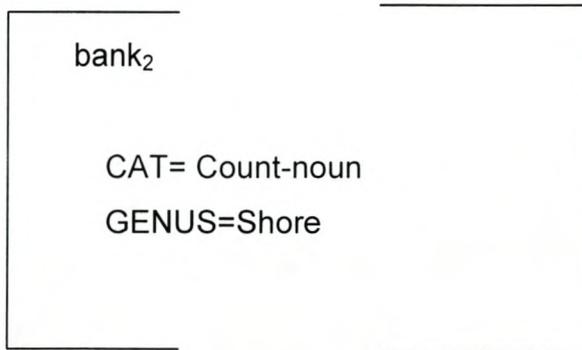
Pustejovsky discusses a dictionary referred to as Sense Enumeration Lexicon (SEL). For example the two-contrastive senses of the word bank as used in the foregoing section are

considered. Pustejovsky employs a standard lexical data structure of category type (CAT) and basic specification of genus term (GENUS) to accommodate this feature within the taxonomic structure of the dictionary, as illustrated in (16)-(17) below:

(16)

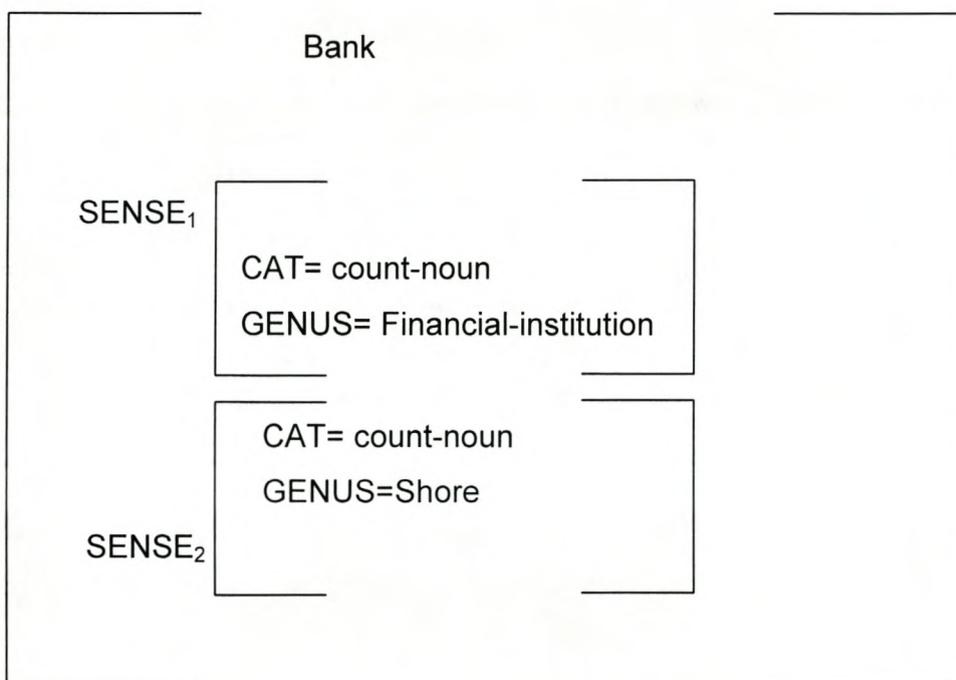


(17)



Pustejovsky shows the differentiation between a contrastive sense from a complementary sense for lexical item. These he illustrates by representing the complementary sense in a single entry as noticeable by sense –identification in (18) below:

(18)



2.5 LIMITATIONS OF SENSE ENUMERATIVE LEXICONS

Pustejovsky discusses the failure of the sense enumeration lexicons to account for the description of natural language semantics. He presents three basic arguments, which shows the inadequacies of SEL's for the semantic description of language. The three basic arguments are as follows:

- The creative use of words: Words assume new senses in novel contexts
- The permeability of word senses: Word senses are not atomic definitions but overlap and make reference to other senses of the word
- The expression of multiple syntactic forms: a single word sense can have multiple syntactic realizations.

Pustejovsky (1995) states that the considerations facts mentioned above shows the inability of sense enumerative models to adequately express the nature of lexical knowledge and polysemy. He argues that although the conventional approach to lexicon design (i.e. sense enumeration) is sufficient for contrastive ambiguity it failed to address the real nature of polysemy. Pustejovsky points out that in order to treat complementary polysemy, we must consider every assumption regarding word meaning and compositionality. He further suggests that in order to keep compositionality we must enrich the semantics of the expression in composition.

2.5.1 The goals of lexical Semantic theory

Pustejovsky states that the primary goal of theory of lexical semantics and with compositional semantics is to describe the data and to be transparent regarding two points:

- The system must be learnable and various phenomena of polymorphisms must be addressed.
- The data set has to expand to include corpora data.

Pustejovsky defines semanticity as referring to the semantic well formedness of an expression in a grammar. Pustejovsky (1995) employed dual judgment in order to

determine whether an expression is truth-functional or not in order to defining semanticity.

According to Pustejovsky the following example sentences illustrate semanticity in the pairs in (1) –(2) below:

- (1) (a) ? Mary kicked me with her foot
(b) Mary kicked me with her left foot
- (2) (a) ? John buttered the toast with butter
(b) John buttered the toast with an expensive butter from Wisconsin.

Pustejovsky argues that the (a) sentences above are not ungrammatical in any strict sense but they are semantically less acceptable than the (b) sentences. Pustejovsky gives other example sentences to illustrate semanticity. Sentences such as (3b) and (3c) are semantically odd because of what we normally associate with the semantic possibilities of a noun such as dictionary and rock. The examples are given in (3) below.

- (3) (a) Mary began the book
(b) ? John began the dictionary
(c) ?? Mary began the rock

These sentences vary in semanticity rather than significant ways. Pustejovsky suggests that the sentence in 3(a) admits two strong interpretations that of doing what one normally do to a book as a reader, reading. The second interpretation is that of becoming a writer, or writing. The sentence (3b) has any number of interpretations regarding activities related to creating or constructing this object, it fails to readily allow an interpretation as in (3a). Pustejovsky argues that there is no generally interpretation for (3c) because of our semantic knowledge or what rocks are and what you can do to them, with them etc.

2.5.2 The creative use of words

Pustejovsky (1995) states that the convincing argument to determine inadequacy of a theoretical model of description is to indicate that this model fails to account for the data being investigated. Pustejovsky points out that the first argument against the sense

enumerative model concerns the creative use of words that is how words can take on an infinite number of meanings in novel context. He considers first the ambiguity of adjectives such as good, discussed in the foregoing section to illustrate the creativity usage of words. Pustejovsky considers the sentences illustrated in (4) below:

- (4) (a) Mary finally bought a good umbrella.
 (b) After two weeks on the road. John was looking for a good meal
 (c) John is a good teacher

Pustejovsky argues that a SEL model requires an enumeration of different senses for such words to account for the ambiguity. He suggests that an adjective such as good will be represented as: Good₁, Good₂, ... Good_n. The sentences in (4) above correspond to the three fixed senses listed below:

Good (1) To function well

Good (2) To perform some act well

Good (3) Tasty

Pustejovsky and Boguraev (1993) gave an example of the context dependence of the creative use of words which is illustrated by adjectives such as fast and slow where the meaning of the predicate varies depending on the head being qualified as in (5)–(9) below:

- (5) The island authorities sent out a fast little government boat curlpaper, to welcome us.
 (6) A fast typist
 (7) Rackets is a fast game
 (8) A fast book
 (9) My friend is a fast driver and a constant, worry to her cautions husband.

As with the adjective good, the examples in (5)–(9) above involve according to Pustejovsky at least three distinct word senses for the word fast.

Fast (1) To move quickly

Fast (2) To perform some act quickly

Fast (3) To do something that takes little time.

Pustejovsky points out that any finite enumeration of word senses will not account for creative applications of this in the language. To illustrate this, Pustejovsky considers the phrases the fastest motorway and a fast garage as used in (10) below:

- (10) (a) The Autobahn is the fastest motorway in Germany.
(b) I need a fast garage for my car, since we leave on Saturday.

The adjective fast in (10a) refers to a new sense, fast₄ that is the ability of vehicle on the motorway to sustain high speed. If this is regarded as a separate lexical sense for fast, then enumeration will not be able to accommodate it.

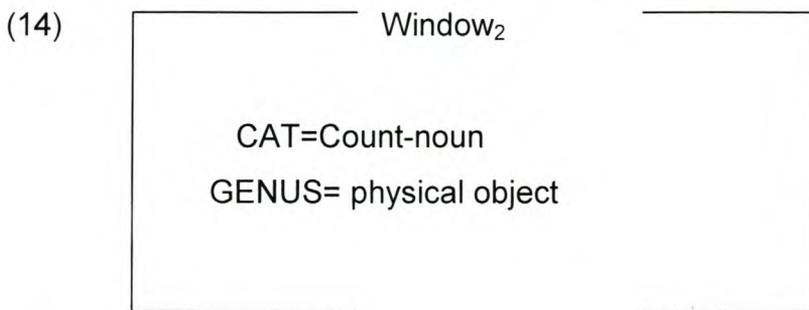
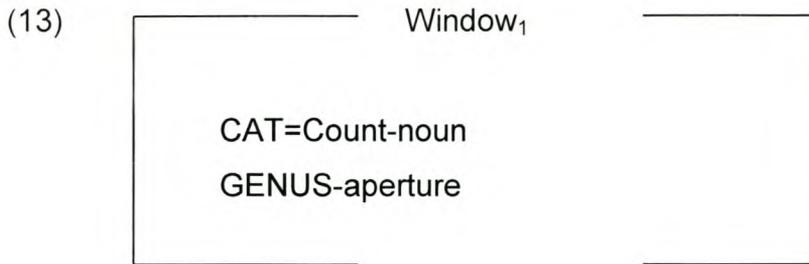
2.5.3 Permeability of word senses

Pustejovsky states that the purpose of discussion on permeability is the overlapping of senses where one sense includes the other. He considers the examples in (11)-(12) below:

- (11) (a) Mary cooked a meal
(b) Mary cooked the carrots
- (12) (a) John fried an omelet
(b) John fried an egg

For both (11a) and (12a), the object came into existence by virtue of the process of cooking and frying respectively.

Sentences (11b) and (12b) denote an activity taken for the edible food to be prepared. Pustejovsky states that there is a problem of too much overlapping under this heading in the centre of semantic components of the different reading, hence it is not easy to reassure about the correct word sense selection on the basis of selectional restrictions alone. He states that another problem for sense enumeration models for lexical knowledge is the inability to express the logical relation between senses in case of logical polysemy. For example, sense alternation involving nouns such as window and door discussed in the foregoing section were analyzed as listing of sense pairs as in (13)-(14) below:



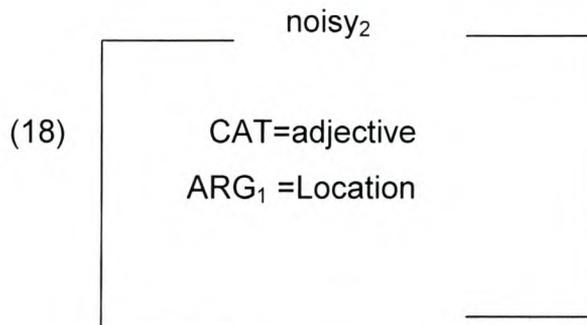
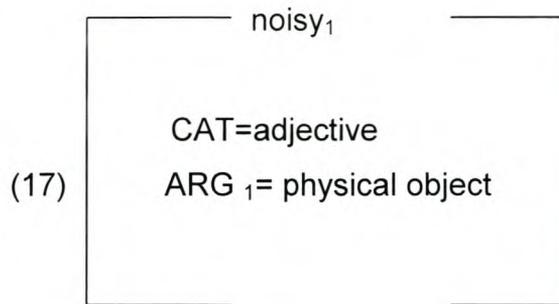
Pustejovsky states that the other area of sense permeability involves adjectives, which have complementary senses in well-defined context. For example, adjectives like sad and happy are able to predicate of both individuals and events. The examples in (15a) and (15b), as well as event indicating nouns (15c) below demonstrate this property:

- (15) (a) The woman is sad₁
 (b) A sad₁ woman
 (c) A sad₂ day/event/occasion

Pustejovsky maintains that a final issue which details sense permeability is that of a related type of adjectival polysemy which involves modifiers such as noisy, which predicates of an individual or of particular location, as illustrated in (16) below:

- (16) (a) A noisy₁ car
 (b) The noisy₁ dog
 (c) A noisy₂ room
 (d) A noisy₂ cafeteria

Pustejovsky argues that the typical dictionary definition will need at least two senses for the adjective noisy (17): an object making noise, and (18): a location accompanied by noise, as illustrated in (17) –(18) below:



This representation, however does not do justice to the meaning of this adjective presented above in (17) and (18).

