THE CAUSATIVE AND ANTICAUSATIVE ALTERNATION IN *KIKONGO* (*KIZOMBO*)

by

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DECLARATION

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ABSTRACT

This study investigates the applicability and suitability of the syntactic decomposition approach to account for the causative and anticausative alternation in *Kikongo* (*Kizombo*) in terms of the structural nodes of Voice, vCAUS and Root as posited in this approach to (anti-)causativity (see Alexiadou 2010). In addition, the aspectual approach postulated by Vendler (1957) and further developed by Verkuyl (1972) and Smith (1997) is invoked for the reason that the two alternants in the causative and anticausative alternation in *Kikongo* (*Kizombo*) are associated with aspectual verb class differences. Research on the causative and anticausative alternation has long been the focus of extensive work in typological and theoretical linguistics. Two central issues revolve around the debate: first the properties of meaning that determine the alternation and the derivational relationship between the alternants, and second, the relation between the causative alternation and other transitivity alternations, e.g. passives and middles. This dissertation demonstrates that there is a wide range of acceptability judgments associated with anticausative uses of *Kizombo* in externally and internally caused change of state and change of location/position verbs. The verb root is the element of meaning that allows the *Kizombo* verbs to alternate irrespective of their verb classes, including agentive verb roots. All the causative variants of externally caused verbs are morphologically unmarked, but all the anticausative variants are morphologically marked. However, all the internally caused change of state verbs are morphologically unmarked. Both the causative and anticausative variants of change of location/position verbs are morphologically unmarked. The anticausative and passive sentences can license an external causer through an implicit argument. While the passive verb sentences can be modified by *by-agent*, *purpose* clause and *agent-oriented* phrases, the anticausative sentences can be modified by *instrument*, *natural force*, *agent-oriented* and *by-self* phrases. The acceptability of modifiers with anticausatives and passives presupposes a presence of a causer in both constructions. The causative form of change of location/position verbs is syntactically intransitive (i.e. in the locative-subject alternation), but its anticausative variant acquires a transitive-like form. Thus, the concept of causative is related to cause and effect of the argument participating in the process. The study considers competing approaches concerning the derivational direction of the causative and anticausative alternation. Given the data in *Kizombo*, it is argued that the syntactic decomposition approach is the most appropriate to account for the example sentences in the causative and anticausative constructions. The transitive approach could probably deal with the externally caused change of state verbs, as discussed in chapter 6, but would face a

challenge relating to the change of location/position verbs because none of the variants is morphologically marked.

Keywords: Bantu languages; *Kikongo*; *Kizombo*; Syntactic Decomposition; Lexical-semantic syntax interface; Change of state verbs; change of location/position verbs; externally caused verbs; internally caused verbs; aspectual verb class

Descriptors: LANGUAGE, LINGUISTICS

OPSOMMING

Hierdie studie het die toepaslikheid en geskiktheid van die benadering tot sintaktiese ontleding ondersoek ten einde rekenskap te gee van die kousatiewe en antikousatiewe wisseling in *Kikongo* (*Kizombo*) ten opsigte van die strukturele vertakpunte van Voice, vCAUS en Root soos in hierdie benadering tot (anti-)kousatiwiteit gestel (sien Alexiadou 2010). Daarbenewens is die aspektiese benadering soos voorgestaan deur Vendler (1957) en verder ontwikkel deur Verkuyl (1972) en Smith (1997) gebruik omdat die twee alternante in die kousatiewe en antikousatiewe wisseling in *Kikongo* (*Kizombo*) met aspektiese verskille in werkwoordklasse geassosieer word.

Navorsing oor die kousatiewe en antikousatiewe wisseling is reeds lank die fokus van omvangryke werk in tipologiese en teoretiese linguistiek. Twee sentrale kwessies word by die debat betrek: eerstens die eienskappe van betekenis wat die wisseling en die afleidende verband tussen die alternante bepaal, en tweedens, die verhouding tussen die kousatiewe wisseling en ander transitiwiteitswisselinge, bv. passief- en middelkonstruksies. Hierdie verhandeling toon dat daar ʼn wye reeks aanvaarbaarheidsuitsprake is wat met antikousatiewe gebruik van *Kizombo* by verandering van toestand en verandering van plasing/posisie van werkwoorde wat ekstern en intern veroorsaak word, geassosieer word. Die werkwoordwortel is die betekeniselement wat dit vir die *Kizombo*-werkwoorde moontlik maak om te wissel ongeag hulle werkwoordklasse, met inbegrip van agenswerkwoordwortels. Al die kousatiewe variante van ekstern veroorsaakte werkwoorde is morfologies ongemerk, maar al die antikousatiewe variante is morfologies gemerk. Al die intern veroorsaakte verandering van toestandswerkwoorde is morfologies ongemerk. Beide die kousatiewe en antikousatiewe variante van verandering van plasing/posisie van werkwoorde is morfologies ongemerk. Die antikousatiewe en passiewe sinne kan ʼn eksterne doener deur ʼn implisiete argument toelaat. Terwyl die sinne met passiewe werkwoorde gewysig kan word deur *deur-agent*, *doel*-sinsdeel en *agent-georiënteerde* frases, kan die antikousatiewe sinne gewysig word deur *instrument-*, *natuurlike krag-*, *agent-georiënteerde* en *deur-self*-frases. Die aanvaarbaarheid van modifiseerders met antikousatiewe en passiewes voorveronderstel ʼn aanwesigheid van ʼn doener in albei konstruksies. Die kousatiewe vorm van verandering van plasing/posisiewerkwoorde is sintakties onoorganklik (m.a.w. in die lokatief–onderwerp-wisseling), maar die antikousatiewe variant daarvan verkry ʼn oorganklik-agtige vorm. Die begrip van kousatief hou dus verband met oorsaak en gevolg van die argument wat aan die proses deelneem.

Die studie neem kompeterende benaderings met betrekking tot die afleidende rigting van die kousatiewe en antikousatiewe wisseling in ag. Gegewe die data in *Kizombo*, word aangevoer dat die benadering van sintaktiese ontleding die geskikste is om rekenskap te gee van die voorbeeldsinne in die kousatiewe en antikousatiewe konstruksies. Die oorganklike benadering sou waarskynlik aan die ekstern veroorsaakte verandering van toestandswerkwoorde, soos in hoofstuk 6 bespreek, aandag kon skenk maar sou voor ʼn uitdaging met betrekking tot die verandering van plasing/posisiewerkwoorde te staan kom aangesien geeneen van die variante morfologies gemerk is nie.

Sleutelwoorde: Bantoetale; *Kikongo*; *Kizombo*; sintaktiese ontleding; leksikaal-semantiese sintaksis-koppelvlak; verandering van toestandswerkwoorde; verandering van plasing/posisie-werkwoorde; ekstern veroorsaakte werkwoorde; intern veroorsaakte werkwoorde; aspektiese werkwoordklas

Beskrywers: TAAL, LINGUISTIEK

NKUFIKILU YA MAMBU

E ndongokelo yayi ita vovela mambu matadidi mtambululu ya “syntactic decomposition approach” muna ntadilu ya nsobana ya n’tung’a sina ye nkondelo ya n’tung’a sina numa m’vovo mya ndinga ya Kikongo, m’povelo ya Azombo, landila kono kya, Voice, vCAUS ye Root, bonso una ya sonekenwa kwa Alexiadou 2010. Muna komina nsamu, e ndongokelo ya ntangu ya m’vovo bosi una ya sonekenwa kwa Vendler (1957) ye ya toma syamiswa kwa Verkuyl (1972) ye Smith (1997) ivana ndwenga kikilu muna mpangululu ya mpanga zina zimonekanga muna ndinga ya Kikongo ye zaya nswaswani ina vena kati kwau. E mvavilu ya nsobana ya mpanga ya yatika kolo kya nda ye mambu mayingi mazonzelwanga tuka muna zimpila ye nsasilu zandongokelo ya zindinga. Nzonzelo zayingi zitoma kalanga vena kati kwa mintangi mya zindinga ye mambu mole matoma twasanga n’zonzi: E dyantete ditadidi e mvavilu ya dyambu dina ditwasanga e nsobana za makuku mum’vovo ye dina dikubayikanasanga. E dya n’zole ngikanasu ina ikalanga vana kati tuka muna n’tung’a sina wa kumbazi ye n’sobana zankaka. E ndongokelo yayi ita songa vo vena ye ntambululu zayingi zitadidi ntondelo ya m’vovo mina misonekenwe mun’kanda wau mitadidi kadiku kya n’tung’a sina muna m’vovelo ya Azombo ye mpanga zina zisobanga kadilu yevo fulu. E tuku dya mpanga ikima kina kivanganga vo mpanga muna Kizombo, kwa konso buka kina e mapnga kavwilwe, kalenda kwani soba, disongele vo ye mpanga zina zisonganga salu kya kubamena muntu kisobana kwani. Mpanga zawonso zina zisonganga ntung’a sina wa kumbazi ka zikomanga sono ko, kansi mpanga zina zakonda ntung’a sina wa kumbazi zikomanga sono. Ye mpe mpanga zina zisonganga ntung’a sina wa mukati kazikomanga sono ko. Mpila yau imosi, mpanga zina zisonganga nsobana ya fulu kazikomanga sono ko. Avo tubundikisa, mvovo mina misonganga nkondelo ya ntung’a sina ye mina misonganga avangwa mina ye n’tung’a sina dyona una vo in’kwa kuma. Avangwa utondanga n’tung’a sina ye m’vovo wa lukanu. E m’vovo una wakonda ntung’a sina sadilu ye ngolo za nza. E ntondelo ya lekwa yayi yau yole isonganga ndose ya n’tung’a sina wa kumbazi muna m’vovo myami. Nsansilu zaying zitalanga mambu man’sobana yamvovo itoma nwananga mumpila ya sasila m’vovo mundinga zayingi, kansi landila mpila ya mpanga mwamu ndinga ya Kikongo ita songa vo kaka “syntactic decompostion approach” ilenda sansula mambu ma nsobana za m’vovo mwami muna ndinga ya kikongo, mpovelo ya Azombo.

Mim'vovo mya mpwena: Bantu languages; Kikongo; Kizombo; Syntactic Decomposition; Lexical-semantic syntax interface; Change of state verbs; change of location verbs; externally caused verbs; internally caused verbs; aspectual verb class

Descriptors: LANGUAGE, LINGUISTICS

DEDICATION

In memory of my father, and for my mother.
To my wife and my children, who stood by me while writing this dissertation.

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Abbreviations and symbols

Adv	Adverb
+AG	Presence of Agent
-AG	Absence of Agent
AgrS	Subject agreement
AgrO	Object agreement
ARG1	Argument one
ARG2	Argument two
APPL	Applicative
AS	Argument structure
ASP	Aspect
CAUS	Causative/causer
CI	Controller of intransitivity
COS	Change of state verb
CP	Non-predicative complement
CTC	Continuous tense criteria
CRP	Case Resistance Principle
Det	Determiner
DEM	Demonstrative
LOC/Dem	Locative demonstrative
DC	Definiteness criteria
DP	Determiner phrase
DP_{Ag}	Determiner phrase that denote Agent thematic role
DP_{Th}	Determiner phrase that denote Theme thematic role
DP_{Loc}	Determiner phrase argument with locative morphology
DP_{Loc}	Determiner phrase argument without locative morphology
DVCon	Derived constellation
E1	Event structure one
E2	Event structure two
EXT	Verbal extension
FIT	Four In and Tense Criteria
FV	Final vowel
FREQ	Frequentative

GB	Government and Binding
GF	Grammatical function
GEN	Genetive
HABIT	Habitual
IND	Indactive mood
INTD	Intended
INTENS	Intensive
IP	Infinitival phrase
ITERAT	Iterative
LCS	Lexical conceptual structure
LF	Logical form
LGF	Lexical Functional Grammar
LMT	Lexical Mapping Theory
LP	Phonological form
LOC	Locative
LSR	Lexical semantic reprentation
MOD	Mood
MP	Minimalist Program
NEG^1	Initial negative marker
NEG^2	Final negative marker
NEUT	Neuter
N	Noun
NC	Nominal concord
OBJ	Object
OBL	Oblique
PASS	Passive
PERF	Perfective
PN	Personal name
POT	Potential
POSIT	Positional
PP	Prepositional phrase
PRED	Predicate
PRO	Pronoun
PST	Past
RRG	Role and Reference Grammar

PRN	Pronoun
PRS	Present
REC	Reciprocal
REL	Relative
REFL	Reflexive
REVER	Reversive
S	Subject
SC	Subject concord
SM	Subject marker
STAT	Stative
T1	Transition one
T2	Transition two
UG	Universal Grammar
UAH	Universal Alignment Hypothesis
V	Verb
VR	Verbal root
VIDMs	Verbs of inherently directed motion
*	Ungrammatical
#	Unacceptable
Numbers	represent noun class prefixes
Ø	morphologically unrealized class prefix

CHAPTER I
RESEARCH BACKGROUND

> Linguistics problems have a way of coming unsolved. Sometimes this is a consequence of the discovery of new data; more often, perhaps, it results from refinements of theory which by making more precise our notions of what may constitute a viable explanation, invalidate previously accepted ways of accounting for well-known facts.
>
> (Albenanthy 1974)

1.1 INTRODUCTION

This study investigates the applicability and suitability of the syntactic decomposition approach to account for the causative[1] and anticausative alternation in *Kikongo* (*Kizombo*) in terms of the structural nodes of Voice, vCAUS and Root as posited in the decompositional approach to (anti-)causativity (see Alexiadou *et al* 2006, Alexiadou 2010). In addition the aspectual approach postulated by Vendler (1957) and further developed by Verkuyl (1972) and Smith (1991, 1997) will be invoked for the reason that the two alternants (i.e. causative and anticausative) are associated with aspectual verb class differences. As will be seen in chapter 4, aspectual meaning contributes to temporal information and point of view expressed in sentences. Aspectual meaning gives two kinds of information: a situation is presented from a particular perspective or viewpoint; and the situation denoted in a sentence is indirectly classified as a state or an event of a certain type.

This chapter is organised as follows: Section 1.2 will give a brief overview of research on the causative and anticausative alternation as well as the rationale for choosing this topic for investigation in this study. Section 1.4 will present the research problem to be investigated, with sub-sections 1.4.1, 1.4.2 and 1.4.3 presenting the research questions, the hypothesis and the goals of the study. Section 1.5 will give a brief account of the research methodology and methods and sub-section 1.5.1 will focus on techniques of data collection, followed by the organization of the dissertation.

[1] Causative verbs can be defined as verbs which refer to a causative situation, that is, to a causal relation between two events, one of which is believed by the speaker to be caused by another. According to Raible (2001) three types of causatives may be distinguished in linguistic literature: (i) the morphological causative is the one in which the causative morpheme is an affix which applies to the base verb (ii) the syntactic causative is the one in which the causative morpheme is typicallyfree from typically a verb meaning and (iii) the lexical causative is the verb meaning CAUSE Vo but lacking any regular and productive causative. It is important to note that in some Bantu languages (e.g. isiXhosa) this causative has a regular marker (see Chapter 2).

1.2 RATIONALE FOR THE STUDY

Shibatani (2001) lists three main criteria for entities and relations that must be encoded in linguistic expressions of causation.

1. An agent causing or forcing another participant to perform an action, or to be in a certain condition.
2. The relation between (the) two events i.e., the causing event, and the caused performing/being event is such that the speaker believes that the occurrence of one event, the "caused event," has been realized at t2, which is after t1, the time of the "causing event".
3. The relation between a causing event and a caused event is such that the speaker believes the occurrence of the caused event depends wholly on the occurrence of the causing event - the dependency of the two events must be to the extent that it allows the speaker a counterfactual inference that the caused event would not have taken place at a particular time if the causing event had not taken place, provided that all else had remained the same.

The above definitional criteria allow for a large set of types of relationships based, on the lexical verb, the semantics of the causer, the semantics of the causee and the semantics of the construction explicitly encoding the causal relationship.

Comrie (1981:158-177), on the other hand, has studied factors (semantic or otherwise) that account for the distribution of causative constructions. He distinguishes between the linguistic encoding of causal relations and other, extra-linguistic concerns, such as the nature of causation itself, and questions of how human beings perceive causal relations. Of particular importance for this study, Comrie characterizes causative events in terms of two microevents perceived of composing a macroevent, and encoded in a single expression (of varying size and form). Formally, this author divides causatives into three types, depending on the contiguity of the material encoding the causing event and that encoding the caused event. These are: (i) lexical causatives, in which the two events are expressed in a single lexical item, as in the case of verb break; (ii) morphological causatives, in which the causing event and the caused event are encoded in a single verbal complex via causative morphology, and, prototypically, morphological marking showing the status of affected arguments, and (iii) syntactic causatives, in which the causing event and the caused event are encoded in separate clauses.

The morphological causative in the Bantu languages which is characterized by the transitivity (valency)-increasing verbal suffix **-is-** is well-documented from both descriptive and theoretical orientation (Baker 1985, 1988; Alsina 1992; Bresnan and Moshi 1993; Mchombo 2004; Shibatani 1976; Matsinhe 1994; Matambirofa 2003 Simango 1995; Fernando 2010; Hyman 2003) and references therein. Verbs with the causative suffix **-is-** introduce a new object argument (i.e. semantic role-bearing expression) to the predicate argument structure (PAS) of a verb. This kind of morphological causative denotes a causative reading in Bantu languages, which can commonly can be distinguished in terms of three variant interpretations, namely the coercive**,** the assistive and the permissive, as shown in (1), (2) and (3), but does, however, not relate to the problem of causativity addressed in this study.

(1) a. *Nzumba lambisi mwana luku*

Nzumba	*lamb-is-i*	*mu-ana*	*Ø-luku*
1-PN	cook-CAUS-PST	1a-child	11-porridge

Nzumba cooked child porridge (Intd: Nzumba caused the child to cook porridge)

b. *Malavu malekese mwana*

ma-lavu	*ma-lek-es-e*	*mu-ana*	*Ø-kilu*
6-drink	6/AgrS-sleep-CAUS-PST	1a-child	7-sleep.

Drink sleep child asleep (Intd: the drink caused the child to fall asleep)

In (1), the newly introduced external argument (i.e. *Nzumba* and *Malavu* 'drink') can be interpreted as the coercive Agent in which the referred subject causes the action to happen. Such an Agent may have the feature inanimate as in (1b), but there is always the condition that this argument causes the action or state.

(2) *N'longi vaikisi ana sikola end sakana*

Ø-n'longi	*vaik-is-i*	*a-na sikola*	*enda sakana*
1-teacher	go-CAUS-PST	2a-children school	go play

Teacher go out school children go play." (Intd: the teacher let the school children go out and play)

The example in (2), shows that the newly introduced external argument (i.e. *N'longi* 'teacher') may be interpreted as permissive Agent in which the DP *n'longi* permits the action (i.e. go out and play) to happen.

(3) *Luzolo vaikisi mwana muboloko*

Luzolo	*vaik-is-i*	*mu-ana*	*mu-Ø-boloko*
1-PN	go-CAUS-PST	1a-child	18-5-prison

Luzolo go out child in prison (Intd: Luzolo assisted/helped the child to get out of prison)

In the example in (3), the newly added external argument (i.e. *Luzolo*) can be interpreted as the assistive Agent in which the agent assists/helps the action (i.e. get out of prison) to happen. In view of the three interpretations of the newly added external argument, it is also possible that the external arguments *Nzumba* and *Luzolo* can be interpreted with any of the referred three agents mentioned above, depending on specific discourse factors.

The notion of causative which constitutes the central concern of this study is manifested in regular causative and anticausative alternants, as exemplified in chapter 6, section 6.1, examples (291 and 298), and chapter 7 section 7.2, examples (473 and 474) replicated in (4) and (5), which crucially exhibit argument alternation in the respective alternants of each pair, as shown in (4) and (5).

(4) a. *N'tungi wa nzo uwdidi gyaka* (*causative*)

Ø-n'tungi wa nzo	*uwd-idi*	*Ø-gyaka*
1-builder of house	break-PST	7-wall

Builder broke wall. (Intd: the builder broke the wall).

b. *Gyaka kiuwdidi* (*anticausative*)

Ø-gyaka	*ki-uwd-**ik**-idi*
7-wall	7/AgrS-break-CI-PST

Wall broke (Intd: someone/something broke the wall).

(5) a. *Mwana wele kuzandu* (*causative*)

mu-ana	*w-ele*	*ku-Ø-zandu*
1a-child	go-PST	17-5-market

Child went to market (Intd: the child went to the market)

b. *Kuzandu kuwele mwana* (*anticausative*)

ku-Ø-zandu	*ku-w-ele*	*mu-ana*
17-5-market	17/AgrS-go-PST	1a-child

To market went child (Intd: the market is the place where the child went)

The above alternations typically exhibit a regular causative and anticausative use of the verb. Causation, in this sense, is also associated with aspectual verb class variations, specifically the event-state distinction. The precise nature and properties of constructions exhibiting these causation-related properties are still largely unexplored in the *Kikongo* (*Kizombo*) language and African languages, at large.

As will be discussed in chapter 3, the causative and anticausative alternation is characterized by verbs that exemplify transitive and intransitive uses, such that the transitive use of a verb V means roughly 'cause to V-intransitive' (Levin 1993[2]; Levin and Rappaport Hovav 1995; Schaefer 2009 and the references therein). Research on the causative and anticausative alternation has long been the focus of substantial research in both typological and theoretical linguistics. Two central issues revolve around the debate: first the properties of meaning that determine the alternation and the derivational relationship between the alternants, and second, the relation between the causative and anticausative alternation and other transitivity alternations, e.g., passives and middles.[3]

Despite comprehensive research in many languages of the world (see discussion in chapter 3), a systematic study on causative and anticausative alternation in *Kikongo* (*Kizombo*) has not been conducted yet. This study intends to make a contribution to the research in *Kikongo* morphosyntax and semantics and to the debate on (anti-) causativity in African linguistics, and general linguistics, more widely.

The term *Kikongo* has been used to designate a vast language group zoned as H with unit 10 in Guthrie's (1967-71) referential classification. Similar for other countries where *Kikongo* is spoken, in Angola this language has a considerable number of dialects (see detail in chapter 2). To study all those dialects would be impractical for this study since it is not concerned with dialectology. For this reason, the data that will be used in this study will be from *Kizombo*, a dialect of *Kikongo* classified as 16h (Maho 2007), as spoken in *Damba* and the *Maquela do Zombo* districts in the Province of *Uige*, which is also the linguistic community of the researcher. Thus, the term *Kizombo* will be used for the reason of precision in relation to the linguistic data examined.

1.3 SIGNIFICANCE OF RESEARCH

As will be seen in chapter 2, *Kikongo* has not been widely studied in the linguistic literature. This work is a contribution to the study of *Kikongo*, (*Kizombo*) in particular, the current debate on (anti-)causativity in African linguistics, and general linguistics, more broadly. More

[2] Levin (1993) documents 49 semantically coherent classes of verbs whose member's pattern in a similar way with regards to alternations. Basically, verbs are grouped together according to meaning, i.e., they share one or more meaning components and they are related through similar syntactic and/or morphological behaviour.

[3] Middles can be characterized as constructions whereby a verb is presented neither a logic agent nor an object, but with a subject that seems to assume the responsibility of the action described without actually being the agent of the action.

importantly, some African languages of Angola are being tested in pilot studies in some public schools, and *Kikongo* is one of those languages, but reference study materials in such languages are practically non-existent. A further area of impact and relevance of this study relates to the view that an analysis of lexical semantic units is essential for applied language research, especially for lexicologists and lexicographers, since they require informed practice and scientific knowledge of lexical semantics and the related morphosyntax of lexical items of a specific language.

1.4 STATEMENT OF RESEARCH PROBLEM

In section 1.2 it was pointed out that no study on the causative and anticausative alternation in *Kizombo* has been conducted before. This study will explore the problem of how the lexical-semantic, aspectual (event structure) and syntactic properties exemplified in the causative - anticausative alternation constructions in *Kizombo* can be accounted for by invoking different combinations of the Voice, vCAUS, and Root nodes in terms of the decomposition approach to the analysis of causative and anticausative alternation. In addressing this problem, the study will also investigate the nature of the interaction and interdependence of lexical semantic verb class properties, aspectual verb class properties, and the syntactic encoding of the external argument of verbs in causative and anticausative alternation constructions. Indeed, the construal of transitivity in *Kizombo* will constitute a central issue in the investigation in relation to the problem of argument alternation.

1.4.1 Research questions

In addition to the above hypotheses, the study will be investigated with the following specific research questions:

1. What elements of meaning allow or disallow the occurence of verbs of change of state and change of location/position in the causative and anticausative in *Kizombo*?

2. Which verb classes realize the causative/anticausative alternation through covert/overt morphology?

3. How do properties of instrument DPs differ from those of natural force DPs, and what are structural realisations of other argument DPs in the sentences realizing anticausativity?

4. Which lexical semantic and aspectual verb class properties determine the classification of verbs into verb roots?

5. What are the morphosyntactic differences between anticausatives and other verbs exemplifying transitivity alternations, and how can transitivity be characterized in *Kizombo* taking into account these different properties?

6. What is the distribution of the PP-like thematic roles realised as external causer?

1.4.2 Hypotheses

Hypotheses are statements a researcher seeks to answer in a study. This academic exercise is absolutely essential and scholastically useful because it helps the researcher to build up a single and substantiated argument. Also, similar for the research problem, hypotheses and research question(s) allow the researcher to define the goals of the research and its scope. This view is bolstered by Selinger and Shohamy (2004:44) when they argue that "there is a close relationship between the development of a research question and the fine-tuning of the research question that will contribute to reliable, valid and significant results."

The reason for this scholarly exercise is to enable the researcher to delimit the study in terms of the amount of phenomena to be examined and the scope of research. This is in line with Welman *et al* (2006:27) when they argue that "after formulating the research problem, the researcher should translate the research problem into a researchable hypothesis in order to:

a) Discuss the problem, its origin and the objectives in seeking a solution;
b) Examine data and records concerning the problem (also known as secondary research);
c) Review similar studies (literature review);
d) Interview relevant native speakers and individuals on a limited scale to gain greater insight into the practical aspects of the problem."

Thus, this study will pursue the following hypotheses:

1. Properties of semantic verb classes in *Kizombo* that allow or disallow the participation of change of state verbs and change of location/position in the causative and anticausative alternation differ within and across verb classes.

2. Aspectual verb class properties vary in causative and anticausative constructions exemplifying different semantic verb classes in *Kizombo*.

3. The thematic role of the external argument in the anticausative alternant is different from the thematic role of the corresponding causative alternant, and in the corresponding passive construction.

1.4.3 Goals

In the introduction, it was pointed out that the aim of this study is to explore the applicability and adequacy of the syntactic decomposition approach in presenting an account of the causative and anticausative alternation in *Kizombo*. Thus, the study has the following interrelated goals:

1. To investigate the syntactic and aspectual verb class properties of semantic verb classes that constrain the occurence of verbs in the causative and anticausative alternation;

2. To explore the semantic properties that distinguish instrument as subject from natural force as subject and the structural positions in which they are realized;

3. To characterize the semantic role properties of PPs realizing the external argument in anticausative constructions, in comparison to those of the external argument in passive constructions;

4. To present an account of the syntactic and semantic properties that distinguish anticausatives from other transitivity alternations (i.e. passives and middles) invoking the notions of Voice, vCAUS, and Root combinations and aspectual verb class distinctions;

5. To investigate the combinations of the nodes Voice, vCAUS, and Root that need to be invoked in presenting an account of the syntactic and aspectual verb class properties exemplified in the causative and anticausative alternation.

