

UNACCUSATIVITY IN SISWATI

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DECLARATION

I declare that this dissertation is my own work and that all the sources I have used have being acknowledged. It has not been submitted for a degree or examination in any other University.

Signature:

Acknowledgement

I dedicate this work to the Almighty God and my parents, Sam and May, for supporting me all the way. I will also want to thank my supervisor, Dr Zeller who has helped me in the development of this dissertation

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Abstract

In Generative grammar, intransitive verbs have been characterized as either unaccusative or unergative. The difference between these verbs concerns the syntactic position of their surface subjects. The subject of unaccusative verbs is base generated in the object position while the subject of unergatives is base generated in the subject position. Unaccusativity has been attested in many languages such as Italian, German, English and Dutch and a number of syntactic tests have been formulated to test unaccusativity in these languages. In this thesis I will show that syntactic tests such as the causative alternation, impersonal passives and locative inversion which distinguish unaccusatives from unergatives in many languages do not work for siSwati.

CHAPTER ONE

ORIENTATION TO THE STUDY

1.1 UNACCUSATIVITY INTRODUCED

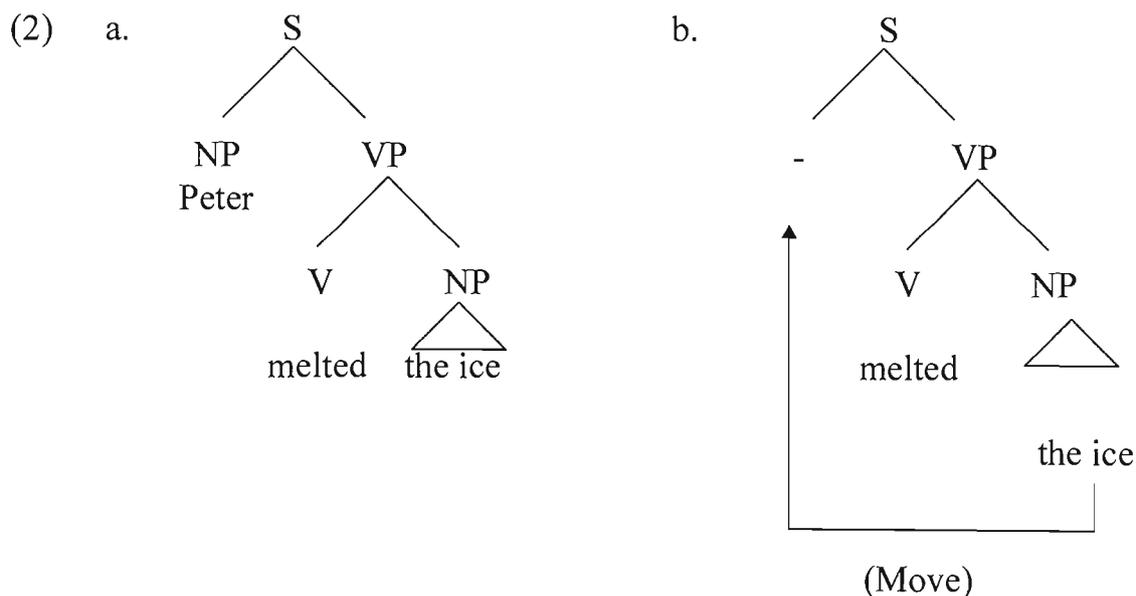
Unaccusativity is a phenomenon that assumes that intransitive verbs can be characterized as either unaccusative or unergative verbs. Each verb is associated with a particular underlying syntactic structure (Belletti 1988, Belletti and Rizzi 1981, Burzio 1986, Grewendorf 1989, Levin and Rappaport Hovav 1986, 1992, 1995, Perlmutter 1978 among others). Consider the following examples in (1a) and (1b):

- (1) a. Peter melted the ice.
b. The ice melted.

The two examples are instances of unaccusativity in the so-called *causative alternation* (Levin and Rappaport Hovav 1995). The verb *melt* has been used in two different ways, transitively and intransitively. (1a) is a transitive construction in which the verb *melt* takes two arguments. The Agent (or the Causer)-NP *Peter* is the subject, and the Patient-NP *the ice* is realized as the

object. In (1b), the verb *melt* is used intransitively, and the Patient-NP is the subject.

In Generative Grammar it is assumed that both sentences in (1) are derived from similar abstract underlying structures called D-Structures. Crucially, the Patient-NP *the ice* is the object of the verb *melt* in the D-Structure of both (1a) and (1b). However, whereas the subject position of (1a) is filled by the Agent-NP, the subject position in the D-Structure of (1b) is empty. As a consequence, the underlying object *the ice* in (1b) moves to the subject position, deriving the surface structure in (1b). A simplified representation of the D-Structure of (1a) and (1b) is given in (2):



Constructions such as (1b) and (2b), where an underlying object becomes the derived subject, and the respective verb that is part of it, are called unaccusatives. The term unaccusativity derives from the assumption that the verb *melt* in (1b), in contrast to (1a), lacks the ability to assign accusative Case to its object, which is the main reason why the object NP in (2b) has to move to the subject position, where it receives nominative Case. Therefore, verbs like *melt* in (1b) are called unaccusative. Contrary, intransitive verbs with *true* (non-derived) subjects are called unergative.

1.2 OUTLINE OF THE THESIS

The thesis is divided into five chapters. In chapter 2, I introduce the theoretical framework upon which the research is constructed. I will first introduce the view of a sentence structure as determined by the principles of X-bar theory. I will also discuss Case theory and Theta theory. Theta theory governs the principles that determine the syntactic projection of arguments. Case theory is concerned with the ways in which a DP can get Case. The interaction of these two sub-theories of GB-theory explains some of the important characteristics of unaccusative constructions.

In chapter 3, I discuss various theories of unaccusativity. I begin my discussion with a brief outline of Perlmutter's (1978) analysis of unaccusativity. I then turn to some of the most influential approaches to unaccusativity in the Government and Binding framework, namely Belletti and Rizzi (1988), Burzio (1986), Grewendorf (1986), Harves (2002), Levin and Rappaport Hovav (1995). I will introduce some of the most important tests that have been used to identify unaccusativity.

In chapter 4, I turn to unaccusativity in siSwati. I first analyze which of the tests introduced in chapter 3 can be applied to siSwati. As far as these tests can be applied to siSwati, I want to show that, surprisingly, these tests, which distinguish unaccusative from unergative in many languages, do not work for siSwati. In chapter 5 I conclude my thesis.

1.3 BROAD ISSUES TO BE INVESTIGATED

I will focus on the following main issues:

- The causative alternation.
- Unaccusative verbs without transitive counterparts.
- Other instances of unaccusativity: passive and raising.

In examining these three broad issues, the thesis seeks to answer the following questions:

Key question:

- Which of the tests for unaccusativity that were identified for other languages can also be applied to siSwati? What results do they yield?

Sub-questions:

- Are there unaccusative verbs in siSwati?
- If there are, what types of unaccusative verbs are there?
- What are the properties of the causative alternation in siSwati?
- What are the properties of the passive in siSwati?
- Does siSwati have raising verbs?

1.4 REASONS FOR CHOOSING THE TOPIC

My choice of the topic was motivated by the following reasons. Firstly, unaccusativity is a well-researched topic in many languages such as Dutch, English, Japanese and French among others. Less attention, however, has been paid to the phenomenon of unaccusativity in the Bantu languages.

Therefore, as a way of filling the gap in the literature, I have opted to conduct research on unaccusativity in the Bantu languages by studying one of them (siSwati) in some detail.

Secondly, as a native speaker of siSwati I am able to provide a wide range of reliable data which may prove useful for other non Bantu-speaking researchers who are interested in the phenomenon of unaccusativity.

1.5 RESEARCH METHODOLOGY AND METHODS

The research methodology to be used in this thesis is the Chomskian approach to the study of language. Baker (1988) and Chomsky (1986b) argue that there are two ways of studying grammar. Firstly, language can be investigated by studying one particular language extensively. The second strategy is to study various languages and compare their similarities and differences. In both strategies native speakers are the most reliable sources in collecting data, because it is generally assumed that language description is the examination of the linguistic knowledge possessed by native speakers (Culicover 1997, Heageman 1991). This work will use both strategies. My main focus will be on one particular language, which is siSwati, but I will

also refer to other languages such as Dutch, English, and Italian, where the phenomenon of unaccusativity is attested.

I will work with available literature based on unaccusativity and with my own data, which I will generate myself. Through this research, I will facilitate the understanding of unaccusativity in siSwati. I will give descriptive accounts of unaccusativity in the various languages where this phenomenon has been attested and examine similarities and contrasts with siSwati, the language under investigation.

CHAPTER 2

THEORETICAL BACKGROUND

2.1 INTRODUCTION

In this chapter I discuss the theoretical framework upon which my research is constructed. I approach the phenomenon of unaccusativity from the perspective of the Principles-and-Parameters-approach (Chomsky 1981, 1986a, and subsequent work). Specifically, I use Government-Binding Theory (Chomsky 1981, 1986a, b) as my theoretical framework. Although many of the assumptions postulated in this framework have been modified or abandoned in recent developments of Chomsky's Theory, particularly in the Minimalist Program (Chomsky 1995, 2000, 2001, 2004), the core ideas underlying the concept of unaccusativity are still valid in the Minimalist Program (although they are sometimes implemented in slightly different ways).

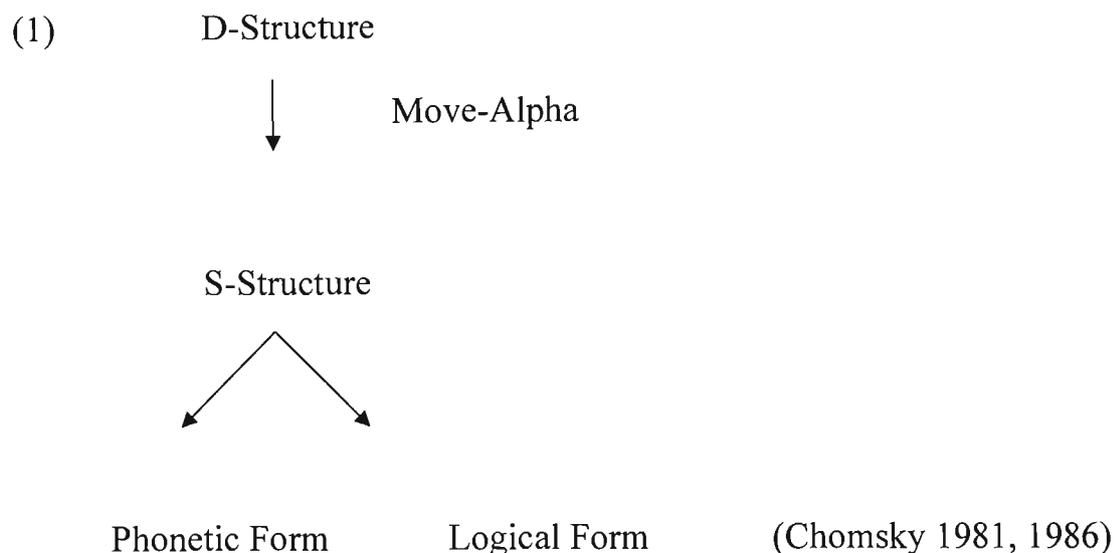
Government-Binding Theory (henceforth GB Theory) is a development of the *Extended Standard Theory* presented by Chomsky in *Aspects of the theory of Syntax* (1965). Chomsky and others developed this Theory in

various variants, which consequently led to the emergence of the GB Theory (Webelhuth 1995), formally presented by Chomsky (1981) in his *Lectures on Government and Binding*. It was further revised by Chomsky (1986a, b).

Clark (1990:4), following Chomsky (1981, 1986), argues that the GB theory has three basic properties, which distinguish it from other theories of grammar. He states these principles as follows: “(i) GB assumes distinct levels of representation; (ii) assumes a number of independent sub-theories which interact to derive these representations and (iii) there are certain constraints which filter possible sentences in a given language”. These properties will be discussed in the following sub-sections.

2.2 THE LEVELS OF REPRESENTATION

One of the leading ideas developed in Chomsky’s earlier work is the assumption that every sentence in all languages corresponds to four levels of representation namely D-Structure, S-Structure, Logical Form and Phonetic Form. These levels are illustrated in the following diagram in (1):



The first level is the D-Structure, the level at which thematic relations between lexical items are encoded. The D-Structure is mapped onto the S-Structure by the principle of move-alpha, where α is any variable ranging from any lexical and functional categories. D-Structure and S-Structure are comparable to Chomsky's (1965) "Deep Structure" and "Surface Structure". S-Structure maps onto two different levels known as Phonetic Form (PF) and Logical Form (LF). S-structure is the level that is pronounced at PF. PF is the representation of the phonetic properties, i.e. a representation of acoustic or sound properties of a given sentence, while LF is the interface with conceptual structure or semantics, where meaning relations like quantifier scope are structurally represented. This view of a sentence structure is presumed to be one of the properties of universal grammar

(Baker 1988, Chomsky 1981, Cook 1988). My discussion of unaccusativity is built on these levels of representation.

The syntactic movement operation referred to here as *Move-Alpha*, relates the D-Structure to S-Structure and S-Structure to Logical Form. The three levels obey certain syntactic constraints or principles (Clark 1990). The D-Structure level is where lexical heads select their arguments and assign thematic roles to them (Chomsky 1981, Haegeman 1991). At this level, lexical items occupy their thematic positions. Consider the following examples in (2):

- (2) a. John has built a house.
b. What has John built?

In (2a) the verb *built* selects two argument NPs, the object NP *a house* and the subject-NP *John*, which it assigns the θ -roles. The NP *John* is the Agent/Causer, i.e. somebody who does something actively and the NP *a house* is a Patient/Theme i.e. the thing/person to which something is done. Both arguments occupy the same position at S-Structure, which they also occupy at D-Structure. As noted above, the idea is that the thematic relations

between a verb and its argument are represented at the abstract level of D-Structure, and it is assumed that the subject position is the position of Agents and the object position is that of Patients.