2.5.4 Difference in syntactic forms

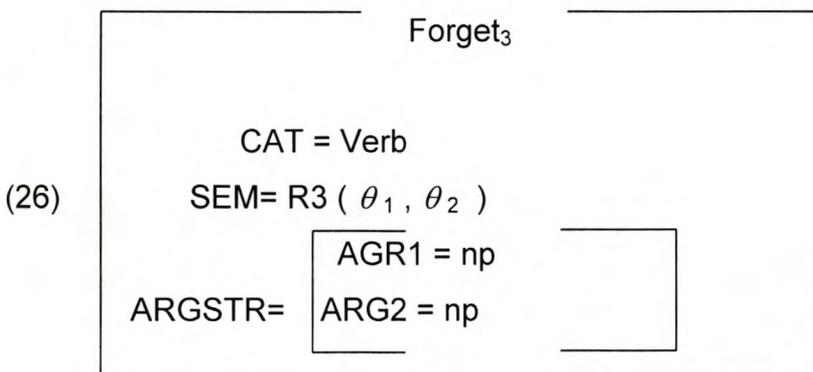
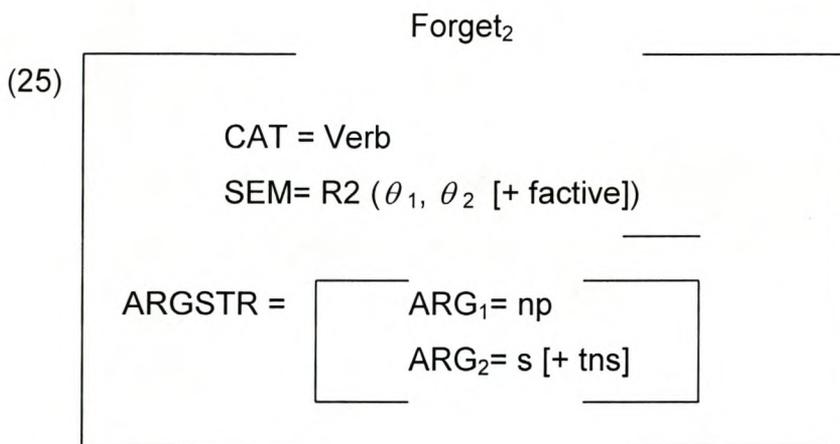
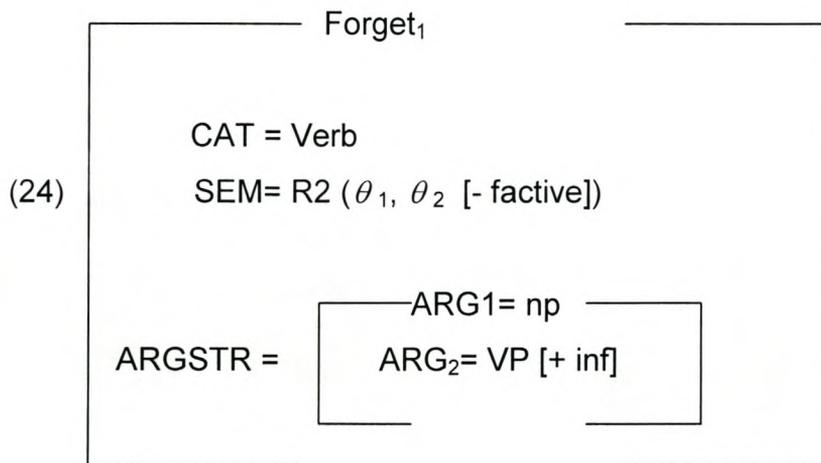
Pustejovsky (1995) maintains that it is in accordance to the grammar rules to separate word sense for a lexical item in order to participate in distinct lexical realization, and this is the sole approach open to the computational lexicon. This is illustrated by verbs such as believe and forget. The sentences in (19)- (23) show that the syntactic realization of the verbs complement determines how the statement is interpreted semantically. Sentence (19) contains 'factivity' and sentence (23) contains a 'concealed' question? According to Pustejovsky these different interpretations are usually written as separate senses of the verb, with distinct lexical entries. The interpretation is illustrated in (19)-(23) below:

(19) Madison Avenue is apt to forget that most folks aren't members of the leisure class
(factive)

(20) But like many others who have made the same choice, he forget to factor one thing into this plans Cal phobia (non-factive)

- (21) As far California being a state run by liberal environmental loonies, let's not forget where Ronald Reagan comes from. (Embedded question)
- (22) What about friends who forget the password or never got it? (Concealed question)
- (23) He leaves, forgets his umbrella, and comes back to get it. (Ellipsed non-factive)

Pustejovsky (1995) used the standard Sense Enumeration Lexicon model to illustrate the above senses into separate senses as in (24) – (26) below:



Pustejovsky demonstrates the property of multiple subcategorization which have a common underlying meaning using the verb remember, as illustrated below:

- a) John probably won't remember that he already fed the dog (factive)
- b) The neighbor remembered to feed the dog (factive)
- c) Mary can never remember where she leaves her car keys (embedded question)
- d) Edith finally remembered her husband's name (concealed question)
- e) John couldn't remember his lines for the play (concealed question)
- f) Mary remembered the keys before she left (ellipsed factive)

2.5.5 Semantic Expressiveness

Pustejovsky (1995) relates the history on expressiveness to the 1950's when principles of context free and transformational grammar were first introduced. The idea behind introduction of this new system was the apparent inadequacies of finite-state descriptions for the different natural language constructions that were being discovered (Chomsky 1955, 1957). Chomsky and others argued that natural language appeared to be not even context free but it appeared to require the way of moving out of the family of context-free language.

Pustejovsky argues that the motivation was clearly data-directed and seemed warranted by the most prevalent interpretation of what CFG's were. He suggests that if we view within SEL's in terms of its generative capacity then we have what might be characterized as monomorphic language. Pustejovsky defines a monomorphic language as a language containing lexical items that are given a single meaning, that is one type and denotation. He defines lexical ambiguity as having a multiple listing of words. He states that Polysemy discussed in the preceding section with words such as door has compel monomorphic approaches to represent these senses as independent and separate lexical items.

Pustejovsky argues that all nouns which seem to be logically polysemous, e.g. fireplace, pipe, room, etc. have the meaning of both physical object and spatial enclosure.

Pustejovsky states that lexical ambiguity is treated by multiple listings of words, both for contrastive ambiguity and logical polysemy. Lexicon is treated as enumerative listings of

word senses. He defines unrestricted Polymorphic languages as languages where the meaning is determined more by the context, than any inherent properties of the language lexicon. Pustejovsky defines weakly Polymorphic languages as languages containing lexical items that are semantically active and have a richer typed semantic representation than conventionally assured semantic operations of lexically determined type changing.

2.5.6 Generative Lexical Models

Pustejovsky explores the basic requirements for a theory of computational semantics, which satisfied the requirements outlined in the preceding sections. He presents a conservative approach to decomposition, where lexical items are minimally decomposed into structured forms rather than sets of features. Pustejovsky distinguishes two noticeable approaches to the study of word meaning: Primitive-based theories, and relation-based theories. According to Pustejovsky those who were conducting primitive-based theory assume that word meaning can be defined in terms of a fixed set primitive elements. In contrast, to this view, a relation-based theory of word meaning claim that there is no need for decomposition into primitives.

Pustejovsky proposes a new way of decomposition, which he refers to as generative or compositional aspects of lexical semantics instead of decomposition into a specified number of primitives. He posits that generative lexicon theory is a system involving at least four levels of semantic representations. These include inter alia:

- Argument structure, which specifies the number and type of arguments that a lexical item carries.
- An event structure of sufficient richness to characterize not only the basic event type of a lexical item, but also internal, subeventual structure.
- A Qualia structure representing the different models of predication possible with a lexical item.
- A Lexical inheritance structure, which identifies how a lexical structure is related to other structures in the dictionary, however it is contrasted.

Pustejovsky postulates a set of generative devices that connect the four levels mentioned above, by providing the compositional interpretation of words in context. He posits a

semantic transformation called type coercion which captures the semantic relatedness between syntactically distinct expressions.

Pustejovsky proposes that the argument, event and qualia types must account for the well-formed conditions defined by the type system and the lexical inheritance structure when undergoing operations of semantic composition.

2.5.7 Strong vs Weak Compositionality

Pustejovsky (1995) states that there are important matters to be addressed concerning compositionality. The two matters he refers to weak and strong compositionality. He argues that a basic Fregean concern with composition was not enough for cognitive or computational model of natural language semantics. He points out that two parameters are vital for characterizing semantic devices:

- (a) The degree of composition within an expression (i.e. how much unilateral or bilateral function)
- (b) How many explicitly defined senses are necessary to accomplish a unique interpretation of phrase.

Pustejovsky argues that the first point refers to how functionally the elements in the phrase are treated relative to the resulting interpretation. He maintains that natural language shows a high degree of composition that must be accounted for formally. Pustejovsky observes that the second point refers to the linguistic and logical tradition of simply multiplying senses on demand for new context as needed to create new word senses. He asserts that compositionality is achieved by enumeration of word senses. Pustejovsky (1995) defines weak compositionality as a rise to a system where the number of distinct lexical senses (i.e. lexical listings) needed in the lexicon rises proportionally to the number of interpretations in the language. Strong compositionality is defined as a system where the number of lexical senses remains roughly constant relative to the space of possible interpretations in the language.

2.6 THE SEMANTIC TYPE SYSTEM

2.6.1 Levels of representation

Pustejovsky states that generative lexicon theory as a computational system is constituted of at least four levels of representation.

- ❖ Argument structure: Specification of number and type of logical arguments, and how they are realized syntactically.
- ❖ Event structure: These sorts include state, process and transition and events may have sub eventual structure.
- ❖ Qualia structure: modes of explanation, embodies of formal, constitutive, Telic and agentive roles.
- ❖ Lexical inheritance structure: Identification of how a lexical structure is related to other structures in the type Lattice, and its contribution to the global organization of lexicon.

Pustejovsky proposes that a set of generative devices connects the four levels mentioned above, providing for the compositional interpretation of words in context. The generative operations included are the following semantic transformation all embodying well-formed conditions on type combinations:

- Type coercion: where a lexical item or phrase is coerced to a semantic interpretation by a governing item in the phrase without change of its syntactic type.
- Selective binding: where a lexical item or phrase operates specifically on the substructure of a phrase, without changing the overall type in the composition
- Co-composition: where multiple elements within a phrase behave as factors, generating new non-lexicalized senses for the words in composition.

Pustejovsky proposes that the semantic transformations include cases of under-specified semantic becoming contextually enriched such as manner co-composition, features transcriptions and light verb specification. He points out that the three semantic transformations help to capture the semantic relatedness between syntactically distinct expressions. He proposes that Argument, Event and Qualia types must correspond to the

well-formed conditions defined by the type system and lexical inheritance structure when undergoing operations of semantic composition.

2.6.2 Argument structure

Pustejovsky postulates that the semantics of a lexical item α can be defined as a structure, consisting of the following components:

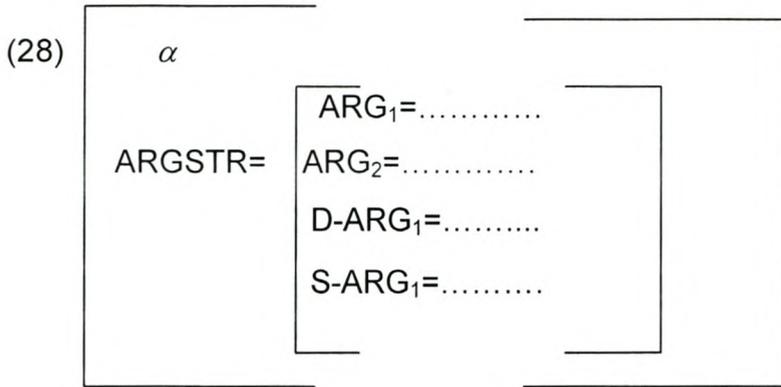
$$(27) \alpha = \langle A, E, Q, I \rangle$$

Where A, represents Argument structure, ϵ , represents event type, Q represents the binding of these parameters in the qualia structure, and I, is an embedding transformation, placing α within a type lattice, determining what information is inheritable from the global lexical structure.

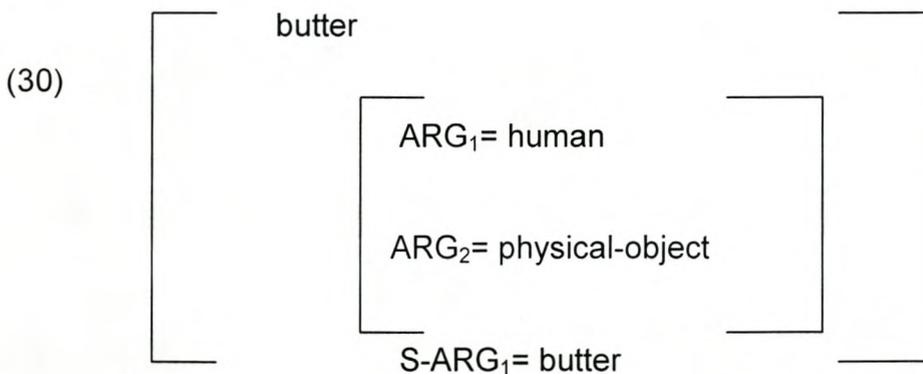
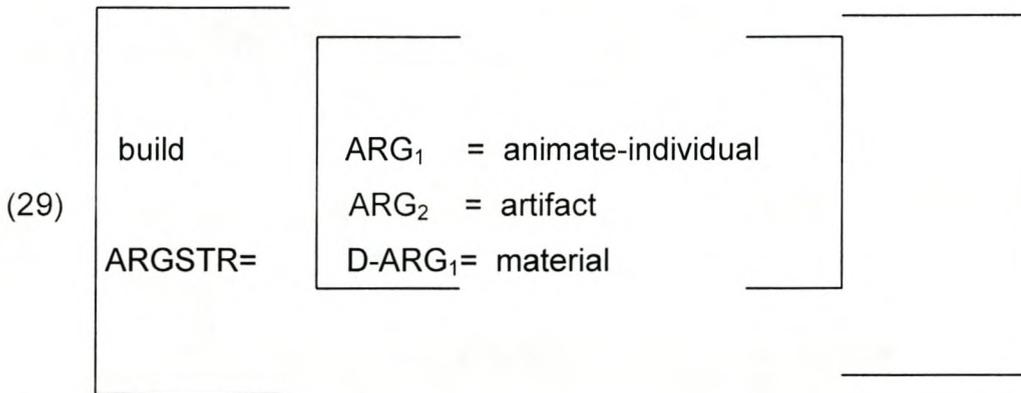
Pustejovsky (1995) states that recent contributions to the theory of grammar have been the view that argument structure itself is highly structured independent of the syntax. He defines argument structure for a word as a minimal specification of its lexical semantics. Pustejovsky points out that there are four distinguishable types of arguments for lexical items as illustrated below:

- (i) True arguments: Syntactically realized parameters of the lexical item; e.g. Jane arrived late.
- (ii) Default arguments: Parameters which participate in logical expression in the Qualia, but which are not necessarily expressed syntactically; e.g. James built the house out of bricks.
- (iii) Shadow arguments: Parameters, which are semantically incorporated into lexical item. They can be expressed only by operations of sub typing of discourse specification; e.g. Mary buttered her toast with expensive butter
- (iv) True adjuncts: Parameters, which modify the logical expression, but are of the situational interpretation, and are not tied to any particular lexical items semantic representation. These include adjunct expressions of temporal or spatial modifications; e.g. The wind is blowing in the mountain.

Pustejovsky suggests that the argument for a lexical item above is as follows: ARG1..... ARGn are represented in a list structure where argument type is directly included in the argument structure, ARGSTR, as in (28) below, where D-ARG is a default argument, and S – ARG is a shadow argument.