1.5 RESEARCH METHODOLOGY AND METHODS

Research methodology and research methods are two terms that are often confused as one and the same. Rigorously speaking, they are not so and there are clear differences between them. One of the major differences between them is that research methods are the techniques which a researcher employs/uses to conduct research into a subject or a topic. Research methodology explains the methods (techniques) by which a researcher may proceed with the research.

Conventionally, research methodologies are broadly classified into qualitative and quantitative thereby creating a huge division among researchers, especially in social sciences (Onwuegbuzie and Leech, 2005). The difference between them has been prominent in many research methods publications (Cf. Neuman 1997; Myers 2009). For instance, Myers (2009:8) distinguishes that qualitative research is an in-depth study of social and cultural phenomena and focuses on text whereas quantitative research investigates general trends across population and focuses more on numbers. Likewise, Miles and Huberman (1994) maintain that qualitative research focuses on in-depth examination of research issues while Harrison (2001) argues that quantitative design provides broad understanding of issues under investigation.

Given this distinction, purists support the view that research questions are usually oriented towards quantitative or qualitative direction and as such these two methodologies should not go hand-in-hand (Howe 1988; Smith and Heshusius 1986). Myers (2009) supports the purists' view of separating the two research philosophies by citing examples of research techniques under the two main categories in his recent publication on 'Qualitative Research in Business and Management'. Qualitative research includes action research, case study, ethnography, grounded research, semiotics, discourse analysis, hermeneutics and narrative while quantitative research encompasses surveys, simulation, mathematical modelling, laboratory experiments, statistical analysis, econometric and structured equations modelling (Myers, 2009 :8).

This study adopts a qualitative methodology. The reason for choosing a qualitative methodology is associated with the fact that the study deals with aspects of linguistic intuition on *Kizombo* native speakers' internalised competence of sentences. Hence, it is necessary to use a research methodology which could elicit speaker-intuitions about the (non-)acceptability of sentences (in Dörnyei's (2007) terms) so that it can respond in a flexible way to new linguistic details that emerge during the process of investigation.

Firstly, an extensive study of a wide range of current literature on the syntax-semantics of causative and anticausative alternation was undertaken. Secondly, a variety of verb classes as studied by Levin (1993) was identified. Most of the verbs were collected on syntactic and semantics grounds. Of particular importance, the selection of verbs for researching the properties that determine the occurrence of such verbs in the causative and anticausative alternation was based on the range of the semantic classes and the thematic roles that they may select in verbs constellations (i.e., Agent-Theme vs Agent-Goal/Locative/Source) categories of the verbs.

1.5.1 Data collection and ethical procedures

With regard to the data collection, three strategies were used: firstly introspection; that is, appealing to the researcher's intuitive proficiency as the data source, as a *Kizombo* native-speaker. Indeed, the researcher is linguistic competence as a native speaker plays a vital role. As Newmeyer (1993) points out, "the typical practice of generativists has been to use themselves as informants in collecting data about the acceptability and interpretation of grammatical construals." Thus, the researcher's personal judgement drawn from his grammatical competence, including his linguistic background of *Kizombo,* makes him eligible to formulate an acceptable judgement on the grammaticality of *Kizombo* sentences which were used in this dissertation.

Secondly, a strategy of elicitation was employed. Despite the researcher being a member of this linguistic community, it is also practical to bring in other *Kizombo* native-speakers as informants, drawing on their intuitions, that is, seeking more consensus on issues under discussion. Thus, a questionnaire based on the various aspects of argument realization, as they were studied by Alexiadou and Anagnostopoulou (2007) and Smith (1997), was devised and given to *Kizombo* native speakers. This is supported by Brown and Rodgers (2004:12) when they say that "sometimes qualitative research also uses the […] questionnaires that we have chosen here to categorise as survey research techniques". Finally, the existing literature on the *Kikongo* (*Kizombo*) language was thoroughly reviewed. Despite the paucity of scholarship available, previous works received an in-depth review. It is hoped that the findings from this review contribute to the contribution of this dissertation.

1.6 ORGANIZATION OF THE STUDY

Chapter 1 gives the rationale for the study, a brief overview of current debates on the causative and anticausative alternation in the linguistic literature and the reason for choosing the topic. In addition, it addresses issues relating to the statement of the research problem, the hypotheses and research questions, the goals of the study, research methodology and methods. For the purpose of research methododology, the study adopts a qualitative research approach, and three strategies, namely introspection, elicitation and a revision of existing literature, both including the *Kikongo* literature.

Chapter 2 gives an account of some phonological and morphosyntactic features of the *Kikongo* (*Kizombo*) language. It examines issues relating to the phonological inventory, the morphology of the *Kikongo* language and properties of transitivity.

Chapter 3 provides an overview of the topic-related scholarship, paying specific attention to studies on the causative and anticausative alternation with change of state verbs. Three competing approaches are reviewed, namely the Intransitive approach, the Transitive approach, and the Syntactic decomposition approach. Furthermore, the chapter reviews properties of middle sentences and considers how these constructions differ from the anticausative and the passive.

Chapter 4 gives an overview of earlier research on the locative inversion. The survey provides a typology of locative inversion in different Bantu languages, including English, and points out the relation between the function and the morphological inventory of locative subject markers. In addition, principle and concept inherent motion verbs as postulated in Talmy, and the notion of causation postulated by Beavers *et al* among others also receive special attention.

Chapter 5 draws on an overview of the existing theories and research on thematic role and aspectual verb classes in order to characterize event structure of the example sentences discussed in chapters 6 and 7. Fundamental concepts like state verbs and process verbs, teli/atelic, events among others, receive close attention.

Chapter 6 explores the range of example sentences of change of state verbs distributed in six semantic classes, as postulated by Levin (1993). A range of diagnostic tests has been employed, relating to the acceptability of instruments and natural forces as subjects, the

anticausative and the modification process. In the second part of the chapter, the analysis of the data in light of major findings is given, followed by the concluding remarks.

Chapter 7 examines the range of example sentences of change of location/position verbs distributed in five semantic classes, as postulated by Levin (1993). Similar to chapter 6, a number of diagnostic tests has been employed to determine the status of the Goal/Locative/Source argument as subject, the status of the preverbal argument as object, the status of the locative prefix expletive, and modification with anticausative alternation. In the second part of the chapter, the analysis of the data in light of major findings is given followed by the concluding remarks.

Chapter 8 gives an overview of the study, summarises the main findings and it provides the conclusions and outlines further areas of research.

CHAPTER 2
THE *KIKONGO* (*KIZOMBO*) LANGUAGE

2.1 INTRODUCTION

In chapter 1, section 1.1, it was stated that this study aims to explore the applicability and suitability of the syntactic decomposition approach to account for the properties of the causative and the anticausative alternation in *Kikongo*. *Kikongo* is a cross-border language, that is, it is spoken in Angola, the Democratic Republic of the Congo (DRC), the Republic of Congo, also known as Congo Brazzaville, and the Republic of Gabon (Fernando 2010). It is estimated that in Angola, *Kikongo* is spoken by 15[4] per cent of the national population (Redinhas 1973). According to Guthrie's (1971) referential classification of Bantu languages, *Kikongo* belongs to zone H codified with number 10. Redinhas (1973) who studied ethnic groups of Angola documented 18 dialects of *Kikongo*, including *Kizombo*.

Owing to the exoglossic language policy adopted by the local authorities in the earlier years of independence, *Kikongo*, similar to other African languages of Angola, is not adequately documented. Thus little printed literature in or about *Kikongo* is available. However, the recent commitment of the Angolan authorities to promote the national languages of Angola led the Institute of National Languages to document alphabets of 7 languages as distributed in the seven linguistic zones of the country. Such alphabets were approved in piloting system to the Council of Ministers in 1987.

This chapter will give a brief account of the *Kikongo* language. Thus it is structured as follows: Section 2.2 will give a brief description of the linguistic community and section 2.3 will present some aspects of the phonological system; section 2.4 will look at the nominal morphology whereas section 2.5 will describe the verbal morphology. Section 2.6 will discuss the verbal structure whereas section 2.7 will focus on the syntax of verbs in *Kikongo*, followed by the interim summary.

[4] It is important to point out, here, that this figure is not official because the country has never conducted a census since 1975. Information about the population has been based on estimates, and accordingly, it varies from one author to another.

2.2 THE AZOMBO COMMUNITY

Kikongo is the language spoken by the linguistic community of *Bakongo*. In Angola *Kikongo* is spoken in Cabinda, Uige and Zaire provinces (Guthrie 1969-71). The *Bakongo* community is ranked as the third largest after *Ovimbundu* and *Akwambundu* (Redinhas 1973). According to Setas (2007), (B)-azombo belong to the former province of Mbata, one of the six provinces of the former *Kongo* Kingdom. It is situated on the northeast of Angola, along the border with DRC and Republic of Congo. Traditionally, the *Azombo* community is known to be keen in business and according to Kyala (2005:3) in 18th Century they were partners in the slavery trade. However, they were also victims of slavery. *Kizombo* is estimated to be spoken by approximately [5]439000 which correspond to 25% of the total population of the province of Uige.

2.3 PHONOLOGICAL SYSTEM

2.3.1 Vowel sounds

The description of vowels is traditionally based on the position of the tongue body, shape of the lips and relative tension of the muscles in the vocal track. In other words, vowels can be characterized as high, low or back depending on the position of the tongue; round or unround depending on the shape of the lips, and tense or lax as far as its relative tension is concerned. The *Kikongo* language, similarly to some other Bantu languages (i.e. Nupe, Jukun, Swahili (cf. Mutaka 2000:33)), displays five vowel sounds: front high /i/, back high /u/, front mid /e/, back mid /o/ and open central /a/, as represented in the left side in figure 1.

	front	**central**	**back**	**front**	**central**	**back**
High	i		u	ii		uu
Mid	e		o	ee		oo
Low		a			aa	

Figure 1: *Kikongo* vowel phonemes

[5] This data was taken from a document published by the city Governor of Uíge in 1991

Vowel length in *Kizombo* is phonemic. It makes a distinction between short and long vowels, as shown in the right side of the figure 1 and exemplified in the infinitive forms in (6).

(6)	a.	*ku-oko [kooko]* 15-hand'	*koko* 'masculinity'
	b.	*yaala* 'to govern'	*yala* 'to expand'
	c.	*suuka* 'to get up early'	*suka* 'to get old'

Quantity opposition seems to be a verb property because its analysis in nouns poses a problem concerning the long syllable, and not the other way round, as shown in (7).

(7) a. *ku-ulu* [kuulu]
15-leg

b. *di-isu* [diisu]
5-eye

c. Ma-isu = *me-eso* [meeso]
6-eye

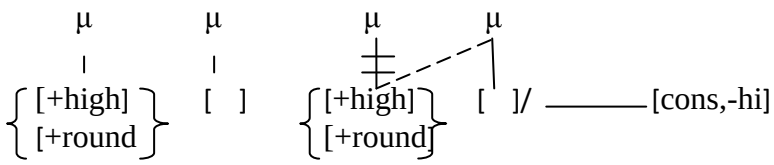
The nouns in (7) include long vowels. Considering that such words are composed of prefixes (*ku-* of class 15, *di-* of class 5 and *ma-* of class 6), the nominals in (7) have their bases *-ulu*, *-isu* and *–eso*, hence the nouns in (7) have long syllables and not long vowels.

The phonemes /y/ and /w/, in *Kizombo* are obtained from the gliding process. For example, when the closed front /i/ combines with the mid-open front /e/ it results in *ye*; when it combines with the mid-open back /o/ it results in *yo* and when it combines with the central open /a/ it results in 'ya'. Likewise, when the front back /u/ combines with the central open [a] it results in 'wa', with mid-open back [o] it results in 'wo', as shown in (8).

(8)	a)	*-yuma* [i + u]	to dry	b)	*-yela* [i + e]	'fill in'
	c)	*-wana* [u + a]	'to meet/find'	d)	*-wola* [u + o]	'to blossom'

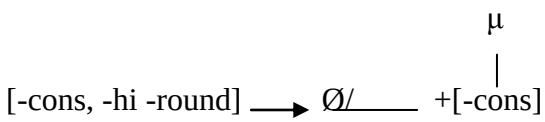
In the word that contains a glide, this is very often the consequence of the rule of Devocalization that changes high front and back vowels into corresponding glides without changing the value of the feature back.

The rule is stated as follows:



This rule converts roots like /-di/ into [dy-] and /-nu/ into [nw-] before the vowel sound [a], thus such forms result in *-dya* ‘eat’ and *-nwa* ‘drink’. During the analysis of the sentences, class pre-fixes that underwent devocalization (e.g., from mu- to mw, from di- to dy-, etc) will be represented in the surface forms for the sake of precision.

Another rule worth mentioning is vowel elision, which can be stated as follows:



The above rule gets rid of the leftmost vowel in sequence that would violate the syllable structure of some words. The unwanted sequence of vowels is derived when two syllables merge for morphological or syntactic reasons. In most cases one may take the examples of the possessive case in which the possessor is proceeded by the possessive operators (*eto*, *eno*), as shown in (9).

(9)	a.	*mwana* ‘child’	*mwan’eto*	‘our child’
	b.	*mbuta* ‘old brother’	*mbut’eno*	‘your elder brother’
	c.	*tata nkento* ‘aunt’	*tata nkent’eto*	‘our aunt’

Vowel harmony is common in *Kizombo*. Trask (1996:383) characterizes vowel harmony as the phenomenon in which only certain combinations of the language’s vowel phonemes are permitted to occur within some specified phonological domains, most often a single phonological word. As examples (10a-b) suggest, vowel harmony is a common phenomenon in *Kizombo* and may help to explain why the applicative and the causative affixes discussed in section 2.4 have allophonic variation as *-el-* with affix *-il-* and *-es-* with suffix *-is-* respectively.

(10)	a.	*-vaanga* 'to do/make'	*-vaang-il-a*[6] 'do/make for'
	b.	*-vonga* 'to get fat'	*-vong-el-a* 'get fat for'
	c.	*-velela* 'to be clean'	*-velel-es-a*' 'cause to be clean'

The examples in (10b) suggest that if a verbal root (VR) has a mid front [e] and a mid back [o], the next vowel must convert into a mid front [e]. Also a VR in which the last consonant ends in the bilabial nasal [m] and the alveolar nasal [n] forms the perfective and applicative form in *-in-* or *-en-*. The examples above are verb-to-verb derivation where the derived suffixes hold two allomorphs. The verbs in the right hand column are derived from those in the left-hand column through a suffixation process.

As said earlier, in *Kizombo*, the distribution of the allomorphs of the derivational suffixes is determined by the height of the first vowel of the root. This means that if the first vowel of the root is mid (/e/, /o/), the suffix will take the mid front sound /e/. In other contexts the suffix will take the sound /i/, as shown in (10).

2.3.2 Consonant sounds

With regard to the consonant system, *Kizombo* displays a range of 24 consonant sounds, including plosives, fricatives, affricates, nasals, laterals and semi-vowels/glides, as shown in Table 1. Plosives and fricatives are also subdivided into orals, and pre-nasals; the pre-nasals composed of nasal and unvoiced sounds are aspirated while those voiced sounds are not, as illustrated in (11 and 12).

(11)	a.	***Nk**osi*	[k^{h}osi] 'lion'
	b.	***mf**umu*	[f^{h}umu] 'chief'
	c.	***mp**uku*	[p^{h}uku] mouse'

[6] In some instances, the applicativized forms can be found in the imbrication process, whereby the verb takes the applied -il- and the perfective –ile, as in *Nzumba lambiidi mwana madya* 'Nzumba cooked the meal for the child. The verb *lambiidi* 'cooked for' has the d-structure: lamb-il-ile. The consonant of the applicative of -il- is elided, giving rise to long syllable -iid-.

(12) a. ***Ng**unga* [ŋguŋga]
'bell'

b. ***mb**ongo* [mboŋgo]
'money'

c. ***nd**ozi* [ndozi]
'dream'

	Place of articulation								
Manner of articulation		bilabial	Labio-dentals	Dental	Alveolar	Post-alveolar	Palatal	Velar	Glottal
	Plosive	/p b		t d				k g[7]	
	Pre Nasalized	mp mb	mf mv	nt nd	ns nz			ŋk ŋg	
	Nasal	m			n		ɲ		
	Fricative		f v		s z				(h)
	Lateral				l				
	Approximants	w					y		/

Table 1: The *Kizombo* consonant system

The segments represented as sequences in table 1 can be considered as complex segments rather than underlying units. However, it seems that some of these segments are derived. For example, the pre-nasalised plosive [mb] is the realisation of a nasal /N/ unspecified for place followed by bilabial plosive /b/ or nasal plosive /m/. The same is true with the pre-nasalised [nd], as instantiated in (13), (14) and (15) and many other examples.

(13) a. /N/ + /m/ [mb] -*mata* (to climb) *mbete* (I climbed)
b. /N/ + /b/ [mb] -*baka* (fetch, achieve) *mbakidi* (I fetch, achieved)

(14) a. /N/ + /n/ [nd] -*nata* (to carry) *ndete* (I carried)
b. /N/ + /l/ [nd] -*luka* (vomit) *ndukidi* (I vomited)

(15) a. /N/ + /k/ [ng] -*enda* (go) *ngyele* (I went)

Given the above cases where changes are clear, it can be that these N+C sequences occur across morpheme boundaries. When such clusters are intramorpheme, they should be seen as

[7] In previous analysis of phonology in this variant it has been assumed that Kizombo lacks the sound [g]. However, a close analysis of data reveals the existence of the sound.

prenalized sound units. Indeed, there is enough evidence proving that [mb] is a combination of /N/ and /m/ or /N/ and /b/ and [nd] is a combination of /N/ and /n/ or /N/ and /l/ and so on. The pre-nasals above are further distinguished by the capacity of triggering nasal harmony. These rules spread the feature [+nasal] from the verb stem- which can be the root only or the root followed by the type of affix, generally referred to as verbal extensions, as was stated earlier.

2.3.3 Tone

Kizombo has a two-tone system including (H) and (L) tone; that is a system in which some syllables are marked with a (´) high tone while other syllables are marked with a (`) low tone, as shown in (16). The use of pitch pattern carries differences of meaning.

(16)	a.	*zíínga*	*zìinga*
		'to live'	'to wrap'
	b.	*kààinga*	*káánga*
		'close'	'toast'

2.3.4 Syllable Structure

As is the case with other Bantu languages, the canonical *Kizombo* syllable structure is CV, but other syllable shapes can also be found, as in (17).

(17)	V:	**a**-*ntu*	'people'
	CV:	-***vo***-*va*	'to speak
	CGV	***kya*** *lumingu*	'of Sunday'
	C[8];	***n'***-*tu*	'head'

Syllable structure is the requirement and constraint which determines the shapes of possible syllables, usually formulated in terms of sequences of consonants and vowels as well as in terms of onset and rhyme, or onset and nucleus and coda (Trask 1996:346). The onset is the initial part of the syllable structure and is usually represented by a consonant. The nucleus is

[8] Syllabic nasal in *Kizombo* is said to be the result of vowel elision of the kind. For example, the word *n'tu* is said to be derived from *mutu* 'head' then there was a vowel elision, that is, the vowel [u] of the prefix *mu*- elided. So the bilabial nasal [m] assimilates to alveolar plosive [t] resulting in [n]. The syllable of this type of words is usually written [n], as the onset, followed by an apostrophe. This fact distinguishes it from other constructions like *ntangu* 'son'.

the part of the syllable that carries the pitch (the most prominent part of the word), while the coda is the part of the syllable that comes after the nucleus.

When the syllable ends in a vowel sound (without coda) it is called an open syllable, as is the case in the *Kizombo* language, and when it ends in a consonant (with coda) it is called a closed syllable, as in the case of many English words. Figure (2) exemplifies syllable structure with *Kizombo* words.

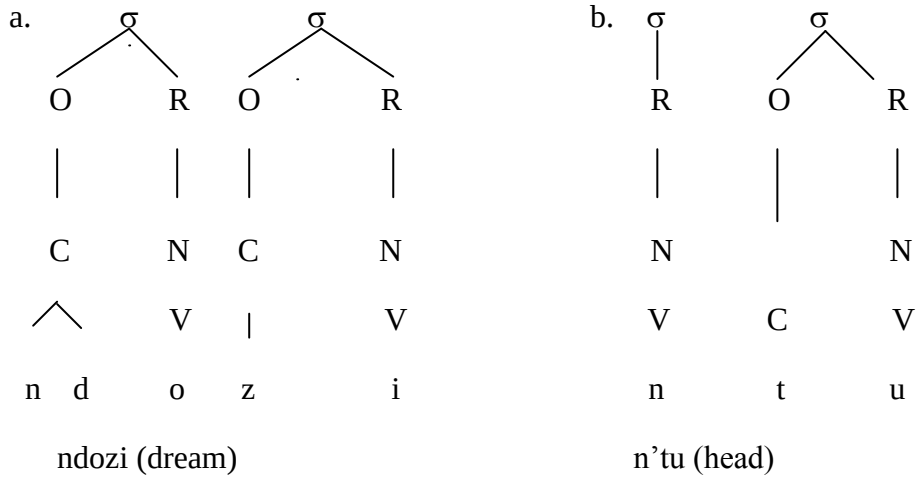


Figure 2: Syllable structure in *Kizombo* adapted from Fernando (2010)

As will be seen later, verb roots can be expanded with various prefixes and suffixes to form the verb structure. The word *ndozi* 'dream' in (a) is formed out of two syllables, of which the first is represented by a complex onset composed of the alveolar nasal [n] and the alveolar plosive [d] and the nucleus is represented by the mid back [o] while the second syllable consists of an onset represented by the fricative alveolar [z] and the nucleus is represented by a closed front [i]. The word *antu* 'people' in (b) is composed of two syllables but the first syllable is only represented by the open central [a], which is also the rhyme, while the second syllable is composed of an onset represented by the plosive alveolar [t] and the rhyme which is represented by the closed back [u].

2.4 NOMINAL MORPHOLOGY

2.4.1 Noun classes

Noun classification has long been of interest to Bantu linguists (cf. Meinhof 1932; Maho 1999; Demuth 2000; Senft 2000 among others), whose interest may be piqued by the possibility that understanding the basis for grouping nouns together as members of a class resides in a system of cultural classification that underlies the system of linguistic

classification. However, although this is not the purpose of this study, the question of whether semantic principles can inform the groupings of nouns into classes in Bantu languages remains contentious. The reason for the noun class system being considered here, is because in *Kizombo*, nouns are part of the verb structure represented by a subject/object agreement, as is seen throughout many of the examples in this dissertation.

The *Kizombo* noun system consists of a range of gender classes and general characteristics of many Bantu languages. Modifiers of nouns agree with the head noun in relevant features of gender and number. Thus, noun class prefixes in this study are referred to by numbers as shown in the glosses, following Meinhof's (1932:170-171) system. The prefixes determines verbal, modifier, and quantifier agreement. In other words, the agreement prefix must be present or else the sentence will be considered ill-formed. In discourse in the initial sentence (18a), the subject may be expressed by a noun phrase (DP) *m'bati* 'trousers'. However, after an appropriate contextual situation has been established, the subject may be filled up by a subject agreement (AgrS), as indicated in (18b).

(18) a. *M'bati misukulwe*
Ø-m'bati *mi-sukul-w-e.*
4- trousers 4/AgrS-wash-PASS-PST
trousers wash were (Intd: the trousers were washed)

b. *ye mitudilwe musuku*
...ye *mi-tud-il-w-e* *mu-Ø-suku.*
…and 4/AgrS- put-APPL-PASS-PST 18-5-room
'…and (the trousers) were put in the bedroom.'

Kizombo has 18 noun classes distinguished by pairs of prefixes, one denoting singular and another plural, as shown in table 2.

Cl	Prefix	AgrS	AgrO	Demonstratives			NC	Rel. PRN
				1	2	3		
1	*mu-*, Ø-	a-, u-, ka-, e-		Eyu	ndyoyo	dyona	a-, wa	ndyoyo
2	a-, Ø-	a-, e-		Aa	oo	eena	a-	oo
3	*mu-*, Ø-	u-	wo	wau	wowo	uwna	wana	wowo
4	mi-, Ø-	mi-	myo	myami	myomyo	miina	mya	myomyo
5	*di-*, Ø-	di-	dyo	dyadi	dyodyo	diina	dya	dyodyo
6	*ma-*	ma-	mo	mama	momo	meena	ma	moomo
7	ki-, Ø-	ki-	kyo	kyaki	kyokyo	kiina	kya	kyokyo
8	i, Ø-	i-	yo	yayi	yoyo	yina	ya	yoyo
9	n-, Ø-	i-	yo	yayi	yoyo	yina	ya	yoyo
10	zin-, Ø-	zi-	zo	Zazi	zozo	ziina	za	zoozo
11	lu-, Ø-	lu-	lo	lwalu	lolo	luuna	lwa	loolo
13	tu-, Ø-	tu-	to	twatu	toto	tuuna	twa	tooto
14	u-, Ø-	u-	wo	wowo	wowo	uwna	wa	wowo
15	ku-, Ø-	ku-	ko	kwaku	koko	kuuna	kwa	koko
16	va-	va-	vo	vava	vovo	vaana	va	voovo
17	ku-	ku-	ko	kwaku	koko	kuna	kwa	kooko
18	mu-	mu-	mo	mwamu	momo	muna	mwa	moomo
19	fi-	fi-	fyo	fyafi	fyofyo	fina	fya	fyofyo

Table 2: *Kizombo* noun classes and their nominal concords adapted from Fernando (2010)

Genders are characterized as classes of nouns reflected in the behaviour of associated words (Hockett (1958). Indeed, Table 2 suggests that Kikongo forms class genders, namely 1/2, 1a/2a, 3/4, 5/6, 7/8, 9/10 and 11/13, while classes 14, 15, 16 17, 18 and 19 are regarded as mono-classes. Class 15 (*ku-*) marks both the verbal infinitives and nominals (some parts of the body). The latter form their plural with class 6 (*ma-*), as shown in (19).

(19) a. nominal *Kuulu kwa Luzolo kutolokele*
Ku-ulu *kwa* *Luzolo* *ku-tolok-ele.*
15-leg N/Agr 1-PN 15/AgrS-break-PST
'Luzolo's leg broke.'

Maalu maLuzolo matolokele
Ma-alu *ma-Luzolo* *ma-tolek-ele.*
6-leg 6/AgrS-Luzolo 6-break-PST
'Luzolo's legs broke.'