However, some NPs can appear in positions where they do not get θ -roles and they surface in derived positions. For instance, in forming the *wh-question* in (2b) the object-NP *what* does not appear in the position where its θ -role is assigned. In (2a), in sentence (2b) *what* is the Patient/Theme, which implies that it is in the object position at D-Structure (where it gets its θ -role). However, in (2b), it is at the beginning of the sentence. This means that the object-NP has *moved* to a sentence initial position (called [Spec CP]), which is a non- θ -position (a position where it is not possible to assign θ -role). In that case the D-Structure of (2b) would be similar to that in (2a), and (2b) would be the S-Structure, which is formed through the successive application of the rule move-alpha.

The moved object-NP leaves behind a so-called *trace*, which is an empty category. This is conceptualized in one of the sub-theories of GB known as *Trace theory*. It involves the relationship between the moved element and the position from which it is moved. The moved element and its trace bear

the same subscript to indicate identity. The S-Structure of (2a) can therefore be presented like this:

(3) What_i has John built t_i?

(3) entails that t_i is the trace of the object-NP $what_i$. The moved NP is known as the *antecedent* of the moved element and the trace and its antecedent form a *chain*. In the example above, the thematic properties of the object-NP at D-Structure are represented by t_i (trace). The object-NP $what$ ‘marked $_i$ ’ symbolizes that $what$ is a θ -marked argument, which has moved from its θ -position to a non- θ -position. The trace and its antecedent therefore, form a thematic chain bearing only one θ -role.

The derivation of the infinite number of sentences that a language has depends on different sub-theories. These sub-theories are Case theory, θ -theory, Control theory, Binding theory and Bounding theory and Movement theory. In this dissertation I will discuss the most relevant theories, i.e. θ -theory and Case theory. I will first introduce the theory of sentence structure advocated in GB, namely the X-bar theory. I will also elaborate on the concept of movement introduced informally above. These theories play a

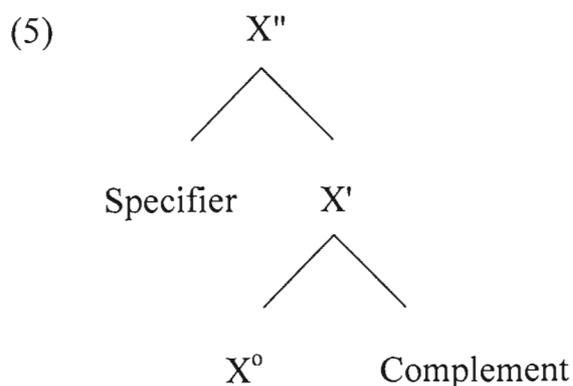
fairly important role in the subsequent discussion of unaccusativity in siSwati.

2.3 X-BAR THEORY

X-bar theory assumes that all lexical categories viz. nouns, verbs, prepositions and adjectives (N, V, P, A) project into phrases. According to X-bar theory, every phrase is the projection of a lexical head X° , where X is variable that can stand for N, V, P, A, and the superscript $^{\circ}$ stands for “zero projection”, which is the lowest projection in the tree structure. The next highest projection of X is an intermediate phrase which is formed when the lexical head combines with another phrase (which may represent one of its arguments). The phrase which together with X° forms X' is called the *complement* of X. The highest projection of X is the *maximal phrasal* projection XP (X''), which consists of X' and another phrase called the *specifier* of X. This general X-bar schema, which is considered to be the basic structure of all syntactic phrases, is represented in (4):

- (4) a. $X'' = \text{Spec } X'$
b. $X' = X \text{ Comp}$ (Clark 1990:6)

The projections shown in (4) are represented by means of tree structures or bracketed constituents in GB theory:



After 1981, X-bar theory was subject to major revisions, especially concerning the treatment of *functional* categories (Webelhuth 1995). Functional categories such as complementisers (C) or inflectional (I) elements (tense or agreement markers; auxiliaries) belong to the so-called “closed class” of lexical elements. Chomsky (1986b) argues that functional elements also project into phrases according to the rules of X-bar theory. More specifically, Chomsky suggests that sentences and clauses are projections of inflectional and complementiser heads respectively. The traditional rule of sentences and clauses in (6) assumes that tensed clauses (S) include an NP, a tense feature (T) and a VP and that more complex

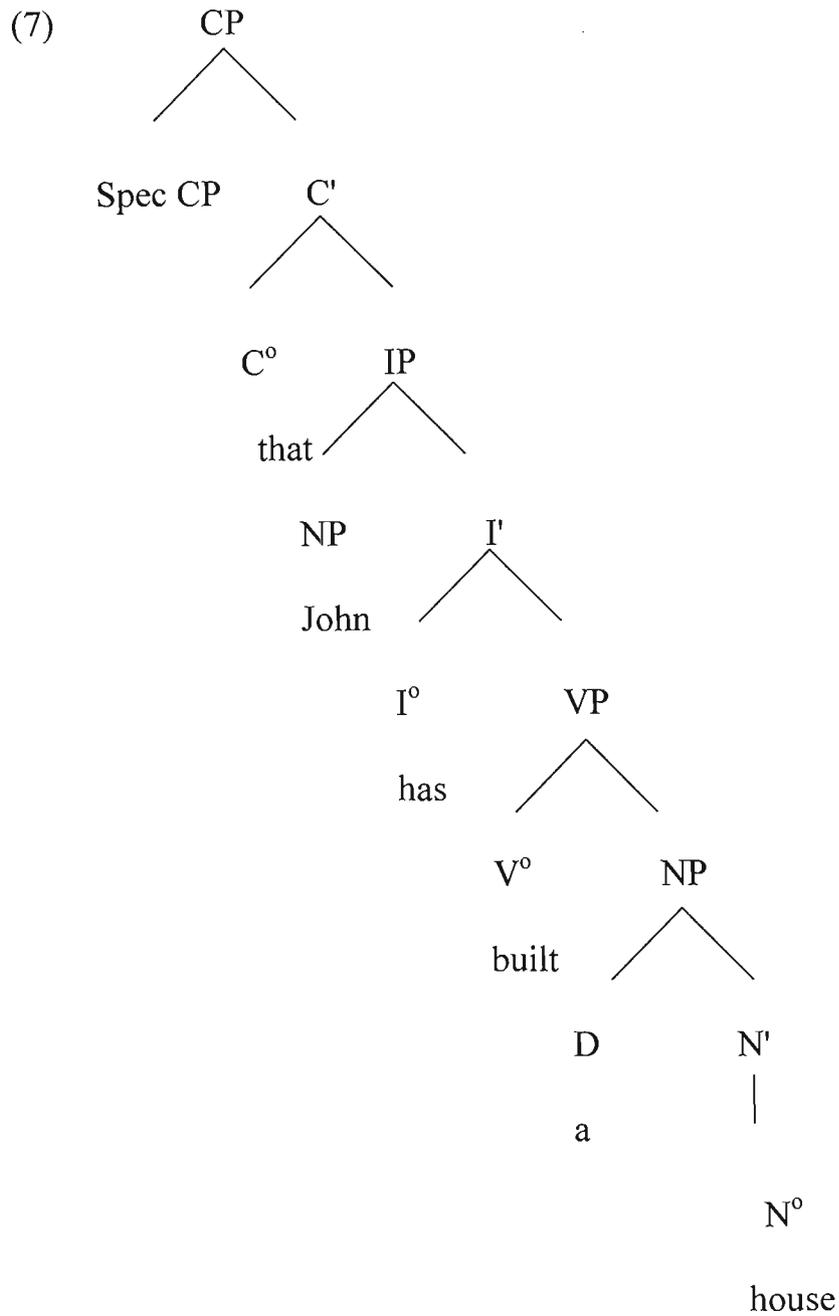
sentence can be formed by combining S with a complementiser, projecting

S':

(6) a. $S' = (C) S$

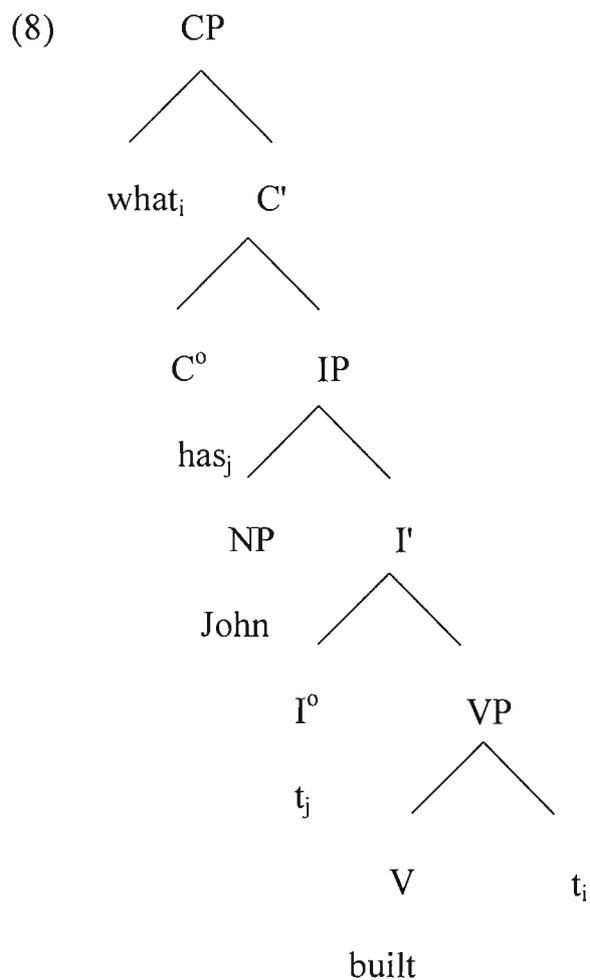
b. $S = NP (T) VP$

In contrast to (6), Chomsky (1986b) suggests that complementisers and inflectional elements like tense should also be characterized as heads, which consequently project into a complementiser phrase (CP) and an inflectional phrase (IP) respectively. The subject NP is the specifier of the head I, whereas the VP-predicate is the complement of I. A sentence such as *That John has built a house* has the following tree structure:



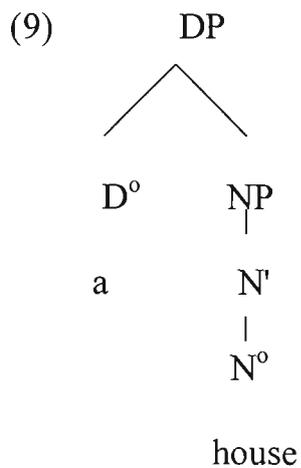
The introduction of IP and CP has the further advantage that it provides the possibility of explaining the derivation of a wh-question like *What has John built?* (see example (2b) above). Whereas the wh-phrase *what* would be in

the same position as the NP *a house* in (7) at D-Structure, the operation Move-alpha brings this phrase into the specifier position of C. The auxiliary *has* moves from I° to C° and the resulting S-Structure is (8):



Abney (1987) proposes that the functional category D (for determiner) can be treated along the same lines. If functional categories project into phrases,

then NPs should also be reanalyzed as projections of determiners (determiner phrases, DPs) (Webelhuth 1995). Abney (1987) argues that determiners are not specifiers as traditionally assumed (see tree in (7) above), but instead are heads, which according to X-bar theory project into phrases. The determiner is therefore not part of the NP rather; the NP is the complement of the determiner head. A simple tree for a DP like *a house* would be as follows:



2.4 THETA THEORY

The Theta theory is the sub-theory of GB Theory that accounts for the relation between a lexical head such as the verb and its arguments. As noted above, arguments of the verb are classified according to the role they play in the event expressed by the verb. These roles are called *thematic roles*. The relationship between the lexical head and its argument is known as a *thematic relation*. The word *thematic* in GB Theory is abbreviated by the Greek letter, θ (theta), so thematic roles are also called theta-roles or θ -roles.

The number of θ -roles is a controversial issue amongst linguists. Examples of different kinds of theta-roles are: *Agent*, *Patient/Theme*, *Experiencer*, *Source*, *Goal/Path*, *Beneficiary/Recipient*, *Instrument*, *Possessor*, *Proposition* (Fillmore 1968, Riemsdijk and Williams 1986).

An Agent refers to the initiator or a doer of an action. In the following sentence *Brian* is an Agent or a doer of the action of running:

(10) *Brian* is running.

Carnie (2002) argues that Agents in most cases are subjects of sentences which can also appear in other positions in the sentence.

Entities that undergo the actions performed by the Agent are called Patient/Theme. In (11) the DP *the pencil* undergoes the action of moving from one place to another. The DP *Mary* bears the θ -role of a Benefactor/Recipient, one who receives something:

(11) Bill gave Mary *a pencil*.

Another thematic role is that of Experiencer, where the argument is not initiating any action but feels or perceives the action. In (11) *John* is not performing or carrying out an action of loving *Mary* but rather perceives the feeling of loving *Mary* and *Mary* is the Patient/Theme the person who is being loved:

(12) *John* loves Jane.

The number of θ -roles that a given verb can assign depends on the type of the verb. A verb like *run* in (10) has only one θ -role to assign, which is an

Agent. Verbs like this are called *one-place predicate* (verbs that assign only one θ -role and hence have only one argument). Some verbs such as *loves* in (12) are *two-place predicates* and assign two θ -roles and verbs such as *give* are *three-place predicates* and have three θ -roles to assign (e.g. Agent, Beneficiary/Recipient, and Patient/Theme).

The basic condition for the assignment of theta-roles is the *Theta Criterion*, articulated in Chomsky (1981:171):

(13) *The Theta Criterion*

- a. Each argument is assigned one and only one theta-role.
- b. Each theta role is assigned to one and only one argument.

The idea behind the condition in (13) is that any given clause has a set of DPs and a set of theta-roles and the correspondence between these two sets must be a one-to-one correspondence.

The unacceptability of (14) is then attributed to the violation of θ -Criterion.

- (14) a. *She ran the bicycle.
b. *John feels.
c. *Gave Mary a book.