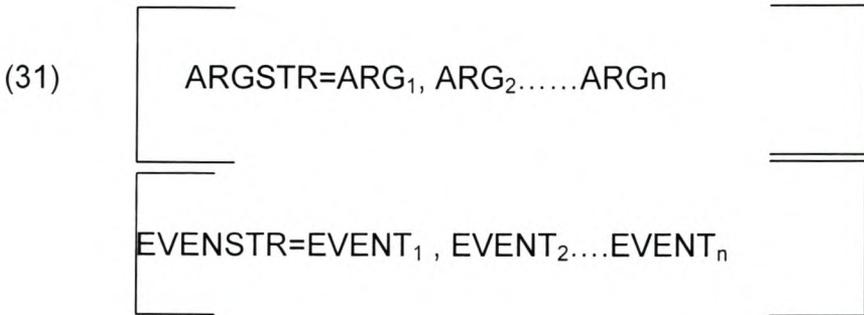


The lexical semantics for the verb discussed above can partially be represented with argument structure specifications, as illustrated in (29) and (30) below:

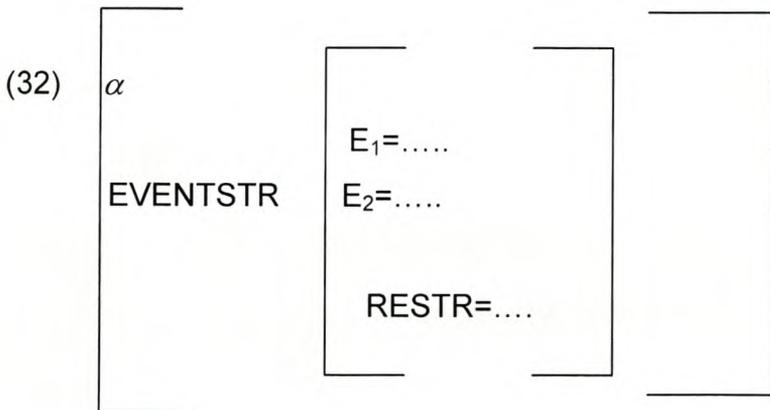


2.6.3 Extended event structure

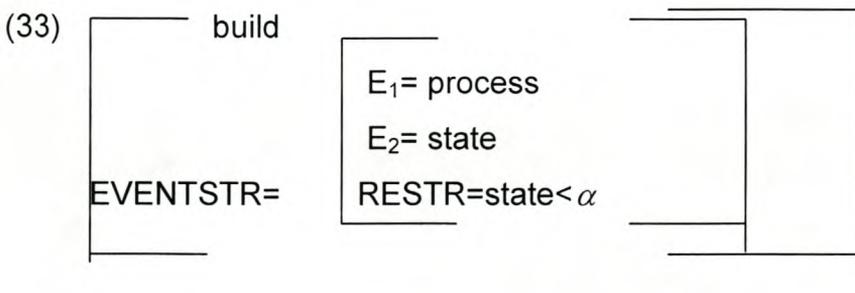
Pustejovsky posits a mechanism of orthogonal parameter binding which allows binding into an expression from independent parameter lists, that is argument structure, and event structure which are schematically represented below:



Pustejovsky states that there are three basic event types of verb, and verb phrases, namely process, states and transitions. The transition is further broken down into achievements and accomplishments. The event structure could schematically represented as in (32) below:



Pustejovsky states that the verb build, which was analyzed in the preceding section, could be represented as in (33) below in the orthogonal parameters:



2.6.4 Qualia Structure

Pustejovsky proposes that generative lexicon theory holds that qualia structure is constituted of four essential aspects of a word's meaning (or qualia):

- Constitutive: the relation between an object and its constituent parts.
- Formal: that which distinguishes it within a larger domain
- Telic: its purpose and function
- Agentive: factors involved in its origin or a bringing it about"

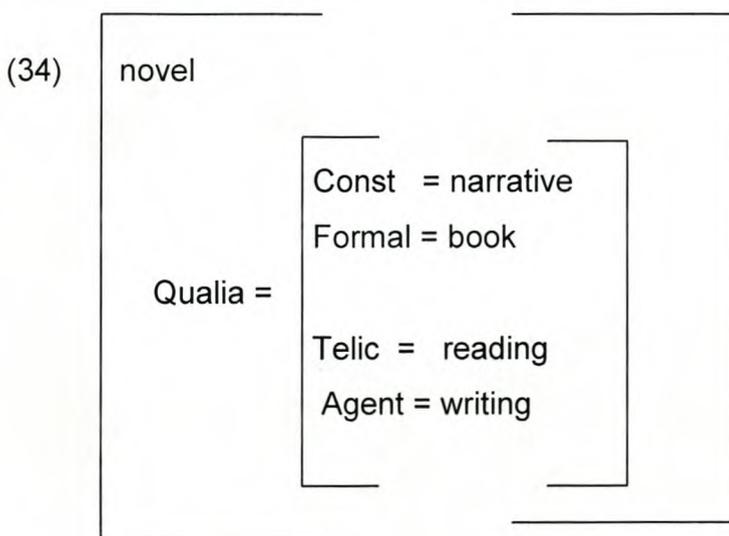
Pustejovsky proposes that there are two general points to be taken into account concerning Qualia roles:

- (1) Every category expresses a qualia structure
- (2) Not all lexical items carry a value for each qualia role.

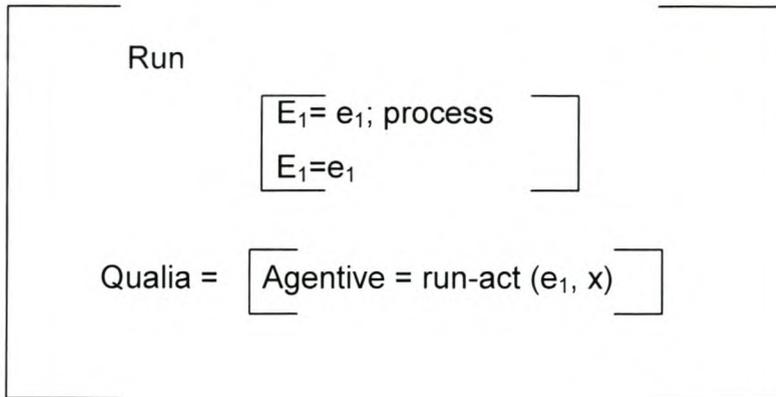
Pustejovsky points out that the difference between the two general points mentioned above is that the first point shows how a generative lexicon provides a uniform semantic representation compositionally from all elements of a phrase while the second point allows us to view Qualia as applicable or specifiable relative to particular semantic classes.

Pustejovsky posits a generative feature structure as the initial representation for the Qualia structure. The two categories, noun and verb, is illustrated in (34)–(35) below:

Qualia structure and noun



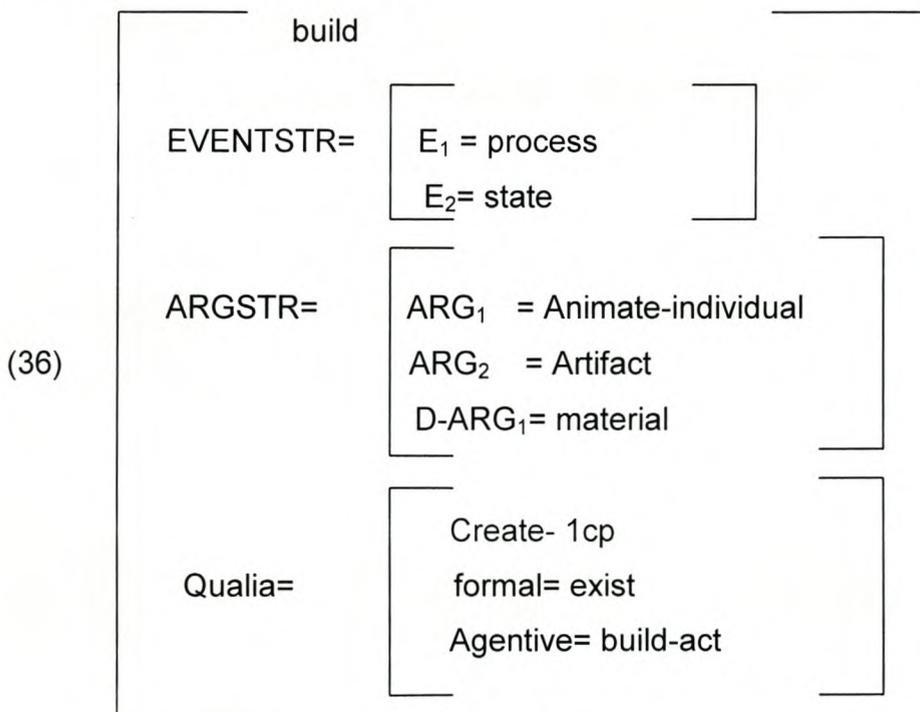
(35) Qualia Structure and verb



2.6.5 The interaction of semantic levels

Pustejovsky proposes that the point of departure under this heading is the integration of the three levels of argument, event, and Qualia structure. The reason for integration is to construct a uniform language for lexical semantic representations in a coherent manner. He examines the semantics of the verb build which was discussed in the foregoing section. He concludes by stating that there are three arguments associated with the verb, two True Arguments and one Default arguments:

Pustejovsky proposes that we analyze the verb as a lexical accomplishment containing two sub events, a process and a resulting state. These are bond to the Qualia in the representation in (36) below:



Pustejovsky points out that the main motivation for Qualia structure is not simply a listing of properties for word. Rather, it can only be appreciated in the context of the generative mechanisms in the grammar, which allow speakers of the language to use the language creatively.

2.7 SUMMARY

In this chapter, Pustejovsky's views on how words can take on an infinite number of meaning in novel context have been discussed. The ambiguity of an adjective such as good in the following example sentences was discussed:

- (37) (1) Mary finally bought a good umbrella.
(2) After a month, Grace was looking for a good meal.
(3) John is a good educator.

The above example sentences could mean the following:

- Good (1) To function well
Good (2) tasty
Good (3) to perform some act well.

The above example sentences support the evidence that words could take infinite number of senses in novel context as indicated by the adjective good above.

It was demonstrated that words in a language have more than one meaning, a property called polysemy. This was illustrated with reference to two distinct and unrelated meanings (i.e. homonymy) in the example sentences below:

- (38) (a) John walked along the bank of the river.
(b) Harborbank is the richest bank in the city.

In the example sentences above, the underlined items have more than one lexical sense. The example sentence marked (38a) refers to the building whereas example sentence marked (38b) refers to the institution.

Attention was also given to the systematic relatedness between word senses in a formal and predictable way, as demonstrated by the following example sentences:

- (39) (a) John plays soccer fast.
(b) Jane walks slowly into the class.

The example sentences (39a) and (39b) above show the relatedness between the underlined words in which their relation is characterised in terms of semantic opposition.

The chapter have shown the overlapping of senses. These could be seen in the example sentences below:

- (40) (a) Mary cooked a meal.
(b) Mary cooked the carrots.

- (41) (a) John fried an omelet.
(b) John fried an egg.

For both (40a) and (41a) above, the object comes into existence by virtue of the process of cooking and frying, respectively, yet there is no vast difference than the activity responsible for the edible food resulting in (40b) and (41b).

This chapter also discussed the failure of sense enumeration to encode all the possible meanings of the lexical item in the lexicon. The chapter concluded with Pustejovsky's views on the generative lexicon as a computational system consisting of at least four levels of representation. The chapter also discussed the view that qualia structure is not only a listing of properties for a word, but it accounts for the ability of speakers of the language to use the language creatively.

CHAPTER 3

A LEXICAL SEMANTIC ANALYSIS OF THE VERBS -YA AND -TA

3.1 INTRODUCTION

The main aim of this chapter is to examine the polysemy of the motion verbs -ya and -ta in Xitsonga in sentences with subjects of various noun types in order to establish senses of each verb. The argument structure of these motion verbs will be investigated taking into account the assignment of selectional restrictions of these motion verbs.

3.2 A LEXICAL – SEMANTIC ANALYSIS OF THE VERB -YA

3.2.1 The semantic type of the subject NP of -ya and its range of complements.

The subject NP is [human]

- (1) (a) [Sipho] wa ya
Sipho is going
- (b) [Noxolo] u yile
Noxolo has disappeared
- (c) [Grace] u ya exikolweni
Grace is going to school
- (d) [John] u ya [eka [Mhinga/ka Mhinga]]
John is going to Mhinga area
- (e) [Maureen] u yile ekaya hi milenge
Maureen went home on foot

In the sentences (1a) and (1b) above the verb -ya does not take any complement. The verb -ya in (1a) is in the present tense, and has the event type of activity or process. In sentence (1b) the verb -ya is in the past tense, denoting an accomplishment event. The verb -ya in Sentence (1d) and (1c) takes a locative complement, where (1c) and (1d) take

an NP complements with the locative morphemes e- and -ini and (1e) takes a prepositional locative complement. These locative complements all realise the goal/direction arguments. In addition the example sentence (1e) takes a prepositional phrase complement which realises the instrument argument, a shadow argument.

The subject NP is [inanimate]

- (2) (a) [Movha] wa ya
The car is going
- (b) [Tafula] ri yile
Lit: The table went away
The table is delivered
- (c) [Tibuku] ti ya exikolweni
Lit: Books are going to school
Books are delivered to school
- (d) [Switulu] swi ya exikolweni hi movha
Lit: Chairs are going to school by car
Chairs are delivered at school by car

In the sentences in (2a) and (2b) above, the verb -ya does not take any complement. The verb -ya in (2a) is in the present tense, and has the event type of activity or process. In sentence marked (2b) the verb -ya is in the past tense, denoting an accomplishment event. The verb -ya in the sentences in (2c), and (2d) takes locative complements with the locative morphemes e- and -ini in (2c), while -ya in (2d) takes a prepositional locative complement. These locative complements realise the goal/direction arguments. In addition the example marked (2d) takes a prepositional phrase complement which realises the instrument argument, a shadow argument.

The subject NP is [concrete noun]

- (3) (a) [Vuswa] bya ya
Lit: Food is going away
Food is delivered
- (b) [Masi] ya yile ekaya
Lit: Milk went home
Milk is delivered at home

In sentence (3a) above the verb -ya does not take any complement. The verb -ya in (3a) is in the present tense, and has the event type of activity or process. In sentence (3b) the verb -ya is in the past tense, denoting an accomplishment event. In addition the example sentence (3b) has a locative complement which realises the goal/direction argument.

The subject NP is [abstract noun]

- (4) (a) [Vuloyi] bya ya
Lit: Witchcraft goes away
There is Witchcraft
- (b) [Rirhandzu] ri yile eka vana hi vanhu
Lit: Love went to children by people
People have love
- (c) [Mavondzo] ya ya evanhwini
Lit: Jealousy goes to people
People have jealousy

In sentence (4a) above, the verb -ya does not take any complement. The verb -ya in (4a) is in the present tense, and has the event type of activity or process. In sentences (4b) and (4c) the verb -ya takes an NP complements with the locative morphemes e- and ini. In addition, sentence (4b) takes a prepositional phrase complement which realizes the agent argument, a shadow argument.