Kooko kwa lunene
Ku-oko *kwa* *lunene*
15-hand NAgr right
hand of right
'the right hand'

Mooko matatu
Ma-oko (*mooko) ma-tatu*
6-hand 6/AgrS-three
'three hands'

b. verbal *Kudya*
Ku-dy-a
15-eat-FV
'To eat'

Kuvova
Ku-vov-a
15-speak-FV
'to speak'

However some nouns that denote human beings are distributed in other classes, which means fruits and human beings may occur in the same class, as shown in (20 to 24).

(20) a. *Se dya Luzolo disumbidi dinkondo*

Ø-se	*di-a*	*Luzolo*	*di- sumb-idi*	*di-nkondo*.
5-father	5-of	1-PN	5/AgrS-buy-PST	5-banana

'Father of Luzolo bought banana (Intd: Luzolo's father bought a banana).

b. *Mase maana sikola matumiswe kulukutakanu*

ma-se	*ma-aana sikola*	*ma-tum-is-w-e*	*ku-lu-kutakanu*
6-father	6/AgrS-2-child school	6-call-CAUS-PASS-PST	17-11-meeting

Parents of children school invited to meeting. (Intd: Parents were invited to attend the school meeting).

(21) a. *Luvwalu kwelele n'kento wa mundele*

Luvwalu	*kwel-ele*	*Ø-n'kento*	*wa*	*mu-ndele*
1-PN	married-PST	1-woman	of	1-white.

Luvwalu married woman of white. (Intd: Luvwalu got married to a white woman)

b. *Luvwalu kwelele akento amindele*

Luvwalu	*kwel-ele*	*a-kento*	*a*	*mi-ndele.*
1-PN	marry-PST	2a-woman	of	4-white

'Luvwalu married women of white.' (Intd: Luvwalu got married to white women)

(22) a. *Ndoki bakamene kungombo*

Ø-ndoki	*bakam-ene*	*ku-ngombo*
9-witchcraft	found-PST	17-witch craft place

'Witch was discovered in witchcraft place' (Intd: the witchcraft was discovered at the witch craft place)

b. *Ndoki zibakamene kungombo*
Ø-ndoki *zi-bakam-ene* *ku-ngombo*
10-witch 10AgrS-found-PST 17-witch craft place'
'Witch (people) were discovered in witchcraft place' (Intd: the witchcraft (people) were discovered at the witchcraft place)

(23) a. *Pulusi dikeenge mwivi*
Ø-pulusi *di-keeng-e* *mw-ivi*
5-police 5/AgrS-arrest-PST 3-thief
'Police arrested thief' (Intd: the police arrested the thief)

b. *Mapulusi makeenge miivi*
ma-pulusi *ma-keeng-e* *mi-ivi*
6-police 6/AgrS-arrest-PST 4-thief
'Police arrested thieves (Intd: the police arrested the thieves)

(24) a. *Kifumbi kivondele muntu*
ki-fumbi *ki-vond-ele* *mu-ntu*
7-murderer 7/AgrS-kill-PST 1-person
Murderer murdered person (Intd: the murderer murdered a person)

b. *Ifumbi ivondele muntu*
i-fumbi *i-vond-ele* *mu-ntu*
8-murderer 8/AgrS-kill-PST 1-person
Murderers murdered person (Intd: the murderers murdered a person)

In the sentence in (20a) the prefix *mu*- in the DP *n'kento wa mundele* 'white woman' belongs to class 1, while in (20b) the plural is formed by the prefix from class 4 *mi*- instead of class 2*a*-; that means, class 2 was declassified by class 4. In sentence (21a), although the agreement prefix u- class 1 is unexpressed in the DP *ndoki* 'witch'; it is found in the verbal structure in the form of subject agreement, while in (21b) the plural is formed by the prefix of class 10. In the sentence in (22a) the prefix *di*- in the DP (*di*-)pulusi belongs to class 5, while in (22b) the plural is formed by the prefix of class 6. This is in accordance with Cobertt (1991:273) who observes that "Bantu languages have several genders, which correspond to semantic classifications only partially: nouns of 1/2 gender are human, but not all nouns denoting human beings belong to class 1/2."

With regard to the gender resolution rule, when an DP is formed by nouns that denote human and non-human nouns, the human agreement of class 2is used, although it takes the plural prefix, as illustrated in (25).

(25) a. *Muntu ye nyoka kaalekanga nzo imosi ko*

mu-ntu ye nyoka	*ka-a-lek-ang-a*	*nzo imosi ko*.
1-person and 9-snake	NEG[1]-2/AgrS-sleep-HAB-FV	house one NEG[2]

Person and snake cannot sleep in same house. (Intd: a person and a snake cannot sleep in the same house).

b. *Mbwa ye nyau kaazolananga ko*

Ø-mbwa ye Ø-nyau	*ka-a-zol-an-ang-a*	*ko*
3-dog and 3-cat	NEG[1]-2AgrS-like-REC-HAB-FV	NEG[2]

Dog and cat do not like each other (Intd: the dog and cat do not like each other)

In the sentence in (25) the noun *muntu* 'person' denotes a human being that belongs to class 1, while the noun *nyoka* 'snake' denotes a non-human being, which belongs to class 9. The gender agreement in (25a-b) marks a human being. Cobertt (1991:273)states that, "if there is at least one conjunct denoting a rational or rationals, then gender 1/2 agreement will be used." This idea is also corroborated by Hawkinson and Hyman (1974:148-50) when they argue that "conjoining noun phrases headed by nouns denoting humans and non-humans are acceptable, and in most cases class 2 agreement is used."

The discussion above suggests that there is no conventional method of describing semantic models yet, which is why Maho (1999: 63) observes that "[…] all noun classes appear to have what grammarians term 'miscellaneous nouns' […] the only agreed difference among grammarians is that of 'animate' and 'inanimate'." Given the irregularities and idiosyncrasies of each language, any semantic classification of a noun class system should be regarded as merely referential rather than a complete work. Many nouns denoting human beings, animals, tools, etc., can be found in a range of classes within individual language.

2.4.2 The locative classes

Locative classes represent idiosyncratic characteristics in *Kizombo*. What chould have been independent locative prepositions in earlier stages of this language have later on turned into class prefixes, behaving analogously to the other class prefixes which represent one of the most distinctive features of almost all Bantu nominal morphology. In *Kizombo*, however, both the full form can be used as in (26) and class prefixes as in (20 to 24). The latter are regarded as locative demonstratives.

(26) a. *Malonga vana meza mena*

ma-longa	*vana*	*meza*	*me-na*
6-plate	LOC/Dem	table	6/AgrS-be

Plates on table are (Intd: the plates are on the table)

b. *Dya fingulu fyaku kuna zulu nini imona ko*[9]

dya	*fi-ngulu fy-aku*	*kuna*	*zulu nani mona ko*
eat	19-pork 19-you	LOC/Dem	the heaven who see there
Eat	pork meat your	in the heaven who will you see	

You can serve your pork you will see nobody to bother you in the heaven

c. *Longo lukala kuna lumbu lwa tata Luvwalu*

Ø-longo	*lu-kala*	*kuna*	*lumbu lwa tata Luvwalu*
11-wedding	11/AgrS-be	LOC/Dem	enclosure of father Luvwalu

'The wedding will be in, there, the enclosure of Mr Luvwalu'

As seen in table 2, locative prefixes are represented by classes 16 (*va*-) equivalent to "on", 17 (*ku*-) equivalent to "to" and 18 (*mu*-) equivalents to "in". Like in any other Bantu languages, these classes trigger subject agreement, as shown in (27).

(27) a. class 16: *Va-*

Masolai makotele vazandu

ma-solai	*ma-kot-ele*	*va-Ø-zandu.*
6-soldiers	6/AgrS-enter-PST	16-5-market

Soldiers entered on market (Intd: the soldiers entered at the market)

b. class 17: Ku-

Mwana uwele kuzandu

mua-ana	*w-ele*	*ku-Ø-zandu.*
1a-child	go-PST	17-5-market

Child went to market. (Intd: the child went to the market).

c. class 18: *Mu-*

Nyoka kotele munzo

Ø-nyoka	*kot-ele*	*mu-Ø-nzo*
9-snake	enter-PST	18-9-house

Snake entered in house (Intd: the snake entered in the house)

In (27a), the locative prefix *va*- refers to a surface open space, comparable to the English preposition "on". In (27b) the locative prefix *ku*- refers to movement, comparable to the English proposition 'to' and (27c) the locative prefix *mu*- refers to interiority, equivalent to the English preposition 'in'. More details on the semantic of the locative prefix in *Kizombo* will be given in chapter 7.

[9] Sentence taken from Socorro, an Angolan musician.

2.4.3 Demonstratives

To indicate the distance at which an object is found, the *Kizombo* speakers distinguish: closer to the speaker, far from the speaker and very far from the speaker. Demonstratives pick up the class prefix of the noun demonstrated, as shown in (28).

(28) a. *Mono mbokele eyu ndona n'kento uta sadisa aana*
mono m-bok-ele ***eyu*** *ndona n'kento Ø u-ta sad-is-a a-ana*
I 1-call-PST DEM old woman 1-be work-CAUS-FV 2-child
I called this old woman who is helping the children

b. *Mono mbokele ndyoyo ndona n'kento uta sadisa aana*
mono m-bok-ele ***ndyoyo*** *ndona n'kento Ø u-ta sad-is-a a-ana*
I 1-call-PST DEM woman RelCl 1-be work-CAUS-FV 2-child
I called that woman who is helping the children

c. *Mono mbokele dyona ndona n'kento uta sadisa aana*
mono m-bok-ele ***dyona*** *ndona n'kento Ø u-ta sad-is-a a-ana...*
I 1-call-PST DEM old woman 1-be work-CAUS-FV 2-child
That old woman who is helping the children...

2.4.4 Relative pronouns

Like the demonstratives, relative pronouns take the prefix of the noun it replaces and are similar in form to demonstratives, as shown in table 2. Thus, they do not co-occur in the sentence, as seen in (28) above. When the demonstrative is used, the relative pronoun is understood, as shown in (29).

(29) a. *Mono mbokele ndona n'kento ndyoyo uta sadisa aana*
mono m-bok-ele ndona n'kento ***ndyoyo*** *u-ta sad-i-sa a-ana*
I 1-call-PST old woman Rel/PRN 1-be work-CAUS-FV 2-child
I called the old woman who is helping the children

2.5 VERBAL MORPHOLOGY

2.5.1 The verb system

Verbs in *Kizombo* are of two types: a base verb or a simple root and a derived verb or a complex root. A base verb is characterized by a root without an additional morpheme that modifies its lexical meaning. *Kizombo* presents two types of base verbs: those that denote a semantic inherent transitive and those that denote a semantic inherent intransitive.

2.5.1.1 Transitive use of verb

Verbs used in the transitive form include mono-transitive and ditransitive verbs. The monotransitive verbs, on one hand, select two arguments, namely the subject associated with the agent thematic role and an object associated with the theme/patient thematic roles, as illustrated in example (30). These linguistic expressions are designated arguments.

(30) a. *Nzumba sonekene n'kanda*

Nzumba	*sonek-ene*	*Ø-n'kanda*
1-PN	wrote-PST	3-letter

'Nzumba wrote letter. (Intd: Nzumba wrote a letter)

b. *Aana alembe madya*

a-ana	*a-lemb-e*	*ma-dya*
2a-child	2/AgrS-cook-PST	6-meals

'Children cooked meals (Intd: the children cooked the meals)

c. *Luzolo sumbidi kaalu*

Luzolo	*sumb-idi*	*Ø-kaalu*
1-PN	buy-PST	5-car

'Luzolo bought car (Intd: Luzolo bought a car)

In the example sentences in (30), the verbs *-soneka* 'write' and *-lamba* 'cook' and *-sumba* 'buy' require an object (theme) *n'kanda* 'letter', *madya* 'meals and *kaalu* 'car' respectively, although in a given context these objects can be unspecified.

Verbs used in ditransitive context, on the other hand, select three arguments; that is, they select/require a subject associated with the agent semantic role, the second object '*aana'* associated with the beneficiary/recipient thematic role (in Bresnan and Kanerva 1989's term) and the first object '*madya'* associated with the theme/patient thematic role, as shown in (31).

(31) a. *Nzumba veene aana madya*

Nzumba	*veen-e*	*a-ana*	*ma-dya.*
1-PN	give-PST	2a-child	6-meal

Nzumba gave children meal. (Intd: Nzumba gave the meal to the children)

b. *Luvwalu futidi n'sadi nzimbu*

Luvwalu	*fut-idi*	*Ø-n'sadi*	*Ø-nzimbo*
1-PN	pay-PST	3-worker	10-money

Luvwalu payed the money to the worker

The example sentences in (31) indicate that the verbs *-vaana* 'give' and *-futa* 'pay' select three arguments, namely the subject '*Nzumba'* and '*Luvwalu'* linked to the thematic role

agent, the object 2 *aana* 'children' and *n'sadi* 'worker' linked to the thematic role beneficiary or receiver and the object 1 *madya* 'meal' and *nzimbu* 'money' linked to the thematic role theme. As will be seen later, the applicative and causative suffixes are also sources of transitivity; that is, transitivity can also be acquired by means of attaching a suffix to the verb root.

2.5.1.2 The intransitive use of verbs

Verbs used in intransitive form select only one argument (i.e. the external argument), namely the subject DP linked to the agent thematic role, as shown in (32). In other words, depending on the list of arguments that such an argument may assign, the argument structure of intransitive verbs are approached in two distinct ways (Du Plessis and Visser 1998). Firstly, the category of intransitivity is distinguished under the logical notion that they are one-place predicates. As was said earlier, such predicates assign only one semantic role such as a DP or a clause.

(32) a. *Mvula inokene*
Ø-mvula *i-nok-ene.* [N +V]
9-rain 9/AgrS-rain-PST
'Rain rained. (Intd: It rained)

b. *Mwini utekele*
mu-ini *u-teek-ele* [N +V]
3-sunshine 3/AgrS-shine-PST
Sun shone (Intd: the sun shone)

c. *N'koko uyumini*
Ø-n'koko *u-yum-ini* [N +V]
3-river 3/AgrS-dry-PST
River dried (Intd: the river dried out)

In the sentences in (32), the predicates *-noka* 'rain' *-teeka* 'shine' and *yuma* 'dry' assign only one argument, notably *mvula* 'rain', *mwini* 'sun' and *nkoko* 'river' which appears in the subject position. As will be seen in section (2.4.7), intransitivity can also obtain by attaching the passive, reciprocal, stative and reflexive affixes to the verb root.

Secondly, some intransitive verbs may assign two arguments: an Agent argument in the subject position and an internal argument in a locative DP. Such DPs are not regarded as the object of the verb for they are places, as shown in (33).

(33) a. *Muntu kosokele vakunda*

mu-ntu	*kosok-ele*	*va-Ø-kunda*
1-person	sit-PST	16-7-chair

Person sat on chair (Intd: the person sat (down) on the chair)

b. *Antu afulukidi mulula*

a-ntu	*a-fuluk-idi*	*mu-Ø-lula*
2-person	2/AgrS-stir-PST	18-5-street

People stirred in street (Intd: the people stirred in the street)

c. *Aana avaikidi kumbazi*

a-ana	*a-vaik-idi*	*ku-mbazi*
2a-child	2/AgrS-go-PST	17-outside

Children exit outside (Intd: the children went outside)

In the sentences in (33), the predicates select two arguments: the external argument *muntu* 'person, *antu* 'people' and *aana* 'children' and the internal arguments (locative DPs) *vakunda* 'on the chair', *munzila* 'in the street' and *kumbazi* 'outside'. This suggests that *Kizombo* aligns with nominative-accusative morphosyntax, according to which it chooses to mark the noun associated with a verb in intransitive use as the subject, notably '*mvula inokene'* literally the rain rained or 'it rained'. It can also be said that transitive and/or intransitive is not an exclusive verb property, but can also be biewed as a sentence property.

2.5.1.3 Derived verbs

Derived verbs are verbs obtained from the process of adding the applicative, causative or any other suffix to the root, which can be an intransitive verb root or mono-transitive verb root, as shown in (34).

(34) a. *Luzolo nokese mvula*

Luzolo	*nok-**es**-e*	***Ø-mvula***
1-PN	rain-CAUS-PST	9-rain

Luzolo rain caused rain (Intd: Luzolo caused it to rain).

b. *Nlongo mikovolese mwana*

Ø-nlongo	*mi-kovol-**es**-e*	***mu-ana***
4-medicine	4/AgrS-cough-CAUS-PST	1a-child

'The medicine caused the child to cough'

The verb -*noka* 'to rain' in (34a) and -*kovola* 'to cough' in (34b) are intransitives in that they do not assign an internal argument. Once the causative suffix ***-es-*** is attached to the verb root -*noka* and -*kovola* they become transitive, therefore, assign objects.

Derived verbs can also be the monotransitive verbs, as discussed in (30), which, by attaching a derivational suffix (i.e. applicative or causative), convert the verb into a ditransitive, as shown in (35).

(35) a. *Nzumba ulambilanga aana madya*

Nzumba	*u-lamb-il-ang-a*	*a-ana*	*ma-dya*.
1-PN	1/AgrS-cook-APPL-PRS-FV	2-child	6-meal.

Nzumba cooks for children meal. (Intd: Nzumba cooks the meal for the children)

b. *Nlongi sumbisi aana mabuuku*

Ø-nlongi	*sumb-is-i*	*a-ana*	*ma-buuku*
1-teacher	buy-CAUS-PST	2-child	6-books

'Teacher caused children buy books (Intd: the teacher oriented students to buy books)

The sentences in (35) show that the verbs -*lamba* 'cook' and -*sumba* 'buy' require three arguments, namely the subject DPs *Nzumba* and *Nlongi* linked to the agent thematic role, the OBJ2 *aana* 'children' linked to the beneficiary role, the OBJ1 *madya* 'meal' and *mabuuku* 'books' linked to the theme thematic role. It is worth noting that the OBJ2 in (35) can be realized as the subject of the passive sentence. For this reason *Kizombo* is regarded as a symmetrical language.

2.5.2 Verbal structure

The verb structure in *Kizombo* is similar to that obtaining in other Bantu languages whose configuration is composed of an agglutinative structure (Mchombo 2004). In other words, the *Kizombo* verb structure is composed of several linguistic elements. However, some of those elements may not necessarily be present in a given verb structure, but those present, must appear in a specific order, as shown in figure 3 adapted from (Meeussen 1967). Typically, verbs have a minimum of a root to which prefixes and suffixes are attached to form a complex verbal structure, followed by a final vowel.

[INIT – NEG[1] – SM - T/A – OM – RAD – EXTs – FV NEG[2]][10]

di- -ka- -twa- -Ø- lamb- -is-il-w- a ko

Dikatwalambisilwa madya ko
Di-ka-tu-a-lamb is-il-w-a madya ko.
(That is why we were not cooked the meal)

Fig 3: *Kizombo* verb structure

It should be noted that, the application of figure 3, although it is generally used by scholars in African linguistics (cf. Bastin 2003; Nurse 2003 among others), may depend on the specificities obtaining in particular languages. In *Kizombo*, for example, the negation is marked by initial *ka-* that precedes the verb root and by the final element *ko* that follows the final vowel. Given an appropriate oral discourse context, *-ko* can be omitted without rendering the sentence ungrammatical. Furthermore, *di-* is part of the complex verb structure placed in the initial slot. As will be seen in sub-section 2.5.5, tense in this language is also marked in the final vowel slot.

2.5.2.1 The initial verb

According to Nurse (2003:90-91) the initial verb structure expresses two categories common to many Bantu languages, namely negative and relative, but individual languages express a range of other categories in the initial position because this is a slot where new material often becomes grammaticalized. The initial element in *Kizombo* can be marked by the morpheme *di-* which is designated in this work as non-predicative complement ($_{N}$Cp). This morpheme often marks the clause or reason clause, as shown in (36).

(36) a. *Dikeezidi mpasi vo lwamvana nzimbu*
di-ka-ez-idi *mpasi vo lu-a-m-van-a* *Ø-nzimbu*
INIT-1-come-PST so that 2-GEN-1/AgrO-give-FV 10-money
'The reason why s/he come is for you to give him/her money'

[10] The abbreviations used in the verbal structure schema are as follows:

INIT	=	initial	OM	=	object marker
NEG[1]	=	negative marker	RAD	=	verb radical
SM	=	subject marker	EXTs	=	verbal affixes
T/A	=	tense aspect marker	FV	=	final vowel
			NEG[2]	=	final negation marker

b. *Dikatwizidi ko kuma kya mvula inokene*
di-ka-tu-iz-idi ko *kuma kya Ø-mvula i-nok-ene*
INIT-NEG[1]-AgrS-come-PST NEG[2] because of 8-rain 8-rain-PST
'The reason why we did not come is because it rained'

2.5.2.2 Negation

As was said earlier, in *Kizombo* negation is marked by the initial morpheme **ka**- that precedes the verb root and by the final morpheme **ko** that follows the final vowel. Given an appropriate oral discourse context, -**ko** can be omitted without rendering the sentence ungrammatical. However, in written texts its presence is obligatory, as illustrated in (37a through 37d). The sentences (37a and b) are represented at their underlying structure, for at the surface structure the -yi- and -u- are not represented, yielding the sentence (*mono kikwenda ko*, and *ngeye kukwenda ko*)

(37) a. *Mono kikuwenda ko*
mono *ka-i-ku-end-a* *ko*
1 NEG[1]-1/AgrS-15-go-FV NEG[2]
I not go (Intd: I do not go)

b. *Ngeye kukuwenda*
ngeye *ka-u-kuwend-a* *ko*
1 NEG[1]-1/AgrS-15-go-FV NEG[2]
you not go (Intd: you do not go)

c. *Yeno kalukwenda ko*
yeno *ka-lu-kwend-a* *ko*
2 NEG[1]-2/AgrS-15-go-FV NEG[2]
You not go (Intd: you do not go)

d. *(Y)au kaakuwenda ko*
(y-)au *ka-a-kwend-a* *ko*
2 NEG[1]-2/AgrS-15-go-FV NEG[2]
They not go (Intd: they do not go)

In oral context, however, the final *ko* may be omitted without rendering the sentence ungrammatical, as illustrated in (38).

(38) a. *Yeto katulamba madya...*
yeto *ka-tu-lamb-a* *(ma-dya)...*
2 NEG[1]-2/AgrS-cook-FV 6-meal
We not we-cook-FV 6-meal
'We do not cook (the meal)...'

2.5.2.3 Subject Agreement (AgrS)

The subject-verb agreement is expressed by prefixing a subject marker to the verb stem. Such a subject marker agrees with the noun class features of the preverbal subject. The marker is a noun prefix that represents the subject noun in the verb structure. As was stated earlier, this phenomenon is still very productive in *Kizombo*, as shown in most of the examples in this work.

(39) a. *Aana asumbidi mavoka*

a-ana	*a-sumb-idi*	*ma-voka*
2a-child	2/AgrS-buy-PST	6-avocado

'The children bought avocados.'

b. *Masolai makotele muvata*

ma-solai	*ma-kot-ele*	*mu-Ø-vata*
6-soldier	6/AgrS-enter-PST	18-5-village

'The soldiers entered in the village'

Sometimes the subject, on the one hand, does not carry the class prefix, but this can be identified in the verb structure, as shown in (40).

(40) a. *Nzo ikusilwe mpemba*

Ø-nzo	*i-kus-il-w-e*	*mpemba*
9-house	9/AgrS-paint-APPL-PASS-PST	paint

House for was painted paint (Intd: the house has been painted)

b. *Zandu diyele mwana*

Ø-zandu	*di-i-ele*	*mw-ana*
5-market	5/AgrS-go-PST	1a-child

Market went child (Intd: The market went the child. i.e. the market is the place of the regular going of the child)

c. *Mbele ivididi*

Ø-mbele	*i-vil-idi*
9-knife	9/AgrS-disappear-PST

'The knife disappeared'

On the other hand, the subject of the sentence may be represented by the subject marker without rendering the sentence ungrammatical, as shown in (41).

(41) a. *…alombele ndoloki*

…a-lomb-ele	*ndoloki*
2a/AgrS-ask-PST	forgiveness

'they asked for forgiveness'

b. *Nsumbidi kalu*
n-sumb-idi *Ø-kalu*
1-buy-PST 5-car
'I bought a car'

Personal names generally do not require (overt) subject agreement, as shown in (42).

(42) a. *Nzumba sumbidi kalu*
Nzumba *sumb-idi* *Ø-kalu*
1-PN buy-PST 5-car
'Nzumba bought a car'

b. *Luzolo nete mwana kulupitalu*
Luzolo *net-e* *mu-ana* *ku-lu-pitalu*
1-PN take-PST 1a-child 17-11-hospital
'Luzolo took the/a child to the hospital'

2.5.2.4 Object Agreement (AgrO)

Languages that have object agreement often place complex conditions on what kind of objects can trigger agreement. It is known from the typological literature that the features associated with object agreement cross-linguistically are those collectively referred to as Animacy and topicality hierarchy (Givón 1976; Comrie 1981).

The object marker for nouns that denote an animate entity in *Kikongo* is represented by enclitics and prefixes (Meinhof 1932:174), as shown in (43) and the corresponding examples in (44). The selection of an object agreement (AgrO) is determined by two conditions, notably animate and left dislocation.

(43) Class 1-*n*- (-*m*-, *ñ*-) Class 2 *tu*-

" "- *ku*- (often drops off) " " *lu*-

" " -*n*-, -*u*- " " *a*-

(44) a. *Mono i'nveene madya*
mono *i-'n-veen-e* [i-n-vaan-il-ile] *ma-dya*.
1 1/AgrS-1/AgrO-give-PST 6-food
I I him/her gave food
'I gave him/her the meal.'

b. *Ngeye iveene madya*
ngeye *i-(Ø)- veen-e* [i- Ø-vaan-il-ile] *ma-dya*.
1 1/AgrS-1/AgrO-give-PST 6-food
You I you gave food
'I gave you the meal.'

c. *Yani unveene madya*
yani *u-n-veen-e* [u-n-vaan-il-ile] *ma-dya*.
1 1/AgrS-1/AgrO-give-PST 6-food
He/she he/she I gave food
'He/she gave me the meal.'

d. *Yani utuveene madya*
yani *u-tu-veen-e* [u-tu-vaan-il-ile] *ma-dya*.
1 1/AgrS-2/AgrO-give-PST 6-food
He/she us gave food
'He/she gave us the meal.'

e. *Mono iluveene madya*
mono *i-lu-veen-e* [i-Ø-lu-vaan-il-ile] *ma-dya*.
1 1/AgrS-2/AgrO-give-PST 6-food
I I you gave food
'I gave you the meal.'

f. *Mono yaveene madya*
Mono *ya-veen-e* [i-a-a vaan-il-ele] *ma-dya.*
1 1/AgrS-2/AgrO give-PST 6-madya
I I them gave food
'I gave them the meal.'

(Adapted from Fernando 2008)

The example sentences in (44a-f) suggest that when an object DP is a human being, the use of the object agreement together with the lexical DP it refers to is obligatory. For other noun classes an independent pronoun is used, which follows the verb, as illustrated in (45) taken from Fernando (2010:13).