The DP *the bicycle* in (14a) does not receive a θ -role because the verb *ran* has only one theta-role to assign, which is an Agent, hence the violation of the θ -Criterion. In (14b) the verb has two θ -roles to assign: an Experiencer and a Theme one argument is missing which could bear the θ -role theme. In (14c) there is also one argument missing, which could bear the θ -role Agent assigned by the verb.

The verb is not the only θ -role assigner; other lexical categories such as prepositions also assign thematic role to their arguments (Carnie 2002). Generally, in most languages, prepositions assign only one θ -role and therefore have only one argument.¹ Consider the following example in (15):

¹ I assume that the subjects in (15) are not syntactic arguments of the prepositions. Note that semantically, a preposition such as *to* in (15a) is transitive and takes two arguments.

- (15) a. He drove *to Nelspruit*. (Θ-role = Path/Goal)
b. He works *in Durban*. (Θ-role = Location) (Preposition)

In (15a), the DP *Nelspruit* is the Goal-argument of the preposition *to*. So *Nelspruit* gets its θ -role not from the verb *drove* but from the preposition *to*. The verb *drove* assigns a θ -role to the subject-pronoun *he*. So, (15a) and (15b) complies with the θ -Criterion since the two DPs each corresponding to one θ -role.

There are two types of theta roles namely *external* theta roles and *internal* theta roles (Brody 2003, Carnie 2002, Chomsky 1981). External theta roles are associated with subjects. In the X-bar architecture external arguments are postulated in [Spec, IP], a position outside VP, whilst internal arguments are associated with objects or complements of the verb and are postulated VP-internally in [Spec, V].

2.5 CASE THEORY

Case theory is concerned with the representation of grammatical relations or functions of DPs in a sentence. In contrast to θ -theory, which displays the semantic function of DPs in a sentence, Case theory describes the syntactic function of DPs in a sentence. The most prominent grammatical relations or functions marked in DPs are subject, object and indirect object. The Case associated with the subject is called *nominative* and the one associated with object is called *accusative* Case.

Case refers to an “abstract” property realized, in all DPs. This property may or may not be overtly realized, depending on the language. This property is called *Abstract Case* in syntactic theory (Carnie 2002, Chomsky 1981, 1986a). In languages such as English and siSwati, there is no obvious case-marking; instead grammatical relations are represented by the position of the DPs in the sentence.² In the examples in (16) and (17), bold print indicates subject and italics indicates object:

² An exception is pronouns in English, which show Case distinctions (he, his, and him) see (16b).

- (16) a. **John** hates *Billy*. / **Billy** hates *John*.
 b. **He** hates *him*.
- (17) a. **Mandisa** unyanya *Letho*. / **Letho** unyanya *Mandisa*.
Mandisa SP-hate-ASP *Letho*.
 ‘**Mandisa** hates *Letho*’.
 b. **Yena** ushaya *yena*.
she SP-hate-ASP *her*.
 ‘**She** hates *her*.’

In (17), Case is not overtly marked like it would be in other languages such as German. In the English example in (16) Cases is represented by the position of the DP. A DP appearing pre-verbally is a subject and a post-verbal DP is an object. SiSwati (example 17) lacks any kind of overt Case-marking, not even the pronouns mark a Case distinction, and it is only the position of the DP that marks grammatical function.

In German for instance, unlike in English, Case is morphologically realized. The Case distinctions are marked on the head of the DP. Consider the following example:

(18) **Der Mann** sieht *den Hund*.

the man sees the dog.

‘The man sees the dog.’

German uses different determiners in object-DPs and subject-DPs. The determiner *der* marks nominative Case while *den* marks accusative Case. Despite this superficial difference in languages like English or siSwati and German, the theory of abstract Case assumes that all DPs get Case, but that in some languages it is overtly marked (e.g. German) and in others, it is not (e.g. siSwati and English). The idea that all DPs should be marked with Case is articulated in Chomsky’s (1981:49) Case Filter, defined as follows:

(19) *Case Filter*

*DP if DP has phonetic content and has no Case.

(cf. Chomsky 1981:49)

The requirement to be marked with Case is linked to the ability of the verb to assign a θ -role to the DP. This is articulated in the so-called *Visibility Condition*, which states that in order to receive a θ -role, a DP must have Case (Culicover 1997:37).

Chomsky (1986a) identifies two types of Cases, namely *inherent* Case and *structural* Case. He defines inherent Case as the type of Case assigned at D-Structure. It is associated with θ -marking i.e. a head assigns inherent Case to a DP it θ -marks. Inherent Cases are genitive Case and dative Case (Neeleman and Weerman 1999). The idea is that e.g. dative Case is typically assigned to DPs with a particular θ -role (such as recipient or benefactor). In contrast, structural Cases are nominative and accusative: they are not assigned to DPs according to their θ -roles, but at S-Structure according to the *structural position* of the DP. Verbs, prepositions and [+ finite] I assign *structural* Cases to DPs.

Structural Case is hence assigned to a DP independently of its θ -role. It only depends on the syntactic position of the DP. Consider the following pairs in (20):

- (20) a. John read a book.
b. The book was read.

- (21) a. John believed her to build houses.
b. John believed her.

The example in (20) shows that an argument with the same θ -role can be realized as the object (accusative), but also as the subject (nominative) in the passive. Importantly, *the book* in (b) is still the Patient although it bears nominative Case (see 2.5.2. below for further details of the passive derivation). The reason is that nominative Case is always assigned to the structural position [Spec, I], no matter which argument is located at S-Structure. The example in (21) shows that the same Case (accusative: *her* is an accusative pronoun) can realize different θ -roles (Agent in (a), Theme in (b)). Accusative Case is associated with the object of the verb, and the object of the verb can be a base-generated Theme as in (21b) or the Agent of an embedded sentence, as in (21a).³

Various linguists propose that there is a direct link between θ -theory and Case theory. Burzio (1986), whose research is based on the study of Italian verbs, emphasizes this link by arguing that there is a 1:1 correspondence between a verb's ability to assign accusative Case and the existence of an external θ -role. This idea is known as *Burzio's Generalization*:

³ Example (21) is a so-called ECM-construction, which used to be analyzed by assuming that the verb assigns accusative Case to the subject of the embedded sentence. In more recent years, ECM constructions have been analyzed in terms of the idea that the embedded subject moves to the object position of the matrix verb (Camie 2002)

(22) *Burzio's Generalization*

- a. Only verbs, which assign external θ -role, assign accusative Case (Burzio 1986:178)
- b. A verb, which fails to assign accusative Case to its object, does not assign an external θ -role (Burzio 1986:184).

2.6 THE INTERACTION OF THETA THEORY AND CASE THEORY: DP-MOVEMENT

If DPs cannot get Case in their D-Structure position they move to a position where they can get Case. This kind of syntactic operation is known as DP-movement. It is a kind of movement driven by the need to assign Case to a DP that would otherwise remain Case-less in its D-Structure position (Carnie 2002). There are at least three instances of DP-movement identified in GB theory: unaccusatives, raising and passives. All these instances of DP-movement are triggered by the need for Case. I discuss each instance in some detail in chapter 3, but I want to briefly mention them here to round up the theoretical discussion of Case and Theta theory.

Consider the following example:

- (23) a. John wrote the essay. (transitive)
b. The essay was written. (passive = unaccusative)

If a transitive verb is passivised it loses its ability to assign accusative Case, and it no longer selects an external theta role to receive nominative Case. If the passivised verb assigns both nominative Case and the external theta-role the derivation will crash, since it would be a violation of both Case theory and the Theta theory. Consider the following example:

- (24) *John was written the essay.

The sentence in (24) is ungrammatical. This is because the object DP does not get Case, hence the violation of Case theory, which requires all DPs to get Case. In order for the sentence in (24) to be grammatical the object DP has to move to subject position occupied by *John*. So if both the DP *John* and DP *the essay* receive the same theta-role, it would be a violation of the Theta criterion. The passivised verb can not assign both the external theta role and accusative Case

2.7 CONCLUSION

In this chapter I have introduced the theoretical framework upon which the research is constructed. I have discussed only the relevant sub-theories of GB framework, which are Case theory and Theta theory. Theta theory governs the principles that determine the syntactic projection of arguments. Case theory is concerned with the ways in which a DP gets Case. The interaction between these two sub-theories of GB-theory explains some of the important characteristics of unaccusative verbs i.e. they do not select an external argument and they fail to assign accusative Case. In this chapter I have also introduced X-bar theory, which is the theory of sentence structure promoted in GB.

I also elaborated on the concept of movement, particularly DP-movement, where I discussed the three instances of DP-movement namely unaccusatives, passives and raising. Unaccusatives have the standard property of unaccusativity (they select an internal argument and fail to assign accusative Case) and not as a passive rule like passive verbs. Passives and raising verbs also have the properties of unaccusativity although with the passive, the unaccusative construction is through passivization where the

subject is absorbed and the object is elevated to the subject position. Raising verbs like *seems* just like unaccusative verbs do not assign an external θ -role and accusative Case. Therefore the internal arguments in the embedded clause do not get Case since *seems* does not assign accusative Case. As a result, the subject of the embedded clause moves to the subject position of the main clause.

CHAPTER 3

STRUCTURAL AND LEXICAL ASPECTS OF UNACCUSATIVITY

3.1 INTRODUCTION

In the previous chapter I presented the theory of Government and Binding, which is the theoretical framework I use in my study. I discussed Theta theory and Case theory and showed how these modules interact to uncover some of the characteristics of unaccusative constructions (including raising and passive). Unaccusative verbs select an internal argument and also fail to assign Case to the object. Therefore, the D-Structure object-DP which bears the θ -role of Patient/Theme changes its syntactic position through the process of movement and ends up in the subject position (Spec, IP) in order to be Case-marked. It thereby fulfills the Case Filter, which requires all DPs with phonetic content to have Case.

In this chapter, I will discuss various theories of unaccusativity. I begin my discussion of unaccusativity in section 3.1 with a brief outline of Perlmutter's (1978) analysis of unaccusativity within the framework of

Relational Grammar. In section 3.2 I discuss some of the most influential approaches to unaccusativity in the GB framework, such as Belletti and Rizzi (1981), Burzio (1986), Grewendorf (1989), and Levin and Rappaport (1995). I also examine the much-studied causative alternation introduced in chapter 2 in order to determine the lexical and structural properties of unaccusatives, since it is assumed that intransitive verbs participating in the causative alternation show evidence of unaccusativity. I also discuss the semantic characterization of unaccusative verbs. In section 3.3 I explore the different diagnostics of unaccusativity studied in various languages that have been researched. Section 3.4 will return to the two instances of unaccusativity that have been studied extensively and which were already introduced in chapter 2, i.e. passive and raising.

3.2 PERLMUTTER'S (1978) ANALYSIS OF UNACCUSATIVITY

A substantial body of literature on unaccusativity cites Perlmutter (1978) as the first researcher to characterize intransitive verbs as either unaccusative or unergative. Perlmutter makes this distinction within the theoretical framework of *Relational Grammar* (RG). Harves (2002:23) argues that Perlmutter's proposal was greatly influenced by the works of Hall (1965)

and Chvany (1975). Harves (2002:23) states “the work of Hall (1965) focused on the analysis of subject and objects in English, while Chvany (1975) in response to Hall’s work provided empirical arguments from Russian in support of the theory that claims that verbs do not necessarily have subjects in the D-Structure level”.

The main objective of the theory of Relational Grammar (RG) is to define grammatical relations of subject, direct object and indirect object. For instance, the grammatical relations of subjects and objects are defined as “1” (subject) and “2” (object), and these relations are realized in different strata or levels. In RG, there are two strata, namely the initial stratum and the final stratum (in GB terms, these are the levels of grammatical representation equivalent to the D-Structure and the S-Structure levels). The grammatical relations are called 1 and 2 in order to disassociate them from the traditional terms, subject and object (Blake 1990, Perlmutter 1978, Perlmutter and Postal 1984).

In his extensive study of these grammatical relations, Perlmutter observes that subjects in some intransitive clauses start out as direct objects, while in others, they start out as true subjects. In RG terms, this phenomenon is

described as follows: some intransitive clauses are initial 1 and not initial 2 and some have initial 2 and no initial 1. The latter situation describes unaccusative constructions and is captured in Perlmutter's *Unaccusative Hypothesis*, stated in (1):

(1) *The Unaccusative Hypothesis* (Perlmutter 1978: 160)

Certain intransitive clauses have an initial 2 but no initial 1.

This hypothesis implies that there is a syntactic distinction between unaccusatives and unergatives. The unaccusative hypothesis assumes that in the initial stratum, the argument of unaccusatives is a 2 (direct object), whereas the argument is 1 (subject) with unergative verbs. In the former, the direct object *advances* to the subject position (advances to 1) in the final stratum (S-Structure) in order to fulfill the *Final 1 Law* which is equivalent to the GB's EPP and which requires the final stratum of every basic clause to have 1 (subject). However, with unergatives there is no advancement to 1 since it already has 1 initially and on the final stratum.

The advancement to 1 is controlled by the so-called *1-Advancement Exclusiveness Law (1-AEX)*, which states that “no clause can involve more

than one advancement to 1” (Perlmutter 1978:166). Perlmutter provides empirical evidence in support of the 1AEX by discussing impersonal passives from Dutch. Consider the following examples, taken from Perlmutter (1978: 169):

- (2) a. * Door de lijken werd al ontbonden.
‘It is already decomposed by the corpse’.
- b. * In dit weeshuis wordt er door de kinderen erg snel.
‘In this orphanage the children grow very fast.’
(unaccusative)
- (3) a. Er wordt hier veel geskied.
‘It is skied here a lot.’
- b. Er wordt in deze kamer vaak geslapen.
‘It is often slept in this room.’
(unergative)

(Perlmutter 1978: 169)

In (2) the formation of impersonal passive from unaccusative verbs is not possible as predicted by the principles of 1AEX. However, in (3), an

impersonal passive can be formed from unergative verbs. When intransitive verbs are passivised, the only argument they select gets absorbed and therefore the construction becomes “impersonal”. In contrast, unaccusative verbs are already formed by advancement to 1, so (2) involve two such advancements and therefore violate the 1AEX.