The subject NP is [natural phenomenon]

- (5) (a) [Nambu] wa ya
Lit: The river goes away
The river is flowing
- (b) [Xihangu] xi yile
Lit: Hail went away
Hail has stopped
- (c) [Xinambyana] xi ya entshaveni
Lit: The stream goes to the mountain
The stream is flowing to the mountain
- (d) [Xihuhuri] xi ya entshaveni
Lit. Whirlwind goes to the mountain
Whirlwind is blowing to the mountain

In sentences (5a) and (5b) above, the verb -ya does not take any complement. The verb -ya in (5a) is in the present tense, and has the event type of activity or process. In sentence (5b) the verb -ya is in the past tense, denoting an accomplishment event. In sentences (5c) and (5d) the verb -ya take an NP complements with the locative morphemes e- and -ini. Both sentences has the event type of activity or process.

3.2.2 The assignment of arguments of -ya

This section will give a systematic presentation of the argument types of the verb -ya- and the event types of the respective sentences.

Kearns (2000) defines patient as the thing an action is done to. She defines the agent argument as the doer or an actor in an event. Kearns defines the theme as the thing which moves in an event.

The subject NP is an agent argument

- (6) (a) [John] u ya ekaya
John is going home
- (b) [Stephelina] u yile exikolweni
Stephelina went to school

In sentence (6a) above the verb -ya does not take any complement. The verb -ya in (6a) is in the present tense, and has the event type of activity or process. In sentence (6b) the verb -ya is in the past tense, denoting an accomplishment event. In addition the sentence in (6b) takes an NP complements with the locative morphemes e- and -ini. These locative complements realise the goal/direction arguments.

The subject is a theme argument

- (7) (a) [Papila] ri yile ekaya
The letter is sent home
- (b) [Vuswa] byi ya emasin'wini
The porridge is taken to the field

In sentence (7a) above the verb -ya is in the past tense, and expresses an accomplishment event. In sentence (7b) the verb -ya is in the present tense, and expresses the event type of activity or process. Both sentences in (7a) and (7b) takes an NP complement with the locative morphemes e- and -ini. These locative complements realise the goal/direction argument.

The Locative argument

- (8) (a) Grace u ya [exitediyamu]
Grace goes to the stadium
- (b) Nsuku u ya [eka Mhinga/ ka Mhinga]
Nsuku goes to Mhinga area

- (c) Ntwanano u yile [exiticini]
Ntwanano went to the station

In sentences (8a), (8b) and (8c) above the verb -ya takes various complements. The verb -ya in (8a) and (8b) is in the present tense, and has the event type of activity or process. Sentence (8c) is in the past tense, denoting an accomplishment event. In sentences (8a), (8b) and (8c) the verb -ya takes an NP complement with the locative morphemes e- and -ini. These locative complements realise the goal/direction argument.

The subject is theme and the prepositional complement of hi is the agent Argument.

- (9) (a) [Mati] ya yile ekaya [hi munhu]
Water is delivered at home by a person
- (b) [Movha] wu yile ekaya [hi muchayeri]
The car went home by the driver
- (c) [Papila] ri yile ekaya [hi Cedric]
The letter is delivered at home by Cedric

In the sentences (9a), (9b) and (9c) above the verb -ya takes various complements. The verb -ya in (9a), and (9c) is in the past tense denoting an accomplishment event. In sentences (9a), (9b) and (9c) -ya takes an NP complement with the locative complement e- and also takes a prepositional locative complement which realizes the agent argument, a shadow argument.

The subject is theme and the prepositional complement of hi is an instrument.

- (10) (a) [Masi] ya ya ekaya [hi movha]
Milk is taken home by car
- (b) [Papila] ri yile ejoni [hi xihahampfhuka]
The letter is taken to town by an aircraft

In sentence (10a) and (10b) above the verb -ya takes two complements. In sentence (10a) the verb -ya is in the present tense, and has the event type of activity or process. In sentence (10b) the verb -ya is in the past tense, denoting an accomplishment event. In both sentences -ya takes a prepositional locative complement. These locative complement realises the goal/complement. In addition the example sentences (10a) and (10b) the verb -ya takes a prepositional phrase complement which realizes the instrument argument, a shadow argument.

3.2.3 Selectional restrictions of the subject of -ya

The agent is an animate and it may be [human] or [animal]

(11) (a) Selection restrictions of the agent

(i) Human: [Grace] u yile ekaya
Grace went home.

(ii) Animal: [Ndlopfu] yi ya edan`wini
The elephant is going to the dam.

In sentences 11a(i) and 11a(ii) above the verb -ya takes a complement. The verbs in 11a(i) is in the past tense, denoting an accomplishment event. Sentence in 11a(ii) is in the present tense, and has the event type of activity or process. In sentences 11a(i) and 11a(ii) -ya takes an NP complements with the locative morphemes e- and -ini. This locative complement realises the goal/direction argument.

(b) Selection restrictions of the NP complement of hi is an instrument

(i) Gwen u yile ekaya [hi milenge]
'Gwen went home on foot'

(ii) Cedric u ya [hi movha]
'Cedric goes by car'

In sentences 11b(i) and 11b(ii) above, the verb -ya does take complement. Sentence marked 11b(i) is in the past tense, denoting an accomplishment event. Sentence marked

11b(ii) is in the present tense, and has the event type of activity or process. In addition both sentences marked 11b(i) and 11b(ii) take prepositional phrase complement which realizes the instrument argument, a shadow argument.

3.2.4 Event structure

The oldest semantic classification for verbs is that of aspectual class. As pointed out previously, it is assumed that there are at least three recognisable aspectual type, i.e state, activity and event where the event is itself sometimes broken down into accomplishment and achievement events. Pustejovsky (1995) states that process/activity is a sequence of events identifying the same expression e.g. run, push, go etc. Kearns (2000) maintains that states are unbounded or atelic, they have natural boundaries or culmination which constitute finishing points. She defines an achievement as an idealized event which occur at a non divisible point in time, and lack duration. Kearns defines an accomplishment as the eventualities with the clearest and most complex structure consisting of a process or activity leading up to culmination or finishing point.

The motion verb -ya has two events in its event structure

Event₁ = activity (process)

(12) (a) Grace u yile hi movha
Grace went by car

(b) Maureen u ya hi milenge
Maureen goes on foot

The example sentences in (12a) and (12b) above denote activity. The event have no natural boundaries or culmination which constitute finishing points

Events₂ = accomplishment/achievement

(a) Susan u ya eka Ximawusa
Susan goes to Ximawusa area

- (b) Jerry u yile ejoni hi awara
Jerry went to town in an hour

The first sentences illustrated above in (a) is an example of accomplishment: the process leads up to culmination or outcome which finishes the event after Susan has reached her destination. The sentence in (b) above is an example of an achievement event which is modified by in an hour which is understood to occur at the end of an hour interval, hence an achievement is realized.

3.2.5 Lexical conceptual paradigm (LCP) of -ya

- (13) (a) Going/traveling
Nsuku wa ya
Nsuku is going
- (b) Go (to a place/person/thing)
- a. Tihuku ti yile exihahlwini
Chickens went to the poultry
- b. Grace u yile epurasini
Grace went to a farm
- (c) Travel/go by a certain means
Cornelia u yile ekaya hi milenge
Cornelia went home on foot
- (d) 'Deliver'
- a. Mati ya yile ekaya
Lit: Water went home
Water is carried home
- b. Semendhe yi yile evhengeleni [hi movha]
Cement is carried to the shop by car

- (e) 'Become present'

Jane u ya ehlengeletanini

Jane goes to the meeting

- (f) 'Flow'

Mati ya ya elwandle

The water goes (flows) to the sea

- (g) 'Blow'

Moya wu ya entshaveni

The wind goes (blows) to the mountain

3.3 A LEXICAL–SEMANTIC ANALYSIS OF THE VERB -TA

3.3.1 The semantic type of the subject NP of -ta and its range of complements:

The subject NP is (human)

- (14) (a) [Stanley] wa ta
Stanley is coming
- (b) [John] u tile
John came
- (c) [Noxolo] u tile enkhubyeni
Noxolo came to the party
- (d) [Lindiwe] u ta eka Hlaneki
Lindiwe is coming to Hlaneki area

In sentences (14a) and (14b) above the verb -ya does not take any complement. The verb -ta in (14a) is in the present tense, and has the event type of activity or process. In

sentences (14b) and (14c) the verb -ta is in the past tense, denoting an accomplishment event. In sentence (14d) -ya is in the present tense, and has the event type of activity or process. In sentences (14c) and (14d) -ya takes an NP complements with the locative morphemes e- and -ini. These locative complements realizes the goal/direction arguments.

The subject NP is [inanimate]

- (15) (a) [Movha] wa ta
The car is coming
- (b) [Buku] yi tile
Lit: The book came
The book is delivered
- (c) [Tafula] ri tile exikolweni
Lit: The table came to school
The table is delivered at school
- (d) [Switulu] swi tile eholweni hi movha
Chairs were delivered at the hall by the car.

In the sentences (15a) and (15b) above the verb -ta does not take any complement. The verb -ta in (15a) is in the present tense, and has the event type of activity or process. In sentences (15b) and (15c) the verb -ta is in the past tense, denoting an accomplishment event. In the example sentence (15c) the verb -ya takes an NP complements with the locative morphemes e- and -ini. These locative complements realize the goal/direction argument.

The subject NP is [concrete noun]

- (16) (a) [Vuswa] bya ta
Lit: Food is coming
Food is on the way

- (b) [Mati] ya tile
Lit: water is delivered
The bride has come
- (c) [Mapa] ya tile exikolweni
Lit: Maize meal went to school.
Maize meal is delivered at school.
- (d) [Masi] ya tile exikolweni hi munhu
Lit: Milk went to school by a person
Milk is delivered to school by a person

In the sentences (16a) and (16b) above the verb -ta does not take any complement. The verb -ta in (16a) is in the present tense, and has the event type of activity or process. Sentences 16(b-d) are in the past tense, and they denote accomplishment events. In sentences (16c) and (16d) the verb -ta takes an NP complement with the locative morphemes e- and -ini. These locative complements realise the goal/direction arguments. In addition the example sentence (16d) takes a prepositional phrase complement which realizes the agent argument, a shadow argument.

The subject NP is [abstract noun]

- (17) (a) [Vuloyi] bya ta
Lit: Witchcraft is coming
There is a witchcraft
- (b) [Rirhandzu] ri tile eka vana hi tatana
Lit: Love went to children by father
Father have love
- (c) [Mavondzo] ya ta evanhwini
Lit: Jealousy comes to people
People have jealousy.

In sentence (17a) above the verb -ta does not take any complement. The verb -ta in (17a) is in the present tense, and in the event type or process. In sentence (17b) the verb -ta is in the past tense, denoting an accomplishment event. In sentences (17b) and (17c) the verb -ya takes an NP complement with the locative morphemes e- and -ini. These locative complements realise the goal/direction arguments. In addition the examples sentence in (17b) takes a prepositional phrase complement which realizes the theme argument, a shadow argument.

The subject NP is [weather noun]

- (18) (a) [Mpfula] ya ta
Lit: The rain is coming
There will be rain
- (b) [Moya] wu tile
Lit: The wind came
The wind have blown
- (c) [Gamboko] ri tile etikweni
Lit: Snow came to the country
- (d) [Xirhami] xi tile eka Mhinga
Lit: Colds came to Mhinga area
There was colds at Mhinga area
- (e) [Nkunghwa] wu tile ka Ximawusa
Lit: Mist came to Ximawusa area
There was mist at Ximawusa area

In sentences (18a) and (18b) above the verb -ta does not take any complement. The verb -ta in (18a) is in the present tense, and in the past tense in (18b), the sentences denote event type of activity or process. In sentences 18(c-e) the verb -ta is in the past tense, denoting an accomplishment event. In the sentences 18(c-e) the verb -ta takes an NP complement with the locative morphemes e- and -ini. These locative complements all realize the goal/direction arguments.

3.3.2 The assignment of arguments with -ta

The subject NP is an agent argument

- (19) (a) [Jane] wa ta
Jane is coming
- (b) [Cedric] u tile exitediyamu
Cedric came to stadium
- (c) [Grace] u ta eka Hlaneki
Grace comes to Hlaneki area

In the sentences (19a) and (19c) above the verb -ta is in the present tense, and has event type of activity or process and accomplishment, respectively. In sentence (19a) the verb -ta does not take any complement. Sentence in (19b) is in the past tense, denoting an accomplishment event. The verb -ta in sentences (19b) and (19c) takes an NP complement with the locative morphemes e- and eka-. These locative complement realizes the goal/direction arguments.

The subject NP is a theme argument

- (20) (a) [papila] ra ta
The letter is coming
- (b) [Bubutsa] ri tile
Storm came
- (c) [Xihangu] xi tile etikweni
Hail came to the country

In sentences (20a) and (20b) above the verb -ta does not take any complement. In sentence (20a) the verb -ta is in the present tense, and the sentence denotes the event type of activity or process. In sentences (20a) and (20b) the verb -ta is in the past tense, denoting an accomplishment event. In sentence (20c) the verb -ta takes an NP

complement with the locative morphemes e- and -ini. These locative complements realizes the goal/direction arguments.

The locative argument

- (21) (a) [John] u tile [enkombisweni]
John came to the show
- (b) [Stephelina] u ta [eka Ximawusa]
Stephelina comes to Ximawusa area
- (c) [Stephen] u tile [eka Bungeni]
Stephen came to Bungeni area

In sentences (21a) and (21c) above the verb -ta is in the past tense, denoting an accomplishment event. Sentence (21b) the verb -ta is in the present tense and the sentence denotes the event type of accomplishment. In sentences 21(a-c) the verb -ta takes an NP complement with the locative morphemes e- and -ini. These locative complements all realizes the goal/direction argument.

The subject is theme and the prepositional complement of hi is an agent argument

- (22) (a) [Papila] ri tile ekaya [hi Stanley]
The letter is delivered at home by Stanley
- (b) [Masi] ya ta exikolweni [hi muchayeri]
Lit: Milk goes to school by a driver
Milk is delivered at school by a driver

In sentence (22a) above the verb -ta is in the past tense, denoting an accomplishment event. In sentence (22b) the verb -ta is in the present tense, and the sentence denotes the event of accomplishment. In sentences (22a) and (22b) the verb -ta takes an NP complement with the locative morphemes e- and -ini. These locative complements realizes the goal/direction arguments. In addition, the example sentences (22a) and (22b)

take a prepositional phrase complement which realizes the agent argument, a shadow argument.