(45) a. *Nsusu iveene zo*
Ø-nsusu *i- Ø-veen-e* ***zo***.
10-chicken 1/AgrS-1/AgrO-give-PST 10/AgrO
Chickens I you gave chickens (Intd: I gave you chickens)

b. *Mankondo inveene mo*
ma-nkondo *i-n-veen-e* ***mo***.
6-banana 1/AgrS-1/AgrO-give-PST 6/AgrO
Bananas I him/her gave bananas (Intd: I gave him/her bananas)

c. *Nzumba nzo bindidi yo*
Nzumba *Ø-nzo* *bind-idi* ***yo***
1-PN 9-house close-PST 9/AgrO
Nzumba the house closed it (Intd: Nzumba closed the house)

The sentences in (45a-b) are seen as implying that the object pronouns *zo* 'them', *mo* 'them', and *yo* 'it' which belong to classes 10, 6 and 9, respectively, denote the non-human and are

thus independent from what follows after the verb. Also the object agreement for the second person singular is always morphologically null, as seen in (44b). Thus, it may be said that object marking is required when an object DP is left dislocated or simply *Kizombo* object-marker tends to receive a topical interpretation, as shown in (46 to 50).

(46) a. *Mbwene mwana*
mb-w-ene [n-mon-ile] *[mu-ana]*
1-see-PST 1a-ana
I saw child (Intd: I saw the child)

b. *Mwana immwene*
[mu-ana] *i-m-mu-ene* [i-m-mon-ile]
1a-child 1/AgrS-1/AgrO-see-PST
Child I him/her saw(Intd: I saw them)

(47) a. *Ngeye mwene aana*
ngeye *mu-ene* *[a-ana]*
1 saw-PST 2a-child
You saw the children (Intd: You saw the children)

b. *Aana wamwene*
a-ana *u-a-mu-ene*
2-child 1/AgrS-2/AgrO-see-PST
Children you saw them (Intd: You saw them)

(48) a. *Nzo twalutungila yo*
Ø-nzo *tu-a-lú-tung-il-a* **yo**
9-house 2/AgrS-2/AgrO-build-APPL-FV 9/PRN
House we built you for it (Intd: we build it for you)

(49) a. *Antumini*
a-n-tum-ini
2/AgrS-1/AgrO-send-PST
They sent me

(50) a. *Kumbokela*
ku-m-bokel-a
15-1/AgrO-call-FV
To call me

The sentences above illustrate that, members of classes 1 and 2 and animates of other classes are obligatorily object-marked, when left dislocated. When nouns of other classes are dislocated they are represented by an independent pronoun as was seen in (48).

2.5.2.5 Tense/aspect (T/A)

Kizombo encodes both tense and aspect. The present tense is marked by the morpheme *-ang-* , as shown in (51). The morpheme *-ang-* realizes the habitual present

(51) a *N'kento uzenganga mbizi mulonga*

Ø-n'kento	*u-zeng-ang-a*	*Ø-mbizi*	*mu-Ø-longa*
1-woman	1/AgrS-cut-HAB-FV	9-meat	18-5-plate

Woman cut meat on plate (Intd: the woman cuts the meat on the plate).

b. *N'kento ulambilanga luku munzungu*

Ø-n'kento	*u-lamb-il-ang-a*	*luku*	*mu-Ø-nzungu*
1-woman	1/AgrS-cook-APPL-HAB-FV	porridge	18-9-pot

The woman cooks porridge in a pan.

With regard to the future, the indicative mood has no future morpheme. Whenever future time is expressed, the time adverb or circumstances of the action are distinctively mentioned, and the action is represented as being then present. For instance, instead of saying: I will come tomorrow, a *Kizombo* speaker would prefer to say: tomorrow I come "*Mbazi ikwiza*". The adverb of time *mbazi* 'tomorrow' is stated, and then the action is considered at the time stated. When the action is actually in progress, the continuous or progressive form is used. However, when the action is not actually in progress at the moment of speaking, but refers to some future time, the simple form becomes future indefinite, while the morpheme *-ang* becomes the present definite, as shown above. The future intention is simply characterised by the repetition of the verb root without any specific adverb of time, as illustrated in (52).

(52) a. *Tunga katunga nzo*

tung-a	*ka-tung-a*	*Ø-nzo*
build-FV	1-null/FUT-build-FV	9-house

"S/he will build a house."

b. *Kuwenda tukuwenda kina mvula ikya*

kwend-a	*tu-kwend-a*	*kina*	*Ø-mvula*	*i-kya*
go-FV	2/AgrS-null/FUT-go-FV	when	9-rain	9-stop

"We will go when it stop raining'

c. *Aana kwiza akwiza kina avunda*

a-ana	*kwiz-a*	*a-kwiz-a*	*kina*	*a-vundu*
2a-child	come-FV	2/AgrS-come-FV-null/FUT	when	2/AgrS-holiday

'The children will come when they are on holiday'

With regards to the perfective, *Kizombo* has three different uses, as illustrated in (53) with the verb *kwiza* 'come'.

(53) a. *Ngizidi*
ng-iz-idi [n-iz-ile].
1-come-PST (P1)
I have come (just a few hours or so ago)

b. *Yaizidi*
ya-iz-idi [i-a-iz-ile].
1-come-PST (P2)
I came (two weeks or so ago)

c. *Yaiza*
ya-iz-a [i-a-iz-ile]
1-came-FV (P3)
I had come (very long time ago)

The perfective displays different allomorphs whose phonetic realization depends generally on a numbers of factors such as the number of syllables that a root has, and whether it ends with the alveolar nasal [n], bilabial nasal [m] or lateral [l]. The perfective aspect of monosyllabic verb roots is generally **-idi**, as shown in (54).

(54)	a.	*-dya*	*di-**idi***	c.	*-kaya*	*kay-**idi***
		to eat	eat-PST		"to offer"	"offer-PST
	b.	*-fwa*	*fw-**idi***	d.	*-yiba*	*yib-**idi***
		to die	die-PST		to steal	steal-PST

The perfective of disyllabic verb roots which end with a lateral [l] take **-idi** and the stem lateral becomes -d- due to the front-closed vowel [i], as shown in (55).

(55)	a.	*-tala*	*tad-**idi***	c.	*-sala*	*sad-**idi***
		to look	look-PST		to work	work-PST
	b.	*-(g)ula*	*ud-**idi***	d.	*-tuula*	*tuud-**idi***
		to break	break-PST		to put	put-PST

There are some verb roots which end with [l], but do not form their perfective with **idi**, as shown in (56).

(56)	a.	*-kala*	*kel-**e***
		to stay/live	stay-PST
	b.	*-zola*	*zol-**ele***
		to love	love-PST

	c.	*-kota*	*kot-**ele***
		to enter	enter-PST

The perfective of polysyllabic verb stems which end with a lateral [l] change to -d- when the final vowel is -i, as in (57).

(57)	a.	*-balula*	*balud-**i***
		to turn	turn-PST
	b.	*-vambula*	*vambud-**i***
		to separate	separate-PST

Monosyllabic and disyllabic verb roots which end with the alveolar nasal [n] and the bilabial nasal [m] form its perfective with **-ini**, as shown in (58).

(58)	a.	*-tuma*	*tum-**ini***	c)	*-vuna*	*vun-**ini***
		to send	send-PST		to tell lie	tell lie-PST
	b.	*-tiina*	*tiin-**ini***	b)	*-kuna*	*kun-**ini***
		to run away	run-PST		to plant	plant-PST

There are some verb roots which end with the alveolar nasal [n] and the bilabial nasal [m], but do not form their perfective with **-ini**, as in (59).

(59)	a.	*-swama*	*swem-**e***
		to hid	hid-PST
	b.	*-nwana*	*nwen-**e***
		to fight	fight-PST

Polysyllabic verb roots which end with an alveolar nasal [n] behave like their lateral counterparts discussed (60a/b) in pattern. The same analysis proposed for polysyllabic verb roots which end with lateral [l] applies to polysyllabic verb stems, as shown in (60c/d).

(60)	a.	*-kanikina*	*kanikin-**i***	c.	*-vutula*	*vutud-**i***
		to promise	promise-PST		to give back	give (back)-PST
	b.	*-bukuna*	*bukun-**i***	d.	*-katula*	*katud-**i***
		to cut	cut-PST		take away	take-PST

In most cases, verb roots with the applicative suffix **-il-**, the perfective is realized as **-idi-**, as shown in (61). The same is true for class 5 prefix which is realized as **di-**, instead of **li-** as shown in table 2, on page (20).

(61)	a.	*-vanga*	*veng-**e***	but	*vang-il-a*	*vang-**idi***
		to do/make	do/make-PST		do/make for	do/make (for)-PST
	b.	*-lamba*	*lemb-**e***	but	*-lamb-il-a*	*lamb-**idi***
		to cook	cook-PST		cook for	cook (for)-PST

While tense is concerned with grammaticalized time relations, aspect is associated with the way in which verb action is experienced in terms of progression. In other words, aspect is characterised by the duration of an action (i.e. perfective or imperfective). In most of Bantu languages aspect is marked by verbal suffixes (Mutaka 2000, Nurse 2008). Each of these suffixes expresses the way in which the action inherent to the relevant verb is experienced. In *Kizombo* aspect is marked either by -idi (perfective or complete) or by the auxiliary *-na* 'be' (imperfective or incomplete).

The notion of perfective can also be better understood in terms of its opposition with the imperfective. Comrie (1976, 1985) distinguishes various types of perfective, for example, result, recent past etc. He describes the perfective of the result in the following terms: a present state is referred to as being the result of some past action. It marks a situation in which the present state is the result of some past action.

(62) *Muntu tungidi nzo*

mu-ntu	*tung-idi*	*Ø-nzo*
1- person	built-PFT	9-house

The person built the house. (Intd: the current state (i.e. the existence of the house is the result of person's past action))

The perfective of the recent past, on the other hand, indicates that the present relevance of the past situation referred to is one of temporal closeness; that is, the past situation is very recent, as shown in (63). Comrie (1976) argues that in many languages the perfective may be used where the present relevance of the past situation referred to is simply temporal closeness.

(63) *Mwana diidi kala*

mu-ana	*di-idi*	*kala*
1a-child	eat-PFT	just

"The child has just eaten."

The imperfective, as opposed to perfective, is characterised by the internal structure of an action or state. As was said before, the *Kizombo* imperfective is often marked by verb *-na* 'be', as shown in (64).

(64) a. *Nzumba dya kena dya*

Nzumba	*di-a*	*ka-na*	*dy-a*
1-PN	eat-FV	1-be	eat-FV

Nzumba eat is (Intd: Nzumba is eating)

b. *Luzolo n'kanda kena soneka*

Luzolo	*Ø-n'kanda*	*ka-na*	*sonek-a*
1-PN	3-letter	1-be	write-FV

Luzolo letter is write (Intd: Luzolo is writing a letter)

2.5.2.6 Verbal root/radical

The verb root constitutes the core morpheme of the verbal structure to which all other peripheral affixes (both prefixes and suffixes) are added in specific order. The syllabic structure of the root may be simple or complex. The simple roots are normally found in monosyllabic stems or include one vowel or peak of sonority when the Final Vowel or Vowel Suffix is removed.

2.5.2.6.1 Simple roots

Simple verb roots in *Kizombo* may be composed of -C-, -CV-, -CVC-, and are also 'short roots' in Ngunga's (2000) term, as shown in (65).

(65) a. -C-

-t-	"to resolve"
-v-	"to give"

b. -CG-

-dy-	/-di-/	"to eat"
-nw	/-nu-/	"to drink"
-vw-	/-vu-/	"to belong"
-fw-	/-fu-/	"to die"
-vy-	/-vi-/	"to tender"

c. CVC

-tal-	"to resolve"
-vov-	"to speak"
-kal-	"to be"
-sal-	"to work"
-zol-	"to love"

2.5.2.6.2 Complex roots

Complex verb roots are composed of roots with – CVC-(VC)-VC

(66) CVC-suffixes

-lamb-ul-ul-	"to cook again"
-lomb-el-el-	"to ask for"
-tang-(is)-	"to teach"
-kwiz-id-il-	"to come for ever"
-kwend-el-el-	"to go for ever"
-katul-(ul)-	"to take way"

In (66), some of the suffixes (i.e. in tang-**is**-a) are fossilized becoming part of the verb root, as shown in the gloss. Without those fossilized suffixes, the remaining part of the verb means nothing in the present language.

2.5.2.7 Verbal affixes

Verbal affixes, in *Kizombo*, have received attention by some scholars (cf. Guthrie 1962; Dereau 1957; Diarra 1990; Matsinhe and Fernando 2008 and Fernando 2010). The reason why they are being reviewed here is that these affixes are part of the verb structure, which is of particular interest to this study. These affixes are taken as the controllers of transitivity (see details in chapter 6).

With regards to the early studies of verbal affixes in *Kizombo*, Guthrie (1962), Dereau (1957) and Diarra (1990) studied the form of the verbal affixes. Despite similarities in their description, these scholars' studies exhibit differences associated with terminology. This means they named the same affixes differently.

Affixes	Dereau 1957		Guthrie 1962	Diarra 1990
APPL	- il -		- il -	- il -
CAUS	- is -		- is -	-is-, -es-
PASS	- w -		- w -	-w-, -iw-, -ew-
REC	- an -		-	-an-, -azyan- asyan-
REFL	-		-	-
STAT	-ik-, -ek-		-	-am- , -an-
POT	-akan-			-akan-
REVER	One	-ol-	-ul-, -ol-	-ul-, -uk-
	Two		-uk-, -ok-	
INTENS	Active	-umun-	-umun-	-alal-
	Neuter		-umuk-	-umun-/-umuk-
ITERAT	Active	-ulul-	-zul-, -uzun-	
	Neuter		-uzuk-	
HABIT	-ang-		-	-
FREQ	- uzul-		-	-
POSIT	Active		-idik-, -inik-	
	Neuter		- al- , - an -	

Table 3: Summary of early studies on verbal affixes in Kikongo, quoted from Fernando (2010)

From Table 3 it is evident that the three scholars agree on the form of applicative, causative, passive and reciprocal. However, Diarra gives the alternatives -*ew*- and -*iw*- for passive, but they all diverge with regard to the stative, reversive, and intensive.

While Dereau designates -*ik*- and -*ek*- as stative, Diarra calls the affixes -*an*- and -*am*-, statives, whereas Dereau considered -*am*- semi-passive. Indeed, the morpheme -*am*- is also viewed as semi-passive in Mchombo (1998). Guthrie represents the reversive in terms of two categories: reversive 1 is formed by -*ul*-, -*ol*-, while reversive 2 is formed by -*uk*-, whereas Diarra considers -*ul*- and -*uk*- as allomorphs of the reversive. Guthrie named -*umun*- as active intensive, and -*umuk*- the as neuter intensive while Diarra called -*alal*- the active intensive and -*umun*- and -*umuk*- the neuter intensive.

Dereau designates -*ulul*- as the iterative while Guthrie once again distinguished between -*uzul*- and -*uzun*- as the active iterative and -uzuk- as the neuter iterative. Guthrie appears to be the only scholar who documents the positional affix, dividing it into the active positional represented by -*idik*- and -*inik*- and neuter positional represented, by -*al*- and -*an*-. It is worth noting that Diarra designates -*an*- as the stative. He also names -*uk*-, -*ok*- and -*ek*- as passive affix for verbs that do not accept -*am*-.

Fernando (2010) who studied six verbal affixes and their grammatical functions argues that these affixes are divided into two groups: those that increase the valency on the argument structure, and those that decrease the valency. The applicative and the causative have the ability of increasing the valency and the object introduced may be assigned various thematic roles. This is corroborated by Du Plessis and Visser (1998:30) when they observe that a class of verbal suffixes in Bantu languages can be distinguished that exemplify the regular alternation as transitive and intransitive verbs, linked to the occurrence of the verbal derivational suffixes. Thus, in what follows, a brief discussion will be given on these two groups of verbal affixes as they were studied in Fernando (2010).

2.5.2.7.1 Transitivizing affixes

2.5.2.7.1.1 The applicative

As was seen in Table 3, the applicative in *Kizombo* is formed by the suffix *-il-* and has three allomorphs. The *-el-* indicates vowel harmony while *-in-* and *-en-* are realized under nasal conditions. With regard to the meaning, this affix indicates that the action is applied on behalf of, toward or with regard to some object (Lodhi 2002:6). With regard to the function, the applicative affix adds one object DP to the base verb to which it is attached and therefore the new object DP is referred to as an applied object (Ngonyani 1988:251). This affix converts the transitive verb into a ditransitive verb, increasing in effect the number of arguments to three.

Applicative with instrument reading

(67) a. *Luzolo ulambilanga madya munzalu*

Luzolo	*u-lamb-il-ang-a*	*ma-dya*	*mu-Ø-nzalu*
1-PN	1/AgrS-be-cook-APPL-HAB-FV	6-food	18-9-spoon

'Luzolo cooks the meal exclusively by means of a spoon.

b. *N'kento uzengelanga mbizi mumbele*

Ø-n'kento	*u-zeng-el-ang-a*	*Ø-mbizi*	*mu-Ø-mbele*
1-woman	1/AgrS-cut-APPL-HAB-FV	9-meat	18-9-knife

"Woman cut meat with knife (Intd: The woman cuts (for) meat exclusively by means of a knife)

The introduction of the applied affix does not only introduce the instrument, but more importantly, in the sentences above denote exclusiveness. Both constructions mean that *nzalu* 'spoon' and *mbele* 'knife' are exclusive instruments used to cook meal and to cut meat. As

will be seen in chapter 7, section 7.4, the applicative can also be used with motion verbs, where it gives the meaning of exclusiveness.

2.5.2.7.1.2 The causative

The causative is formed by the morpheme **-is-** with its allomorph ***-es-*** due to vowel harmony. Semantically, this affix indicates cause to do or to be. Syntactically, the causative, as in the case with the applicative, increases the valency of the verb by adding one object to the predicate argument structure. In other words, the causative has the function of introducing a new agentive DP as subject (causer), either demoting the original subject (causee), and the original object to the second object or demoting the original subject to some sort of indirect object, as shown in (68). As pointed out earlier, the causative affix converts an intransitive verb into a transitive verb, as was seen in the example (32), on page 27, reproduced here as (68), and a transitive verb into a di-transitive verb, increasing in effect the number of arguments to two or to three, as shown in (69).

(68) a. *Luzolo nokese mvula*

Luzolo	*nok-**es**-e*	*Ø-**mvula***
1-PN	rain-CAUS-PST	9-rain

Luzolo rain caused rain (Intd: Luzolo caused it to rain).

b. *Nlongo mikovolese mwana*

Ø-nlongo	*mi-kovol-**es**-e*	***mu-ana***
4-medicine	4-cough-CAUS-PST	1a-child

'Medicine coughed child (Intd: the medicine caused the child to cough)

(69) a. *Nzumba lambisi aana madya*

Nzumba	*lamb-**is**-i*	***a-ana***	*ma-dya*.
1-PN	cook-CAUS-PST	2a-child	6-food

'Nzumba caused children to cook the meal (Intd: Nzumba asked children to cook the meal)

b. *Nzumba lombese mbevo sambu*

Nzumba	*lomb-**es**-e*	*Ø-**mbevo***	*Ø-sambu*
1-PN	ask-CAUS-PST	1-sick person	7-prayer

Nzumba caused the sick person to pray (Intd: Nzumba asked people to pray for the sick person)

2.5.2.7.2 Intransitivizing affixes

2.5.2.7.2.1 The passive

The passive affix has three forms of which only the morpheme -*w*- is productive, whereas the others, -*ew*- and -*iw*-, are restricted to monosyllabic verbs.

(70) a. *Madya malembwe kwa n'kento*

ma-dya	*ma-lemb-w-e*	*kwa*	*Ø-n'kento*
6-food	6/AgrS-cook-PASS-PST	by	1-woman

The meal was cooked by the woman

With regard to the function, contrary to the applicative and the causative discussed above, the passive suppresses the agent of the active sentences moving the theme into the subject position of the passive. In other words, the passive morpheme converts transitive verbs (subject = agent and object = patient) into intransitive verbs by promoting the object argument to the subject position and demoting the subject to oblique NP or zero realization, as indicated in (71).

(71) a. *Mama lembe nsusu*

Ø-mama	*lemb-e*	*Ø-nsusu*.
1-mother	cook-PST	9-chiken

'Mother cooked chicken (Intd: the mother cooked the chicken)

b. *Nsusu ilembwe kwa mama*

Ø-nsusu	*i-lemb-w-e*	*(kwa mama)*
9-chicken	9/AgrS-cook-PASS-PST	(by mother)

Chicken was cooked (by mother) (Intd: the chicken was cooked (by mother))

In the example sentences in (71b) the Theme of the active sentence is realized as the subject argument of the passive sentence while the Agent of the active sentence is demoted to the oblique DP of the passive sentence. When comparing (71a) and (71b), one will notice that in (71b), after the passive morpheme is attached to the verb, the valency of the verb is reduced by one, as a result topicalizing the Theme.

Kizombo also displays topic DP sentences with an impersonal passive interpretation with a limited number of verbs as shown in (72).

(72) a. *Mwana ankeenge*

mu-ana	*a-n-keeng-e.*
1-child	2/AgrS-1/AgrO-close-PST

'Child they him/her arrested. (Intd: the child was arrested)'

b. *Nsusu tuntekele*
Ø-nsusu *tu-n-tek-ele*
9-chicken 2-1/AgrO-sell-PST
'Chicken we it sold (Intd: the chicken was sold)'

The example sentence in (72) resembles the passive in the sense that the words *mwana* 'child' and chicken are topicalized and clitic *-n-* is attached to the verb *-kaanga* 'arrest' and -teka 'sell. The only difference between sentence (72) and (71b) is that in the latter the demoted subject is expressed via the enclitic and can also be expressed through an oblique DP.

2.5.2.7.2.2 The reciprocal

The reciprocal suffix in Kikongo is represented by the morpheme ***-an-*** with an allomorph ***-azyan-***. The second form is regarded as historical in that it is not as productive as the first. According to Dlayedwa (2002:71), the "reciprocal conveys the meaning of two or more individuals who are involved/engaged in the same activity." This means that the first actor does an action to the second who in return does the very same action to the first. The morpheme ***-azyan-*** expresses reciprocity and it does not combine with other affixes. Consider the examples in (73).

(73)	a.	*-mon-a*	*mon-an-a*	*mon-azyan-a*
		see-FV	see-REC-FV	see-REC-FV
		'see'	'see each other'	'see mutually'
	b.	*-suumb-a*	*suumb-an-a*	*suumb-azyan-a*
		buy-FV	buy-REC-FV	buy-REC-FV
		'buy'	'buy each other'	'buy mutually'
	c.	*-tal-a*	*tal-an-a*	*tal-azyan-a*
		see/visit-FV	see/visit-REC-FV	see/visit-REC-FV
		'see/visit'	'see/visit each other'	'see/visit mutually'

However, certain verbs in *Kizombo* do not accept *-an-* and *-azyan-* to express the reciprocal. In most cases, speakers of this language use the prefix *ki-*, which marks the reflexive, to express the reciprocal, as shown in (74).

(74)	a.	*-sonek-a*	*ki-sonek-en-a*
		write-FV	REFL-write-
		'write'	self write a (write for each other)
	b.	*sal-a*	*ki-sad-is-a*
		work-FV	REFL-work-CAUS-FV
		'work'	self work cause (help each other)

c.	*timuk-a*	*ki-timuk-a*
	jump-FV	REFL-jump-FV
	'jump'	self jump (jump for each other)

Contrary to Mchombo's (2004:104) argument that the reciprocal is subject to all processes that target the VS, namely the phonological process of vowel harmony and the morphological processes of reduplication and nominalization, the reciprocal in *Kikongo* does not undergo these processes. With regard to syntactic function, and contrary to the passive, the reciprocal binds the object DP (theme/patient) to the subject, creating the meaning in the plural as illustrated in (75).

(75) a. *Aana amonane vazandu*

a-ana	*a-mon-an-e*	*va-Ø-zandu*.
2a-child	2/AgrS-see-REC-PST	16-5-market

Children saw each other in market (Intd: The children saw each other in the market)

b. *Zimfumu zamavata ziwanane kulukutakanu*

Zi-mfumu	*za-ma-vata*	*zi-wan-an-e*	*ku-lu-kutakanu*
10-chief	10/AgrS-6-village	10/AgrS-meet-REC-PST	17-11-meeting

Chiefs of villages met each other in meeting (Intd: The chiefs of the villages met at the meeting)

2.5.2.7.2.3 The stative

The stative suffix is represented by the morpheme ***-ik-*** with its allomorph ***-ek-*** due to phonological conditions. In the linguistic literature, this affix has been interpreted in various ways and, hence, various names have been suggested, such as 'stative' (Guthrie 1962), 'neutro-stative' (Matsinhe 1994), 'factative/causative' (Diarra 1990), 'potential' (Sanderson 1954, cited in Ngunga 2000), and 'neuter-passive, quasi-passive' (Mchombo 1993). For the purpose of this study, the term stative will be used as an umbrella to cover the range of meanings suggested in the literature by the aforementioned scholars. Here the common denominator is that stative has the same morphological shape and causes the same syntactic effect on all inherently transitive verb roots to which it is attached (Ngunga, 2000:186).

The stative is also similar to the passive. They both involve an intransitive VR whose argument bears the thematic role of patient (Mchombo 1993:16) and which is regarded as the subject of the sentence. However, they differ in the sense that the passive allows an overt expression of the oblique subject function, while the stative does not, as in (76).

(76) a. *Nzumba mwene Lumengo munzila ya zandu*

Nzumba	*mwen-e*	*Lumengo*	*mu-nzila*	*(y)-a*	*Ø-zandu.*
1-PN	see-PST	1-PN	18-way	of	5-market

'Nzumba saw Lumengo on the way to market.'

b. *Lumengo monekene munzila ya zandu*

Lumengo	*mon-ek-ene*	*mu-Ø-nzila*	*(y)-a*	*Ø-zandu.*
1-PN	see-STAT-PST	18-9-way	of	5-market

'Lumengo was visible on the way to market.'

As will be seen in chapter 6, verbs like *-gul*a 'break' assigns two thematic roles, namely the Agent role and the Theme role as shown in (77a). However, the inclusion of -k- in the verb controls the transitivity of the verbs. For these verbs with the -k-, (intransitive) alternation occurs in sentences which have similar derivation to ergative pairs, as in (77b).

(77) a. *Mwana uwdidi kopo*

mu-ana	*uwd-idi*	*Ø-kopo*
1a-child	break-PST	5-glass

Child broke glass (Intd: The child broke the glass)

b. *Kopo diuwdikidi*

Ø-kopo	*di-uwd-**ik**-idi*
5-glass	5/AgrS-break-CI-PST

'Glass broke (Intd: the glass broke)

In the example in (77a), the transitive suffix – bears the semantic feature CAUSATIVE whereas the intransitive suffix ***-ik-***, holds an ANTICAUSATIVE semantic feature. For that reason, during the analysis in chapter 6, this morpheme and its allomorphs will be designated controller of intransivity, hereafter (CI). Furthermore, verbs like *-seva* 'to laugh' and *-dila* 'to cry' which are regarded as intransitive in languages like English, exhibit transitive properties in Kikongo as shown in (78).