3.3 UNACCUSATIVITY IN THE GB FRAMEWORK

Perlmutter’s unaccusative hypothesis was introduced into Chomsky’s GB framework by Burzio (1986). Within the GB framework, the difference between the two classes of verbs is based on the underlying syntactic position of the sole argument of the two classes of intransitive verbs, which therefore are assumed to have different argument structures. The argument of an unaccusative verb is a D-Structure object and the argument of an unergative is a D-Structure subject (Harves 2002, Levin and Rappaport Hovav 1995, henceforth L&RH). The D-Structure configurations of the two classes are represented in (4):

- (4) a. unaccusative verb: $_ [_{VP} V NP/IP]$
b. unergative verb: $NP [_{VP} V]$

(L&RH 1995:3)

The D-Structure position of the subject of an unaccusative verb is within VP, a position normally occupied by objects; this means that the subject of an unaccusative verb is underlying a thematic object. Which is why L&RH (1995) define unaccusativity in argument structure terms as having an internal argument which may be a DP or clausal complement (e.g. in raising constructions), as illustrated in (3). The internal argument is in a position where it gets its thematic role of Patient/Theme (in the case of DP) or proposition (in the case of IP); importantly, however, a DP cannot get Case in this position.

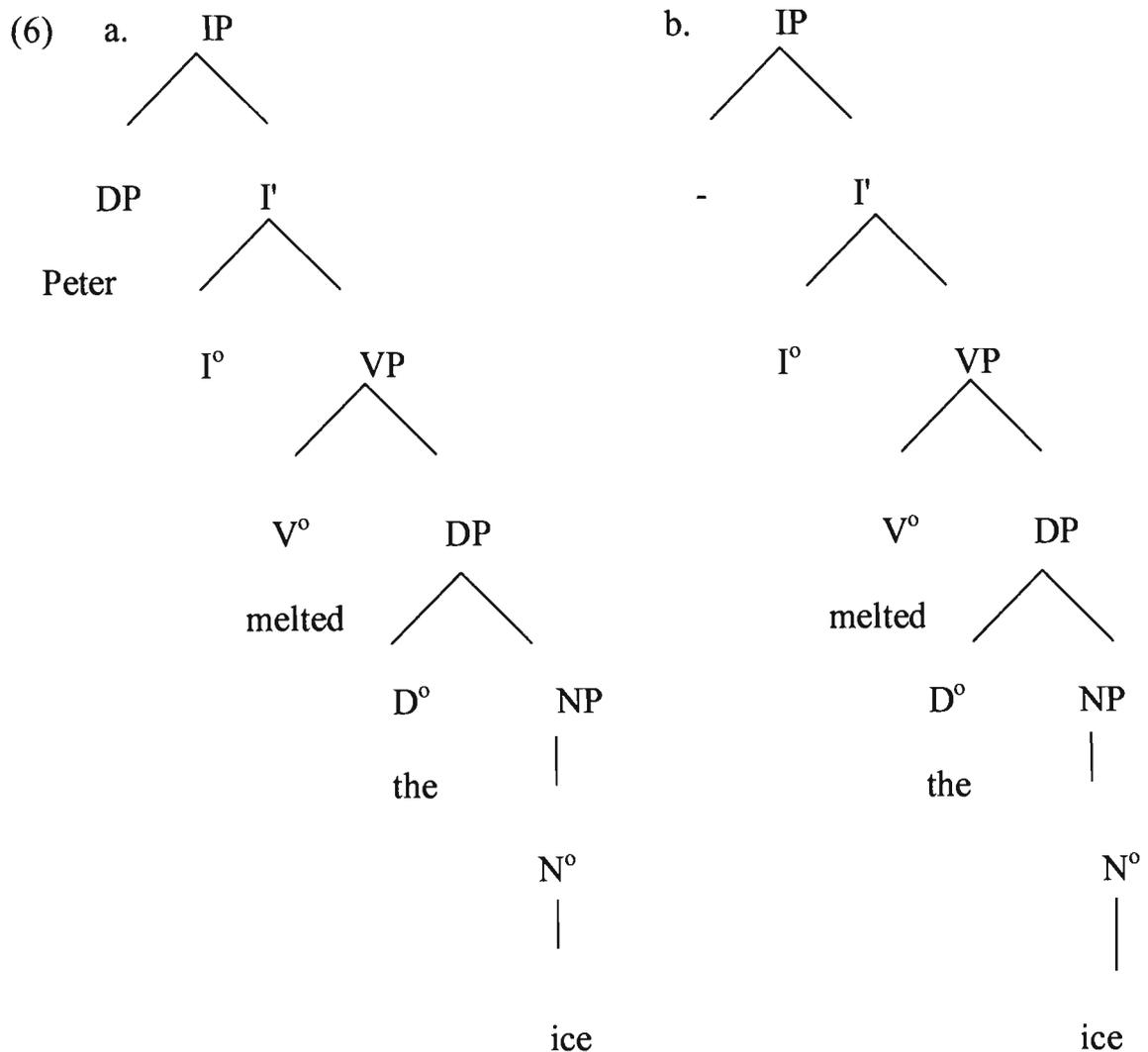
A typical example for unaccusativity, is provided by the intransitive variant of the much studied causative alternation introduced in section 2.3.1 (see Burzio 1986, L&RH 1995, Rosen 1981 among others), which will be discussed in the next section.

3.4 THE CAUSATIVE ALTERNATION

Numerous tests have been suggested for unaccusativity, and the causative alternation introduced in section 2.3.1 is one of the suggested tests. Causative constructions are constructions where the subject of the verb is causing the object to be involved in the action expressed by the verb. Such causative constructions are typically transitive or ditransitive. Interestingly, some transitive causatives have intransitive counterparts, as seen in example (1), p.1, repeated here as (5):

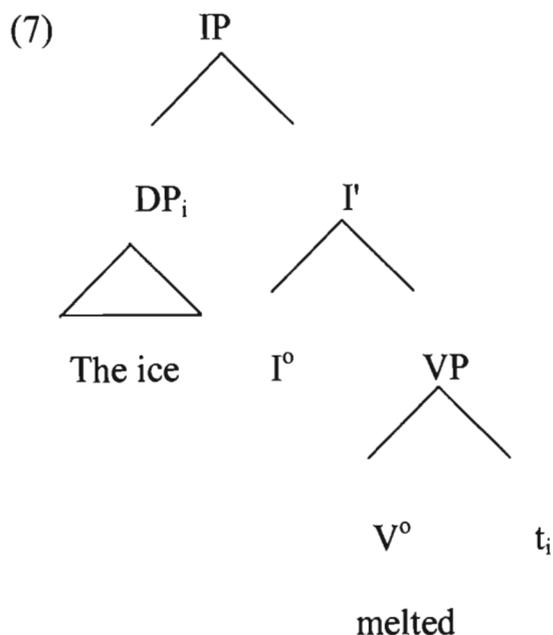
- (5) a. Peter melted the ice.
b. The ice melted.

The construction in (5a) is a transitive construction where the subject *Peter* is a causer; he is causing the object *the ice* to do the action of melting. As was illustrated in section 2.3.1, the subject of the intransitive and the object of the transitive variant share the same semantic role of Patient/Theme. It is therefore assumed that they are both objects at the D-Structure level. A representation of the D-Structures of both (5a) and (5b) is provided in (6):



As already discussed in chapter 2 above, the verb *melt* in (6b) does not select a Causer DP (external argument). For that reason, the subject position in the D-Structure of (6b) is empty. However, like its transitive counterpart, the verb *melt* in (6b) selects an object-DP (internal argument), the DP *the ice*, which originates in the object position at D-structure, as in the transitive construction in (6a). However, since the object-DP in (6b) does not get Case,

it moves to the empty subject position (Spec-IP) where it gets nominative Case, deriving the S-Structure in (7).



The D-Structure object of the intransitive verb in (6b) has become the derived subject in (7). It leaves behind its trace (empty category); the trace and the moved object DP form a chain, which bears the theta-role of Patient/Theme.

Importantly, the intransitive variant of the causative alternation presents the significant properties of an unaccusative verb, i.e. selection of an internal argument and failure to assign accusative Case. Consequently, verbs such as

break, melt, dry, and open and their counterparts in other languages, which participate in the causative alternation, are assumed to be unaccusative (Belletti and Rizzi 1981, L&RH 1995, Van Valin 1990).

The following examples, taken from L&RH (1995:80:2-4), show that unergative verbs such as *play* and *laugh* cannot participate in the causative alternation:

- (8) a. The children played.
b. * The teacher played the children.
- (9) a. The crowd laughed.
b. * The comedian laughed the crowd.

L&RH (1995) argue that unaccusative and unergative verbs have distinct lexical semantic representations. Intransitive verbs that participate in the causative alternation are unaccusative, and L&RH (1995) assume that such verbs have a single lexical semantic representation, associated with both their unaccusative (intransitive) form and their transitive form. This lexical semantic representation is a bi-event structure. This means, the verb *melt*

represents two events and hence two clauses; the first event states the act of causing and the second event expresses the change of state. In contrast, unergative verbs do not have this semantic property; they therefore do not participate in the causative alternation. Unergative verbs do not have the *cause* predicate and involve only one event; they have a *monadic* lexical semantic representation. The different lexical semantic representations of the two classes of verbs are illustrated in (10):

- (10) a. melt: [x do-something] cause [y become melted]
b. laugh:[x laugh] (L&RH 1995:83)

The whole representation in (10a) corresponds with the transitive form; the bracketed part selected by the cause-operator alone is the unaccusative variant. The unaccusative variant is a part of a larger event structure that semantically consists of two events. If both events are syntactically realized, it is the transitive causative construction; if the causative part is not syntactically realized, it is the unaccusative construction. Unergatives are semantically single events; they therefore do not participate in the causative alternation.

3.5 UNACCUSATIVE VERBS WITHOUT TRANSITIVE COUNTERPARTS

As already mentioned, verbs that participate in the causative alternation have been assumed to be unaccusative. However, not all unaccusative verbs participate in the causative alternation. In languages such as Italian, some intransitive verbs that are assumed to be unaccusative do not have transitive counterparts. For example, the Italian verb *arrivare* ‘arrive’ does not have a transitive counterpart but is considered to be unaccusative. How can it be shown that *arrivare* is indeed unaccusative?

Burzio (1986) provides three unaccusativity tests that encompass verbs with or without transitive variants. These syntactic diagnostics include *auxiliary selection*, *past participle agreement* and *ne-cliticization*, and these will be discussed in the following sections. Furthermore, I will also discuss the *locative inversion* construction as one of the suggested tests for unaccusativity in various languages.

3.5.1 Auxiliary selection

Burzio (1986) identifies auxiliary selection as one of the criteria for unaccusativity in Italian. Italian verbs form their present perfect tense with either *essere* ‘be’ or *avere* ‘have’, depending on their syntactic properties. Unaccusative verbs select *essere* whereas transitive and unergative verbs select *avere*. Consider the following examples in (11):

- (11) a. Giovanni è arrivato.
Giovanni has arrived.
‘Giovanni has arrived.’ (unaccusative)
- b. Giovanni ha telefonato.
Giovanni has telephoned.
‘Giovanni has called.’ (unergative)
- c. Giovanni ha insultato due amici.
Giovanni has insulted two friends.
‘Giovanni has insulted two of his friends.’ (transitive)
- (Burzio 1986:53)

(11b) and (11c) take the auxiliary *avere* whereas (11a) takes *essere*. According to Burzio (1986), the choice of *essere* indicates that the verb only assigns a theta-role to the object and not the subject. In other words, the subject of the verb that takes *essere* is a thematic object. As already discussed in 3.3, one property of unaccusatives is that they lack the ability to assign accusative Case to the internal argument, and as a result, the latter moves to the subject position as a derived subject to get nominative Case. So *arrivare* ‘arrive’ is unaccusative, assigns an internal θ -role, selects *essere* as the auxiliary, and its internal argument moves to the subject position to be Case-marked. Passive verbs also use the auxiliary *essere* to form the present perfect tense, which suggests that they are also unaccusative (see section 3.6).

3.5.2 Past participle agreement

In languages such as Italian and French the distribution of past participle agreement is used as a diagnostic to test unaccusativity. It is assumed that a past participle will agree with a subject that forms a chain with a VP-internal trace (Burzio 1986). Since the subject of an unaccusative verb is an internal argument and located inside the VP at D-Structure, it agrees with a past

participle. In contrast, no such agreement is attested with unergatives (Burzio 1986, Grewendorf 1989, Harves 2002):

(12) a. Maria è arrivat-a/*-o.
Maria is arrived-FEM/*MASC
'Maria arrived.' (unaccusative)

b. Maria ha telefonat-o/*-a.
Maria has telephoned-MASC/*FEM
'Maria called.' (unergative)

Italian: Burzio (1986:86)

(13) a. Anne est arrive.
Anne is arrived-FEM
'Anne arrived.' (unaccusative)

b. Anne a telephone.
Anne has telephoned-*FEM/MASC
'Anne called.' (unergative)

French: (Harves 2002:23)

In (12a) *Maria*, the subject of the unaccusative verb, agrees in gender with the past-participle *arrivat-a*, while in (12b), the same subject *Maria* does not agree with the past participle *telefonat-o*. The same thing happens in the French example. The subject of unaccusative verb, *Anne*, agrees in gender with the past participle, while in the unergative construction it does not. These examples support the claim that verbs such as *arrive* have their subjects originating in the object position, which then move to the subject position, whereas unergatives have true subjects.