The subject is theme and the prepositional complement of hi is an instrument

- (23) (a) [Matj] ya tile [hi movha]
 Lit: Water is brought by car
 Water is delivered by car
- (b) [Vuswa] byi ta [hi mbita]
 Lit: Food is coming by pot
 Food is delivered by pot

In the sentence (23a) above the verb -ta is in the past tense, denoting an accomplishment event. Sentence marked (23b) the verb -ta is in the present tense, and the sentence denotes the event of activity or process. Sentences (23a) and (23b) take a prepositional phrase complement which realizes the instrument argument, a shadow argument.

3.3.3 Selectional restrictions of the subject of -ta

- (24) (a) Selection restrictions on the agent
 The agent is animates and it may be a (human) or (animal)
- (i) Human: [Zodwa] u tile
 Zodwa came
- (ii) Animal: [Nghala] ya ta
 The lion is coming

In the sentences marked 24a(i) and 24a(ii) the verb -ta does not take any complement. Sentence marked 24a(i) the verb -ta is in the past tense denoting an activity event. In sentence 24a(ii) the verb -ta is in the present tense, and has the event type of activity or process.

- (b) Selection restrictions on the NP complement of hi is an instrument
- (i) Nsuku u tile [hi movha]
Nsuku came by car
 - (ii) Joyce u tile hi [milenge]
Joyce came on foot
 - (iii) Mapapila ya tile [hi Xihahampfhuka]
Letters were transported by an aircraft

In the sentences marked 24b(i-iii) above the verb -ta is in the past tense, denoting an accomplishment event. In addition the verb -ta takes a prepositional phrase complement which realizes the instrument argument, a shadow argument.

3.3.4 Event structure

The motion verb -ta has two events in its event structure

Event₁ = Activity/process

- (25) (a) Grace wa ta
Grace is coming
- (b) Stephelina u tile
Stephelina came

The above example sentences in (25a) and (25b) denote activity because the event have no natural boundaries or culmination which constitute finishing points. The process shows continuity.

Event₂ = Accomplishment/achievement

- (26) (a) Grace u ta eMozambique
Grace is coming to Mozambique

- (b) Cornelia u tile edorobeni hi 45 minete
Cornelia came to town in 45 minutes

In the above example sentence in (26a) is an example of accomplishment event because the process is completed when Grace has reached her destination. The process lead up to a culmination or finishing point. The second sentence marked (26b) is an example of an achievement because it consists of boundness and no more at the end of 45 minutes interval.

3.3.5 Lexical conceptual Paradigm (LCP)

The following sentences can be distinguished for the verb -ta in terms of its Lexical Conceptual Paradigm.

- (a) 'Came'
Stephen u tile
Stephen came
- (b) 'Deliver'
Masi ya tile exikolweni
Lit: Milk came to school
Milk is delivered at school
- (c) 'Arrive at a place'
Xirhami xi tile ejoni
Colds have come to town
- (d) 'Flow'
Mati ya tile e danwini
Water came to the dam
- (e) 'Blow'
Moya wu tile etikweni
The wind came in town

- (f) 'Be present'
 Mukamberi u tile exikolweni
 The circuit manager came to school.

3.4 CONCLUSION

From the above analysis of lexical-semantic properties of the verbs -ya and -ta it is evident that these motion verbs express different senses when they are used with various noun types. They express a multiplicity of meanings of which exemplify their polysemy.

For example, in the sentence mati ya tile (water is delivered) can also mean idiomatically that there is a bride in the family in Xitsonga. I have demonstrated that the motion verbs -ya and -ta do sometimes not take any complement. Consider the example sentences below:

- (i) N'wana wa ya
 'The child is going'
- (ii) Mbyana yi tile
 'The dog came'

In the example sentence in (i) above the verb -ya is in the present tense, and has the event type of activity or process. Sentence marked (ii) the verb -ta is in the past tense, also denoting an activity event.

I have demonstrated that when the locative complement is realized by the locative morpheme e- and -ini is realized. This can be seen in the example sentences below:

- (i) Vana va ya enkhubyeni
 'Children are going to the party'
- (ii) Tibuku ti tile exikolweni
 'Books were delivered at school'

In the above example sentences, marked (i) and (ii) the verb takes an NP complements with the locative morphemes of e- and -ini. These locative complement realise the goal/direction argument.

I also demonstrated that the prepositional constructions realizes the instrument argument, a shadow argument. These is illustrated by the example sentences below:

- (i) Vana va yile ekaya [hi movha]
'Children went home by car'
- (ii) Vaendzi va tile ejoni [hi xitimela]
'Visitors came to town by train'

In the above example sentences in (i) and (ii) the preposition is hi and the complements are movha (car) and xitimela (train), respectively.

I have demonstrated that the motion verbs -ya and -ta express multiplicity of senses. This is evident from the example sentences below:

- (i) 'Deliver'
Tihunyi ti yile ekaya
'Fire wood is carried home'
- (ii) 'Flow'
Mati ya ya elwandle
'Water is going to the sea'
- (iii) 'Came'
Vuswa byi tile
'Food is delivered'
- (iv) 'Blow'
Moya wu tile etikweni
'The wind came to the country'

(v) 'Be present'

Mukamberi u tile exikolweni

'The circuit manager came to school.

It is evident that motion verbs such as -ya and -ta express a multiplicity of senses in terms of its polysemous behaviour.

CHAPTER 4

A LEXICAL SEMANTIC ANALYSIS OF THE VERB; -FAMBA AND -BALEKA.

4.1. INTRODUCTION

The primary aim of this chapter is to examine the polysemy of the motion verbs -famba (go) and -baleka (run away) with various argument noun types in Xitsonga. The locative applicative affix (-el-) will also be employed in order to determine varieties of meaning (i.e. senses in terms of polysemy). The argument structure of these motion verbs will be investigated systematically, taking into account the selection restrictions of the argument of these motion verbs. The event structure will also be examined. Lastly, the lexical conceptual paradigm of the respective verbs and their different senses will be established.

4.2 THE SEMANTIC TYPE OF THE SUBJECT NP OF -FAMBA AND ITS RANGE OF COMPLEMENTS

The subject NP is [human]

- (1) (a) [Marcia] wa famba
Marcia is going
- (b) [Piet] u fambile
Piet went
- (c) [Stephelina] u fambile edorobeni
Stephelina went to town
- (d) [Grace] u fambile eka Bungeni
Lit: Grace went away from Bungeni
Grace left Bungeni area

- (e) [Thomas] u fambile hi movha
Thomas went by car

In the sentence (1a) and (1b) above the verb -famba is in the present and past tense respectively, and the sentence have the event type of activity or process. In sentences (1a) and (1b) -famba does not take any complement. In sentences (1c), (1d) and (1e) the verb -famba is in the past tense, denoting an accomplishment event. In sentence (1c) and (1d) -famba takes an NP complement with the locative morphemes e- and -ini. These locative complements realise the source and goal/direction arguments, respectively.

In addition the verb -famba in the example sentence (1e) takes a prepositional phrase complement which realizes the instrument argument, a shadow argument.

The subject NP is [inanimate]

- (2) (a) [Tafula] ra famba
Lit: The table moves
The table is loaded
- (b) [Xitulu] xi fambile
Lit: The chair went away
The chair is taken away
- (c) [Tibuku] ti fambile exikolweni
Lit: Books went away at school
Books were carried away from school
- (d) [mapulanga] ya fambile hi movha
Planks were delivered by car

In sentences (2a) and (2b) above the verb -famba does not take any complement. The verb -famba in (2a) is in the present tense, and in (2b) in the past tense and has the event type of activity or process. In sentences (2c) and (2d) the verb -famba is in the past tense and the sentences denotes an accomplishment event. Sentence (2c) takes an NP complement with the locative morphemes of e- and -ini. These locative complements

realise the source argument. In addition the example sentence (2d) takes a prepositional phrase complement which realizes the instrument argument, a shadow argument.

The subject NP is [concrete noun]

- (3) (a) [Vuswa] bya famba
 Lit: Food goes away
 Food is taken away
- (b) [Mati] ya fambile
 Lit: Water went away
 Water has stopped
- (c) [Masi] ya fambile exikolweni hi movha
 Lit: Milk went away to school by car
 Milk is delivered at school by car

In sentences (3a) and (3b) above the verb -famba does not take any complement. In sentence (3a) the verb -famba is in the present tense, and in (3b), in the past tense and the sentences denote an event type of activity or process. In sentence (3c) the verb -famba is in the past tense, the sentence denoting an accomplishment event. The verb -famba in sentence (3c) takes an NP complement with the locative morphemes e- and -ini. The locative complements realises the goal/direction argument. In addition the verb -famba in example sentence (3c) takes a prepositional phrase complement which realizes the instrument argument, a shadow argument.

The subject NP is [natural phenomenon]

- (4) (a) [N'weti] wa famba
 Lit: The moon is going
 The moon is disappearing
- (b) [Dyambu] ri fambile
 Lit: The sun went away
 The sun has set

In the sentences (4a) and (4b) above the verb -famba does not take any complement. In sentence (4a) the verb -famba is in the present tense, and the sentence denotes the event type of activity or process. In sentence (4b) the verb -famba is in the past tense, and the sentence also denotes an activity event.

The subject NP is [weather noun]

- (5) (a) [Xirhami] xa famba
 Lit: Colds goes away
 Colds is coming to an end
- (b) [Gwitsi] ri fambile
 Lit: Frost went away
- (c) [Gamboko] ri fambile etikweni
 Lit: Snow went away in the country
 There is no more snow in the country
- (d) [Xihuhuri] xi famba hi patu
 Lit: Whirlwind goes on the road
 Whirlwind is blowing along the road

In the sentences (5a) and (5b) above the verb -famba does not take any complement. In sentences (5a) and (5d) the verb -famba is in the present tense, and has the event type of activity or process. Sentences (5b) and (5c) the verb -famba is in the past tense, denoting an activity and accomplishment event, respectively. In sentence (5c) -famba takes an NP complement with the locative morphemes of e- and -ini. These locative complements realizes the goal/direction arguments. In addition, -famba in sentence (5d) takes a prepositional phrase complement which realizes the argument, a shadow argument.

The subject NP is [abstract noun]

- (6) (a) [Rirhandzu] ra famba
 Lit: There is no love anymore

- (b) [Ntshuxeko] wu fambile
Lit: Democracy went away
There is no longer democracy
- (c) [Mavondzo] ya fambile evanhwini
Lit: Jealousy went away from John
People do not have jealousy anymore
- (d) [Rifumo] ri fambile eka John
Lit: Wealth went away from John
John has no source of income anymore/John is poor

In the sentences (6a) and (6b) above the verb -famba does not take any complement. In sentence (6a) and (6b) the verb -famba is in the present and past tense respectively and the sentences denotes the event type of activity or process. Sentences in (6c) and (6d) the verb -famba is in the past tense, denoting an accomplishment event.

In sentences (6c) and (6d) the verb -famba takes an NP complement with the locative morphemes e- and -ini. These locative complements realizes the source arguments.

4.2.2 The assignment of arguments of the verb: -famba

The subject NP is an agent argument

- (7) (a) [Tsakani] u famba hi movha
Tsakani is going by car
- (b) [Mariana] u fambile exikolweni
Mariana went from school
Mariana went away from school

In sentence (7a) above the verb -famba is in the present tense, and has event type of activity or process. Sentence marked (7b) the verb -famba is in the past tense, and the sentence denotes an activity event. Sentence (7b) takes an NP complements with the locative morphemes of e- and -ini. This locative complement realizes the source

argument. In addition sentence (7a) the verb -famba takes a prepositional phrase complement which realizes the instrument argument, a shadow argument.

The subject NP is a theme argument

- (8) (a) [movha] wa famba
The car goes away
- (b) [mpfula] yi fambile
Lit: The rain went away
The rain has stopped

In sentences (8a) and (8b) above the verb -famba does not take any complements. In sentence (8a) the verb -famba is in the present tense, and the sentence has the event type of activity or process. In sentence (8b) the verb -famba is in the past tense, and the sentence denotes an activity event.

The locative argument

- (9) (a) Ndlala yi fambile [etikweni]
Lit: Drought went away in the country
There is no more drought in the country
- (b) Vana va fambile [eka Ximausa]
Lit: Children went away from Ximausa area
Children left Ximausa area

In the sentences (9a) and (9b) above the verb -famba is in the past tense, and the sentences denote an activity event. In sentences (9a) and (9b) take an NP complements with the locative morphemes e- and -ini. These locative complements realizes the goal/direction and source arguments, respectively.

The subject is theme and the prepositional complement of hi is an agent argument.

- (10) (a) [Mali] yi fambile ebangini hi Javu
Money is taken away to the bank by Javu
- (b) [Xitulu] xi fambile ekaya hi Cedric
The chair is taken away home by Cedric

In the sentences (10a) and (10b) above the verb -famba is in the past tense, denoting an accomplishment event. In the sentences (10a) and (10b) the verb -famba takes an NP complement with the locative morphemes e- and -ini. These locative complements realize the goal/direction arguments. In sentences (10a) and (10b) the prepositional phrase complements realize the instrument argument, a shadow argument.

The subject is the theme and the prepositional complement of hi is an instrument

- (11) (a) [Mali] yi fambile [hi movha]
Money is taken away by car
- (b) [Mati] ya famba [hi phayiphi]
Water flows through the pipe

In sentences (11a) and (11b) above the verb -famba is in the past tense, denoting an activity event. In sentence (11b) the verb -famba is in the present tense, and has event type of activity or process. In sentences (11a) and (11b) -famba takes a prepositional phrase complement which realizes the instrument argument, a shadow argument.

The locative applicative

- (12) (a) Stanley u fambela [exibedlhele]
Stanley often goes to hospital
- (b) James u fambela [eka Ximausa]
James often goes to Ximausa village

In sentences (12a) and (12b) above the verb -famba takes an applicative affix (-el-). In sentences (12a) and (12b) the verb -famba takes an NP complements with the locative morphemes e- and eka-, respectively. These locative complements realize the goal/direction arguments.

4.2.3 Selectional restrictions of the subject of : -famba

(13) (a) selection restrictions on the agent

The agent is animate and it may be [human] or [animal]

- (i) Human : [Susan] u fambile
Susan went away
- (ii) Animal : [ndlopfu] ya famba
The elephant is going

In sentences 13a(i) and 13a(ii) the verb -famba does not take any complement. In sentence 13a(i) the verb -famba is in the past tense, denoting an activity event. In addition sentence marked 13a(i) the verb -famba is in the present tense, and also denotes the event type of activity or process.