(78) a. *Luzolo sevele mwana bwidi*

Luzolo	*sev-ele*	*mu-ana*	*bw-idi*
1-PN	laugh-PST	1a-child	fall-PST

Luzolo laughed child fell down (Intd: Luzolo laughed at the child who fell down)

b. *Aana adididi ngudi au fwidi*

A-ana	*a-dil-idi*	*Ø-ngudi*	*au*	*fw-idi*
2a-child	2/AgrS-cry-PST	3-mother	GEN	die-PST

Children cried mother their died (Intd: The children cried for their mother who passed away)

The examples in (78) suggest that the verbs laugh at and cry exhibit properties of transitivity in which *-seva* 'laugh at select *mwana* 'child' as its object while *-dila* 'cry' selects *ngudi*

'mother' as its object. Thus, it may be concluded that properties of the transitivity or the intransitivity are language- specific and depends on specific language context.

2.5.2.8 Final vowel

The last slot of the verbal structure is the final vowel. This slot has been designated differently by different scholars, for example, determinative vowel (Satyo 1985) and verbalizer (Mchombo 1978:88). In *Kikongo* the vowel **-a** is found in the final position of the infinitive, and other tenses, except for the recent past and yesterday past. Nurse (2003) asserts that the final vowel also includes a small closed set originally having to do with mood and aspect, but now including negation and tense in some languages. In *Kikongo*, the final vowel marks the tense, as shown in (79).

(79) a. *Mwana uwdidi kopo*

mu-ana	*uwd-idi*	*Ø-kopo*
1a-child	break-PST	5-glass

"The child broke the glass."

b. *Nzumba kombele nzo*

Nzumba	*kombel-e*	*Ø-nzo*
1-PN	sweep-PST	9-house

'Nzumba swept the house'

c. *Ngudi lombele maaza*

Ø-ngudi	*lomb-ele*	*maaza*
1-mother	ask-PST	water

The mother asked water (Intd: the mother asked for water'

Indeed the verbs *-gula*, *-komba* and *-lomba* in their infinitive and habitual present hold the final vowel -a. In their past form, the past morpheme is signalled in the final vowel slot, changing it into *-idi*, *-e*, and *-ele*, depending on the root as discussed in subsection 2.5.5. After analysing some aspects of the morphology of Kikongo, the next section will focus on the grammatical relations.

2.6 PREDICATE ARGUMENT STRUCTURE IN *KIZOMBO*

The verb in *Kizombo* is the focus of this dissertation specifically with regards to its argument expression, the selection restrictions on the arguments, and projection from the argument structure to the syntactic subcategorization frame. As will be discussed in chapter 3, the argument structure gives information about the list and the type of parameters of the

predicate. Studies on argument structure, such as those by Pustevjosky (1995), and Levin and Rappaport Hovav (1998), have shown that in order to account for the restriction on how arguments are linked to syntactic positions a number of distinctions have to be drawn. Pustevjosky (1995) distinguishes four types of argument that will be addressed in relation to *Kizombo* verbs.

(i) True arguments:

(80) *Nzumba sompele n'kento*

Nzumba	*somp-ele*	*Ø-n´kento*
1-PN	get marry-PST	1-woman

Nzumba married woman (Intd: Nzumba got married)

The sentence in (80) illustrates a syntactically realized parameter of the lexical verb *sompa*. This verb is a two-place argument predicate (i.e., ARG1, ARG2). The two arguments are represented in a structure where argument type is directly encoded in the argument structure (X, Y).

(ii) Default arguments:

These argument types are logically part of expressions in the 'qualia', in Pustejovsky's terminology, but they do not need to be obligatorily realized syntactically as in (81).

(81) a. *Ntungi wa nzo tungidi gyaka kya ndobi*

Ø-ntungi wa nzo	*tung-idi*	*Ø-gyaka kya*	*ndobi*
1-builder	build-PST	7-wall of	brick

The builder of house built the wall of brick (Intd: the builder built the wall out of the brick)

b. *Muntu fukidi n'ludi wa nyanga*

mu-ntu	*fuk-idi*	*Ø-n'ludi wa nyanga*
1-person	roof-PST	3-roof of bush

Person roofed the roof with bush (Intd: the person roofed the roof out of bush)

(iii) Shadow arguments

Pustejovsky argues that shadow arguments are semantically integrated in the meaning of a lexical item and they can only be expressed by means of discourse specification. They usually refer to semantic content that is necessarily expressed in syntax.

(82) *Yambila muntu muntima wa velela*

yamb-il-a	*mu-ntu*	*mu-Ø-ntima wa velela*
Welcome-APPL-FV	1-person	18-3-heart of clean

Welcome someone with happiness

The expression n'*tima* in (82) is a shadow argument as it can only be expressed under specific circumstances within the clause when the expressed argument stands in subtyping relation to the shadow argument.

(iv) True adjuncts

True adjuncts are parameters which modify the logical expression, but are not part of the situational interpretation. They are not associated with any particular lexical item's semantic representation, but include adjunct locative phrases or spatial modification.

(83) a. *Nkewa dyembalele kun'ti*
Ø-nkewa *dyembalel-e* *ku-Ø-n´ti*
9-monkey hang-PST 17-3-tree
Monkey hanged on tree (Intd: The monkey hanged on the tree)

b. *Lumingu lumosi kaveenge kulupitalu*
Lu-mingu *lu-mosi* *ka-veeng-e* *ku-lu-pitalu*
11-week 11-one 1-do-PST 17-11-hospital
one week s/he stayed in the hospital (Intd: S/he stayed in the hospital for one week

2.6.1 Selectional restrictions on the arguments

When a verb selects a certain argument, it also selects the semantic features which it must have in order to appear with such an argument. However these selectional restrictions may be language specific. For example, while the verb 'cry' in English selects only one argument, in *Kizombo* such a verb may select two-arguments, as shown in (84).

(84) a. *Mwana dididi ngudi andi wele kun'koko*
Mu-ana *dil-idi* *Ø-ngudi andi wel-e* *ku-Ø-n'koko*
1a-child cry-PST 1-mother his go-PST 17-3-river
The child cried (for) his mother who went to river

b. *Mwana zengele n'ti mutanzi*
Mu-ana *zeng-ele* *Ø-n´ti* *mu-Ø-tanzi*
1a-child cut-PST 3-tree 18-7-machete
The child cut the tree by means of Machete

In the sentence (84b) the first argument is *mwana*. The selection of *-zenga* is based on the agentivity properties of the DP *mwana*. That is to say, the selected DP requires complying with specific semantic properties. An inanimate DP argument cannot perform such an activity and for that reason cannot be selected. The second argument *n´ti* is selected on the basis of the

encyclopaedic meaning of the verb *-zenga*. The verb *-zenga*, for example, selects a specific argument and rejects the ones that do not conform to the meaning of the argument. This information is stored in the lexicon of a native speaker who need not to be told.

2.6.2 Linking of arguments to syntactic subcategorization frame

The lexical semantic representation, that is the predicate argument structure of a verb indicates the number of arguments it takes. According to the number of arguments, which a predicate bears, it will be described as a one-place, two-place, or three-place verb. Each argument will have a specific variable corresponding to such arguments or such variables may have certain semantic labels as the Agent, the Theme, etc. (See details in chapter 5).

(85)	a.	One-place predicate:	*-kosoka*	ARG1	(x)
			SRepres.	(Ag)	
	b.	Two-place predicate:	*-lamba*	ARG1, ARG2	(x-y)
			SRepres.	(Ag) (Th)	
	c.	Three-place predicate	*-vaana*	ARG1, ARG2, ARG3	(x,y,z)
			SRepres.	(Ag) (Rec) (Th)	

The assignment of thematic roles is governed by the projection principle and theta-criterion (Chomsky 1985) which states that a verb may only subcategorize for complements that it theta-marks. The theta-criterion, for example, constrains a one-to-one association between theta-roles. This means one semantic role must assign one and only one argument. Thus, each variable in the predicate argument structure must be saturated or correspond to one syntactic constituent, as the example sentence in (86).

(86) *N'kento ulanbanga madya munzungu*

Ø-n´kento	*u-lamb-ang-a*	*ma-dya*	*mu-Ø-nzungu*
1-Woman	1/AgrS-cook-HAB-FV	6-food	18-9-pot

The/a woman cooks meals on the pan

In (86) the variable x corresponds to the Agent argument n´*kento*', the variable y corresponds to the Theme argument '*madya'* and the adjunct *mu-* plus the Locative argument *nzungu* correspond to the place where the meal is cooked. The arguments presented above by n´*kento*, *madya*, and *munzungu*, each receive one and only one thematic role. This means that each

thematic role gives the relation between the DPs and LPs in the argument positions associated with a verb in the syntax and variables in the predicate argument structure of a verb.

Thematic roles may be assigned by a verb, preposition, or a verb phrase through predication. The DP arguments of a verb in syntax are not the same with regards the the way in which they are assigned a theta-role. The DP argument which is assigned a theta-role by VP via predication, for example, must be outside the maximal projection of the verb, as shown in figure (4).

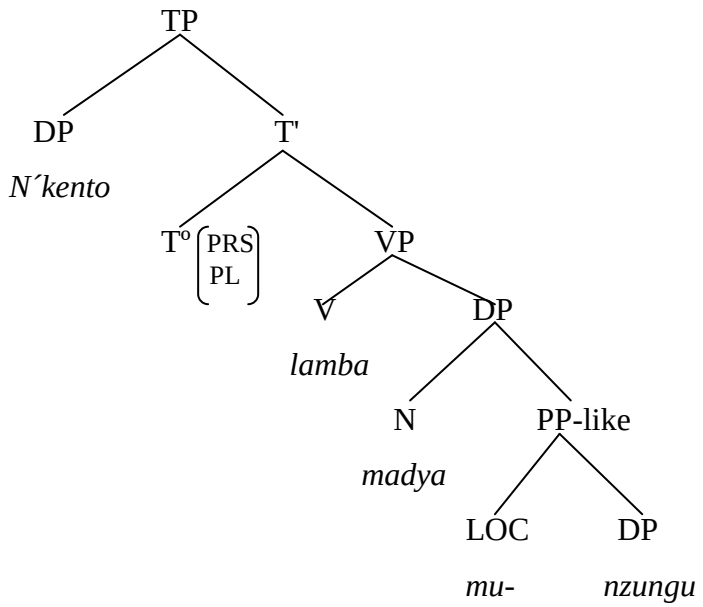


Figure 4: The *Kizombo* sentence exemplifying the relation between external and internal arguments

The verb may assign a theta-role to the DP argument in the subject position, is the external argument. The remaining arguments are internal to the maximal projection. The subcategorization properties of the verb indicate the syntactic categories that appear as sisters or complements to the verb which is the head of the VP. Arguments which appear in the position subcategorized by a verb are called internal arguments.

The internal arguments are assigned their theta-roles in the syntax under government principle which state that the verb or a preposition that assigns a theta-role must govern such an internal argument, whereas the external argument must be in relation of to mutual c-command with the maximum projection of the verb. The lexical representation of a given verb must include specification of how each DP argument is assigned to its theta-role along with the number of arguments that a verb can assign, as in (87).

(87)	x	< y, LOC	< z	(Variables)
	Ag	Th	Source	(thematic labels)

The variables Y and Z represent internal arguments. The relation between sentence constituents of the verb '*lamba*' is structurally given in figure (4) above.

2.7 PRONOMINALIZATION

Kizombo has a six-personal pronoun system, as shown in (88).

(88) Subject pronoun

Singular		***Plural***	
Mono	'I'	*Yeto*	'we'
Ngeye	'you'	*Yeno*	'you' (Pl)
Yan(d)i	's/he'	*Au*	'they'

As the glosses clearly indicate in (88), subject pronouns in *Kizombo* are not distinguished on the basis of gender or classes. It should be noted that pronouns in *Kizombo* refer exclusively to humans. Due to the influence of European languages, the third person pronoun in *Kizombo* has been adopted from human reference to animate reference in the written language. In terms of gender resolution conflict, *Kizombo* adopts two strategies: if DP_1 and DP_2 are coreferential and the speaker is part of the coreferentiality, then only the first person plural may be used as the agreement, as shown in (89a-b). However, if the speaker is not part of the coreferentiality, then only the second person plural may be used as the agreement, as shown in (89c).

(89) a. *Mono ye ngeye tufeti lombela mwana sambu*

mono ye ngeye	*tu-feti*	*lomb-el-a*	*mu-ana*	*Ø-sambu*
I and you	2/AgrS-should	ask-APPL-FV	2a-child	7-prayer

You and I should pray for the child

b. *Yeno ye yeto katulendi zonza ko*

yeno ye yeto	*ka-tu-lendi*	*zonza*	*ko*
You and we	NEG^1-Agr/S3Pl-must	quarrel	NEG^2

You and we must not quarrel(Intd: You and us must not quarrel)

c. *Yani ye ngeye lufeti wizananga*

yani ye ngeye	*lu-feti*	*wizan-ang-a*
S/he and you	AgrS/2Pl-must	like-HAB-FV

She/he and you must love each other

'You must love each other'

2.8 SUMMARY

This chapter has given an account of the phonological and morphosyntactic features of the *Kikongo* (*Kizombo*) language. It has shown that *Kikongo (Kizombo)*, as is the case with other Bantu languages, uses noun classes and that these classes are very productive. Regarding its phonological inventory, it was pointed out that *Kikongo* has five vowels and that vowel length is phonemic with a distinction between short and long vowels. Concerning the consonant sounds, segments represented as sequences can be considered as complex segments rather than underlying units. Section 2.5 addressed issues relating to the verbal morphology and *Kikongo* (*Kizombo)'s* verb system. It was shown that while some verbs are inherently intransitives, they may acquire transitive properties via a derivational process. Similarly, transitive verbs may acquire intransitivity properties through a derivational process. The verbal root may accommodate as many elements as possible. However, these elements observe a given order in which they appear. Some affixes, for example, are the sources of transitivization. Of particular relevance to this study is the view that transitivity and intransitivity in *Kikongo* can not always be regarded as an inherent property of the verb root. Certain verbs which are inherently intransitives in some languages (i.e. English), have transitive use in *Kikongo*, therefore the notion of transitivity may vary across-language.

CHAPTER 3
AN OVERVIEW OF RESEARCH ON THE CAUSATIVE AND ANTICAUSATIVE ALTERNATION

3.1 INTRODUCTION

Chapter 2 presented the phonological and morphosyntactic features of the *Kikongo (Kizombo)* language. This chapter will review some of the major research in the field of the causative and anticausative alternation, which includes studies conducted in a number of lexical-semantic and syntactic frameworks. The causative and anticausative alternation received substantial attention in both typological and theoretical studies (Lackoff 1965; McCawley 1968; Dowty 1979; Levin and Rappaport Hovav 1995, 2005; Levin 1993, 2009; Piñón 2001; Chierchia 1989/2004; Schäfer 2008, 2009; Koontz-Garboden 2009; Alexiadou *et al* 2006; Alexiadou and Doren 2007; Alexiadou 2010, among others). The reason for the extensive body of research is partly due to the fascinating complexities and properties that allow the causative and anticausative alternation of various semantic verb classes to vary both within a particular language and cross-linguistically. Despite the variation, there seems to have been a tacit recognition by many scholars that an understanding of these properties within particular languages and across languages is important to understanding how natural languages encode information.

The literature concerning both the causative and anticausative alternations and the locative-subject alternation is extensive, consequently, a complete review of all studies providing lexical-semantic and syntactic accounts of these constructions is not possible. Instead, this chapter will be limited to some of the studies which will shed the light on analysis of data in *Kikongo*. Thus, this chapter will seek to answer the question of which lexical-semantic and syntactic properties allow/disallow these alternations and how theories of aspect address the issue under investigation. It will seek to reveal what knowledge - theoretical and typological - have been established in relation to alternations in some languages of the world. Throughout this review, the principles of critical appraisal will be applied and each section will provide an account of what issues researchers have studied on the subject under investigation. Most of the examples will be based on English because research in this field was mainly conducted in the English language or in comparison to it.

The chapter is organized as follows: Section 3.2 will set the background and section 3.3 will review approaches on the causative and the anticausative alternation. Three competing

approaches will be reviewed: Subsection 3.3.1 will focus on the Intransitive approaches, of which proponents maintain that anticausatives are semantically causative, but have no direct reflex in the syntax. Subsection 3.3.2 will review the Transitive approach of which advocators maintain that anticausatives are semantically causative and hold direct syntactic relevance. Section 3.3.3 will deal with the Common approach and proponents of this approach contend that although anticausatives lack causative semantics, theoretically, they can involve causation or be compatible with it. In section 3.4 the focus will shift to the status of the middle formation. Section 3.4.1 will survey characteristics of the middle formation and section 3.4.2 will review properties of verbs and the semantics of the sentence. Section 3.4.3 will review the properties of the grammatical subject of middle formation and section 3.4.4 will explore properties of the logical subject. Section 3.4.5 will review the implicit argument. Section 3.4.6 will examine the approaches and, finally, a summary of the main points discussed will be given.

3.2 SETTING THE BACKGROUND

The causative and the anticausative alternation is characterized by verbs which allow both, a transitive and intransitive use and where the transitive use of a verb V means roughly 'cause to V- intransitive' (Levin 1993; Levin and Rappaport Hovav 1995; Alexiadou *et al* 2006; Alexiadou 2010, Schäfer 2008, 2009 among others). Typologically, verbs undergoing this alternation are those which denote change of state, change of degree or change of location (cf. Schäfer 2008; Beavers *et al* 2010), as exemplified in (90).

(90) a. Frank breaks the window

b. The window broke

In the sentences in (90), the subject Frank in (90a) is the external argument of the transitive verb and this subject argument is said to be suppressed in the intransitive variant, hence the internal argument of the transitive verb is promoted to the position of the subject of the intransitive variant, as shown in (90b). For this reason, anticausative verbs in many studies are regarded as the diagnostic test of unaccusative verbs (Levin and Rappaport Hovav 1995; Alexiadou *et al* 2006) under the belief that a universal principle of theta-role assignment such as the Uniformity of Theta assignment Hypothesis (UTAH) (Baker 1988) holds true (Schäfer 2008). The internal theta-role of the transitive version should be base-generated in the intransitive version internally.

The debate concerning the causative and the anticausative alternation in the linguistic literature revolves around two major concerns: the first concern deals with the similarities and dissimilarities between passives and anticausatives with regards to the presence of or absence of an implicit external argument (cf. Alexiadou *et al* 2006; also Alexiadou 2010; Schäfer 2008, 2009 and the references therein). Passives and anticausatives differ in two important aspects (Levin and Rappaport 1995; Reinhart 2000; Chierchia 2004; Schäfer 2009; Alexiadou 2010):

(i) *Modification and control*: Passives but not anticausatives can be modified by agent introducing by-phrases, agent-oriented adverbials, and allow control into purpose clauses;
(ii) *Verb restrictions*: Any transitive verb can be passivized, but only a restricted number of verbs can form an anticausative (Schäfer 2008:148).

In languages like English, break verbs allow both an anticausative and passive use while 'cut' verbs allow passive use and disallow an anticausative. This is so because although 'cut' verbs in English express a changes of state similar to 'break' verbs, the latter fail to fulfil the precondition for undergoing the causative alternation (Schäfer 2008).

With regard to *modification*, and *control*, earlier studies argue that this is due to the presence vs absence of an implicit external argument in passives and anticausatives. While passive verbs contain an implicit argument which can be assessed by by-phrases and agent-oriented adverbials, and which can exert control into purpose clauses, anticausatives lack such an argument and, for that reason, modification and control cannot hold. In spite of tacit agreement such as the lack of modification and control, linguists differ in view as regard the level of grammar at which the implicit external argument is expressed.

With regard to the properties of meaning, the focus of the research on the causative and anticausative alternation has been to identify meaning components which determine the behaviour of individual verbs. Although the causative alternation in earlier research is constrained to verbs of change of state and non-agentive verbs of motion, there are anticausative verbs that lack causative counterparts in languages like English, but do have such counterparts in a number of other languages, and verbs of causation that lack anticausative counterparts in English, but do alternate in other languages (cf. Alexiadou 2010; Schäfer 2009). Furthermore, some classes of verbs in some languages allow instruments or

natural force (e.g. weather nouns) as subjects, yet they do not have anticausative counterparts. Some other verbs restrict their external argument[11] to agents and never license natural causers as subject, although they exhibit the anticausative alternation.

In addition, the debate has revolved around the reason of why anticausative alternants do not have an explicit external argument (i.e. a lexically realized expression corresponding to the subject argument in the transitive use of a verb) and which of the two uses, the causative or anticausative, is basic, and where this derivation takes place in the grammar (cf. Dowty 1979; Pesetsky 1995; Levin and Rappaport Hovav 1995; Reinhart 2000, 2002; Alexiadou *et al* 2006; Schäfer 2008, 2009, among others).

Three competing approaches have emerged, namely the Intransitive approach, the Transitive approach and the Common approach. As will be seen below, in the Intransitive approach, the intransitive form is regarded as the basic form and is expected to be morphologically marked, while in the Transitive approach, the transitive form is considered the basic form, and the intransitive form is the derived one, therefore the former is expected to be morphologically marked. The Common approach, on the other hand, proposes that both variants are derived.

Proponents of the Intransitive and the Transitive approach agree that it would be conceptually unsatisfactory to assume that each variant of an alternating verb – causative and anticausative – is assigned an independent lexical entry (Schäfer 2008, 2009). The reason is that it would be impossible to state any generalizations about which verb can and which verb cannot undergo the causative alternation. Indeed, generalizations regarding which verbs undergo causative alternation do not hold across languages. In the sections that follow the focus will turn to the approaches to causative alternations.

3.3 APPROACHES TO CAUSATIVE ALTERNATIONS

3.3.1 The Intransitive approach

3.3.1.1 Lakoff (1965)

Starting with Generative Semantics, some scholars have assumed that the meaning of verbs can be decomposed into some kind of lexical semantic representation which is on its turn composed of a limited set of basic event predicates and a lexical core (Lakoff 1965;

[11] An argument is an expression (usually DPs) that bears a thematic/semantic role. Arguments include agents, patients, themes, goals, sources, locations, experiencers, benefactives, etc.

McCawley 1968; Dowty 1979; Hale and Keyser 1987; 2002; Rappaport Hovav and Levin 1995, among others).

The Intransitive approach, also known as causativization, has received a great deal of attention going back to Lakoff (1965; McCawley 1968; Dowty 1979) among others. The assumption is that English verbs should be couched within a derivational approach. They argue that anticausatives lack an implicit external argument because these constructions are basically monadic. The causative variant is derived from the anticausative alternant by means of the causativization process. This idea was borne out in Lakoff's (1965) analysis of the triad sentences, as shown in (91), taken from (Dowty 1979:41).

(91) a. The soup was cool.
b. The soup cooled.
c. John cooled the soup.

In the sentences in (91), the representation of a deep grammatical relation, in Lakoff's terms, is evident between subject and predicate in sentences (91a-b) and an analogous relation holds between verb and object in (91c). If an inappropriate subject was placed in any of the sentences in (91), they would all be equally inappropriate. In order to answer the question of the source of different deep structures, Lakoff noted the following sentences, as shown in (92), taken from Dowty (1979: 41).

(92) a. The soup cooled
b. The soup became cooled
c. The soup became to be cooled
d. It came about that the soup was cool
e. That the soup was cool came about

For Lakoff, sentences (92a-b) are nearly synonymous and differ very little in syntactic form, thus they may be derived from the same deep structure. If all the sentences in (92a-d) come from the same deep structure, then there is a source or, there are sources, most that resemble (92e), where there is a sentential subject (the soup was cool) and an intransitive verb (came about). Considering that abstract deep structure elements with semantic significance were coming in vogue, Lakoff argued that sentence (92a) differs from the other sentences in having an abstract verb with the feature +INCHOATIVE, whereas sentences (92b-d) have become or come about with nearly the same meaning.

The situation in (92e) is parallel to (92b). In Lakoff's view, one can find paraphrases of clause (92c) which are possibly transformational variants of it, but which have more clauses than (92b), just as (92b) has one more clause than (92a), as shown in (93), taken from (Dowty 1979: 43).

(93) a. John cooled the soup
b. John caused the soup to cool
c. John made the soup to cool
d. John caused the soup to become cool
e. John brought it about that the soup was cool
f. John caused it to come about that the soup was cool

If sentences in (93a-f) were derived from at least structurally identical deep structure, then those structures would contain similar deep structure to that of (92b) embedded in a higher sentence which has the main verb *cause*, *make* or the semantically similar abstract verb whose feature is +CAUSATIVE, as shown in Figure 5.

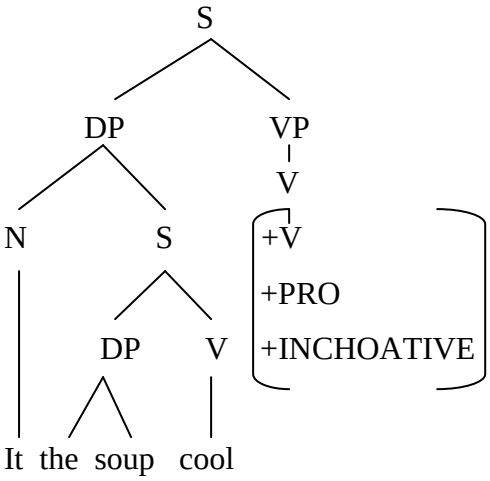


Figure 5: Lakoff's (1965) structure of inchoative of the sentence (92a), quoted from Dowty (1979:43)

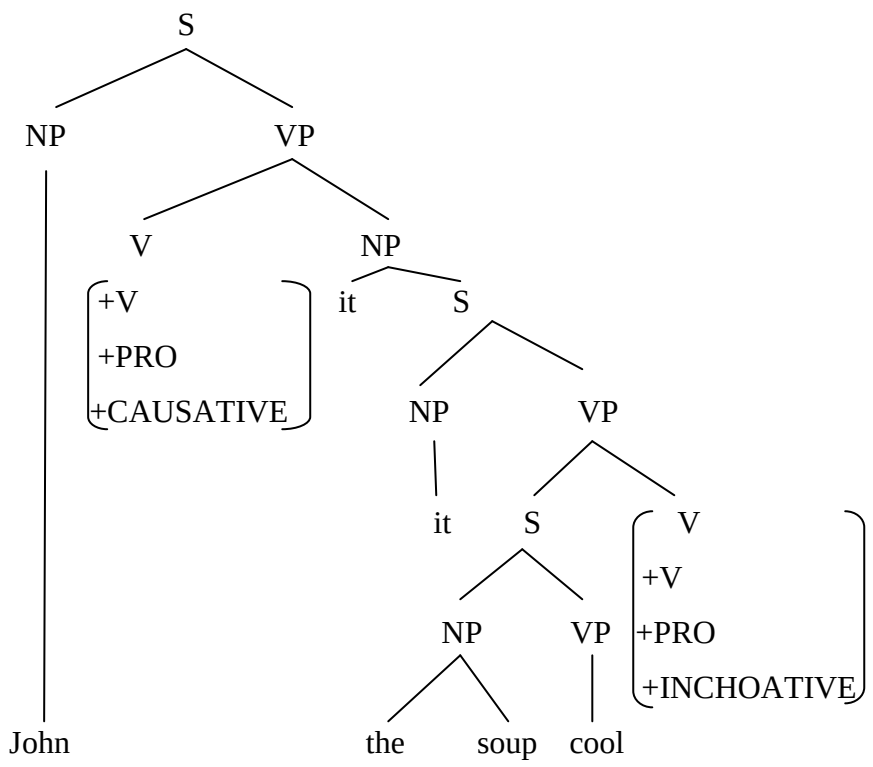


Figure 6: Lakoff's (1965) structure of causative of the sentence (93a), quoted from Dowty (1979:43)

As abstract items with semantic significance gained the ground in the analysis of sentences, under the grammar transformation theory, scholars (i.e. Lakoff, McCawley, among others) began to propose that the 'deep level' of underlying syntactic structure would be regarded to have all the properties formerly attributed to semantic representation (i.e. level of linguistic structure fully representing the meaning of a sentence but without specific word to a single natural language at surface level (Dowty 1979:43).