3.5.3 Ne-cliticisation

Another syntactic test for unaccusativity proposed by Burzio (1986), which holds specifically for Italian, is ne-cliticisation. *Ne* is a pronominal element, which must attach to a head, and the attachment of the clitic *ne* to a verb is known as ne-cliticisation (Haegeman 1991:299). Burzio (1986) argues that in Italian, ne-cliticisation is only possible with D-Structure objects. Burzio illustrates the notion of ne-cliticisation using the following transitive sentences from Italian in (14) and (15):

- (14) a. Giovanni ha insultato due amici.
 ‘John has insulted two friends.’
- b. Giovanni ne ha insultati due.
 John of-them has insulted two.
 ‘John has insulted two of his friends.’
- (15) a. Giovanni ha parlato a due amici.
 ‘John has spoken to two friends.’
- b. *Giovanni ne ha parlato a due.
 John of-them has spoken to two.
 ‘John has spoken to two.’

In the above examples we observe that ne-cliticisation from the DP *due amici* ‘two friends’ is acceptable in (14) and unacceptable in (15). The difference between the two DPs in (14) and (15) is that in (14), *due amici* is a complement of the verb and therefore a direct object whereas in (15) the same DP is the complement of a preposition. (15) thus does not meet the conditions of ne-cliticisation.

Ne-cliticisation provides empirical evidence for the view that subjects of unaccusative verbs pattern exactly with objects of transitive verbs, whereas subjects of unergative verbs behave like subjects of transitive verbs.

Consider the following examples in (16) and (17)

(16) a. Molti studenti arrivano.

Many students arrive.

b. Arrivano molti studenti.

Arrive many students.

c. Ne arrivano molti.

of-them arrive many.

‘Many of them arrive.’

(17) a. Molti studenti lavorano.

Many students work.

b. Lavorano molti studenti.

Work many students.

c. *Ne lavorano molti.

*Of-them work many.

In Italian, the subject of the verb may appear post-verbally or pre-verbally. In (16), the post-verbal subject allows ne-cliticisation, which suggests that it is an underlying object. In contrast, the postverbal subject in (17) does not allow it. Therefore, it follows that verbs like *arrivare*, which allow ne-cliticisation, are unaccusative verbs since their surface subjects are underlying objects.

3.5.4 Impersonal passives

Another characteristic of unaccusative verbs already discussed in section 3.1 is that they do not form impersonal passives. Some languages allow unergatives to be passivised. Since unergatives only assign one theta role (an external one), which is absorbed in the passive, the resulting constructions are called impersonal passives, lacking any arguments (Perlmutter 1978). This is illustrated by the following German example, taken from Grewendorf (1989:6):

(18) Es wurde getanzt.

‘It was danced.’

(unergative)

Since passives involve the absorption of an external θ -role, unaccusatives do not assign such a role. An impersonal passive cannot be formed with unaccusatives. See example (19):

(19) *Es wurde angekommen.

‘It was arrived.’ (unaccusative)

Impersonal passives are therefore used as a test for unaccusativity in languages such as German.

3.5.5 *Resultative phrases*

Another much-studied unaccusativity test is the distribution of resultative constructions. L&RH (1995:34) define a resultative predicate as a “phrase that denotes the state achieved by the referent of the DP it is predicated of as a result of the action denoted by the verb in the resultative construction”. Importantly, the resultative phrase can only be predicated of a direct object DP, but not of a subject DP. This kind of restriction is known as the Direct Object Restriction (DOR), a term used by L&RH (1995).

(20) John painted the barn red.

In (20), only the barn ends up red and not John. John painted the barn and as a result it turned red.

Crucially, since resultative phrases are only predicated of direct object-DPs, only unaccusative verbs and passive verbs are compatible with resultative phrases. Resultative phrases are impossible with unergatives (Carrier and Randall 1992, Jackendoff 1990, L&RH 1995). This is due to the fact that the surface subject of unaccusatives and passives is an underlying direct object, while that of unergatives is an underlying subject. Observe the following examples taken from L&RH (1995:39):

- (21) a. The pond froze solid.
b. The butter melted to a liquid.
c. The glass broke into little pieces. (unaccusative)
- (22) a. The grass had been eaten bare by the goats.
b. The ice-cream was frozen solid.
c. The baby was shaken awake by the earthquake. (passive)

The resultative phrases in (20) and (21) are all predicated of the surface subject of the unaccusative verbs (*froze*, *melt*, and *broke*) and the passive verbs (*eaten*, *frozen* and *shaken*). In (21a), for example, *the pond*, which is the surface subject of the sentence, froze and as result became solid. Similarly in (22a), the grass was eaten by the goats and as a result became bare.

Contrary to unaccusative (passive) verbs, unergative verbs cannot take resultative phrases, because their subjects are also underlying subjects, i.e. they occupy [Spec, IP] on all syntactic levels of representation {see Simpson

1983).⁴ Consider the following examples taken from L&RH (1995:35-36) and Carrier and Randall (1992:191):

- (23) a. * Dora shouted hoarse.
b. * John danced tired.
c. * The children laughed sick.

The English verbs in the sentences above are unergative. Sentence (23a) cannot mean that Dora shouted and as result of the shouting got hoarse. Similarly, (23b) and (23c) do not have resultative meanings.

However, Carrier and Randall (1992), L&RH (1995) and Simpson (1983) argue that the resultative meaning of the sentences in (23) can be achieved through the addition of the so-called *fake reflexive objects*. The resultative phrases in (24) are interpreted as being predicated of the reflexive pronoun, which is a co-referent of the subject:

⁴ However, L&RH (1995:56) argue that not all unaccusative verbs pass the resultative phrase test. There are two classes of verbs which do not take resultative phrases; verbs of appearance, such as *arrive*, and *come* and verbs of existence, such as *remain*, *stay* and *exist*.

- (24) a. Dora shouted herself hoarse.
b. John danced himself tired
c. The children laughed themselves sick.

The reflexives are direct objects, therefore (24) is a way of predicating something of the subject of an unergative verb while obeying the DOR.

L&RH (1995:36-37) further point out that unergative verbs can be used with resultative phrases when they take a *nonsubcategorized object DP*. Consider example (25), taken from L&RH (1995:36):

- (25) a. Sylvester cried his eyes out.
b. Sleep your wrinkles away.

The verbs in (25) are unergative. Resultative phrases are possible with them because the post verbal DP is not a true argument of the verb i.e. it is not theta-marked by the verb, since unergatives in themselves do not take internal arguments (object DPs). The resultative phrases are predicated of the nonsubcategorized post-verbal DP (*his eyes* and *your wrinkles*). The examples in (24a)-(24c) therefore show that unergative verbs, in contrast to

unaccusatives, cannot combine with bare resultative phrases, but require some sort of object (either a fake reflexive or a non-subcategorized argument) in order to be compatible with a resultative predicate. The possibility of adding a bare resultative predicate to an intransitive verb can therefore be used as a test to distinguish unaccusative verbs from unergative verbs in English.

3.5.6 Locative inversion construction

The locative inversion construction is assumed to be another test that can be used to distinguish unaccusative verbs from unergative verbs (Bresnan and Karneva 1989, Bresnan and Mchombo 1987, Demuth and Mmusi 1997, Hoekstra and Mulder 1990, L&RH 1995, Machobane 1995). It is assumed that only intransitive verbs can be found in locative inversion constructions, and notably not all intransitive verbs, but only unaccusative verbs and passive verbs are allowed to form locative inversion constructions. This means therefore that unergatives do not form locative inversion constructions.

A pre-verbal locative DP and post verbal subject-DP characterize a locative inversion construction. A typical locative inversion construction is given in (25):

- (25) a. The towers and spires of a town appeared in the distance.
b. In the distance appeared the towers and spires of a town.

(L&RH 1995:218)

A significant property reflected in the construction in (25) is that the verb is an intransitive verb. L&RH (1995) discuss that it is this property that makes locative inversion an unaccusative diagnostic. It is assumed that not all intransitive verbs can be found in the locative inversion construction. But only unaccusative verbs can be found in this construction:

- (26) a. Many people work in the hotel.
b. *In the hotel work many people.

Example (26b) is ungrammatical because the verb *work* is an unergative verb.

Locative inversion as an unaccusative diagnostic is also attested in Bantu languages. For example in Chichewa, locative inversion does distinguish unaccusatives from unergatives. Examples of a locative inversion construction taken, from Bresnan and Karneva (1989:2) are given in (27) and (28):⁵

(27) a. Ku-mu-dzi ku-li chi-tsime.

17-3-village SC17 -be 7-well.

‘In the village is a well.’

b. Chi-tsime chi-li ku-mudzi.

7-well 7 SB-be LOC17-3-village.

‘The well is in the village.’

(28) a. Ku-mu-dzi ku-na-bwér-á a-lendô-wo.

17-3-village SC17 PST-come-FV 2-visitors-those.

‘To the village came those visitors.’

b. A-lendô-wo a-na-bwér-á ku-mu-dzi.

2-visitor- 2 those 2 SB-PST-come-FV 17-3-village.

‘Those visitors came to the village.’

⁵ See appendix A for glosses and abbreviations.

According to Bresnan & Karneva (1989), locative inversion is possible only with verbs whose highest thematic role is a Theme, and according to the thematic classification developed by Demuth and Mmusi (1997), only unaccusative and passivised transitive constructions have the Theme as their highest thematic role and, therefore can be found in locative inversion constructions. On the contrary, unergatives and transitive verbs have the Agent as their highest thematic role therefore cannot be found in locative inversion. Therefore, since examples (27) and (28) allow the locative inversion construction the verbs *-li* 'be' and *-bwérá* 'come' are unaccusative.

The impossibility of using unergatives in locative inversion can be illustrated with the Chichewa unergative verb *-imba* 'sing'. Example (29) in Chichewa is ungrammatical, since the verb *-imba* 'sing' is unergative and its highest thematic role is an Agent. Therefore, it cannot be found in the locative inversion construction:

- (29) a. *M-mi-têngo mu-kú-imb-á a-nyâni.
18-4-tree SC18-PROGR-sing-FV 2-baboons
'In the trees are singing baboons.'

Bresnan & Karneva (1989:16)

In chapter 4, I will further discuss locative inversion and see what results it yields for siSwati on the basis of Bresnan and Karneva's analysis.

3.6 OTHER INSTANCES OF UNACCUSATIVITY

Two instances of unaccusativity that have been studied extensively are the passive and the so-called raising construction briefly introduced in chapter 2. I discuss them in turn below.

A verb can have the lexical property of being unaccusative, or it can become unaccusative as the result of a passivization process. Passive verbs are unaccusative verbs that are derived from transitive verbs by the productive rule of passivisation. As already mentioned, one of the properties of unaccusatives is their inability to assign accusative Case. Another property of unaccusative verbs is the absence of an external argument. Passivisation

derives constructions with exactly these properties: If a transitive verb is passivised, it loses the ability to assign accusative Case, and it no longer selects a DP in the subject position. As a result, the internal argument now moves to the subject position to receive nominative Case and becomes the derived subject of the passivised verb. This process is also characteristic of unaccusative verbs.

- (30) a. John melted the ice. (transitive)
b. The ice melted. (unaccusative)
- (31) a. John ate the ice-cream. (transitive)
b. The ice-cream was eaten. (passive = unaccusative)

The so-called raising verbs, such as *seem* also have the property of unaccusativity. Like passive and other intransitive unaccusative verbs, they do not select an external argument and do not assign accusative Case. The important difference between raising verbs and unaccusative verbs like *melt* in (30b) is that raising verbs take an *infinitival clausal complement*. Since the subject of an embedded infinitival clause does not get nominative Case (infinitives do not assign nominative Case), the embedded subject is raised

to the subject position of the main clause in order to be case-marked.

Consider the following examples in (31):

- (31) a. Seems [John to love her]
b. John seems [to love her]

In (31a), *seems* takes an infinitival clausal complement (the embedded clause in square brackets, *John to love her*). (31a) is the D-Structure, where *John* is the subject of the embedded clause, while the subject position of the main clause is empty. Since *seems* does not assign an external θ -role in (31a), the NP *John* is raised to the subject position of the main clause to get (nominative) Case, hence the derivation in (31b).

3.7 CONCLUSION

To sum up this chapter, I have discussed the various tests for unaccusativity and passive and raising constructions. The two classes of intransitive verbs that can be distinguished i.e. unergative and unaccusative are attested cross-linguistically. Therefore, it is plausible to assume that they also exist in siSwati. In the next section, I want to investigate whether the tests discussed

in this chapter or other tests exist for siSwati as well and therefore, whether the existence of unaccusative verbs can be proven for this Bantu language.

CHAPTER 4

UNACCUSATIVITY IN SISWATI

4.1 INTRODUCTION

Having discussed various theories of unaccusativity by looking at different languages that have been extensively researched, I now turn to unaccusativity in siSwati. The working hypothesis is that verbs, which are unaccusative in other languages, are unaccusative in siSwati as well. I will examine which of the tests for unaccusativity introduced in chapter 3, can also be applied to siSwati and see what results they yield.

I will discuss passive and raising, impersonal passive, causative alternation and locative inversion since the other tests cannot be applied to siSwati. This chapter is structured as follows: Section 4.1 examines the passive in siSwati to see if it has the property of unaccusativity as assumed in most theories of unaccusativity. In Section 4.2, I investigate whether siSwati does have raising verbs since these types of verbs have the properties of unaccusativity (see chapter 3, section 3.5). Section 4.3 challenges one of the tests proposed by Perlmutter (1978) that I discussed in chapter 3, which states that

unaccusative verbs do not form impersonal passives. I show that certain siSwati verbs that can be classified as unaccusative by various syntactic diagnostics do nevertheless form impersonal passive. In section 4.4 I examine the properties of the causative alternation in siSwati, to test whether the siSwati verbs participating in the causative alternation are truly unaccusative. In section 4.5, I discuss locative inversion constructions in siSwati. Section 4.6 is the conclusion.

4.2 INSTANCES OF UNACCUSATIVITY IN SISWATI

As was shown in chapter 2, passivised verbs are unaccusative in that the derivation of a passive sentence also involves the promotion of an internal argument to subject position. Since siSwati forms passives productively, I discuss the passive in siSwati as one clear instance of unaccusativity in this section.

My discussion is based on the analysis of the passive presented in Baker (1988) and Baker, Johnson & Roberts (1989). Baker (1988) offers an explanation for the fact that the external theta-role is absorbed in a passive

by arguing that the passive morpheme is a nominal argument, which receives an external theta-role from the verb.