(b) selection restrictions on the NP complement of hi is an instrument

- (i) Tihomu ti famba [hi movha]
Lit : Cattle goes by car
Cattle are carried by car
- (ii) Mapapila ya fambile [hi xitimela]
Letters were delivered by train

In sentence 13b(i) above the verb -famba is in the present tense, and the sentence denotes an event type of activity or process. In sentence 13b(ii) the verb -famba is in the past tense, denoting an accomplishment event. In addition sentences 13b(i) and 13b(ii) the verb -famba take a prepositional phrase complements which realizes the instrument argument, a shadow argument.

4.2.4 Event structure

Sentences with the motion verb –famba may have two events in event structure

Event ₁ = Activity / process

- (14) (a) Grace wa famba
Grace goes away
- (b) Zola u fambile
Zola went

The example sentences (14a) and (14b) denote an activity of unspecified duration, hence activity is realized.

Event ₂ = accomplishment/achievement

- (15) (a) Getrude u fambile exikolweni
Getrude went to school
- (b) John u fambile edorobeni hi 50 wa timinete
John went to town in 50 minutes

The example sentence (15a) above denotes an accomplishment: the process leads up to the finishing point when Getrude has reached the school. The sentence in (15b) is an example of achievement consisting of boundedness and continues no more after the interval of 50 minutes. The achievement is modified in 50 minutes and is understood to occur at the end of 50 minutes interval. Hence achievement is realised.

4.2.5 Lexical conceptual paradigm (LCP) of –famba:

- (a) 'Deliver'
Mapulanga ya fambile hi movha
'Planks were carried away by the car'
'Planks were delivered by car'

- (b) 'Go away'
Dyambu ri fambile
Lit. The sun has set
It is late
- (c) 'Steal'
- (i) Tibuku ti fambile exikolweni
Lit: Books went away from school
Books were stolen
- (ii) Movha wo basa wu fambile exikolweni
Lit: The white car went away from school
The white car is stolen from school
- (d) 'flow'
Mati ya fambile ephayiphini
Lit: Water went away from the pipe
There is shortage of water

4.3 THE SEMANTIC TYPE OF THE SUBJECT NP OF -BALEKA AND ITS RANGE OF COMPLEMENTS

The subject NP is [human]

- (16) (a) [Cornelia] wa baleka
Cornelia is escaping
- (b) [Cedric] u balekile
Cedric has escaped
- (c) [Griffiths] u balekile entirhweni
Griffiths absconded from the job
- (d) [Karin] u balekile exikolweni hi movha
Karin dodged the school by car

In sentences (16a) and (16b) above the verb -baleka does not take any complement. In sentence (16a) the verb -baleka is in the present tense, and has the event type of activity or process. In sentence (16b) the verb -baleka is in the past tense, also denoting an activity event. In sentences (16c) and (16d) the verb -baleka takes an NP complement with the locative morphemes e- and -ini. These locative complements realize the source arguments. In addition sentence (16d) take a prepositional phrase complements which realizes the instrument argument, a shadow argument.

The subject NP is [natural phenomenon]

- (17) (a) [Dyambu] ri balekile
Lit: The sun has disappeared
It is hot
- (b) [Tinyeleti] ti balekile emapapeni
Lit: Stars escaped from the clouds
'Stars are visible'

In the sentence (17a) above the verb -baleka does not take any complement. In sentence (17a) the verb -baleka is in the present tense, and has the event type of activity or process. In sentence (17b) the verb -baleka is in the past tense, denoting an accomplishment event. In addition sentence illustrated (17b) the verb -baleka takes an NP complement with the locative morphemes of e- and -ini. These locative complements realise the source arguments.

The subject NP is [weather noun]

- (18) (a) [Xirhami] xi balekile
Lit: Colds have run away
There is no longer cold
- (b) [Gamboko] ri balekile
Lit: Snow have run away
Snow have gone away

- (c) [Mberha] yi balekile
 Lit: Dew have run away
 Dew have melted

In the sentences 18(a-c) above the verb -baleka does not take any complements. In sentences 18(a-c) the verb -baleka is in the past tense, denoting an accomplishment event.

The subject NP is [abstract noun]

- (19) (a) [Rirhandzu] ri balekile eka Jane
 Lit: Love has escaped from Jane
 Love has just started at Jane
- (b) [Rivengo] ri balekile
 Lit: Hatred has disappeared
 There is no more hatred
- (c) [Rifumo] ri balekile
 Lit: Wealth has disappeared
 There is poverty

In the sentences (19b) and (19c) above the verb -baleka does not take any complement. In sentences 19(a-c) the verb -baleka is in the past tense, denoting an accomplishment event. In sentence (19a) the verb -baleka takes an NP complement which is a locative morpheme eka-. These locative complements realise the source argument in (19a).

4.3.2 The assignment of argument of -baleka:

The subject NP is an agent argument

- (20) (a) [Karin] u balekile exikolweni
 Karin dodged from school

- (b) [Stanley] u balekile ejele
Stanley escaped from jail

In sentences (20a) and (20b) above the verb -baleka is in the past tense, denoting an accomplishment event. In sentences (20a) and (20b) the verb -baleka takes an NP complement with the locative morphemes of e- and -ini. These locative complements realizes the source arguments.

The subject NP is a theme argument

- (21) (a) [Movha] wu balekile
Lit: The car has run away
The car has disappeared
- (b) [N'wana] u balekile ekaya
Lit: The child has run away from home
The child left his home

In the sentences illustrated in (21a) and (21b) above the verb -baleka is in the past tense, denoting an activity and accomplishment event respectively. Sentence (21a) the verb -baleka does not take any complement. In addition sentence illustrated (21b) takes an NP complement with a locative morpheme, e-. This locative complement realizes the source argument.

The locative argument

- (22) (a) Nsovo u balekile [engomeni]
Nsovo escaped from initiation school
- (b) Hlamalani u balekile [eka Ximausa]
Hlamalani migrated from Ximausa area

In sentences (22a) and (22b) above the verb -baleka is in the past tense, denoting an accomplishment event. In sentences illustrated (22a) and (22b) -baleka takes an NP

complement with the locative morphemes of e- and -ini. These locative complements all realizes the source argument.

The subject is theme and the prepositional complement of hi is an agent argument

- (23) (a) [mali] yi balekile [hi vanhu]
 Lit: Money escaped by people
 Money is stolen by people
- (b) [Movha wu balekile [hi muchayeri]
 Lit: The car drove away by the driver
 The driver stole the car

In the sentences (23a) and (23b) above the verb -baleka is in the past denoting an accomplishment event. In addition sentences illustrated (23a) and (23b) the verb -baleka takes a prepositional phrase complement. This complement realizes the instrument argument, as shadow argument.

The subject is theme and the prepositional complement of hi is an instrument

- (24) (a) [Mali] yi balekile [hi movha]
 Lit : Money is taken away by car
 Money is stolen
- (b) [papilla] ri balekile [hi poso]
 Lit : The letter escaped by the pos
 The letter is delivered by the post

In the sentences (24a) and (24b) above the verb -baleka is in the past tense, denoting an accomplishment event. In sentences (24a) and (24b) the verb -baleka takes a prepositional phrase complement. These complement realizes the instrument argument, a shadow argument.

The locative applicative

- (25) (a) John u balekela [eMozambique]
John seek refuge to Mozambique
- (b) Dyambu ri balekela [emapapeni]
The sun disappears into the clouds
- (c) Jane u balekela [eka mHINGA]
Jane escaped to MHINGA
Jane is escaping to MHINGA

In sentences 25(a-c) above the verb -baleka takes an applicative affix (-el-). In sentences 25(a-c) the verb -baleka is in the present tense, and has the event type of accomplishment. In sentences 25(a-c) the verb -baleka takes an NP complement with the locative morphemes e- and -ini. These locative complement realizes the goal/direction argument.

4.3.3 Selectional restrictions of the subject : -baleka

- (26) (a) selection restrictions on the agent

The agent is an animate it may be [human] or [animal]

- (i) Human : [Zodwa] u balekile evukatini
Lit: Zodwa run away from marriage
Zodwa divorced her husband

- (ii) Animal : [Nghala] yi balekile enkambeni
The lion escaped from the camp

In sentences 26a(i) and 26a(ii) the verb -baleka is in the past tense, denoting an accomplishment event. Both example sentences 26a(i) and 26a(ii) the verb -baleka takes an NP complement with the locative morphemes e- and -ini. These locative complement realizes the source argument.

- (b) selection restrictions on the NP complement of hi is an instrument
- (i) Zoleka u balekile ejele [hi milenge]
Zoleka escaped from jail on foot
- (ii) Zuma u balekile exikolweni [hi movha]
Zuma dodged from school by car

In the sentences illustrated 26b(i) and 26b(ii) above the verb -baleka is in the past tense, denoting an accomplishment event. The verb -baleka in sentences 26b(i) and 26b(ii) takes an NP complement with the locative morphemes e- and -ini. These locative complement realizes the source argument. In sentences 26b(i) and 26b(ii) the verb -baleka also takes a prepositional phrase complement which realizes the instrument argument, a shadow argument.

4.3.4 Event structure

The motion verb -baleka exemplifies two events in its occurrence in the example sentences below:

Event ₁ = Activity/process

- (27) (a) Thoko u balekile
Thoko escaped
- (b) Siphokazi u balekile exikolweni
Siphokazi dodged at school

Sentence (a) denotes an activity. Sentence (27b) above conveys the same information as sentence (27a) where Siphokazi is dodging school it is an event of unspecified duration, there is continuity activity.

Event ₂ = accomplishment /achievement

- (28) (a) Nsuku u balekela ejoni
Nsuku flees to town
- (b) Joyce u balekile exikolweni hi 30 minete
Joyce dodged at school in 30 minutes

In sentence (28a) the process has a logical culmination, whereby the activity is over when Nsuku is in town. This type of sentence denotes an accomplishment event. An achievement is an event that results in a change of state, just as an accomplishment does, but where the change is thought of as occurring instantaneously. For example, sentence (28b) above is an example of achievement, therefore modification by point-like adverbial such as 30 minutes is suggestive that a sentence denotes an achievement.

4.4 LEXICAL CONCEPTUAL PARADIGM (LCP) OF -BALEKA

- (29) (a) 'abscond'
- Jane u balekile evukatini
Jane escaped from her marriage
- (b) 'flee'
- George u balekela eka mHINGA
George is escaping to mHINGA
- (c) 'vanish'
- Xirhami xi balekile
'Colds have run away'
There is no more cold
- (d) 'quit'
- Susan u balekile entirhweni
Susan ran away from work

4.5 CONCLUSION

In this chapter I have demonstrated that Xitsonga verbs of motion may express complex motion events. -Famba and -baleka are verbs which, besides the incorporation of the fact of motion may also express the directional category of complex motion events when associated with the applicative affix (-el-). For instance in the example sentences below:

- (i) John u fambela esibendlhele
'John often goes to hospital'
- (ii) John u balekela ejoni
'John is escaping to Johannesburg'

The above example sentences marked (i) and (ii) realize the goal/direction argument.

I have presented evidence in support of the fact that the motion verbs -famba and -baleka can be used without a complement. The example sentences below illustrate this property:

- (i) Mufana wa famba
'The boy is going'
- (ii) Grace u balekile
'Grace escaped'

The sentence marked (i) above the verb -famba is in the present tense, and has the event type of activity or process. Sentence marked (ii) the verb -baleka is in the past tense, also denoting an activity event.

I have demonstrated that if the verb takes a locative complement there is an expression of source or goal where locative morphemes e- and -ini are employed. These locative complements realize the location, source or goal/direction argument. This is illustrated by the example sentences below:

- (i) Vana va famba epatwini
'Children are going on the road'

- (ii) Swichudeni swi baleka exikolweni
 'Students are dodging from school'

The prepositional phrases realize the instrument argument, a shadow argument. These is illustrated by the example sentences below:

- (i) Mufana u famba [hi movha]
 'The boy is going by car'
- (ii) Vanhu va Mozambique va baleka [hi milenge]
 'People from Mozambique escaped on foot'

The prepositional phrase consists of the preposition hi with the complements movha (car) and milenge (legs), respectively as illustrated in the above example sentences.

The motion verbs -famba and -baleka express a multiplicity of meanings. This is evident from the example sentences below:

- (i) 'abscond'

Jane u fambile evukatini
 'Jane escaped from her marriage'

- (ii) 'quit'

Susan u balekile entirhweni
 'Susan run away from work'

- (iii) 'deliver'

Mapulanga ya fambile hi movha
 'Planks were loaded in the car'

(iv) 'Take away (steal)'

Tibuku ti fambile exikolweni

'Books were stolen'

From the analysis of lexical-semantics of the motion verbs -famba (go) and -baleka (run away) it is clear that these motion verbs express a multiplicity of meanings in terms of its polysemy properties

CHAPTER 5

THE LEXICAL SEMANTIC ANALYSIS OF THE VERBS -KASA, KHANDZIYA AND -GONYA

5.1 INTRODUCTION

The main aim of this chapter is to examine the polysemy of the motion verbs -kasa (crawl), -khandziya (climb up) and -gonya (ascend) in sentences with various noun subject types in Xitsonga in order to address its varieties of meaning (i.e. senses in terms of polysemy) for each verb. The argument structure of these motion verbs will be investigated taking into account the selection restrictions of arguments of these verbs. The applicative affix (-el-) with selected verbs will be employed to determine the effect on argument assignment.

5.2 A LEXICAL–SEMANTIC ANALYSIS OF THE VERB -kasa.

5.2.1 The Semantic type of the subject NP of -kasa and its range of complements.

The subject NP is [human]

- (1) (a) [Sally] wa kasa
Sally is crawling
- (b) [Sophie] u kasile
Sophie crawled.

In the sentences illustrated (1a) and (1b) above the verb -kasa does not take any complement. Sentence (1a) the verb -kasa is in the present tense, and has the event of activity or process. Sentence marked (1b) the verb -kasa is in the past tense, and the sentence also denotes an activity event.

The subject NP is [weather noun]

(2) (a) [Moya] wo kasa

Lit: The wind is crawling

The wind is blowing slowly

(b) [Xihuhuri] xo kasa epatwini

Lit: The whirlwind is crawling on the road

The whirlwind is blowing slowly on the road

In the sentence illustrated in (2a) above the verb -kasa does not take any complement. In the sentence (2a) the verb -kasa is in the present tense, and has the event of activity or process. In sentence (2b) the verb -kasa takes a locative complement. In sentence (2b) the verb -kasa takes an NP complements with the locative morphemes of e- and -ini. These locative complements realise the location argument.