Indeed, it became a common sense among scholars that most 'surface' English words would be represented at the deep structure level by complex expressions rather than from single elements.

3.3.1.2 McCawley (1968)

In an attempt to respond to the question of how individual lexical items would be replaced by multiple parts of an underlying tree during the derivation, McCawley (1968), taking the example of the verb 'kill', proposes that the verb kill is to be analysed into the components CAUSE, BECOME, NOT and ALIVE, as illustrated in Figure 3. And he postulated a transformation of Predicate Lifting (later, Predicate Raising) which attaches a predicate element such as CAUSE, BECOME, NOT and ALIVE. The elements corresponding to kill

form a single constituent, and a lexical insertion transformation would replace a sub-tree consisting only of this collection of elements with the verb kill.

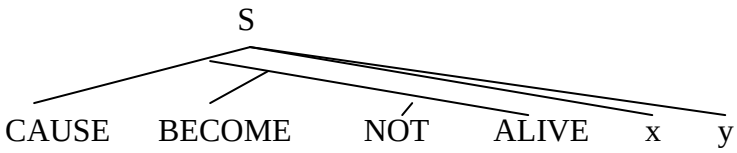


Figure 7: McCawley's analysis of deep structure of verb kill, taken from Dowty (1979:45)

In McCawley's view, the predicate-raising transformation could be optional at each stage; and if it did not apply at any stages in a derivation process, different lexical items would be inserted to replace the different abstract elements or even groups of elements that would ultimately be regarded as single constituents. He then proposes that from the same deep structure, other English sentences could also be obtained from an equation such as (*x causes y to become not alive, x causes y to become dead, x causes y to die*, and *x bring it about that y is dead)* (Dowty 1979:45). In the causative and the anticausative use different syntactic constructions occur based on the same basic lexical items but with 'a unit of meaning' present in one that is not present in the other.

3.3.1.3 Dowty (1979)

Building on McCawley, Dowty (1979) proposes a decompositional analysis. He postulates a special 'causative rule (i.e. S24, T24) that derives transitive verbs from intransitive verbs and whose semantic effect is to add a predicate CAUSE to the representation of the former. Taking the example of the verb break, the causative rule states that given $\text{break}_{\text{intrs,}}$ there is a verb $\text{break}_{\text{trans}}$ and the corresponding translation rule states that the representation of $\text{break}_{\text{trans}}$ includes a predicate CAUSE, as shown in (94b).

(94) a. break $_{\text{inchoative}}$: λy [Become BROKEN (x)]

b. break $_{\text{causative}}$: λyλx [∃P [P (x) Cause Become BROKEN (y)]]

(Dowty 1979)

Dowty's analysis of the causative use, strictly speaking, is derived from its anticausative with the help of syntactic rules. Furthermore, he proposes rules (S23 and T23, as shown on page 206), that derives anticausative verbs (i.e., $\text{break}_{\text{trans}}$) from stative adjectives (i.e. $\text{break}_{\text{adj}}$) and whose semantic effect is to add a predicate BECOME to the representation of the former.

Nevertheless, such rules have quite a number of exceptions (Dowty 1979; see also Pinõn 2001). Later on (see Dowty's chapter 6) he considered them to have the status of lexical redundancy rules.

An influential decomposition approach to word meaning is presented in Dowty (1979). Dowty combined insights developed in Generative Semantics with the intentional logic system in the tradition of Richard Montague. He focused on deriving the aspectual classes of verbs as postulated by Vendler (1957), namely states, activities, accomplishments, and achievements (see detail in chapter 4). Accomplishments (*paint a picture, make a chair*) are complex and extended in time, while achievements *(spot, find, die*) are simple and occur at a point in time. Dowty (1979) hypothesized that 'the different aspectual properties of the various kinds of verbs can be explained by postulating a single homogeneous class of predicates - stative predicates - plus three or four sentential operators and connectives' (Dowty 1979:71).

The operators and connectives are treated as logical constants, with a standard model-theoretical interpretation for each. Two important operators are CAUSE and BECOME. Accomplishments are defined in terms of the operator CAUSE, which takes two propositions as arguments. As its name suggests, this operator is meant to capture the notion of causation. The BECOME operator takes a single state as its scope, its interpretation fixed so that BECOME(p) is true at time t if $\neg p$ just prior to t and p just after t. This operator is introduced by accomplishment verbs, and the state p corresponds to the result state of the accomplishment. A third operator, DO, relates volitional agents to the actions they undertake.

Dowty illustrated his system with detailed analyses, including a treatment of the systematic semantic relation between adjectives such as 'cool' or 'open', and their cognate inchoative and transitive verbs. For example, the property 'cool' is the stative predicate expressed by the adjective 'cool' (6a). (The logical expressions in (95) are adapted in simplified form from Dowty 1979:206-7).

The inchoative verb 'cool', as in *The soup cooled*, is translated using cool' in combination with the BECOME operator in (95b). This sentence can be roughly paraphrased as 'The soup became cool.' Dowty's translation of the causative verb '*cool*', as in '*Marie cooled the soup'*, is an expression of the form φ CAUSE ψ, where φ and ψ are propositions (95c). The causing

proposition φ involves the agent argument (*Marie*, in the example) and the result ψ is BECOME ('cool'(the-soup)).

(95) a. adjective *cool* (as in *The soup is cool*):

λy [cool'(y)]

b. intransitive verb '*cool'* (as in *The soup cooled*):

λy [BECOME[cool'(y)]]

c. transitive verb *cool* (as in *Marie cooled the soup*):

$\lambda y \lambda x$[[. . .x . . .] CAUSE [BECOME[cool'(y)]]]

Dowty motivated his system with a rich array of linguistic evidence. For example, the existence of the result state expression 'cool'(y) in the structure in (95b) and (95c) explains the ambiguity of 'Marie cooled the soup again': it presupposes either (i) that Marie cooled the soup at least once before, or (ii) that the soup was 'cool' before. (Reading (ii) is illustrated by the familiar rhyme, 'All the king's horses and all the king's men couldn't put Humpty Dumpty together again.' Dowty (1979) notes that this 'is obviously not intended to entail that anyone had put Humpty Dumpty together on an earlier occasion, but merely that Humpty Dumpty had been "together" once before.' This ambiguity follows if the operator introduced by the adverb *again*, which contributes the presupposition that the situation in its scope obtained previously, can take a scope that is either wider or narrower than that of the BECOME operator.

The characterization of the causative and anticausative alternation in this approach seems to be plausible at first glance. However, there is a robust consideration that may speak against this approach so far as its essential feature is that in the causative and anticausative alternation, the causative verb is derived from its anticausative counterpart. One should expect languages with complex morphology to generally conform to such a direction of the derivation. Having discussed the Intransitive approach, the focus will now shift to the Transitive approach.

3.3.2 The Transitive approach

Proponents of the Transitive approach (cf. Grimshaw 1982; Chierchia 1989/2004; Levin and Rappaport Hovav 1995; Reinhart 2002 among others) propose the opposite direction of derivation. The common view among them is that this approach is entirely lexical in nature,

but it differs considerably in how to account for the direction of derivation of the anticausative, specifically in regard to whether anticausative constructions have causative semantics (Schäfer 2009).

3.3.2.1 Grimshaw (1982)

In her analysis of the causative alternation, Grimshaw (1982) proposes that a lexical operation of detransitivization does exactly the opposite of the causativization discussed earlier under the Intransitive approach. Grimshaw argues that the causative version is the basic form, and the operation of detransitivization deletes the CAUSE predicate from the Lexical Conceptual Representation (henceforth LCR) (cf. also Schäfer (2009:30)), as illustrated in (96).

(96) Detransitivizing Rule:

a. Causative [(x) CAUSE [BECOME BROKEN (y)]]

b. Anticausative [BECOME BROKEN (y)]

Under Grimshaw's detransitivizing operation, the same question asked with respect to the causativizing approach arises: considering that internally change of state verbs lack a causative use, they arguably do not have a source from which they can be derived as such verbs are basically listed as intransitive entries, or they must be marked so that the detransitivization operation must be obligatory (cf. Alexiadou *et al* 2006; Schäfer 2009; Alexiadou 2010, among others). A further concern with Grimshaw's proposal is that the detransitivization operation must be constrained since not all transitive verbs have anticausative uses. A restriction criterion seems, however, to be inappropriate, since the range of verbs participates in the causative and the anticausative alternation varies from one language to another and within the language.

3.3.2.2 Reinhart (2000, 2002)

Reinhart (2000, 2002), building on Chierchia (1989), later on (2004) proposes a detransitivizing operation which differs from that of Grimshaw at the level of implementation. Reinhart proposes a theta-system that builds on decomposition, but she assumes that lexical entries encode relations between a verb and its arguments. Reinhart, proposes that theta-roles are encoded by two binary features, and then the lexicon allows 'arity operations' which

manipulate lexical entries. Finally, linking mechanisms map arguments to syntax according to their theta composition.

The two binary features relevant for the decomposition of the theta-roles are [+C/¯C] expressing whether the argument in question is responsible for causing the verbal event and [+m/¯m] expressing whether the mental state argument is relevant to the verb/event. These features can occur alone or in combination. Human agents, for example, are coded as [+C/+m], themes on the other hand are coded [-C/-m]. The feature [+C] is underspecified for [+/-m] and for that reason it is compatible with both human agents and non-human causers.

Reinhart proposes that two 'operations' can manipulate lexical entries. The first, **saturation**, derives passive constructions through existential building of the external argument. The second, **reduction**, eliminates either the external or internal argument. Inherent reflexives are derived from transitive entries through internal argument reduction. Anticausatives are derived from transitive entries via external argument reduction – also known as expletivization. Central to this approach is the view that the external argument can only be if it is [+C], that is underspecified for the contrast between agents and causers and instruments. Reinhart furthermore proposes that all unaccusative verbs are actually derived from transitive counterparts and if an unaccusative verb lacks a transitive use in a language (i.e., grow, parch), this transitive is to be "frozen". It can be fed by the lexical operation, but it is never inserted into the syntax.

3.3.2.3 Chierchia (1989, 2004)

Chierchia (1989/2004), proposes a different analysis of the causative and anticausative alternation which takes into consideration the fact that one may find reflexive morphology on anticausatives. She argues that anticausatives are basically transitive and the unaccusative variant is derived via the process of reflexivization. According to Chierchia, reflexivization is an operation that takes a relation as its argument and sets the two arguments of the relation to be identical to one another (Schäfer 2008, as shown in (97)).

(97) R (verb) (x) $\longleftrightarrow$ [verb (x)] (x)

When the rule in (97) is applied to causative verbs, it takes the relation between two arguments, namely x and y, as shown in (98a). Some actions or properties P of y causes α (x)

and returns (98b) when the external argument and the internal argument are set to be identical, that is, the theme binds to the subject. For unaccusative formation, a special form of reflexivization is required – internal reflexivization - which leaves behind the internal argument.

(98) a. $\lambda x \lambda y \exists P$ [CAUSE P (y), α (x)]

b. $\lambda x \exists P$ [CAUSE P (x), α (x)]

Reflexivization has the clear advantage that it attempts to make sense out of the reflexive morphology often found with anticausative verbs. This is the reason why anticausatives in some languages are reportedly marked with reflexive morphology (see Koontz-Garboden 2009). For Chierchia, in cases where no such reflexive morphology can be found, the reflexive operator is lexically incorporated into the meaning of the verb without any morphological reflexives (Chierchia 2004:42). She argues that anticausatives with no transitive variant are derived from some abstract transitive verb which is "frozen".

According to Chierchia the licensing of the Italian phrase 'da se' equivalent to English phrase (by itself) lends enough evidence to consider such analysis. She argues that the anticausative 'da se' -exemplified in (99), taken from Chierchia (2004:42) must be formed as the only clause of the event under consideration. Since anticausative allows 'da se' with the theme as the antecedent she concludes that this theme is also the causer of the event.

(99) *La porta si è aperta da sè*
The door REFL is opened by itself.
The door opened by itself.

However, the example in (99) does not express a similar meaning to (a property of) 'the ship itself sank the ship'. Rather, it seems that the usage of 'da se' and its counterpart in other languages refuses that a causer of the change of state event can be identified (cf. Reinhart 2000; Pylkkanen 20002; Alexiadou *et al* 2006 and; Schäfer 2009). Furthermore, research in Italian suggests that, 'da se' phrases are not limited to anticausative verbs, they also occur with other verbs as long as the context suggests that the event expressed by the verb, in principle, be caused via periphrastic causation.

Reflexivization is not free from problems. Morphologically, there are quite a number of natural languages that use the same morphological marking found in anticausatives for other types of voice i.e., generic middles and passives. However, Chierchia remains unclear whether these other types of voice can also sensibly be reduced by the same operation. Also, the semantic side has been put into question (Piñón 2001; Doran 2003; Folli 2003, and Schäfer 2009 among others). The main concern, here, is a sentence like: 'the boat sank' which means the same as 'the boat sank the boat'. According to Schäfer (2009) Chierchia's approach becomes inadequate when one analyzes a sentence like 'the wound healed within two weeks'. Furthermore, reflexization remains silent with regard to the restriction that some agentive change of state verbs undergo in some languages.

In the viewpoint of morphology, such accounts face analogous challenges to those of the Intransitive approach discussed earlier, since, in the Transitive approach, anticausatives are said to be derived from a causative variant, and the morphology type found on anticausatives can be assumed as the marker of the derivational process. However, a crucial question relates to how would this approach account for languages that mark their causative variant.

3.3.2.4 Levin and Rappaport Hovav (1995)

Levin and Rappaport Hovav (1995) propose that all verbs undergoing the causative alternation are inherently transitive and therefore have the causative Lexical Conceptual Structure (henceforth LCS) as in (100a), whereas intransitive change of state verbs which lack a transitive variant (cf. *-yuma*, *-gola*), have the LCS as in (100b) respectively.

(100) a. [x DO-SOMETHING] CAUSE [y BECOME <STATE>]]
c. [y BECOME <STATE>]

Levin and Rappaport Hovav designate the verbs with the LCS in (100a) as 'externally caused verbs' and the verbs with the LCS in (100b) as 'internally caused verbs.' The verbs in (100a) are meant to imply the existence of an 'external causer' with immediate control over bringing about the eventuality denoted by the verbs (Levin and Rappaport Hovav 1995:92). With regards to the verbs in (100b), some properties inherent to the argument of the verb are responsible in bringing about the eventuality (ibid). While in some languages some externally caused verbs can leave the causer unexpressed, Levin and Rappaport Hovav (1995:53) argue

that our knowledge of the world tells us that the eventuality that these verbs describe could have happened without an explicit external causer.

An externally caused verb can leave its external argument unexpressed only if the eventuality expressed by the verb can come about without the intervention of an agent, for example, if the verb can take agents, instruments or causers as the external arguments. It is only occasionally that a detransitivization process can take place. This is source of the verb restrictions and the selection restrictions discussed in the introduction.

With the verb "break" in its transitive use, both arguments are first projected from the LCS to argument structure (henceforth AS), mediated by linking rules, and from argument structure to syntax. In the intransitive use, the external argument is lexically bound in the mapping from the Lexical Semantic Representation (henceforth LSR) to AS and is therefore prevented from being projected into syntax. Levin and Rappaport Hovav give two supporting arguments for their proposal. Firstly, they followed Chierchia (1989/2004) in the assumption that Italian 'da se' and its English counterpart 'by itself' signal the causative semantics in anticausatives. Secondly, the selectional restrictions on the intransitive use as illustrated in (100) favour a detransitivization account. Therefore they suggest that these phrases take up the cause argument present at the level of LCS and identify it as the theme. Looking carefully to the sentences in (100) one may conclude that if the intransitive use in (100a) is the basic form, then the transitive variant in (100b) is derived from an ungrammatical base.

Folli (2003) observes that one can also find selectional restrictions indicating the opposite direction, as shown in (101).

(101) a. The tent/Mary collapsed.
b. Sue collapsed the tent.
c. *Sue collapsed Mary.

The argument is that alternating verbs are inherently dyadic predicates. Anticausatives fail to have an implicit (i.e. lexically unrealized) external argument because of the lexical process of detransitivization that introduces an intransitive entry from the transitive verb (cf. Schäfer 2008). Therefore, Levin and Rappaport Hovav propose a bi-eventive analysis of causative verbs. The lexical representation proposed by Levin and Rappaport Hovav for such verbs involves the predicate 'CAUSE' with two arguments external (i.e. the subject argument) and

internal (i.e. the object theme argument), the causing subevent and the central subevent (Schäfer 2008:177). The cause argument is associated with the causing subevent and the theme is associated with the central subevent. In the transitive use of the verb "break" the cause and the theme are projected from the LSR into AS and from AS into the syntax, as illustrated in (102).

(102) Transitive use of the verb "break"

LSR [[x do – something] cause [y become BROKEN]

Linking Rules | |

AS <x> <y>

(Levin and Rappaport Hovav 1995:108)

In the intransitive use of the verb "break", the cause argument is "lexically bound" in the mapping from LSR to AS thereby being projected into the syntax, as shown in (103).

(103) Intransitive use of the verb "break"

LSR [[x – do – something] cause [y become BROKEN]]

Lexical binding ø |

Linking rules |

AS <y>

(Levin and Rappaport Hovav 1995:108)

According to Levin and Rappaport Hovav (1995:83) the difference between internally and externally caused verbs is that externally caused verbs are dyadic in the lexicon while the internally caused verbs are monadic. One of the reasons that a verb like 'laugh' does not have a causative alternation is that its LSR in English does not involve an external causer. The verb 'break' on the other hand, has causative semantics even in its intransitive use. Thus, they suggest that the intransitive form come about through the lexical binding of the external causer before the mapping to AS.

The proposition that external arguments are true arguments of the verb is incompatible to the current theories on syntax and semantics of external arguments (see Marantz 1984). This proposition is based on the assumption that the external causer of the verb "break" is part of the lexical meaning of the verb. Such an assumption requires that the external argument is a true argument of the verb. Marantz (1984), however, observes that the semantic relationship

between the external argument and the verb is different from the one between the verb and its internal argument. Internal arguments trigger a special interpretation of the verb while external arguments do not. The interpretation of a clause depends on its internal argument; thus, the external argument is not an argument of the verb as it cannot affect the verb's interpretation.

These syntactic differences between subject-object resulted in some linguists (Kratzer 1994, 1996, 2005; Alexiadou *et al* 2006, Schafer 2008 and Alexiadou 2010 among others) to suggest that the external argument is projected not by the verb, but by a separate head also called the Voice. This head is regarded as the thematic relation that exists between the eventuality described by the VP and the individual that appears as the external argument (i.e. the agent). Significantly, the nature of this thematic role is commonly predictable from the meaning of the VP, as shown in figure 8.

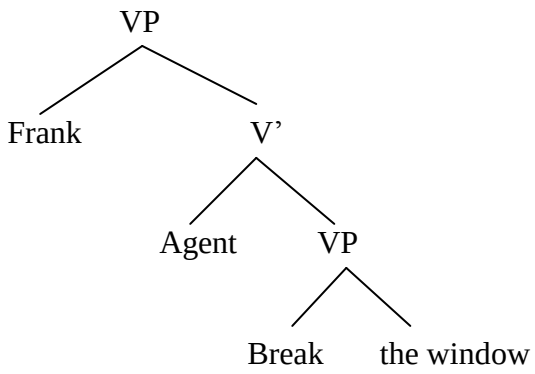


Figure 8: Verb phrase structure

Reinhart (2000) argues that causation is coded through a lexical feature 'cause' formalized as [+C] which is part of the definition of a set of semantic/thematic (theta)-roles that can cause a change, by the *cause*, *agent*, and *instrument*. She argues that alternant verbs are treated inherently transitive; therefore they select a [+C] external argument and a [-C -m] theme internal argument. Anticausative verbs, are derived from the transitive entry in the lexicon by a reduction of operation; thus, it reduces the external [+C] role. The outcome of this expletivization process is the conversion of the two-place verb into a one - place verb, as shown in (104).

(104) a. V_{acc} (θ1 [+c], θ_2) → R_e (V) (θ_2)

b. R_e (V) (θ_2) = V (θ_2)

(Reinhart 2002:21)

According to Reinhart, the external role reduction differs from the internal (reflexivization) reduction in its semantic meaning. The argument reduced by reflexivization remains present in the interpretation, while expletivization suppresses the argument on the whole. The Re(duced) argument can be regarded as semantically null. The reduced entry in (104b) denotes just the property corresponding to a one-place verb with the remaining argument. Both the above approaches, however, seem not to describe adequately the issues of the causative and anticausative alternation, as none of the alternants appears to be directly derived from each other.

3.3.3 The Syntactic Decomposition approach

In the previous sections it was seen that the analysis of the event decomposition of causative and anticausative verbs has changed over the decades. The proposal to decompose causative and anticausative verbs goes back at least to the field of Generative Semantics. Ever since, there has been a continuous debate as to whether such a decomposition should take place at the level of syntax (i.e., McCawley 1968) or only at the level of semantic representation of the clause (i.e., Dowty (1979)), among others. Scholars like Levin and Rappaport Hovav (1995) assumed that causatives decompose into the events CAUSE, BECOME and STATE, as exemplified in (105) and anticausatives decompose into the events BECOME and STATE in (106).

(105) a. Mary breaks the window
b. [Mary [CAUSE [BECOME[the window BREAK]]]]

(106) a. The window breaks
b. [BECOME [the window BREAK]]

The above analysis suggests that causatives and anticausatives differ in the number of events they are involved in. The causatives have three events, CAUSE, BECOME and a STATE while the anticausatives have two events, BECOME and STATE. However, as was seen, such analysis fails to describe adequately issues relating to decomposition of events with the possible readings for the adverb '*again*'.

The Common approach as postulated in Kratzer (1996); Pylkkanen (2002), elaborated by Alexiadou *et al* (2006), Schäfer (2008, 2009); Alexiadou (2010)) and reference therein, is couched from the framework of Distributed Morphology which assumes that verbs are

derived from category neutral Roots[12], by the addition of a verbalizing head in Marantz's (1997)'s term. The assumption inherent to this approach is that verbs are derived from category mental roots via the addition of verbalizing heads. So they are associated with non-syntactic information, the so called encyclopaedic or conceptual knowledge, which can constrain the syntactic frame which a root can enter. Roots are categorized together with the external causation vs. the internal causation scheme and this generalization determines whether it must occur in causative or in anticausative form.

3.3.3.1 Kratzer (1996)

Kratzer (1996), inspired by Marantz (1984), proposes that the external argument is "severed" from the verb and introduced by an extra-projection on top of the verb, manely the Voice projection. In the view point of semantics, the external argument is associated with the verbal event via a process called 'event identification'. The verb combines with the external argument semantically via a compositional principle which identifies the event variables contributed by Voice and the verb and the 'Event Identification' (Kratzer 1996:122). This yields the following semantic representation in (108c).

(107) a. Frank breaks the window
b. [Mary [Voice [break the window]]]

(108) a. break: λxλe [break (x)(e)]
b. Voice: λxλe [Agent (x)(e)]
c. λe [break (the-window)(e) & Agent (Mary)(e)]

Kratzer (2005), points out that if the CAUSE does not introduce the external argument itself, one can be completely free of the BECOME predicate. From this analysis it is evident that causatives and anticausatives hold precisely the same event decomposition and they differ only in the presence vs. the absence of the *Voice*. Causatives have the decomposition in (107b) and anticausatives have the decomposition in (109b).

(109) a. The window breaks
b. [CAUSE [the window broken]]

[12] Roots are traditionally considered to be the abstract elements that make up the lexicon and store the necessary information for the formation of words.

3.3.3.2 Pylkkänen (2002)

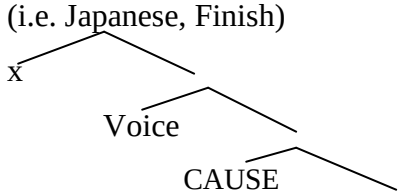
Pylkkänen (2002), however, opposes the view that causativization brings about an external (argument) causer. Instead, this scholar advances for the view that the CAUSE predicate itself does not introduce the external argument of a causative event. Rather, it is the defining function of causativization to just introduce an implicit argument ranging over causing events and to relate it to a non-causative (change-of-state) event (e.g. External arguments are introduced by a further head on top of the CAUSE, namely the Voice head proposed by Kratzer (1996). The semantic representation of these two heads, as proposed by Kratzer in (108c) and Pylkkänen, is hown in (110).

(110) CAUSE: $\lambda P.\lambda e.[(\exists e')\ P(e')\ \&\ CAUSE\ (e, e')]$ (cf. e.g. Pylkkänen 2002:76)

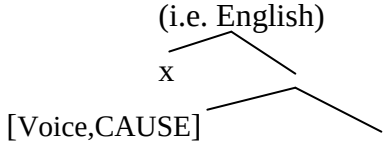
According to Pylkkänen, from the syntactical point of view, separating the head that introduces the external argument from the head that introduces the causative event makes the prediction that, in principle, the latter should be able to show up in the absence of the former, i.e. that there should exist causative predicates without an external argument (Shafer 2007). Pylkkänen argues that we can indeed find such constructions, but only in some languages. The relevant parameter is whether a language necessarily tied the two heads together or not. Semantically, Voice and CAUSE are always separate syntactically, they can either project their own syntactic heads or they can be tied together into a semantically complex head. The two types of languages are illustrated in (111).

(111) **Variation: Voice-bundling**

a. Non-voice-bundling causative (i.e. Japanese, Finish)



b. Voice-bundling causative (i.e. English)



Pylkkänen (2002:76)

Pylkkänen, paraphrasing Marantz (1997), argues that in this respect, causative heads are expected to be divided into three different types: (i) those that are able to combine with constituents containing an external argument, (ii) those that select VPs lacking an external

argument and (iii) to those that select for something even smaller than a verb, namely a category neutral root.

3.3.3 3. Alexiadou *et.al*. (2006a, b)

Alexiadou *et.al*. (2006a, b), who maintain the analysis in (107) and (109), argue that the causative alternation should be seen as a *Voice* alternation and causatives and anticausatives involve the same event decomposition with a causative meaning component present even in anticausatives. They contend that agentivity and causation are represented by different heads in the decomposition of causatives and following Kratzer (2005), the eventive head in causatives and in anticausatives is the same.