The passive morpheme for siSwati is *-w-*. Since the passive morpheme is a head, it is located in a VP-external head position, which is Infl. The hypothesis is that the passive morpheme is an external argument of the verb and that explains why there cannot be an external argument DP in a passive: having both the passive morpheme and an external agent DP would violate the Theta Criterion, which states that each theta-role is assigned to one and only one argument. Therefore, sentences such as (1), in which an agent and the passive co-occur, are ungrammatical:

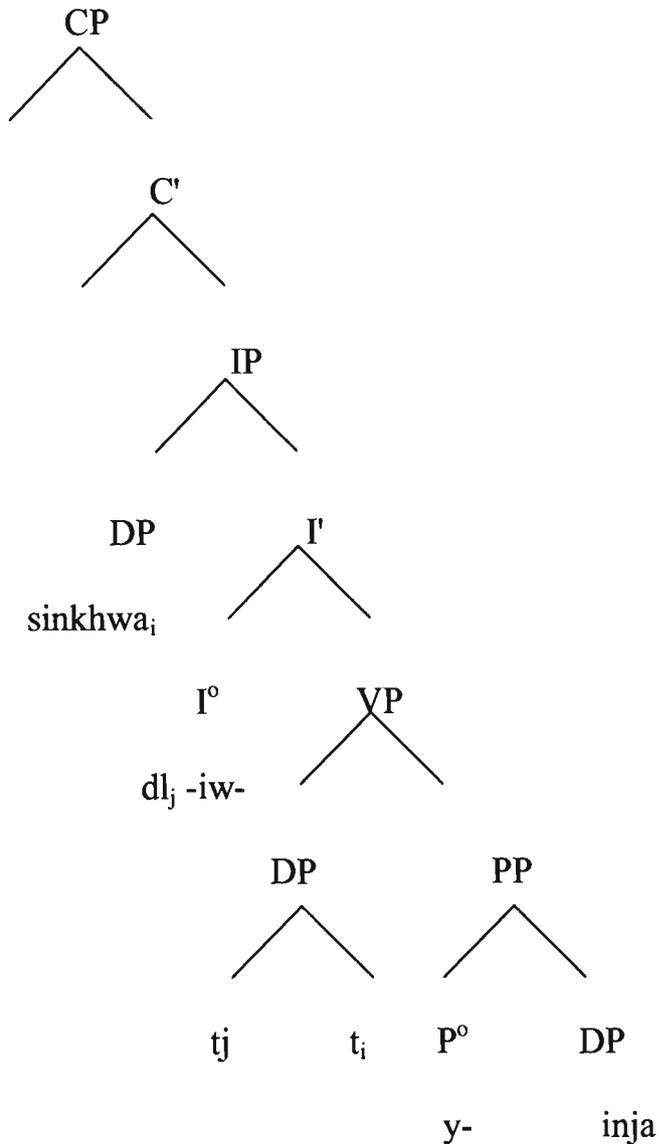
- (1) *Inja idl-iw-a sinkhwa.
dog AGR-eat-PASS-FV bread.
Lit: 'the dog was eaten by the bread.'

Grammatical passives in siSwati therefore cannot occur with an external argument in subject position; the agent of the transitive construction in (2a) must either disappear (2bii) or must be realized in an oblique PP introduced by the preposition 'by' or its equivalent (2bi):

- (2) a. Inja i-dl-a sinkhwa.
 the dog AGR-eat-FV bread.
 ‘The dog is eating bread.’
- b. (i) Sinkhwa si-dl-iw-e y-inja.
 Bread SC-eat-PASS-PERF COP-dog.
 ‘The bread was eaten by the dog.’
- (ii) Sinkhwa si-dl-iw-e.
 bread SC-eat-PASS-PERF.
 ‘The bread was eaten.’

In (2b) we observe that the object DP *sinkhwa* ‘bread’ has been elevated to the subject position. The external θ -role has been completely absorbed by the passive morpheme. The sentence in (2bii) is syntactically represented as follows:

(3)



(3) illustrates that the passive formation in siSwati involves two movement steps. The first movement is V° to I° incorporation, where the verb *dl-* 'eat' moves from its position as head of the VP to the passive morpheme in I°.

This movement is motivated by the *Stray Affix Filter*, a principle which requires the passive morpheme to be attached to the verb at surface structure (Baker 1988). The second movement is the movement of the object DP *sinkhwa* ‘bread’ from complement of the verb position to Spec, IP. Since the by-phrase is an adjunct, it would move from the complement position.

As discussed in chapter 2, the reason for the object DP to be elevated to the subject position is because once a transitive verb such as *dl-a* ‘eat’ is passivised, it loses its ability to assign accusative Case. Since there is no argument DP in the subject position, the internal argument can move to Spec, IP and receive nominative Case. It hence becomes the derived subject of the passivised verb. It is this process of case-driven A-movement which is also characteristic of unaccusative verbs. We can therefore conclude that passives in siSwati, like presumably in all other languages, are unaccusative verbs derived from transitive verbs through the productive rule of passivisation.

Van der Spuy (1997) identifies another derived unaccusative construction which is the so-called *neuter passive*, described in Doke’s (1927) in grammar of isiZulu. It is almost identical to the passive. The neuter passive

uses the morpheme *-ek ~ -akal*, which means that there is a possibility or potential that something can happen to the subject DP:

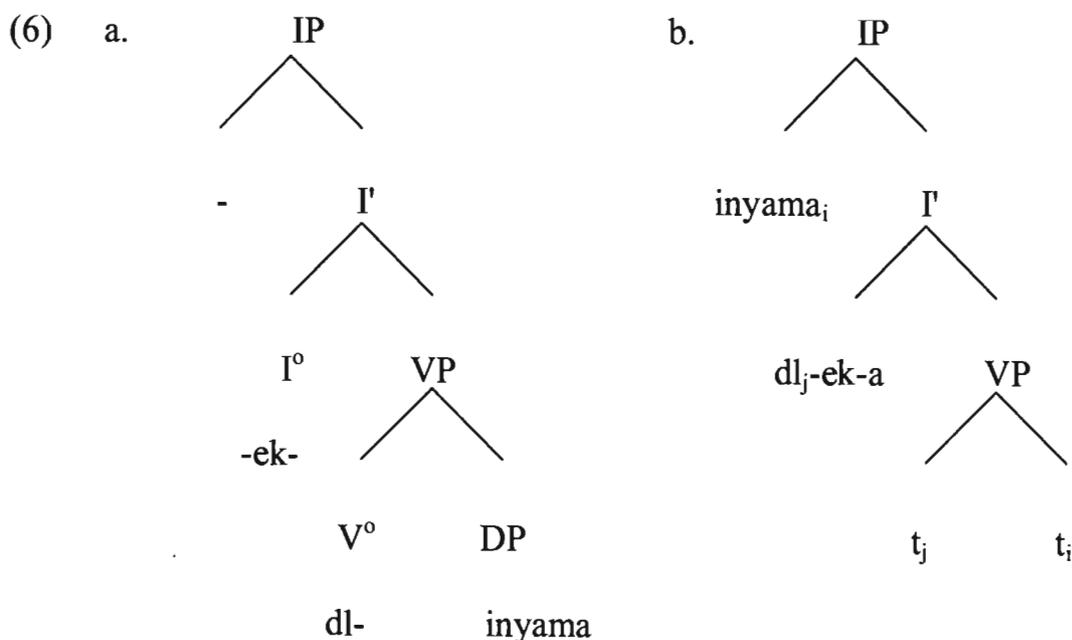
- (4) a. Sipho u-dla inyama.
Sipho SC-eat-FV meat.
'Sipho is eating the meat.' (transitive)
- b. Inyama i-ya-dl-ek-a
meat SC-PR-eat-NEP-FV.
'The meat is edible.' (neuter-passive = unaccusative)

The sentence in (4b) means that the act of eating meat is possible, without actually mentioning the person eating the meat. In contrast to the passive, the neuter passive cannot have a by-phrase:

- (5) *Inyama i-ya-dl-ek-a ngu Sipho.
meat SC-PR-eat-NEP-FV by Sipho.

Once the neuter-passive morpheme attaches to the verb, the verb loses its ability to assign an external theta-role and accusative Case. It only assigns an internal argument, which then moves to the subject position to get

nominative Case. In (4b), the verb *dleka* ‘edible or eatable’ selects an object DP *inyama* ‘meat’ which is left without Case at D-Structure, which consequently triggers DP-movement; the object DP moves to the subject position to be Case-marked. Significantly, we can assume that the neuter passive morpheme *-ek-* is located in Infl where it is assigned an external theta-role, just like the standard passive morpheme. In the neuter passive, there is also V^0 -to- I^0 incorporation; the verb moves from V^0 to I^0 to be attached to the neuter passive morpheme. A syntactic representation of the S-Structure of sentence (4b) is given in (6):



Evidence that *-ek-* absorbs an external theta-role is provided by the fact that it is not possible to attach the neuter-passive to transitive or unergative verbs without absorbing the external theta-role, hence examples (7) and (8) are ungrammatical:

- (7) a. *Sipho u-ya-sebent-ek-a.
 Sipho SC-PRT-work-NEP-FV.
- b. *Ba-ntfwana ba-ya-hlabel-ek-a.
 SP2-children SC-PRT-sing-NEP-FV. (unergative)
- (8) a. *Sipho u-dlal-ek-a i-bhola.
 Sipho SC1a-eat-NEP-FV SP9-ball.
- b. *Gugu u-phek-ek-a li-phalishi.
 Gugu SC1a-cook-NEP-FV SP5-porridge. (transitive)

4.3 RAISING VERBS IN SISWATI

As has been discussed in chapter 3, raising constructions also have the property of unaccusativity. They do not assign an external theta-role or accusative Case. For instance, the verb *seem* in English is a raising verb; it combines with an infinitive clause. See example (9) again:

- (9) a. seems [_{IP}John to love her]
b. John seems [_{IP}to love her]

In (9a), the DP *John* is the subject of the embedded clause *to love her* and the subject position of the main clause lacks a subject DP. As was noted in chapter 2, all sentences need to have their subject position filled. Therefore, as a consequence, the subject of the embedded clause is raised to the subject position of the main clause.

A crucial property of raising that has been observed in languages such as English is that raising is only possible from an infinitival clause. If the embedded sentence is finite, its subject cannot move to the subject position of the main clause since finite INFL can only assign Case to the subject DP. This can be illustrated in (10);

- (10) a. *It seems John to love her.
b. *John seems that loves her.

This section will therefore investigate whether there are true raising verbs in siSwati. Consider the siSwati examples in (11) and (12):

- (11) a. *Ngatsi John ku-tsandz-a yena.
 seems John to-love FV her.
 lit: ‘Seems John to love her.’
- b. *John ngatsi ku-tsandz-a yena.
 John seems to-love-FV her.
 ‘Seems John to love her.’ (infinitival clausal complement)
- (12) a. ngatsi John u-tsandz-a yena.
 seems John SC1a-love her.
 ‘Seems John loves her.’
- b. John ngatsi u-tsandz-a yena.
 John seems SC1a-love her.
 ‘John seems loves her.’

In (11) and (12) above, *ngatsi* semantically corresponds to the English raising verb *seem*⁶. However, contrary to the properties of raising verbs in languages such as English, in siSwati, it seems that *John* is raised from a finite embedded clause, since the embedded clause *u-tsandza yena* ‘loves her’ is tensed. Nevertheless, raising out of an embedded finite clause has

⁶“Ngatsi does not agree with subject and therefore is not possibly a verb. In Nguni languages there are sentences like “*ungathi uJohn ucebile*” where *ungathi* is a complementiser not a verb.

been attested in Nguni as well as languages such as Greek and Japanese (Alexiadou and Anagnostopoulou 1999, Van der Spuy 1997, Zeller 2006).

Van der Spuy (1997, 2001) and Zeller (2006) discuss the Nguni verb *fanele* ‘must or ought to’ as another example of a siSwati raising verb. Consider the following example (it has been translated into siSwati):

- (13) a. Ku-fanele kutsi [Jabu a-yekele]
 LOC-must that Jabu SC-resign
 ‘It is necessary that Jabu must resign.’
- b. Jabu u-fanele kutsi a-yekele
 Jabu SC-must that SC-resign
 ‘Jabu must resign.’

(Zeller 2006:17, Van der Spuy 2001:244)

In (13a) the verb *fanele* has been prefixed with the locative prefix *ku-* and combines with an embedded finite clause, which has the subject DP *Jabu*. This suggests that there is no subject DP in the subject position of the main clause (Zeller 2006). Example (13a) therefore looks syntactically identical to (14):

(14) It seems that John loves her.

Contrary to the English raising construction the embedded clause in (13) is finite. In (13b), the subject-DP has moved (from the embedded finite clause) to the subject position of the matrix clause and the moved subject-DP agrees with the verb. The embedded sentence in (13) is in the *subjunctive* mood. This is one of the important aspects which differentiate siSwati (and isiZulu) raising constructions in (13) and the ungrammatical English example in (10), where the subordinate sentence is finite but in the indicative mood (Zeller 2005:18). This means that in English subjects of the finite clauses in the indicative mood cannot raise but only subjects of infinitive sentences must raise. In siSwati (and isiZulu) raising of the subject-DP is made possible by the subjunctive mood. Zeller discusses that the subjunctive mood occupies an intermediate position between finite and non-finite sentences. Hence, raising is *optional*, this explains why (13a), in which the subject-DP is in the embedded clause, is also grammatical.

4.4 IMPERSONAL PASSIVES AND SISWATI UNACCUSATIVE VERBS

As discussed in chapter 3, Perlmutter (1978) argues that unaccusative verbs do not occur in impersonal passive constructions. As far as passivisation of intransitive verbs is concerned, only unergatives can be passivised, since they assign one external argument, which can be absorbed in the passive. The German example discussed in chapter 3, which are repeated here as (15) for convenience, illustrate this possibility.

- (15) Es wurde getanzt
it was danced
'There was danced.'