The subject NP is [natural phenomenon]

(3) [Dyambu] ro kasa

Lit: The sun is crawling

The sun is moving slowly

The sun is slow to set down

In the sentence illustrated in 3 above, the verb -kasa does not take any complement. In addition the verb -kasa is in the present tense, and has the event of activity or process.

5.2.2 The assignment of arguments with -kasaThe subject NP is an agent argument

(4) (a) [Zeke] wa kasa

Zeke is crawling

(b) [Ernest] u kasile

Ernest crawled

In the sentences marked (4a) and (4b) above the verb -kasa does not take any complement. In sentence (4a) the verb -kasa is in the present tense, and has the event type of activity or process. In sentence (4b) the verb -kasa is in the past tense, also denoting an activity event.

The subject NP is a theme argument

- (5) [Mimovha] yo kasa epatwini
 Lit: Cars are crawling on the road
 Cars are moving slowly on the road

In the above example sentence the verb -kasa is in the present tense, and the sentence has the event type of activity or process. In the example sentence above the verb -kasa takes an NP complement with the locative morphemes e- and -ini. These locative complement realise the location argument.

The locative argument

- (6) (a) Bazi ro kasa [epatwini]
 Lit: The bus is crawling on the road.
 The bus is moving slowly
- (b) N'wana u kasa [exitupini]
 The child is crawling on the stoop

In the sentences illustrated in (6a) and (6b) above the verb -kasa is in the present tense, and the sentence has the event type of activity or process. The verb -kasa in both example sentences in (6a) and (6b) takes an NP complement with the locative morphemes e- and -ini. These locative complements realize the location argument.

The subject is theme and the prepositional complement of hi is an agent argument

- (7) (a) [Bazi] ro kasa [hi vanhu]
 Lit: The bus is crawling by people
 The bus is moving slowly because of many passengers.

(b) [movha] wo kasa [hi muchayeri]

Lit: The car is crawling by the driver

The car is moving slowly because of the driver

In sentences marked (7a) and (7b) above the verb -kasa is in the present tense, and the sentence has the event type of activity or process. In the sentences (7a) and (7b) the verb -kasa takes prepositional phrase complement. These complements all realizes the reason/cause argument, a default argument.

The subject is theme and the complement of hi is an instrument

(8) [Xitimela] xi kasa [hi Xiporo]

Lit: The train is crawling by the railway line

The train is moving slowly on the railway line.

In the example sentence (8) above the verb -kasa is in the present tense, and the sentence has the event type of activity or process. In the example sentence marked (8) -kasa takes a prepositional phrase complement, which realizes the default argument.

The locative applicative

(9) N'wana u kasela [exitangeni]

The child is crawling to the kitchen.

In the example sentence illustrated (9) above the verb -kasa is in the present tense, and the sentence has the event type of activity or process. In addition the verb -kasa takes an applicative affix (-el-). It takes an NP complement with the locative morphemes e- and -ini. These locative complement realize the location argument.

5.2.3 Selection restrictions of the subject -kasa:

(10) (a) Selectional restriction on the agent.

The agent is animate it may be [human] or an [animal]

- (i) Human: [Susan] wa kasa
 Lit: Susan is crawling
 Susan is walking slowly
- (ii) Animal: [Nghala] yo kasa epatwini
 Lit: The lion is crawling on the road
 The lion is walking slowly on the road.
- (b) Selectional restrictions on the NP complement of hi realise a location argument
- (i) Mati yo kasa [hi phayiphi]
 Lit: water is crawling by the pipe
 Water is flowing slowly through the pipe
- (ii) Xitimela xo kasa [hi xiporo]
 Lit: The train is crawling by the railway line
 The train is moving slowly on the railway line

In the sentence illustrated in 10a(i) above the verb -kasa does not take any complement. In addition the verb -kasa is in the present tense, and the sentence has the event type of activity or process. In the sentences illustrated in 10b(i) and 10b(ii) the verb -kasa appears in a sentence that has the event type of activity or process. In sentences 10b(i) and 10b(ii) the verb -kasa also takes a prepositional phrase complement which realizes the location argument, a default argument.

5.2.4 Event structure

The motion verb -kasa occurs in sentences that exhibit two event types:

Event₁ = Activity/ process

Maureen wa kasa

Maureen is crawling

The sentence illustrated above denotes an activity of unspecified duration, hence activity is realized.

Event₂ = accomplishment/ achievement

- (11) (a) Sally u kasile ku suka emubedweni ku ya erivantini
Sally has crawled from the bed to the door
- (b) Tsakani u kasile hi tinhweti timbirhi
Tsakani crawled in two months

The example sentence 11(a) denotes an accomplishment event because there is a logical culmination to the activity performed. The second sentence marked 11(b) above is an example of an achievement event consisting of its boundaries and no continuation after the interval, so the whole of an achievement is modified by point adverbials such as in two months which is understood to occur at the end of two months interval.

5.2.5 Lexical conceptual paradigm (LCP) of -kasa:

- (12) (a) 'move slowly'
Mimovha yo kasa epatwini
Lit: Cars are crawling on the road
Convoy of cars are moving slowly on the road
- (b) 'Crawl'
Cornelia wo kasa
Cornelia is crawling

5.3 A LEXICAL – SEMANTIC ANALYSIS OF THE VERB -KHANDZIYA

5.3.1 The semantic type of the subject NP of -khandziya and its range of complements

The subject NP is [human]

- (13) (a) [Helen] wa khandziya
Helen is climbing up
- (b) [Grace] u khandziyile
Grace has climbed
- (c) [Nsuku] u khandziya emurhini
Nsuku is climbing in the tree
- (d) [Stephelina] u khandziyile eka mHINGA
Lit: Stephelina climbed up (embarked) at mHINGA
Stephelina embarked on her transport at mHINGA

In the sentences illustrated in (13a) and (13b) above the verb -khandziya does not take any complement. In the sentences illustrated (13a) and (13c) the verb -khandziya is in the present tense, and the sentence has the event type of activity or process. Sentences illustrated (13b) and (13c) the verb -khandziya is in the past tense, and the sentence also denotes an activity event. Sentence (13d) denotes an accomplishment event. In sentences (13c) and (13d) the verb -khandziya takes an NP complement with the locative morphemes of e- and -ini. These locative complement realizes the location argument.

The subject NP is [inanimate]

- (14) (a) [Tafula] ra khandziya
Lit: The table is climbing
The table is loaded.

- (b) [Movha] wu khandziyile
 Lit: The car have climbed
 The car is loaded
- (c) [Switulu] swi khandziyile emovheni/ eka movha
 Chairs were loaded in the car.

In the sentences illustrated in (14a) and (14b) the verb -khandziya does not take any complement. In sentence (14a) the verb -khandziya is in the present tense, and the sentence has the event type of activity or process. In the sentences illustrated in (14b) the verb -khandziya is in the past tense, and the sentences denotes an activity event. Sentence (14c) denotes an accomplishment event. In the sentence illustrated in (14c) the verb -khandziya takes an NP complement with the locative morphemes e- and -ini. These locative complement realizes the goal/direction argument.

The subject NP is [natural phenomenon]

- (15) (a) [Dyambu] ri khandziyile entshaveni
 Lit: The sun has climbed up the mountain
 The sun has gone up
- (b) [Xihuhuri] xi khandziya eka tindlu / ka tindlu
 Lit: Whirlwind is climbing up the house
 Whirlwind is blowing up the house.
- (c) [Nkwangulatio] wu khandziya entshaveni
 Lit: Rainbow climbs up the mountain
 A rainbow is seen up the mountain.

In sentence (15a) above the verb -khandziya is in the past tense, denoting an accomplishment event. In sentences (15b) and (15c) the verb -khandziya is in the present tense, and the sentence has the event type of accomplishment. In the sentences illustrated 15(a-c) the verb takes an NP complement with the locative morphemes of e- and -ini. These locative complements realize the goal/direction argument.

The subject NP is [concrete noun]

(16) (a) [Mati] ya khandziyile ebilohweni

Lit: Water climbed the bridge

Water flowed over the bridge

(b) [Masi] ya khandziyile eka makete

Lit: Milk climbed up in the market

The price of milk has increased in the market.

In the sentences illustrated (16a) and (16b) above the verb -khandziya is in the past tense, and the sentences denote an accomplishment event. In the sentences illustrated in (16a) and (16b) the verb -khandziya takes an NP complement with the locative morphemes e- and -ini. These locative complement realizes the location argument.

5.3.2 The assignment of arguments with -khandziya:

The subject NP is an agent argument

(17) (a) [Tihomu] ti khandziya entshaveni

Cattle are climbing up the mountain

(b) [Grace] u khandziyile ebazini

Lit: Grace has climbed in the bus

Grace travelled by bus

In the sentence illustrated in (17a) above the verb -khandziya is in the present tense, and has the event type of accomplishment. In sentence (17b) the verb -khandziya is in the past tense, denoting an accomplishment event. In sentence (17b) the verb takes an NP complement with the locative morphemes e- and -ini. These locative complement realize the goal/direction and location argument, respectively.

The subject NP is a theme argument

- (18) (a) [Xitulu] xi khandziyile emovheni
 Lit: The chair climbed into the car
 The chair is loaded in the car
- (b) [Tibuku] ti khandziyile evhengeleni
 Lit: Books have climbed up in the shop
 The price of books have increased in the shop

In the sentences illustrated in (18a) and (18b) above the verb -khandziya is in the past tense, denoting an accomplishment event. In the sentences (18a) and (18b) the verb – khandziya takes an NP complement with the locative morphemes e- and -ini. These locative complement all realizes the goal/direction and location arguments, respectively.

The locative argument

- (19) (a) Cecilia u khandziyile [evhengeleni]
 Lit: Cecilia climbed (embarked) at the shop
 Cecilia got her transport at the shop
- (b) Michael u khandziya [eka Ximawusa]
 Lit: Michael climbed (embarked) at Ximawusa
 Michael got her transport at Ximawusa

In the sentence illustrated in (19a) above the verb -khandziya is in the past tense, denoting an accomplishment event. Sentence marked (19b) the verb -khandziya is in the present tense, and the sentence also has the event type of accomplishment.

In the sentences illustrated in (19a) an (19b) the verb takes an NP complement with the locative morphemes e- and -ini. These locative complement realizes the location argument.

The subject is theme and the prepositional complement of hi is the agent argument

[movha] wu khandziyile [hi vanhu]

The car is climbed (embarked) by people

In the example sentence above the verb -khandziya is in the past tense, denoting an accomplishment event. In addition the verb -khandziya takes a prepositional phrase complement. These complement realizes an instrument argument, a default argument.

The subject is theme and the complement of hi is an instrument or location

(20) (a) [Masaka] ya khandziyile [hi foroko yo rhwala]

Bags were loaded by a fork – lift

(b) [Mfenhe] yi khandziyile [hi rhavi]

The baboon climb up the branch

In the sentences illustrated (20a) and (20b) above the verb -khandziya is in the past tense, denoting an accomplishment event. In addition sentences illustrated (20a) and (20b) the verb -khandziya takes a prepositional phrase complement. These complements realize the instrument and location arguments respectively, which are default arguments.

(21) (a) Sophie u khandziyela [exikolweni]

Lit. Sophie climbs at school

Sophie embarked at school

(b) Vaendzi va khandziyela [eka mHINGA]

Lit. Visitors climbs at mHINGA

Visitors embarked at MHINGA

In the sentences marked (21a) and (21b) above the verb -khandziya has the applicative affix (-el-). In sentences (21a) and (21b) above the verb -khandziya takes a prepositional phrase complement. These complements realize the location argument, a default argument.

5.3.3 Selectional restrictions of the subject -khandziya

- (22) (a) Selection restrictions on the agent
The agent is animate it may be [human] or [an animal]
- (i) Human [Gacia] u khandziya emurhini
Gacia is climbing in the tree
- (ii) Animal [mbuti] yi khandziya entshaveni
The goat is climbing up to the mountain
- (b) Selection restrictions on the NP complement of hi is an instrument
- (i) Mfenhe yi khandziya [hi rhavi]
The baboon climb up by the branch
- (ii) Khamba ri khandziyile [hi khumbi]
The thief climbed up by the wall

In the sentences marked (22a) above the verb -khandziya is in the present tense, and the sentence has the event type of activity or process. In addition both sentences the verb -khandziya takes an NP complement with the locative morphemes of e- and -ini. These locative complement realizes the goal/direction argument. Sentence marked 22b(i) the verb -khandziya is in the present tense, and has the event type of activity or process. Sentence 22b(ii) the verb -khandziya is in the past tense, denoting an accomplishment event. Again, sentences marked (22b) the verb -khandziya takes a prepositional phrase complement which realizes the instrument argument, a shadow argument.

5.3.4 Event structure

The motion verb -khandziya occurs in sentences that can denote two events in its event structure:

(23) Event₁ = activity/process

- (a) Piet wa khandziya
Piet is climbing
- (b) Victor u khandziyile entshaveni
Victor has climbed the mountain

In the example sentence marked (23a) and (23b) denotes an activities because both sentences illustrated in (23a) and (23b) denotes unspecified duration. The event shows continuity.

Event₂ = accomplishment/achievement

- (24) (a) Collen u khandziyile exitichini
Lit. Collen climbed (embarked) at the station
Collen got his transport at the station
- (b) Agnes u khandziyile xitimela hi awara
Agnes climbed the train in an hour

In the sentence (24a) above -khandziya denotes an accomplishment event where the activity is over when Cecilia is at the station. In the sentence (24b) above the modification by point like adverbials such as in an hour is suggestive that a sentence denotes an achievement.

5.3.5 Lexical conceptual paradigm (LCP) of -khandziya

- (25) (a) 'increase'
Tibuku ti khandziyile evhengeleni
Lit. Books have climbed up in the shop
Books are expensive

- (b) 'embark'
Solani u khandziyile movha
Lit Solani climbed the car
Solani embarked her transport
- (c) 'get up'
Mfenhe yi khandziyile entshaveni
Lit The baboon climbed up the mountain
The baboon reached the mountain peak
- (d) 'ascend'
Wanuna u khandziya xiganga
The man goes up to the steep hill

5.4 A LEXICAL–SEMANTIC ANALYSIS OF THE VERB -GONYA

5.4.1 The semantic type of the subject NP of -gonya and its range of complements:

The subject NP is [human]

- (26) (a) [Stephelina] wa gonya
Stephelina goes up
- (b) [Grace] u gonyile
Grace have gone up
- (c) [Cornelia] u gonya eswitepisini
Cornelia goes up the stairs
- (d) [Solani] u gonya ekaya hi milenge
Lit: Solani goes up home on foot
Solani goes home on foot

In the sentences illustrated in (26a) and (26b) above the verb -gonya does not take any complement. In sentences (26a) and (26d) the verb -gonya is in the present tense, and

has the event type of activity or process. In sentence (26b) the verb -gonya is in the past tense, and in (26c) in the past tense, denoting an accomplishment event. In addition sentences (26c) and (26d) the verb -gonya takes an NP complement with the locative morphemes of e- and -ini. This locative complement realizes the goal/direction and instrument arguments respectively. In sentence (26d) the verb -gonya takes a prepositional phrase complement which realizes the instrument argument, a default argument.