In other words, both causative and anticausative variants are built up from a [√Root + Theme] complex which expresses a resultant state and an eventive verbal head CAUS which takes the resultant state as its complement. CAUS introduces *a causal relation* between a causing event (the implicit argument of CAUS) and the resultant state denoted by the [√Root + Theme] complex. Causatives (in the active as well as in the passive) additionally have a Voice projection on top of the CAUS which is responsible for the introduction of the external argument (Alexiadou and Anagnostopoulou 2007). In this view, there is no directionality to the causative and anticausative alternation, as none of the two constructions is directly derived from the other. Instead, both are derived from the same Root. Thus these scholars propose the decomposition of causatives in (112) and that of anticausatives in (113).

(112) The abstract decomposition of *causatives*
[DPext.arg VOICE [CAUS [√Root + DP theme]]]

(113) The abstract decomposition of *anticausatives*
[CAUS [√Root + DP theme]]

It will suffice to say that, Voice does not introduce an event (*DO*) but just expresses a relation between the element in its specifier and the event in its complement position (CAUS). This is the original conception of *Voice* as it was introduced by Kratzer (1996).

It is important to recall that Chomsky (1995) takes vP as the layer that brings about the external argument while Kratzer's (1996) believes that it is the Voice that performs this function. Alexiadou *et al* (2006) propose in their approach that the little v just verbalizes a structure without introducing an external argument. External arguments are introduced by voice on the

top of the little v through process designated event identification (Kratzer 1996; Alexiadou *et al* 2006 and Schäfer 2009).

The head introducing the causative event (vCAUSE) does not introduce the external argument; instead the external argument (DP_{EA}) is introduced by the Voice on the top of the vCAUSE, as shown in figure 9.

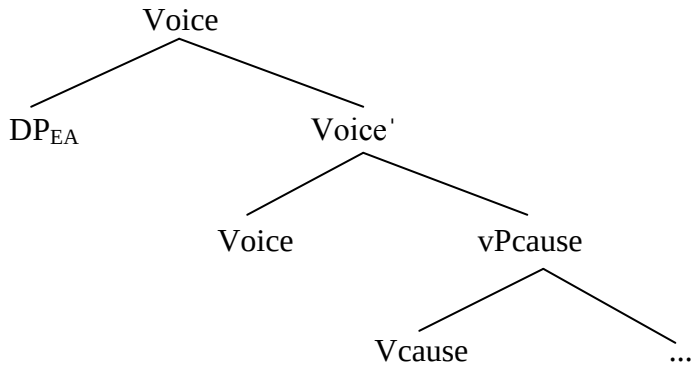


Figure 9: Structure of the sentence exemplifying the voice

Secondly, causatives and anticausatives do not differ in number of events involved. Such an argument is based on the behaviour of the adverb '*again'* in a change of state verbs context. In the view of these scholars, this adverb has two interpretative readings, namely *repetitive* and *restitutive*. However, an analysis that decomposes causatives syntactically into three event layers should yield three rather than two, adverbial scopes for *again*. Crucially, the reading of (114a) is not possible – at least not in languages such as English and German, as shown in (114) taken from (Schäfer 2009)

(114) John opened the door again

a. Agent's action (and the inchoative event and the resultant state) is repeated:
John did something again as a result the door opened.
(again [...CAUSE...[...BECOME...[...STATE]]])

b. Inchoative event (and the resultant state) is repeated:
John did something and a result the door opened again
[...CAUSE...(again[...BECOME...[...STATE...]])]

c. Only the resultant state is repeated
John did something and as a result the door returned to its previous state of being open.
[...CAUSE...[...BECOME...(again[...STATE...])]]

For these scholars, causatives and anticausatives do not differ in regard to number of eventive heads; lexical causatives cannot be built from three event predicates. Considering that both

causatives and anticausatives are derived from a common root, but that they differ by the fact that one contains verbalizing head, the proposal in figure (10a-b) gives a path to tackle the cross-linguistic morphological variation in anticausatives.

Alexiadou *et al* (2006) propose a further reduction of the number of syntactic heads involved in the decomposition of the anticausative and propose that causatives similar to non-alternating unaccusatives involve the head vCAUSE, as shown in figure (10).

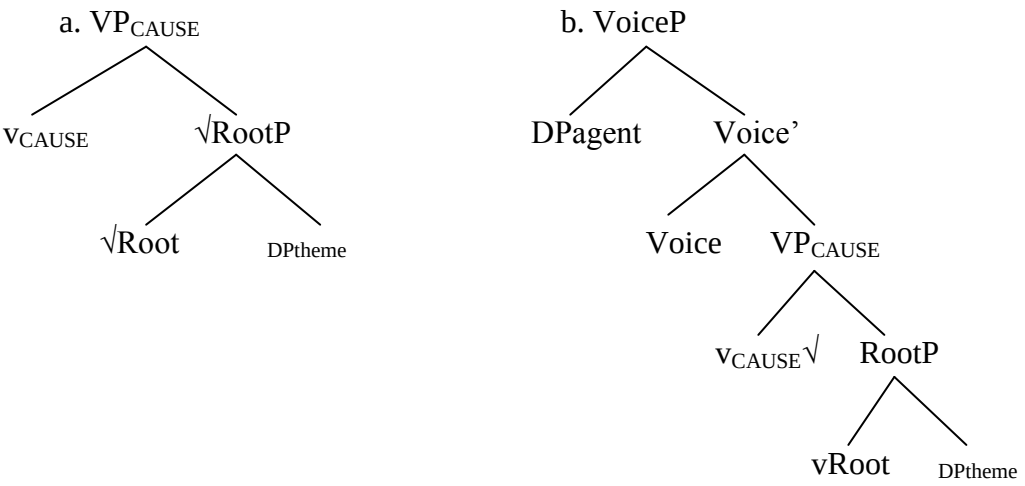


Figure 10: Structure of anticausative constructions

The figure in (10) gives the representation that the first verbalizing head combining with the RootP always introduces a causative event leading to the resultant state expressed by the root predicated over the theme. Even the non-alternating unaccusative verbs (bloom, blossom, and wilt) have the structure in figure (10a), similar to the one proposed in a lexicalist approach. The motivation, however, is different from Levin & Rappaport hovav (1995) and Chierchia (1989 and 2004).

With regards the difference anticausatives and passives, these linguists point out that anticausatives differ from passives in that only passives can license an external argument in the *by* -phrase. It turns out that although anticausatives do not license agentive *by* -phrases, in some languages, verbs that denote change of state combine with specific PPs introducing non-human causers or causing events (see also Wright 2002). More importantly, these causer PPs are only possible in anticausative structures suggesting that the thematic source is located in their event decomposition. Thus, they propose an analysis based on VOICE, vCAUS and ROOT components as shown in (115).

(115) [Voice [vCAUS [Root]]] (Alexiadou *et al* 2006:201)

The VOICE component is responsible for the insertion of an external argument and holds features of agentivity and manner. For these scholars, the presence of +/- agentive feature is responsible for the licensing of an agent and a causer external argument in active and passive constructions. The agentive Voice (Voice [+AG]) licenses agents, including instrumental PPs, and the non-agentive Voice (Voice [-AG]) licenses causers. However, if a Voice is active, the relevant thematic role is realized in its specifier; if it is passive, the relevant thematic role is implicit (i.e. not lexically expressed). In the anticausative use, Voice might be completely absent or else realized as Voice [-AG] with an implicit causer argument (Alexiadou *et al* 2006:202). Thus, two patterns of variation are expected to satisfy different language structures. First, in languages where the Voice [-AG] head is possible in passive, the anticausative must not appear with the Voice head. Second, in languages where the passive is essentially agentive, the Voice [-AG] head is free to be used in the anticausative analysis. The vCAUSE introduces the causal relation between a causing event and the resultant state denoted by the verbal root + the theme.

With respect to the licensing of PPs in passives and anticausatives, these scholars propose that adjunct PPs are licensed by structural layers that contain the relevant semantic features. The decomposition in (8) and (9) entails two types of licensing heads, Voice and CAUS, for the PPs under discussion. Passive Voice with the feature [+AG] licenses agents and true instrument PPs, whereas passive Voice with the feature [-AG] licenses causer *by*-PPs in English and causer von-PPs (or causer durch-PPs) in languages like German. Those causer PPs found in anticausatives such as English's *from*, German's *durch* and Greek's *apo-*, *me-*PP are thematically licensed by CAUS.

With regards to the Root, Alexiadou *et al* argue that they are the remainder of lexical entries, bear information which to a certain extent determines whether a verb undergoes the causative alternation or not. They propose that Roots combine with verbalizing heads expressing events to form verb in syntax (Schäfer 2009) and they fall into four different classes, depending on their encyclopaedic semantics, as illustrated in (116) quoted from Levin (2009:2).

(116) a. agentive (e.g., *murder*, *assassinate*): "the event is necessarily brought about by an agent"

b. externally caused (e.g., *destroy*, *kill*): "can be brought by an external cause or an agent"

c. internally caused (e.g., *blossom*, *wilt*): "the cause of change-of-state event is linked to properties inherent to the argument undergoing change"

d. cause unspecified (e.g., *break*, *open*): "not specified for external or internal causation.

To account for language diversity, Alexiadou *et al* (2006) proposed two structures associated with the anticausative alternant, as shown in (117).

(117) a. [vCAUS][ROOT]] Anticausative structure I

b. [Voice][vCAUS[ROOT]]] Anticausative structure II

The structure in (117b) is associated with non-active morphology and in which externally caused verbs occur. Alexiadou et al, however, stress that not all languages can make use of it. English, for example, does not make use of this structure and for that reason externally caused roots in this language which have to combine with Voice can only form a passive structure. Greek makes use of the anticausative structure in (117b) and, therefore, sometimes such verbs can also form passives whose structure is at times similar and at other times not. Alexiadou and Anagnostopoulou (2007) underline that the Voice head is special and it is the locus of non-active morphology which, however, is not interpreted as signifying the presence of an implicit argument. They suggests that the reason why English verbs such as *destroy*, *kill* and *hit* lack anticausative alternants is because they are externally caused in that they would need the Voice.

Alexiadou *et al's* proposal, namely that the internally caused verbs (e.g., *blossom*, *wilt*) can receive a causative analysis, has not been broadly accepted (cf. Levin 2009). Levin, building on Levin and Rappaport Hovav (1995), argues that internally caused verbs cannot receive a causative analysis because they lack such use. Wright (2002), who studied transitivity in change of state verbs in English, reports that internally caused verbs have a causative use in English, although their subjects are predominantly natural forces, as predicted in Alexiadou *et al*, or related phenomena, and are not animate.

The survey of approaches on the causative and anticausative alternation has demonstrated that the Intransitive model is justified by languages that mark the causative variant, and the Transitive model is justified by languages that mark the anticausative variant. Each approach

seems to leave room for questions of the paradigm unanswered. The Decomposition approach proposes that both processes - causative marking variant and anticausative marking variant- can be found across and within individual languages. It further holds that the causative and the anticausative alternations involve the same event decomposition. They only differ in the presence or absence of Voice which introduces the external argument. This approach is seen as the most appropriate one to be employed in the analysis of alternations with change of state verbs and motion verbs in *Kizombo*.

Hence, although many generalizations are known about properties of the causative and the anticausative alternation in many languages, some aspects that may be idiosyncratic to some languages (e.g., *Kizombo*) are still to be explored. Yet, research on the causative and anticausative alternation suggests that little attention has been paid to African languages.

3.4 MIDDLE FORMATION

Middles, similar to other alternants, are grammatical relation changing. They share the same morphosyntactic properties with anticausatives, as illustrated in (118).

(118) a. Frank breaks the window
b. The window breaks
c. The window breaks easily

The similarity between (118b) and (118c) is that the logical object argument of (118a) is the grammatical subject of (118b-c). The window in (118b-c), for example, is the logical object argument because it receives the interpretation of ‘undergoing the breaking’. Therefore, this DP is associated with the thematic role “Theme”. Syntactically, the window is the only syntactic argument in (118b-c). The sentence in (118c) reveals a range of properties, which makes it very appealing. Although the verb in (118) is in its active form, the logical object argument is realized in the surface subject position. These properties of (118) resemble those of the anticausative constructions discussed above. The most obvious properties are that middles exhibit characteristics such as: (i) genericity, (ii) modality, (iii) the adverbial effect, responsible subjects and implicit arguments.

For that reason, following Zwart (1997), middle formation is the process whereby a verb is presented without its usual agent, without an object, and with a subject that appears to be responsible for the action described without actually being the agent of the verb. The passive

verb in (118c) also has the illogical object that realizes in the surface subject position. Thus, anticausatives, middles and passives are related to active transitive sentences. However, there are number of differing properties between middle, passive and anticausative verbs. The difference is that in middle formation, in some languages, the verb does not show any morphological marking which differentiate it from a construction like anticausative and passive. In other languages, contrary to what is argued in Jingquan (2007), middles show overt morphology similar to anticausatives in form (see data in Kikongo). However, the following general properties hold in most of middle constructions:

(i) The external argument of non-middle counterpart of the middle verb cannot be expressed as regular DP-argument in the middle.

(ii) If the non-middle counterpart of the middle verb has a direct internal argument bearing the theta-role of the patient or theme, the subject of the middle carries this theta-role.

(iii) The middle verb is stative and non-episodic and it denotes a generic statement. That is, the overtly expressed patient or theme argument has a particular individual-level property, or that events denoted by the verb or by the verb's argument combination have a particular property in general.

3.4.1 Properties of middle formation

As stated above, middle sentences exhibit a range of properties that allow them to be distinguished from anticausatives and passives. Thus, in what follows, the discussion will focus on properties of the middle formation.

3.4.1.1 Genericity

As described by Keyser and Roeper (1984) see also Fagan (1992), the middle formation has been taken as stative here, and genericity taken as synonym of stative. From the viewpoint of the semantics, these constructions are generic statements (Massam 1992). Generally they describe a generic property to what would be realized as the object of the verb. They denote generic events rather than specific ones, as illustrated in (119).

(119) a. The glass breaks easily

b. Japanese cars handle easily

c. The wall paints ea

The examples in (119) do not make reference to an actual event taking place at around the time, instead they report a property of the grammatical subject. That is why they are regarded to be aspectually stative (Swart 1997) and cannot be used in context that require eventuality. In other words, the eventive verbs become a derived statives and specifically receive a generic interpretation. Thus, Keyser and Roeper (1984) argue that middles are unacceptable in the past tense with a time expression specifying definite past moments, as shown in (120).

(120) a. *Yesterday, the teachers bribed easily
b. *Two years ago, the Japanese cars handled easily
c. *When Mandela's autobiography was launched, it sold well.

The ungrammaticality of (120) occurs because the sentences contain a specific time reference. This fact reinforces the idea of the stativity of middles. Keyser and Roeper (1984) explain that "middle predicates and stative predicates pattern alike and accordingly cannot occur in imperative or in progressive forms." For Keyser and Roeper, both imperative and progressive denote a kind of action/activity; therefore, they are not felicitous with middles. However, these scholars point out that in some instances, middle, as is the case with statives, may be compatible with progressives. Yet, they cannot be considered to have an eventive, as the constructions in (121).

(121) a. This newspaper is reading better everyday.
b. Young children are knowing more about HIV-aids these days.
c. The baby is resembling his father more and more every day.

For these scholars, some restrictions are imposed on progressive stative. For example, the progressive in (121c) is regarded ungrammatical if it contains the time expression at the moment, as in (122). Following Bland (1988:59), the acceptability of the progressive (121) lies in the fact that it focuses on change of state. Verbs that denote events can be put into the progressive because they refer to a situation in which something happens. This refers, to a situation where some kinds of change of state takes place, although gradually. Verbs that denote state cannot appear in the progressive because stative verbs lack variation, activity and successive stages.

(122) *At the moment, baby is resembling his father.

The progressive sentences in (121), contrary to the sentence in (122), are regarded acceptable since they focus on the differences in degree between sets of related states. It is worth noting that the stativity of middles has been explained in different ways semantically. Condoravdi (1989) supports the view that stativity in middles involves quantification over events, as in habitual events, as shown in (123).

(123) Bureaucracies bribe easily

In the view of Condoravdi, the sentence in (123) reads that "all events of bribing bureaucracies will be easy events." The opposite is argued by Fagan (1992) who states that there is quantification over potential subjects, not events. Thus, for Fagan, the sentence in (123) should read "all instances of bureaucracies will receive the property of being easy to bribe."

In English, middles are, also, restricted to the simple present tense and for Keyser and Roeper this feature contributes to the fact that these constructions should be considered as generic sentences. According to Jingquan (2007:228) the simple present tense in English is used to express timeless propositions. Although, middles describe a given event in time, they differ from other generic propositions. Thus, grammatical subjects are not required to be generic as shown in (124).

(124) a. This book reads easily
b. This cow eats hay easily

The two sentences in (124), the (124b) do not hold any generic reading. The implicit agent of middle, however, is always interpreted generically. This is supported by Levin (1982) when she argues that a middle involves generic quantification over an implied argument which can be interpreted as 'people in general'. The sentence in (124a) can receive the reading as in (125).

(125) 'People in general can read this book easily'

3.4.1.2 Modality

The stative reading discussed above is always associated with a kind of potentiality. This means, a middle sentence describes the subject's capability to carry out the action expressed

by the predicate. However, they typically give a generic model notion of ability/possibility, indicating that an activity expressed by the verb can be carried out. This view is supported by Jingquan (2007:208) when he says that "middles can be roughly paraphrased with a passive sentence that contains the modal can, as anyone." In the view of Jingquan, the sentence in (126a) can be paraphrased as in (126b).

(126) a. This meat cuts easily
b. Anyone is able to cut this meat with ease

With this interpretation in mind, the modality property exhibits two further properties (i) the stativity as was mentioned above and (ii) they usually contain some form of modification of the modality (Jingquan 2007). This, followed by the obligatory modality, results in the stativity or the obligatory generic character of the middles. Building on the above, Massam (1992) and Spencer (1998) propose that a middle should be defined in terms of genericity and modality properties. However, if both genericity and modality properties are what the middle construction encodes, then one should expect that generic passives in (126b) should be identical in meaning to the corresponding middles, as the examples in (127).

(127) a. These glasses are easily cleaned.
b. The bureaucracies are easily bribed.
c. This Japanese car is easily handled .

(Keyser and Roeper 1984:381)

In fact the sentences in (127) are semantically distinguishable from the corresponding middles in (128).

(128) a. These glasses clean easily.
b. The Bureaucracies bribe easily.
c. The Japanese cars handle easily.

After a careful careful look at the above sentences, one realizes that there is a difference with regard to the interpretation of the sentences in (128) compared to their counterparts in (127). Such a difference has to deal with modality. Following Jingquan, generic passives simply generalize over events, as if there is a modal component that is not encoded. It then arises on the basis of the validity of the inference that if something is done, and done regularly, it can be done at any time. However, in the middles sentences, the ability of reading is encoded, and

not inferred as in passive (Jingquan 2007: page). If the overt modal verb is added to the sentences in (128), the passives are felicitous in (129a and 129c), but middles are infelicitous as in (130).

(129) a. These glasses can be cleaned easily.
b. ?The bureaucracies can be bribed easily.
c. The Japanese cars can be handled easily.

(130) a. *These glasses can clean easily.
b. *The bureaucracies can bribe easily.
c. *The Japanese cars can handle easily.

The infelicity of the sentences in (130) is that these sentences express "epistemic modality" in Jingquan's (2007) terms. This means, the possibility that the glasses clean easily, bureaucracies bribe easily and Japanese cars handle easily is scarce, or rather they express root modality (i.e. they do not refer to the ability of any arbitrary agent to carry out the tasks specified (ibid)).

3.4.1.3 Adverbial effect

Adverbial effect is said to be the third feature of middle constructions. Middle constructions in English usually come with an adverbial which modifies the predicate. The absence of modifier may render the construction unacceptable, as illustrated in (131).

(131) a. *This book reads
b. *The bureaucracy bribes

Fagan (1988:201) argues that middles in (131) are unacceptable because there is no activity pertinent to the use of books, for instance, which is conducted by means of reading a book, instead by doing something else to it. However, the adverbial paradigm is strictly constrained; in other words, not all adverbs are acceptable with these constructions. Middle constructions in English mainly accept adverbs of manner, for example, *easily*, *well* and *smoothly*, etc. For that reason Fellbaun (1986:27) points out that adverbs of manner which are agentive-oriented are unacceptable in middle construction, as shown in (132).

(132) a. *The book sells proudly

b. *The bureaucracy bribes expertly

The examples in (132) led Roberts (1987) and Fagan (1992) to observe that under specific circumstances an adverb of manner is obligatory. Iwata (1999:528), however, comments that although an adverb of manner is obligatory, such obligatory presence is not associated with syntactic subcategorization requirements as one of informativeness. Jingquan (2007) opposes this view and argues that the absence an of adverbial in the middle construction is acceptable provided that non-given information is somehow supplied. This scholar argues that the negation in (133), and the sentential stress on the verb in (134) are emphatic as in (135).

(133) a. *This meat cuts.

b. This meat does not cut.

(134) a. *This car drives.

b. I thought we were out of gas, but the car drives!

(135) a. These red sport models do sell well, do not they?

For Jingquan the distinction between generic passives and middles in English has to do with the position of the adverb in the sentence. Middle constructions in English are only rendered grammatical with the adverb of manner taking final position, whereas, generic passive constructions are grammatical with the adverb occurring in median position. However, for Fellbaun (1986) the difference in the interpretation of middle depends on the position of the adverb, which correlates with the presence/absence of the agent.

3.4.2 Properties of verbs that occur in the middle voice

The view that middles are derived from basic transitive verbs is rejected by Keyser and Roeper (1984) because for these scholars not every transitive verb can undergo middle formation. In an attempt to respond to the question, what properties (syntactic and semantic) allow or constrain verbs to undergo middle formation, a range of suggestions have been put forward, some of which will be discussed here. There have been consensus among researchers working in the field (cf. Keyser and Roeper 1984 and Fagan 1992, among others) that three

properties are relevant for the formation of middle sentences: (i) the properties of the verb, (ii) the properties of the grammatical subject and (iii) the grammatical object.

Keyser and Roeper (1984) point out that the grammatical motivation that allows some verbs to undergo middle formation and others not is that middles are required to be stative. Aspectually, properties of the verb are the determining factor in whether or not a given verb participates in middle formation. Research on aspectual classes (cf. Vendler (1967:107-108), Verkuyl (1973); Dowty (1979) and Smith (1991, 1997) among others) distinguishes four types of classes. The *Activity* class consists of verbs that denote an ongoing action with no inherent endpoint (i.e. run, play the ball). The *Accomplishment* class consists of verbs that denote event with internal time structure and an endpoint (i.e. build a house). The *Achievement* class consists of verbs that denote instantaneous events, but with an end-point (i.e. know the answer) and the *State* class consists of verbs that do not denote event (i.e. love someone, see someone) and have no end point.

Fagan (1992) argues that verbs that denote *Activity* and *Accomplishment* undergo middle formation. His argument accounts for the difference in terms of grammaticality between the two aspectual classes, as exemplified in (136) and (137).

(136) a. This pipe smokes nicely
b. Ross-style pictures paint easily

(137) a. *The answer knows easily
b. *The mountains see easily

Fagan's argument received a prompt reaction from Jingquan (2007:216) who argues that there are verbs that belong to the same aspectual class, as in (138) but exhibit different behaviour with regard to middle formation.

(138) a. *This book buys well.
b. This book sells well.

To account for such constraint, Fagan (1992) proposes an additional condition, which must hold for the grammatical subject of the verb. This is known as "the responsibility condition of the subject." This condition stipulates that the entity stated by the logical subject must display

such properties that it can be held responsible for the action that the predicate expresses. Considering the verbs *sell* and *buy* in (138), Jingquan argues that the illogical subject (i.e. book) holds the properties which make it responsible for being sold easily. It follows in this type of analysis subjective aspects of the book such as the availability of the book in bookshops, lack of money, as these are not properties of the book itself.

3.4.3 Properties of the grammatical subject

Studies of English middle formation (see Roberts 1987) suggest that the logical object of the active variant which is the grammatical subject of the middle must be affected by the the action expressed by the verb. This means, an affected argument is a prerequisite for the well-formedness of middle constructions. The notion of affected argument is perceived as a "Theme" (Roberts 1987) or a 'Patient' by Jackendoff (1990). For that reason, Roberts (1987:90) argues that middle formation applies only to verbs with an internal theme. This scholar conceptualizes "Theme" as an argument that undergoes change of state; further, an argument is a Theme if some properties of the argument holds prior to time T and fails to hold after that time, or vice-versa (Jingquan 2007). This notion accounts for the contrast between (139) and (140).

(139) a. This fabric launders nicely
b. This wood split easily

(140) a. *This poem understands easily
b. *This Eiffel Tower sees easily from the window

In (139), *fabric* and *wood* are said to be the affected argument because their properties underwent a kind of change of state: the fabric becomes clear through laundering while the wood has become cut into pieces. Because of the properties of the objects, the predicates '*launder'* and '*split'* may undergo middle formation. Now, if the logical object is not clearly affected as the examples in (140) then the middle is unacceptable; further constraints of (140) is the fact that 'poem' and 'Eiffel Tower' are not inherently changed by the predicates '*understands'* and '*sees'*; hence they cannot receive a middle interpretation.

However, according to Jingquan (2007:228), the notion of affected argument is not at all accurate because this notion does not adequately account for all the facts. He exemplifies that

the verbs '*read'* and '*photograph'* in English form acceptable middles, but they lack affected arguments, as shown in (141).

(141) a. This book reads easily.
b. She photographs well.

In the sentences in (141), the inherent properties of 'a book' and 'a person' are not changed by the activity of reading and photographing. This led Tenny (1987) to argue that only incremental verbs, the ones whose logical object 'delimits' or 'measure out' the event expressed by the predicate, are eligible for middle formation. It can be said that middle formation with verbs like '*read'* and '*photograph'* are contentious, for the notion of affected object is only defined as being modified by the action expressed by the verb. Suffice to say that the notion of effected differs from affected in the sense that an effected object is the one that comes into existence by the action denoted by the verb. For example, the verbs *build*, *paint*, *write* and *knit* are regarded as effected objects, as illustrated in (142) taken from Jingquan (2007: 220).

(142) a. Bob built a new house
b. Bob painted a Landscape-dim
c. Bob wrote a detective novel
d. Bob knitted a new sweater

The object 'house' in (142a) comes into existence as a result of the act of building. In the same vein, the picture is obtained from the action of painting; the novel from the action of writing and the sweater from the action of knitting. From the aspectual viewpoint, the sentences in (142) fall in Vendler's Achievement class.

3.4.4 Properties of the logical subject

In Section (3.3.1) it was pointed out that the logical subject of the underlying transitive verb is always semantically present; in addition, the implied subject must be an agent. However, Rapoport (1999) argues that middles are not intrinsically agentive at all, though some middles appear to have agentive reading.