Impersonal passives involve the absorption of an external theta-role and unaccusatives do not assign such a role. Therefore, impersonal passives cannot be formed with unaccusatives.

Verbs that are assumed to be unergative in other languages do form impersonal passives in siSwati. Consider the following examples:

(16) Ku-ya-hlek-w-a lapha kakhulu.

It-PRT-laugh-Pass-FV here a lot.

‘It is laughed here a lot.’

(17) Kwa- jayiv-w-a e-sitolo.

it PST-dance-Pass-FV Loc-shop.

‘It was danced at the shop.’

(18) Ku-ya-setjent-w-a.

It-PRT- work-Pass-FV.

‘It is worked.’

In forming the impersonal passive in siSwati an impersonal prefix *ku-* (past tense *kwa-*) is used. It is an expletive that satisfies the EPP. As noted in section 4.2, that when a verb attaches to a passive morpheme, it absorbs the external θ -role. In forming the impersonal passive, an expletive dummy element is inserted in the subject position to satisfy the EPP, since there is no internal argument to move to the subject position. Sabel and Zeller (2006) argue that the expletive in Nguni in contrasts to the English expletive pronouns *it* and *there*, is a null expletive (expletive *pro*), it is semantically

and phonologically vacuous. According to this view, the marker *ku-* which is attached to the verb in siSwati signals the presence of an expletive *pro* in subject position. The examples in (16) – (18) show that siSwati verbs; *hleka* ‘laugh’, *jayiva* ‘dance’ and *sebenta* ‘work’ as expected can be found in impersonal passive constructions.

However, this test poses an interesting problem in identifying unaccusative verbs. SiSwati data shows that some verbs which are unaccusative in other languages do form impersonal passive and some do not. Verbs such as *ncibilika* ‘melt’, *oma* ‘dry’, which are unaccusative in other languages, do not form impersonal passives in siSwati, as expected, by the impersonal passive test:

(19) *Kwa-ncibilik-w-a e-langeni.

it-melt-CM-Pass-FV Loc-sun.

‘It was melted in the sun.’

(20) *K-omi-w-a ngu Sipho.

It-dry-Pass-FV by Sipho.

‘It was dried by Sipho.’

Verbs such as *fika* ‘arrive’ and *bulala* ‘break’ contrary to what Perlmutter observed form impersonal passives in siSwati form impersonal passive:

(21) Kwa-fik-w-a.

It-arrived-Pass-FV.

‘It was arrived.’

(22) Kwa-bula-w-a ngematje.

It-broke-Pass-FV by the stone.

‘It was broken by the stone.’

The data above is grammatical. However, this possibility is a violation of the 1AEX, which allows one advancement to the subject position (see section 3.1). Unlike German and Dutch, siSwati apparently allows for passivisation of verbs which are unaccusative in other languages. Are these verbs therefore unergative in siSwati? Although the impersonal passive test would suggest so, it is not certain that because the verbs in (21) and (22) allow the impersonal passive they are necessarily unergative, as suggested by Perlmutter (1978). It has been noted in the literature that certain languages, including Bantu languages, allow for the passivisation of unaccusative verbs.

For example Zeller (2006) argues that this is possible in Kinyarwanda where unaccusative verbs such as *fall*, *arrive* and *come* can be passivised. The following examples are taken from Zeller (2006:4):

(23) Amategura y-a-guu-w-e-ho n'amabuye.

tiles SP-PST-fall-Pass-ASP-Loc by stones.

'The tiles were fallen on by the stones.'

(24) Inzu y-a-ge-z-w-e-ho n'abaguzi.

house SP-PST-arrive-ASP-Pass-ASP-Loc by buyers.

'The house was arrived at by the buyers.'

(25) Ubusitaani bw-eer-w-a-mo n'inyaanya.

Garden SP-grow-Pass-FV-Loc by the tomatoes.

'The garden was grown in by the tomatoes.'

In siSwati some verbs that are unaccusative in other languages allow the impersonal passive. In order to explain this, one could argue that, unlike the impersonal passives in German and Italian, where only the external theta-role of an intransitive verb can be absorbed, SiSwati and other Bantu languages (such as Kinyarwanda) absorb the highest theta role available in a passive, which can be an external one, but also an internal one. As result, the

verbs in (21) and (22) can form the impersonal passive that is why SiSwati and Kinyarwanda have passivised unaccusatives.

The passive morpheme in siSwati cannot only be in INFL (where it absorbs the external theta-role), but also in VP, where it is perhaps directly attached to the verb. As a VP-internal clitic, it would then absorb an *internal* theta role. The consequence would be that siSwati does indeed allow the passivisation of an unaccusative verb, as discussed with passives in section 4.1. The assumption would be that the passive morpheme in siSwati always absorbs the highest argument in the theta hierarchy. So that with transitive verbs, only the external argument, and not the internal argument, can be absorbed. But with (at least some) unaccusatives verbs where there is no external argument, you can also absorb the internal theta role and get an impersonal passive.

Furthermore, impersonal neuter passives too are possible:

(26) a. Ku-ya-sebent-ek-a.
It-PRT-work-NEP-FV.
'Work can take place.'

b. Ku-ya-hlek-ek-a.
It-PRT-laugh-NEP-FV.
'It is possible to laugh.'

Unaccusative verbs such as *fika* 'arrive', *vela* 'appear' and *nyamalala* 'disappear', which are classified as unaccusative in many languages, also allow for the formation of impersonal neuter passives:

(27) a. Ku-ya-fik-ek-a e-dolobheni.
it-PRT- arrive-NEP-FV Loc-town.
'It is possible to arrive in town.'

b. Ku-nyamalal-ek-a nge-madina.
it-disappear-NEP-FV ASP-yesterday.
'It is possible to disappear in lunch hour.'

Since these verbs do not have an internal argument to be raised to the subject position the pleonastic element is inserted to fulfill the EPP, which requires all clauses to have subject position filled.

However, given the fact that some verbs behave as unaccusative the conclusion drawn above probably has to be revised, as not all internal theta roles can be absorbed (see examples (19) and (20) above). An interesting topic of future research would be to look at the semantic nature of these different sets of verbs and see if those whose internal theta roles can be absorbed can be systematically distinguished from those which do not allow passivisation. This point will not be discussed here because it goes beyond the scope of the dissertation. To conclude this section, I note that impersonal passives are also problematic as a test for unaccusativity in siSwati.

4.5 THE CAUSATIVE ALTERNATION IN SISWATI

As was discussed in chapter 3 (section 3.2.1), it is assumed by various researchers that intransitive verbs that participate in the causative alternation have the property of unaccusativity. Consider again the English example in (28):

- (28) a. Peter melted the ice.
b. The ice melted.

In the standard analysis of transitive causatives in English, which are analyzed as being monoclausal, the object must be a true object, i.e. it must be an *internal* argument generated in VP, because there is only one clause, and the causer already fills the subject position. Therefore, the assumption is that if the object of the transitive variant appears as the subject of the intransitive variant, it is still an internal argument, hence, the verb is unaccusative.

In this section, I examine the properties of the causative alternation in siSwati and discuss whether siSwati intransitive verbs participating in the causative alternation are truly unaccusative.

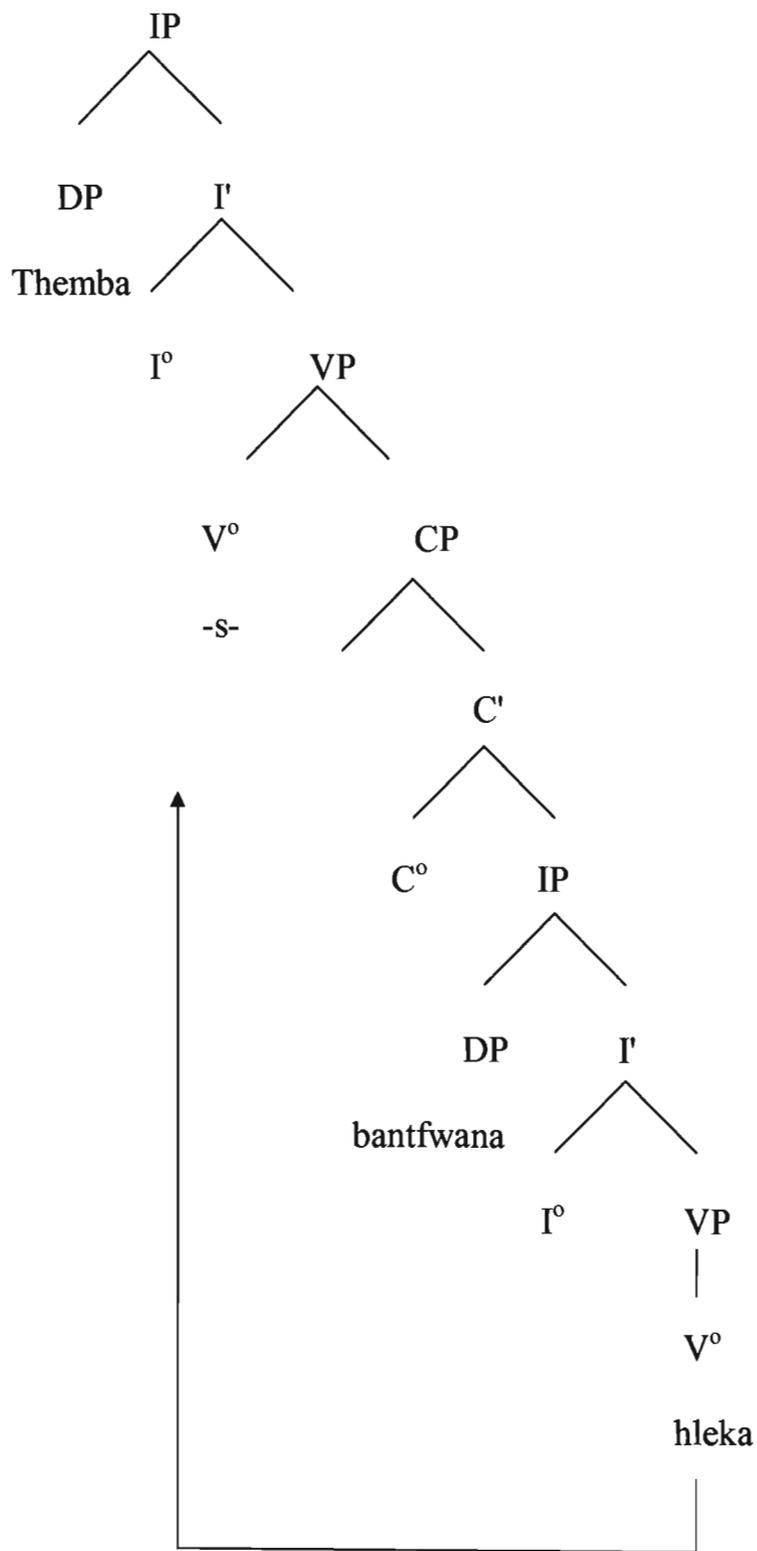
The causative in siSwati, like in most Bantu languages, is derived morphologically via the addition of the causative affix *-is-*. Consider the following examples of a causative alternation from siSwati:⁷

⁷ Glosses and abbreviations are provided in appendix A. SiSwati like all Bantu languages has noun classes, see appendix B for the classification of noun classes developed by Meinhof (1906 quoted in Doke 1927).

- (29) a. Themba u-hlek-is-a ba-ntfwana.
 Themba SC1a-laugh-CM-FV PR2-children.
 ‘Themba makes the children laugh.’
- b. Ba-ntfwana ba-ya-hlek-a.
 PR2-children SC-PRT-laugh-FV.
 ‘The children are laughing.’

(29a) is a morphologically derived causative construction. Importantly, in Baker’s (1988) influential incorporation theory, such constructions are analysed as being derived from syntactically bi-clausal constructions. The causative morpheme *-is-*, which is analysed as a separate verb in Baker’s theory, Baker (1988), takes it to be a verb with the meaning ‘to make’. This therefore means that the sentence in (29a) is made up of two clauses, the verb of the first clause (expresses the act of causing) is the causative morpheme and its subject is *Themba* (the causer), and the verb of the second clause is *hlek-*, and the DP *bantfwana* is the subject of the embedded clause. In Baker’s theory, the two verbs combine via movement: the verb of the second clause moves to the first clause and combines with the causative affix, hence deriving the sentence in (29a). This can be syntactically represented as follows:

(30)



(Move)

This means that the object of a transitive causative verb like *uhlekisa* does not have to be an internal argument of the causative verb but can be analysed as the subject of the clausal complement of the causative marker. So nothing forces us to assume that the object in (29a) is an internal argument. But then it does not follow that the subject of the intransitive variant is an internal argument and that the verb is unaccusative. In fact, (30) illustrates that the subject of *-hleka* can be generated in Spec I as an external argument. The verb *laugh* is analyzed as unergative in many languages. It is therefore plausible to assume that it is unergative in siSwati as well.