The subject NP is [inanimate]

(27) (a) [Tafula] ra gonya

Lit: The table goes up
The table is lifted up.

(b) [Tibuku] ti gonyile

Lit: Books went up
Books are expensive

(c) [Switulu] swi gonyile eka Town Talk

Lit: Chairs went up at Town Talk furniture
Chairs are expensive at Town Talk furniture

In the sentences illustrated (27a) and 27b) above the verb -gonya does not take any complement. In sentence (27a) the verb -gonya is in the present tense, and has the event type of activity or process. In sentences (27b) and (27c) the verb -gonya is in the past tense, also denoting an activity/process event. In sentence (27c) the verb -gonya takes an NP complement with a locative morpheme eka-. These locative complement realizes the locaton argument.

The subject NP is [natural phenomenon]

(28) (a) [Dyambu] ra gonya

Lit: The sun goes up
It is becoming late

(b) [Nkunghwa] wu gonyile entshaveni

Lit: Mist have gone up to the mountain
Mist went up the mountain

In the sentence illustrated in (28a) above the verb -gonya is in the present tense, and has the event type of activity or process. In sentence (28b) the verb -gonya is in the past tense, denoting an accomplishment event. In sentence (28b) the verb -gonya takes an NP complement with the locative morphemes e- and -ini. These locative complement realizes the goal/direction argument.

The subject NP is [concrete noun]

(29) (a) [Vuswa] bya gonya

Lit: food goes up
The price of food is going up.

(b) [Masi] ya gonyile

Milk have gone up
Milk is expensive

(c) [Byala] byi gonyile evhengeleni

Lit: Beer have gone up at the shop
Beer is expensive at the shop

In the sentences illustrated (29a) and (29b) above the verb -gonya does not take any complement. In the sentences illustrated in (29b) and (29c) the verb -gonya is in the past tense, denoting an activity event. In sentence (29c) the verb -gonya takes an NP complement with the locative morphemes of e- and -ini. These locative complement realizes the location argument.

The subject NP is [abstract noun]

(30) (a) [Vuloyi] bya gonya

Lit: Witchcraft goes up
Witchcraft is prevailing

(b) [Rivengo] ra gonya eka vanhu hi munhu

Lit: Hatred goes up to people by a person

Hatred is brought to people by an individual

In the sentences illustrated in (30a) and (30b) the verb -gonya is in the present tense, and has the event type of activity or process. In sentence (30a) the verb does not take any complement. In sentence (30b) the verb -gonya takes an NP complement with a locative morpheme eka-. In sentence (30b) the verb also takes a prepositional phrase complement which realizes the agent argument, a default argument.

5.4.2 The assignment of arguments of -gonya:

The subject NP is an agent argument

(31) (a) [Noxolo] u gonya ekaya
Noxolo goes away from home

(b) [Solani] u gonyile ekaya hi movha
Solani went away from home by car

In the sentence illustrated in (31a) above the verb -gonya is in the present tense, and the sentence has the event type of accomplishment. Sentence (31b) the verb -gonya is in the past tense, denoting an accomplishment event. In both sentences (31a) and (31b) the verb -gonya takes an NP complement with a locative morpheme e-. These locative complement realize the source or goal/direction argument. In sentence (31b) the verb -gonya takes a prepositional phrase complement which realizes the instrument argument, a default argument.

The subject NP is a theme argument

(32) (a) [Movha] wu gonya exigangeni
The car goes up at the steep hill

- (b) [Tibuku] ti gonyile evhengeleni
 Lit: Books have gone up in the shop
 Books are expensive at the shop.

In the sentence illustrated (32a) above the verb -gonya is in the present tense, and has the event type of activity or process. In sentence (32b) the verb -gonya is in the past tense, also denoting an activity event. In sentences (32a) and (32b) the verb takes an NP complements with the locative morphemes of e- and -ini. These locative complement realises the goal/direction and location arguments, respectively.

The locative argument

- (33) (a) Hlamalani u gonya [entshaveni]
 Hlamalani is going up the mountain
- (b) Dzunisani u gonya [exikolweni]
 Dzunisani goes up to the school

In the sentences illustrated in (33a) and (33b) above the verb -gonya is in the present tense, and has the event type of accomplishment. In both example sentences in (33a) and (33b) the verb -gonya takes an NP complement with the locative morphemes of e- and -ini. These locative complement realize the goal/direction argument.

The subject is theme and the prepositional complement of hi is an agent or instrument argument

- (34) (a) [Movha] wu gonya entshaveni [hi muchayeri]
 The car is going up the mountain by the driver
- (b) [Tibuku] ti gonyile [hi muxavisi]
 Lit: Books went up in the shop by trade
 Books are expensive in the shop.

In the sentence illustrated in (34a) above the verb -gonya is in the present tense, and has the event type of activity or process. In sentence (34b) the verb -gonya is in the past

tense, denoting an accomplishment event. In sentences (34a) and (34b) the verb -gonya takes a prepositional phrase complement. These complements all realizes the agent argument, a default argument in (34a) and an instrument, also a default argument in (34b).

The subject is theme and the prepositional complement of hi is an instrument

- (35) (a) [Mihandzu] yi gonyile ekaya [hi movha]
 Lit: Fruit went up home by the car
 Fruit were delivered at home by the car.
- (b) [Semendhe] yi gonyile emovheni [hi foroko yo rhwala]
 Cement were loaded in the car by the fork-lift.

In the sentences illustrated in (35a) and (35b) above the verb -gonya is in the past tense, denoting an accomplishment event. In the sentences illustrated in (35a) and (35b) the verb -gonya takes a prepositional phrase complement. This complement realizes the instrument argument, a default argument. Both sentences illustrated in (35a) and (35b) the verb -gonya also takes an NP complements with the locative morphemes e- and -ini. These locative complements realize the goal/direction argument.

The locative applicative

- (36) (a) Tihomu ti gonyela [entshaveni]
 Cattle are going up to the mountain
- (b) Vanhu va gonyela [ehosini]
 People are going up to the chief's kraal

In the sentences illustrated in (36a) and (36b) above the verb -gonya takes an applicative affix (-el-). In sentences marked (36a) and (36b) the verb -gonya takes an NP complement with the locative morphemes e- and -ini. These locative complement realize the goal/direction argument.

5.4.3 Selectional restrictions of the subject of -gonya:

- (37) (a) Selection restrictions on the agent argument
The agent is animate: [human] or [an animal]
- (i) Human: [Nsuku] u gonya exitediyamu
Nsuku is ascending the stadium
- (ii) Animal: [Tihomu] ti gonya ntshava
Cattle are going up the mountain
- (b) Selection restrictions on the NP complement of hi is an instrument
- (i) Mufana u gonya ntshava [hi milenge]
The boy is ascending the mountain on foot.
- (ii) Ntshava yi gonya [hi vavasati]
The mountain is ascended by women.

In the sentences illustrated 37a(i) and 37a(ii) above the verb -gonya is in the present tense, and has the event type of activity or process. In sentence 37a(i) the verb takes an NP complement with a locative morpheme e-. The locative complement realizes the goal/direction argument. In addition sentences marked 37b(i) and 37b(ii) above the verb -gonya is in the present tense, and has the event type of activity or process. In both sentences 37b(i) and 37b(ii) the verb -gonya takes a prepositional phrase complement which realizes the instrument argument, a default argument in 37b(i) and the agent argument in 37b(ii), also a default argument.

5.4.4 Event Structure

The event verb -gonya has two-event structure:

Event₁ = Activity/process

(38) (a) Abigail wa gonya
Abigail is going up

(a) Gail u gonyile hi milenge
Gail went up on foot

The example sentences in (38a) and (38b) as illustrated above denote activity. The event have no natural boundaries or culmination which constitute finishing points.

Event₂ = Accomplishment/achievement

(a) Khanyisa u gonyela ekaya
Khanyisa went up home

(b) Susan u gonyile entshaveni hi awara
Susan went up the mountain in an hour

In the sentence (38a) the process has a logical culmination whereby the activity is over when Khanyisa is at home. Such sentences denote an accomplishment event.

In the sentence in (38b) the change is not a gradual one, but something that has a point-like quality to it. Therefore modification by point adverbials such as in an hour is suggestive that a sentence denotes an achievement.

5.4.5 Lexical conceptual paradigm (1cp) of -gonya:

(39) (a) 'go away'
Pule u gonyile
Pule have gone up

(b) 'go up/rise'
Switulu swi gonyile eka Morkels
Lit: Chairs have gone up at the Morkels Furniture
Chairs are expensive at Morkels Furniture.

5.5 CONCLUSION

In this chapter I have demonstrated that the Xitsonga motion verbs -kasa (crawl), -khandziya (climb up) and -gonya (ascend) express different senses when they are used in sentences with various noun types as subject. They express a multiplicity of meanings in terms of polysemy. The example sentence Tibuku ti khandziyile evhengeleni (Books have gone up in the shop) means that books are expensive in the shop. I have also demonstrated that these motion verbs sometimes do not take any complement. This is evidenced by the example sentences below:

- (40) N'wana wa kasa
'The child is crawling'
- (41) Tihuku ti khandziyile
Lit: 'Chickens climbed up'
Chickens are expensive
- (42) Vuswa bya gonya
Lit: 'Food is going up'
The price of food is going up

In the example sentences marked (40) above the verb -kasa is in the present tense, and the sentence has the event type of activity or process. In the sentence (41) the verb -khandziya is in the past tense, denoting an accomplishment event. In addition sentence marked (42) the verb -gonya is in the present tense, and has the event type of activity or process.

The motion verbs -kasa, -khandziya and -gonya take an NP complement with the locative morphemes e- and -ini. These locative complements realize the location or goal/direction arguments. This is evidenced by the example sentences below:

- (43) (a) N'wana u kasa exitupini
'The child is crawling on the stoop'

- (b) Mfenhe yi khandziya entshaveni
'The baboon is climbing up the mountain'
- (c) Movha wu gonya exigangeni
'The car is ascending the steep hill'

I have also demonstrated that when the applicative affix (-el-) is employed the verb takes a locative complement. These complements realize the location or goal/direction argument. This is evidenced by the example sentences below:

- (44) (a) N'wana u kasela ekhixini
'The child is crawling to the kitchen'
- (b) Kokwana u khandziyela exikolweni
Lit. 'Grandmother is climbing to school'
Grandmother embark to school
- (c) Agnes u gonyela entshaveni
'Agnes is ascending up the mountain'

The prepositional phrases realize the instrument argument, a shadow argument. This is evidenced by the example sentences below:

- (45) (a) N'wana u kasa ekhixini [hi matsolo]
'The child is crawling in the kitchen on knees'
- (b) John u khandziyile emurhini [hi rhavi]
'John climbed up the tree by the branch'
- (c) Grace u gonyile ekaya [hi movha]
'Grace went up home by car'

In the foregoing example sentences (45a-c) the preposition is hi and the complements are matsolo (knees) rhavi (branch) and movha (car), respectively.

I demonstrated that the motion verbs -kasa (crawl), -khandziya (climb up) and -gonya (ascend) express a multiplicity of senses. This is evidenced by the example sentences below:

(46) (a) 'crawl'

Gwen wa kasa

'Gwen is crawling'

(b) 'increase'

Nyama yi khandziyile evhengeleni

Lit: 'Meat have gone up (increased) in the shop'

Meat is expensive at the shop

(c) 'go away (by certain means)'

Ntwanano u gonyile ekaya hi milenge

'Ntwanano went away home on foot'.

It is evident that the above motion verbs -kasa, -khandziya and -gonya express a multiplicity of senses in terms of polysemy.

CHAPTER 6

SUMMARY AND CONCLUSION

Chapter 1 lays the foundation of the following concepts namely the aim of the study, theoretical framework and the organisation of these thesis.

In Chapter 2 the theory of Generative Lexicon is discussed. In Section 2.2 the generative lexicon approach is discussed and the classification of verbs is detailed. In Section 2.3 the nature of lexicon knowledge is discussed. Here the lexical semantic theory of classifying the lexical items of a language into classes predictive of their syntactic and semantic expression is explicitly explained. In Section 2.4 the logical problem of polysemy is discussed. In this section the survey is on, the problem of lexical item where a lexical item carries more than two meanings. In this section the word homonymy was introduced to discuss the matter. In Section 2.5 limitations of sense enumerative lexicons is discussed. Here the failure of sense enumerative lexicon to encode all the possible meanings of the lexical items in the lexicon is detailed. In Section 2.6 the semantic type system is discussed. In this section, the generative lexicon theory as a computational system which is characterized of at least four levels of representation is detailed.

In Chapter 3 the polysemy of the motion verbs *-ya* (go) and *-ta* (come) are discussed in various noun types in Xitsonga. The thematic roles such as an agent and theme are defined. In sub-section 3.2.2 the locative argument is discussed. When the locative argument is introduced there is the indication of goal/direction argument. In this chapter (3) the prepositional phrase is discussed where it is detailed. In section 3.2.4, the event structure and the oldest semantic classification for verbs that of aspectual class are discussed and defined. In Section 3.2.5 the lexical conceptual paradigm in this chapter is discussed in order to realize different senses of meanings.

In Chapter 4 like Chapter 3 the polysemy of the motion verbs *-famba* (going) and *-baleka* (run away) are discussed in various noun types in Xitsonga. Chapter 4 introduced locative applicative where the applicative affix (-el-) is affixed to the verb stem where it is detailed. The event structure is discussed where it is detailed. The lexical conceptual paradigm is also detailed in this chapter.

In Chapter 5 like Chapter 4 the polysemy of the motion verbs -kasa (crawl), -khandziya (climb up) and -gonya (ascend) are discussed in various noun types in Xitsonga. Chapter 5 also introduces the construction of locative applicative where the applicative affix (-el) is affixed to the verb stem in order to realise the directional category where it is detailed. In Section 5.4.4 the event structure and its events is detailed. Chapter 5 also discusses about the lexical conceptual paradigm (see section 5.4.5 for details) in order to realise different senses of meanings.

Chapter 6 Gives a short summary of each chapter of these thesis

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