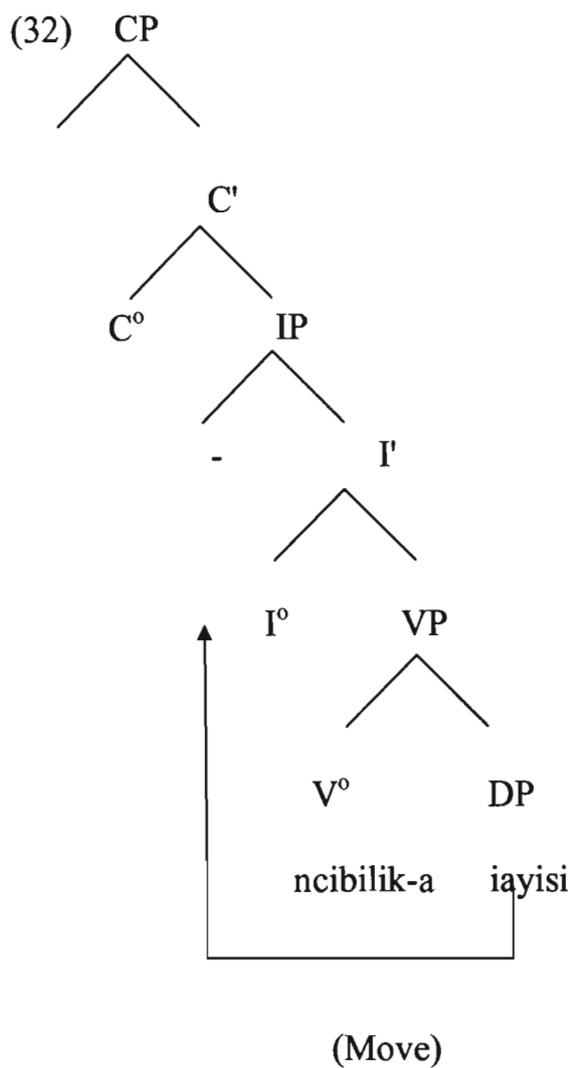
Importantly, siSwati verbs that correspond to the English verbs that participate in the causative alternation are also derived morphologically. A bi-clausal analysis is therefore possible with these verbs as well. Consider the following example:

- (31) a. Sipho u-ncibilik-is-a i-ayisi.
 Sipho SC1a-melt-CM-FV PR9-ice.
 ‘Sipho melted the ice.’
- b. Iayisi i-ya-ncibilik-a.
 ice SC-PRT-melt-FV.
 ‘The ice melted.’

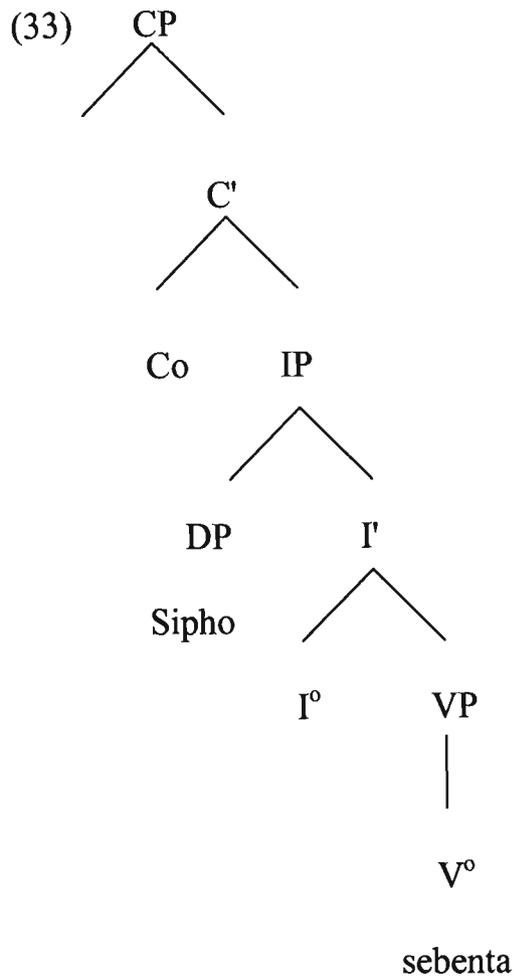
Since the transitive form of *ncibilik-* is also derived by means of a causative marker, the object in (31a) may theoretically be an external argument of a clausal complement. One can therefore conclude that, based on Baker’s Incorporation theory, the causative alternation is not an appropriate measure to test unaccusativity in siSwati, since unergatives can also appear in it, due to the bi-clausal derivation.

However, one could assume, as a working hypothesis, that those verbs whose corresponding form participates in the causative alternation in English are probably unaccusative in siSwati as well. This view is of course also compatible with Baker’s bi-clausal analysis. If *ncibilik-* is unaccusative, the argument of the embedded verb *ncibilika* ‘melt’ is base generated inside VP at D-Structure, and then moves to Spec, IP (of the lower clause) at S-

Structure. The following is the presumed syntactic representation of the lower clause:



If the transitive variant of the causative alternation is unergative, the argument of the respective intransitive verb generates in the subject position [Spec, IP]. (33) illustrates this for the verb *sebenta* ‘work’.



4.6 LOCATIVE INVERSION IN SISWATI

In this section, I discuss locative inversion in siSwati against the background of Bresnan and Kanerva (1989) analysis of locative inversion, discussed in chapter 3 (section 3.4.6). The hypothesis is that locative inversion is only possible with unaccusative and passive verbs and not possible with

unergative verbs. SiSwati, like Chichewa and other Bantu languages, does have locative inversion. In this section therefore I will test if the above hypothesis does hold for siSwati using verbs that are classified as unaccusative in other languages:

- (34) a. I-mali i-nyamalal-e e-ndlini.
 PR9-money SC-disappear-PERF Loc-house.
 ‘The money disappeared in the house.’
- b. E-ndlini ku-nyamalal-e i-mali.
 Loc-house SC-disappear-PERF PR9-money.
 ‘In the house disappeared the money.’
- (35) a. Ti-vakashi ti-fika e-khaya.
 PR8-visitors SC-come Loc-home.
 ‘Visitors come at home.’
- b. E-khaya ku-fika ti-vakashi.
 Loc-home SC-come PR8-visitors.
 ‘At home visitors come.’
- (36) a. Ema-futsa a-ncibilik-a e-bhodweni.
 PR6-margarine SC-melt Loc-pot.
 ‘The margarine melts in the pot.’
- b. E-bhodweni ku-ncibilika ema-futsa.
 Loc-pot SC-melt LOC PR6-margarine.
 ‘In the pot the margarine melts.’

Examples (34) to (36) show that locative inversion with the unaccusative verbs *nyamalala* ‘disappear’, *fika*, ‘come or arrive’, and *ncibilika*, ‘melt’ is possible. As in Chichewa, the locative DP can be analyzed as a grammatical subject of the locative inversion construction. Evidence for this, like in Chichewa, comes from subject-verb agreement. In the b-examples, the locative DP precedes the verb and it agrees with the verb through the locative marker *ku-*.

As predicted by Bresnan & Kanerva (1989), passives in siSwati can also form locative inversion since passives also have a Theme as their highest thematic role:

- (37) a. I-nyama i-cotjwa e-ndlini.
 PR9-meat SC-chop-PASS Loc-house.
 ‘The meat is chopped inside a house.’
- b. E-ndlini ku-cotj-w-a i-nyama.
 Loc-house SC-chop-PASS PR9meat.
 ‘In the house the meat is being chopped.’

Notably though, contrary to what has been observed by Bresnan & Kanerva (1989), verbs that are classified as unergative and have an Agent as their highest thematic role can undergo locative inversion in siSwati. This include verbs such as *hleka* ‘laugh’, *hlabela* ‘sing’, and *sebenta* ‘work’:

- (38) a. Ba-ntfwana ba-hleka e-motweni.
 PR2-children SC-laugh Loc-car.
 ‘The children are laughing in the car.’
- b. E-motw-eni ku-hleka ba-ntfwana.
 Loc-car SC-laugh PR2-children.
 ‘In the car the children are laughing.’
- (39) a. Ti-ngobiyane. Ti-hlabel-a e-sihlahleni.
 PR8-baboons SC-sing-FV Loc-tree.
 ‘The baboons are singing in the tree.’
- b. E-sihlahleni ku-hlabel-a ti-ngobiyane.
 Loc-tree SC-sing-FV PR8.
 ‘In the tree the baboons are singing.’
- (40) a. E-ma-dvodza a-sebent-a e-timayini.
 PR6-men SC-work-FV Loc-mines.
 ‘Men work in the mines.’
- b. E-timayini ku-sebenta ema-dvodza.
 Loc-mines SC-work PR6-men.
 ‘In the mines work men.’

The above data shows that in siSwati both unaccusatives (including passives) and unergatives can form locative inversion, therefore, locative inversion, although it works for other languages in distinguishing unergative from unaccusative, does not work for siSwati.

4.7 CONCLUSION

In this chapter, I have examined the two possible instances of unaccusativity which are attested in siSwati: passive and raising. I found that the passive is unaccusative in siSwati. I also observed that the neuter passive (Doke 1927, Van der Spuy (1997) is an unaccusative construction in siSwati. Moreover, I have found that SiSwati, like other languages where unaccusativity has been studied, has raising verbs. The corresponding raising verbs in siSwati select a finite clausal complement instead of an infinitival clausal complement.

However, the syntactic tests for unaccusativity suggested for languages such as English, Italian or German (impersonal passives, causative alternation and locative inversion) cannot be used as tests for unaccusativity in siSwati. SiSwati data has shown that some verbs that are unaccusative in other languages when tested against these unaccusative tests do not behave like

unaccusative verbs. For instance some unaccusatives appear in impersonal passive much against the behavior of unaccusative verbs. The fact that some unaccusatives behave like unaccusative in the discussed tests, shows that unaccusative verbs may exist in siSwati but there is no evidence from the tests discussed which would show that the subject of certain intransitive verbs originates in VP.

CHAPTER 5

CONCLUSION

5.1 INTRODUCTION

This chapter presents a summary of my findings, recommendations and suggestions for further research.

Unaccusativity as defined in the beginning of the thesis is a phenomenon that states that intransitive verbs fall into two classes; unaccusative verbs and unergative verbs. The difference between these two classes of verbs pertains to the D-Structure position of the surface subject of the two classes verbs. It is assumed that the surface subject of an unaccusative verb is underlying a direct object, whereas the subject of an unergative verb is underlying a subject.

5.2 FINDINGS

The main objective or purpose of this dissertation is to examine which of the tests for unaccusativity that are identified for other languages can also be applied to siSwati. In doing this I have examined the two instances of

unaccusativity identified in other languages: passive and raising and three different tests for unaccusativity (i.e. impersonal passive, causative alternation and locative inversion) suggested for languages such as English, Italian and German to see if it also holds for siSwati.

One of the findings is that the passive construction in siSwati like in other languages is unaccusative. It actually has the properties of an unaccusative construction. Once a transitive verb attaches to a passive morpheme *-iw-* it loses its ability to assign an external theta role and accusative Case. Another derived unaccusative construction in siSwati is the neuter-passive construction which is almost similar to the passive. It has the morpheme *-akal-* like the passive morpheme, when it attaches to a transitive verb it also loses the ability to assign external theta role and accusative Case.

Raising verbs as assumed in other languages such as English also exhibit properties of unaccusativity. An interesting finding is that siSwati raising constructions, like in Greek and Japanese raising, is out of a finite embedded clause rather than an infinitival embedded clause. SiSwati verbs like *ngatsi* ‘seems’ and *fanele* ‘ought to’ discovered by Van der Spuy 1997, 2001 and Zeller 2006 found in other Nguni languages are raising verbs in siSwati.

In discussing the three different tests suggested for other languages it turns out that neither of them neatly distinguishes unaccusative from unergative. However, this does not mean that siSwati lacks unaccusative verbs.

It is assumed that impersonal passives cannot be formed with unaccusative verbs, since it involves the absorption of an external theta role and unaccusative verbs do not have this theta role. Contrary to what is assumed, some verbs that are unaccusative in other languages allow impersonal passive in siSwati. This has been explained by the assumption that the passive morpheme absorbs the highest theta role in the theta hierarchy. So with unaccusative the internal argument is absorbed hence we have passivised unaccusatives. However, this is faltering since there are unaccusative verbs which do not form impersonal passive. The impersonal passive test therefore, is not an appropriate measure for unaccusativity in siSwati.

Another test that has been discussed is the causative alternation. It is assumed that intransitive verbs that participate in causative alternation have the property of unaccusativity. Unlike in English, siSwati causative

constructions are bi-clausal, an analysis based on Baker's incorporation theory. In this analysis the argument of the embedded clause is depicted as the true subject rather than an object which then moves to the subject position of the main clause. Causative alternation too does not justify that the subject is underlying an object like it does in other languages.

Another test is the locative inversion, although it works for other languages it also does not distinguish unergative from unaccusative in siSwati. It is assumed that locative inversion is only possible with unaccusative and passive verbs. Contrary, to this, siSwati data has shown that both unaccusative (and passive) and unergative verbs can be used in locative inversion constructions.

5.3 RECOMMENDATIONS AND SUGGESTIONS FOR FURTHER RESEARCH

The working hypothesis is that verbs which are unaccusative in other languages are unaccusative in siSwati; hence a suggestion for further research would be to see if siSwati has grammatical properties that could be

used to develop tests for unaccusativity since the available tests do not work for siSwati.

In the discussion, it has been shown in section 4.4 that unaccusative verbs in some Bantu languages (such as Kinyarwanda) can be passivised. Since the highest theta role can be absorbed. SiSwati data has shown that siSwati too has passivised unaccusatives. The internal argument is absorbed in unaccusative construction. It would be interesting to find out on the nature of the sets of verbs that are classified as unaccusative in other languages and whose internal theta role can be absorbed.

Another possible suggestion for further research would be to investigate whether a property of unaccusativity in siSwati, is determined by verbs alone or the VP. In some languages, for instance in Dutch and Italian, verbs of motion such as *walk*, *fly*, *go*, etc. become unaccusative when combined with a PP denoting the end point of a physical activity (Hoekstra and Mulder 1990).

APPENDIX A

GLOSSES AND ABBREVIATIONS

1, 2, 3 etc = Noun classes

ASP = Aspectual marker

CM = Causative morpheme

COP = Copulative marker

FV = Final Vowel of the verb

LOC = Locative morpheme

NEP = Neuter-passive morpheme

PR = Noun prefix

OC = Object concord

PASS = Passive morpheme

PERF = Perfect aspect morpheme

PROG = Progressive aspect

PRT = Present tense marker

PST = Past tense marker

SC = Subject concord

SP = Subject prefix

TN = Tense

APPENDIX B

MEINHOF'S NOUN CLASSIFICATION

CLASS	NOUN PREFIX
1.	umu- (1a = (u-) singular, bo- plural)
2.	ba-
3.	umu-
4.	imi-
5.	li-
6.	ema-
7.	si-
8.	ti-
9.	iN-
10.	tiN-
11.	lu-
12.	-
13.	-
14.	bu-
15.	ku-

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