(143) Japanese cars sell easily

Indeed, in popular consciousness, the act of selling involves an agentive that is somebody who sells the cars; in this case such an agent must be a human being, because this activity is exclusively for human and not for a non-human. Building on this assumption, one can assume that the sentence above has an implied agent of sale. Thus, these constructions, similarly to the passive, display the involvement of the logical subject argument, which can be expressed via by-phrase. However, Hale and Keyser (1987) argue that the presence of middle agency is derived from the presence of obligatory adverbials. While analysing aspectually theta-roles, they maintained that only *Activity* and *Achievement* classes can have an external argument.

From the previous analysis, it can be inferred that verbs that undergo middle formation are aspectually classified as *Activity* and *Achievement* verbs leaving other aspectual classes aside or by thematic feature only those verbs that exhibit an agent argument can participate in middle formation. However, Jingquan (2007:237) argues that a useful diagnostic whether or not an argument is an agent in the relevant sense is the possibility of using agent-oriented adverbials. On the other hand, Jackendoff (1990) proposes another diagnostic which is based on "what XP did to YP frame, in which XP is an agent.

Contrary to Hale and Keyser (1987), Jackendoff (1990), Fagan (1992) challenges the agentivity condition on the logical subject and offers example sentences in which agentive subjects are attested , but are not eligible for middle formation, as shown in (144) taken from Fagan (1992).

(144) a. The finishing line researches easily
b. This wall hits easily
c. That dog kicks easily

The examples in (144) suggest that there are cases in which a verb that does not have an agent for its subject argument can participate in middle formation. Nevertheless, according to Ackema and Schoorlemmer (1994), the examples in (144) cannot be taken as counter examples to the agentivity condition. They are independently ruled out by a separate condition, which is the responsibility condition which requires that the logical object argument must display such properties so that it can be held responsible for the action that the predicate expresses. Ackema and Schoorlemmer went on saying that both the agentivity

condition and the affectedness condition are crucial for the well-formedness of middles and the agentivity condition takes precedence over the affectedness condition.

3.4.5 The implicit argument

Discussion on transitivity alternations also revolves around the presence and or absence of implicit argument in the reversal sentences. This presence is here confirmed by scholars who argue that the presence of an implicit argument is one of the major characteristics of middles (Keyser and Roeper 1984; Ackema and Schoorlemmer 1994, 1995; Condoravdi 1989 and Fagan 1988, 1992 among others). Middle construction has an understood, but overt agent. Many studies in middle formation suggest that these constructions have corresponding transitive variants which in their active use generally take an agent for the so called logical subject and a patient for logical object (see section 3.3.3.2). The difference, however, is that, similar to the anticausative and the passive, in middle sentences, the external argument is not projected in syntax and the underlying verb's internal argument (i.e. the Theme or Patient) surfaces as the grammatical subject in the sentence-initial position. According to Jingquan (2007:222), however, "the semantics of middles remain unchangeable as in the corresponding active transitive with regard to the role of the expressed Patient and the implied agent."

This lack of syntactic projection of the external argument is also shared by the anticausative, as discussed in section 3.2 and the passive to be discussed in section 3.4. The difference between English middles and other transitivities is that firstly, like anticausatives, middles are not morphologically marked; while the passive are. Secondly, the grammatical subject of a middle must necessarily be an argument of the middle verb. Thus, Jingquan (2007) observes that exceptionally case-marked subjects of some infinitival complements can become the grammatical subject of the matrix verb under passivization, not under middle construction, as shown in (145).

(145) a. He was believed to be a good teacher
b. *He believes to be a good teacher easily

Thirdly, contrary to passives and anticausatives, middles do not allow the expression of the base verb's external argument theta-role in a *by*-phrase or *from*-phrase, as in (146b-c).

(146) a. Such texts are usually translated by a professional translator.

b. *Such texts do not translates easily by a professional translator

c. *Such texts translates easily from a professional translator

As was said before, the fact that the logical subject of passive verb can be realized in a *by*-phrase has been regarded as evidence that the syntactically suppressed argument is present. However, in argument structure, its presence is manifested via the *by*-phrase. Although a middle does not license a *by*-phrase and *from*-phrase, they are said to license a *for*-phrase (Stroik 1992 and Hoekstra and Roberts 1993). Stroik, for instance, points out that in such cases, the logical subject of the middle is syntactically expressed in the guise of a *for*-phrase. Which means the *for*-phrase is the expression of the underlying logical subject argument of the middle verb, similar to the *by*-phrase in passive constructions and the *from*-phrase in anticausative constructions, as shown in (147), (148) and (149).

(147) a. Bible reads quickly [for father John]

b. No Latin text translate easily [for Jack]

(148) a. This Bible was bought [by father John]

b. This Latin text was translated [by father John]

(149) a. The glass broke [from the wind]

b. The door opened [from the wind]

The sentences above appear to support Stroik's syntactic derivation of middle constructions because the agent argument seems to be expressed overtly. However, as observed by Ackema and Schoorlemmer (1995), contrary to what happens with passive and anticausative constructions, not all middle verbs license the *for*-phrases, as exemplified in (150).

(150) a. These pizzas deliver very smoothly (*for anyone with a moped)

b. The books do not sell (for the average shopkeeper)

Thus, two observations contrasted with each other: Hoekstra and Roberts's (1993) observation that a *for*-phrase is licensed by the adverbial modifier generally present in middle sentences and Ackema and Schoorlemmer (1995)'s that a *for*-phrase is not licensed by an adverbial modifier, but rather by the modal semantics of the complement sentence. If Ackema

and Schoorlemmer's observation is correct, then there is reason to believe that the logical subject is syntactically present in the middle verb. Although proponents of this view themselves argue that the underlying logical subject is not assigned to a regular argument position, but it is always implied. In other words, the logical subject argument is an implicit argument (Jingquan 2007:224).

Implicit arguments are overt syntactically and unquestionable, such arguments have been taken as syntactically active categories and do not occupy a syntactically projected position. Overt syntactic elements can be detected indirectly in that they have their own environment. Other characteristics are that middles are known to disallow non-volitional adverbs. Sentences with non-volitional adverbs have been taken as evidence for the presence of a syntactic Agent-phrase (cf. Keyser and Roeper 1984:405). These scholars argue that sentences with the phrase "all by itself" means "totally without external aid". One of the reasons is that the notion "without external aid" is compatible with agentlessness, as shown in (151).

(151) a. *This book reads easily [by itself]
b. *Silk sheets hang easily [all by themselves]

The unacceptability of the above sentences is due to the semantic mismatch between the non-volitional adverbs and the implied agentive interpretation associated with the events/state denoted by the predicates (Jingquan 2007).

3.4.6 Approaches to middle formation

With regard to the theoretical orientation, research on middle formation revolves, mainly, around two approaches: lexical and syntactic. Proponents of the lexical approach (Fagan 1988; 1992; Ackema and Schoorlemmer 1994, 1995, 2006), propose lexical operations prior to lexical insertion in such a way that the middle subject appears as a subject already at D-structure. Proponents of the syntactic approach (Hoekstra and Roberts 1993; Keyser and Roeper 1984; Stroik 1999), on the other side, contend that a syntactic movement rule which operates in a way different to the standard of Government and Binding Theory (cf. Chomsky 1981; Haegeman 1994) for the passive transformation. In what follows the discussion will evolve around these two approaches.

3.4.6.1 The Lexical approach

3.4.6.1.1 Fagan (1992, 1994)

Proponents of the lexical approach (cf. Fagan 1992; Ackema and Schoorlemmer 1994, 1995, 2006) contend that middle formation is essentially the intransitive form. These constructions are derived from a pre-syntactic operation on an otherwise transitive form and they are projected onto syntax with external arguments. The non-projected argument is not overtly expressed as a result of some lexical principles. Fagan (1992), while criticising the syntactic approach, argues that middle formation cannot be obtained via syntax, because a similar grammatical relation change in middle and passive formation should be obtained from the same process. Passive construction in English, involves the syntactic A-movement of the logical object, such A-movement is not possible in middle constructions. Recall that Wasow (1977) explains that one of the tests used to illustrate that passive involves A-movement in English is that it allows preposition standing. However, middle formation fails to pass this test, as shown in (152).

(152) a. John was laughed at
b. *John laughed at easily.

With regards to the failure of preposition standing (152b), Fagan argues that the internal argument of the middle verb cannot be externalised through A-movement, therefore it must be derived lexically rather than syntactically.

Fagan establishes a similarity between middles and the constructions in (153) which involve generic quantification over an implied argument. Building on Rizzi (1986), Fagan's quantization does not change the number of theta-roles in a verb's lexical entry. It is worth mentioning that Rizzi accounts for the notion of saturation of a theta-role in dealing with sentences like the ones in (153).

(153) a. This sign cautions people against avalanches.
b. This sign cautions against avalanches

In the view of this scholar, instinctively, a theta-role is saturated when it is associated with some referential content, that is, when one can understands 'who does what'. Thus, Rizzi (1986) points out that saturation is typically done in syntax through the Projection Principle

and Theta-Criterion, which ensure that theta-roles are associated with DPs. Two types of saturation are distinguished: overt theta-role saturated syntactically and non-overt theta-role saturated lexically. For that reason Rizzi (1986:509) proposes the following rule in (154):

(154) Assign "arb" to the direct theta-role

The term arb is defined as "arbitrary interpretation" and interpreted as [+human, +generic]. To account for the fact that lexically saturated theta-roles are not realized in syntax, Rizzi argues that the Projection Principle operates on theta-roles that are saturated in the lexicon. Theta-roles which are lexically saturated will never be projected at the level of syntax. Therefore, although it is not associated with an overt constituent, it is easily understood, because it is still part of the lexical meaning of a lexical unit.

Building on the above view, Fagan (1988:98) contends that the rule in (155) is responsible for the assumption that what is typically the Agent theta-role in the middle a receives generic reading, but cannot be realized syntactically.

(155) Assign arb to the external theta-role

The above rule ensures that external theta-roles of lexical units are understood in general when such lexical units are converted into middles. To account for the fact that a theta-role of a verb undergoing middle formation is externally realized, Fagan (1988) proposes a rule as stated in (156).

(156) Externalize the direct theta-role

The rule in (156) assigns a generic reading to the external theta-role of a verb. Such theta-role is not projected into the syntax because it is saturated in the lexicon; thus the direct theta-role of the verb is externalized by rule (155).

3.4.6.1.2 Ackema and Schoorlemmer (1994, 1995, 2006)

Ackema and Schoorlemmer, assert that middles and passives share similar properties; for instance, the logical subject is not the grammatical subject. They argue that in spite of the similarity, the analogous changes in grammatical relations in middle formation and passive

formation should not be derived in the same process. Recall that Keyser and Roeper (1984) argue that in passive construction, the logical subject, although apparently not a syntactic argument, is syntactically much more active than it is in the middle sentence. However, Ackema and Schoolemme oppose Keyser and Roeper's argument and they point out that passives can license agentive adverbs, by-phrase and purpose phrase, but middles cannot, as shown in (157) and (158).

(157) a. The wall was painted on purpose
b. The wall was painted by Harry
c. The wall was painted to protect it against the rain

(158) a *Walls paint easily on purpose
b. *Walls paint easily by Harry
c. *Walls paint best to protect it against the rain

Therefore, they propose an analysis for passives which involves the syntactic presence of logical subject and movement of the object and reject the analysis of A-movement in middles. In addition, these scholars compare some analysis of the middles on the basis of two properties: first, the syntactic presence or absence of A-movement to promote the internal argument of the transitive variant to the middle sentence, and secondly, the presence or absence of A-movement to promote the internal argument of the corresponding transitive variant to the middle.

With regard to the first property, they find no convincing evidence for the syntactic presence of the middle verb's logical subject. Ackema and Schoorlemmer (2006) demonstrate that the logical object is a base-generated subject, that is, there is no syntactic DP-movement. The middle verb's grammatical object is in D-structure subject position (which they assume to be VP-internal). Thus, they point out that middles are derived pre-syntactically by suppressing the agent and base-generating the underlying object in the subject position. They then propose the S-structure representation of the sentence in (159a) as in (159b).

(159) a. The wall paints easily
b. [IP wall$_i$ [I'[VPt$_i$ [V' paint easily]]]]

Building on Jackendoff (1990), Ackema and Schoorlemmer (2006)) adopt a model of grammar in which the semantic arguments of a predicate are projected onto syntax from a

level of Lexical Conceptual Structure (LCS). It is worth mentioning that Fagan, who also analysed middles under lexical approach, argues that logical subject argument of a middle is semantically present at LCS, and is not syntactically projected, which is allowed because it is semantically (arb)itrary argument.

Ackema and Schoorlemmer argue that the logical subject must be an Actor in Jackendoff's term in order for this operation to be possible. Thus, they propose a principle which states that a verb can never lose its capacity to assign an external theta-role, as a result of which the logical object argument of the middle verb becomes its syntactic external argument. Combining the above principle with that of argument projection, according to which projection to syntax takes place in accordance with thematic hierarchy (cf. Grimshaw 1990), one can see that when a verb's usual subject argument is not projected to syntax, as in anticausatives, middles and passives being studied in this work, hierarchically the next highest argument in its LCS will be generated in the position of external argument.

3.4.6.2 The Syntactic Approach

3.4.6.2.1 Keyser and Roeper (1984)

Proponents of the Syntactic approach propose that middles are syntactically derived, that is, the middle formation process involves the suppression or demotion of an external argument to the grammatical subject position. In the view of Keyser and Roeper (1984) these constructions display properties of both active and passive voice. This view explains that the surface subject corresponds to the underlying object. Moreover, in languages like English, the verb in middle construction bears active morphology. Similar to the passive, however, middles are arguably derived from their transitive counterparts. Both constructions are taken to be the intransitive variant of the transitive alternation, as shown in (160).

(160) a. Frank breaks [the window]
b. [The window] breaks easily
c. [The window] is broken

The examples in (160) instantiate the difference between middle and passive in English; the middle is morphologically unmarked or simple middles are neither marked by any morpheme nor characterized by the presence of an auxiliary verb. In other words, the verb break in (160b) does not take any morpheme that can distinguish it from its transitive counterpart, but

(160c) is marked by the past participle (-en) represented by (-ed) and the auxiliary verb be. Besides the above differences, as stated earlier, these two constructions share two essential properties: first similar to anticausative, the logical subject argument of the transitive is not overtly projected, although it is implied, and second, the logical object argument of the transitive in (160a) appears as the grammatical subject in both (160b) and (160c).

In English, passives are formed in syntax in the sense that this process involves demotion of external argument and the object-theme is promoted to the position of illogical subject. Thus, Keyser and Roeper (1984) argue that like passives, middles also conform to the syntactic analysis of Move α movement. It is important to recall that in classical Government and Binding (GB) analysis of passives, the especially passive morphology *-en* on the verb is responsible for the suppression of the agent theta-role and the verb's ability to assign accusative case to the internal argument. It follows that middles in English are not themselves morphologically overt as shown in many examples in this section. However, in many African languages, (cf. Mchombo 2004) passivization is a morpholexical process. In this group of language, passivization is formed with the morpheme -w-, with its allophones -iw- and -ew-. As will be seen in chapter 5, data on the middle formation in *Kizombo*, suggests that verbs which participate in middle formation have the same form as their anticausative counterparts; that is they are morphologically marked.

In Keyser and Roeper's view, English has an abstract clitic, but such clitic is not expressed at the level of phonology. Such a clitic is the one which plays the function of absorbing the accusative Case and the agent-theta role. Building on this assumption, they propose that the middle sentence in (160b) can be syntactically represented as in (161).

(161) The window$_i$ breaks$_{ti}$ easily.

Nevertheless, as Chomsky (1985a:271) explains, unlike middles in English, middles in Italian contain overt clitic si, as shown in (162) taken from Chomsky (ibid).

(162) a. Le mele si mangiano.
b. Si mangiano le mele.
c. The apples si eat.

In (162) the clitic si absorbs the objective Case and carries the subject argument function of agent. This fact led Keyser and Roeper to argue that such an absence of expressible si holds two consequences in languages like English: (i) middles are less productive and (ii) Italian and English are different regarding the control powers of middles.

3.4.6.2.2 Stroik (1999)

Contrary to Keyser and Roeper, Stroik, within the syntactic approach, proposes that the semantic argument of middle verbs is obligatorily projected in syntax. This implies that the lexico-semantic structure of a middle verb is the same as that of the transitive variant. On Stroik's proposition, the verb "read" in (163), (163a-b) projects the same thematic grid, (i.e. Agent and Theme).

(163) a. They read the book.
b. Bureaucrats bribe easily.

Hence he assumes that the agent argument is assigned to PRO, which is demoted to a VP-adjunct position. Accordingly, the sentence in (163b) is projected structurally as in (164).

(164) $[_{IP}$ bureaucrats$_i$ [I[VP[VP[v' bribe t_i easily]]PRO]]]

Furthermore, Stroik explains that the demoted external argument theta-role can occur in an adjunct position overtly and be Case-licensed inside a prepositional phrase (PP). In the view of Stroik, the *for*-phrase is an overt realization of the demoted agent argument that is always present in the middle sentence as in (165).

(165) That book reads quickly for Mary

Stroik (1999) reveals a relationship between the *for*-phrase and the object of middle verb. He extends Reinhart and Reulands (1993) approach to the relationship between reflexivity and predication to middles with overt PP.

Similar to Keyser and Roeper (1984), and Stroik (1999), Hoekstra and Robert (1993) propose the syntactic projection of all the semantic argument of the middle constructions. They point out that the middle verb's subject argument, similar to passive constructions, is assigned in

syntax, although not to a lexical DP in subject position, but to PRO in verb-internal subject position. The internal argument is regularly assigned to the subject, which is consequently generated at the derived subject position Move α; hence they propose the structure in (166b).

(166) a. Bureaucrats bribe easily
b. [IP bureaucrats$_i$ [I[VP $_{PRO}$[v' bribet$_i$ easily]]]]

These scholars support the idea that middles can have a *for*-phrase as suggested in Stroik (1992, 1995, 1999). Nevertheless, Hoekstra and Robert assume that propositional object as the one in (166) receives an experience thematic role from the adverb in the relevant sentence and that the experience's content licenses the pro-argument in [Spec, VP].

The syntactic analysis does not provide adequate explanation for the differences between middles and passives. As emphasised earlier, the ungrammaticality of preposition standing in middle verbs gives evidence against the syntactic analysis of middles in English. Indeed, A-movement treatment of passives is based on the fact that they allow preposition standing in English (Wasow 1977), even though this diagnostic test cannot be taken as cross-linguistic because the Kikongo language, for example, does not allow such constructions. Also, a further claim that middles involve an implicit argument which can be identified as PRO (i.e. Stroik 1999) or pro (i.e. Hoekstra and Roberts 1983), a standard test for implicit external arguments, does not hold for middle formation in many languages (see Jingquan for more detail). The reason is that analysing the external argument as PRO/pro needs non-trivial theoretical amendments since none of the examples above gives a satisfactory environment for PRO/pro.

3.5 SUMMARY

This chapter reviewed the current status of syntactic and lexical semantic theories relating to causative and anticausative and other transitivities. This scholarly review was done with the statement of the research problem and the goals of the study in mind. Indeed, this exercise was fruitful in the sense that it helped the researcher to comprehend not only the status of synchronic theories, but also that of transitivity. Three approaches on causative and anticausative alternations were reviewed; the Intransitive approach is justified by languages that mark the causative variant, whereas the Transitive approach is justified by languages that mark the anticausative variant. Both approaches leave room for questions of the paradigm unanswered. For example one wonders how these approaches could handle facts found in

languages that present both types of morphology, see data in chapters 6 and 7. The syntactic decomposition approach, however, takes both processes causative marking variant and anticausative marking variant to be found across and within languages as base-generated. In this approach the causative and the anticausative alternations involve similar event decomposition. They only differ in the presence or absence of Voice which introduces the external argument. Thus, this approach invokes three nodes: Voice, vCAUS and the Root. Despite considerable research on many languages of the world, little research on causation has been done on Bantu languages and in *Kikongo* in particular.

CHAPTER 4
AN OVERVIEW OF PREVIOUS RESEARCH ON LOCATIVE INVERSION

4.1 INTRODUCTION

Locative inversion has received considerable attention by many scholars both in typology orientation (Bresnan and Kanerva 1989, 1994; Machobane 1995; Moshi 1995; Demuth and Mmusi 1997; Marten 2006 and references therein) and in the theoretical domain (Bresnan 1994; Levin & Rappaport Hovav 1995 and Machobane 1995) among others. This alternation is often thought of as a process that reverses the grammatical relations of the participants (i.e., $DP_{iAg} - A_{grSi}V$ - DP_{jLoc} = $DP_{jLoc} - {}_{AgrSj}V$ - DP_i). One of the substantiations for such types of relations comes from agreement. In some Bantu languages after reversal, the DP_{iAg} of the sentence no longer triggers agreement with the Agent/Theme subject in the verb structure; it is the postverbal DP_{Loc} that the verb agrees with. Three central issues have featured in the debate: firstly, the typology of the properties of the predicates that participate in locative inversion, secondly, whether the proposed locative DP exhibits properties of the subject, and how to account for the Agent/Theme subject, and thirdly, what type of information structure that such a construction avails.

This chapter will seek to reveal the different views, theoretical and typological, have been advanced in relation to locative inversion in some Bantu languages, and in English. Throughout this review, the principles of critical appraisal will be applied and each section will be an account of the issues the researchers have studied. Much of the examples will be based on the respective languages as they were studied by the various researchers.

The chapter is organized as follows: section 4.1 will review locative inversion in a number of Bantu languages. Section 4.1.1 will review locative in version in the *Chichewa* language, as studied by Bresnan and Kanerva (1989) and section 4.1.2 will review the *Sesotho* language, as studied by Machobane (1995). Section 4.1.3 will review the *Kichaga* language, as studied by Moshi (1995); section 4.1.4 will consider locative inversion in *Setswana*, as studied y Demuth and Mmusi (1997) and section 4.1.5 will examine locative inversion in English, as studied by Bresnan (1994). After this discussion, the focus will shift to a comparison of some approaches to locative inversion. Two approaches will be reviewed: first, the Lexical Functional Grammar account by Bresnan (1994) and, second the Principles and Parameters account by Levin and Rappaport Hovav (1995) and Machobane (1995).

4.2 PREVIOUS STUDIES

Many studies in Bantu languages points out that this group of languages have a range of different noun classes, conceptually analogous to gender, each of which presents diverse morphological agreement on different parts of speech (i.e. verbs, adjectives, and numbers) as subject or object agreement morphology (Cf. Hyman and Duranti 1982). Some of these classes are strongly associated with specific semantic concepts. Of special interest to this chapter are the locative noun classes: class 16 indicates open place/surface, class 17 indicates movement forward and class 18 indicates closed place or interiority. In what follows a brief characterization of the main aspects of research on locative inversion in six languages is given.

4.2.1 *Chichewa* (Bresnan and Kanerva 1989)

Bresnan and Kanerva (1989), in examining locative inversion in *Chichewa*, notice that this language exhibits rich locative morphology in both nominal and verbal agreement, preserving the locative classes: 16/*pa-*, 17/*ku-* and 18/*mu-*/*m-* typical of many Bantu languages. In inverted sentences, the preposed locatives trigger subject-verb agreement (167b) and cannot be omitted or separated from the verb.

(167) a. ***ku**-mu-dzi* ***ku**-li* *chi-tsîme*
17-3-village SC17-be 7-well
'In the village is a well'

b. ***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'

c. ***m**-mi-têngo* ***mw**-a-khal-a* *a-ny ni*
18-4-tree SC18-PERF-sit-FV 2-baboons
'In the trees are sitting baboons'

(Bresnan and Kanerva 1989)

Like in the non-inverted sentences, the preposed locatives can be raised to the subject position of the matrix clause, as in (168), and can also be relativized, as shown in (168b).

(168) a. *Mvûla* *y-a-yamba* *ku-gwá* *ku-mu-dzi*.
9-rain 9-PRF-start INF-fall 17-3-village
'It has started to rain at the village.'(Intd: Rain has started to fall at the village.)

(Bresnan 1994:94)

b. *N' pâ-ti [pa-méné p-á-ím-á nkhandwe]?*
COP 16-Q 16-REL 16-REL-PRF-stand-IND 9-fox
Lit.: 'It is where that is standing the fox?'

(Bresnan and Mchombo 1989)

The postverbal DPs are presentationally focused and no object marker referring to the postverbal logical subject is permitted in location. Locative inversion is only felicitous with unaccusative predicates. As was said before, the examples in (167), the locative DPs precede the verb and they trigger subject agreement with it.

Similarly, for any ordinary subject in *Chichewa*, the preposed locatives are reported to take non-finite VP as modifiers, as in (169a) or as predicative complements, as in (169b), and hence function as the external argument of the non-finite verb, as shown in (169).

(169) a. *M-nkhalangó [$_{VP}$ m-ó-khál-á mi-kângo]*
18-9-forest 18-*ASC*-*INF*-live-IND 4-lion
'In the forest where there live lions.'

b. *M-nyumbá ndi [$_{VP}$ m-ó-gón-á nkhûku]*.
18-9-house COP 18-*ASC*-*INF*-sleep-IND 10-chicken
'In the house is where chickens sleep.

(Bresnan and Kanerva 1989:14)

The diagnostic tests with subject relatives and subject extraction reveal that the locative DPs play the role of grammatical subjects. The authors point out that, like other grammatical subjects, locative subjects in inverted sentences can be omitted, or be postposed, as shown in (170a), but they cannot intervene between the verb and logical subject, as exemplified in (170b), showing that the logical subject has to follow the verb immediately.

(170) a. *mw-a-khal-a* *a-ny ni* *m-mi-têngo*
SC18-PERF-sit-FV 2-baboons 18-4-trees
'In the trees are sitting baboons'

b. **mw-a-khal-a* *m-mi-têngo* *a-ny ni*
SC18-PERF-sit-FV 18-4-trees 2-baboons
Intd: 'In the trees are sitting baboons'

With regard to the properties of non-object of the inverted subject, like an object, the inverted subject occupies a position within the smallest phrase containing the verb, and like a subject, the locative participates in subject-verb agreement and anaphora, attribution and predication, and subject raising. However, the inverted subject also shows properties atypical of objects. First, it cannot passivize (Bresnan & Kanerva 1989:15).

In terms of the discourse-pragmatic properties, the preposed locative serves as topical expression representing old information, whereas the inverted logical subject is focal, introducing new information. By contrast, in the non-inverted construction, it is the Theme-subject that is topical and the oblique locative that is focal. In a discourse context, as in (171), whereby the place of arrival is questioned, only the canonical construction with a focal expression is felicitous, although a preposed locative, as the (171b) is also felicitous. However, locative inversion in *Chichewa* proves to be infelicitous because the locative is taken as the subject, and regarded as the most topical element of the sentence, whereas the logical subject is focused, although it has already been introduced.

(171) a. *Ndi-ku-fún-á ku-dzíw-á kuti n' ku-tí a-lendó á-ná-fîk-a.*
1s-PRG-want-IND INF-know-IND COMP COP 17-Q 2-visitor 2REL-RECPST-arrive-IND
'I want to know where it was that the visitors arrived.'

b. *Ndi ku-mu-dzi a-lendô-wo á-ná-f îk-a.*
COP 17-3-village 2-visitor-2-those 2-REL-RECPST-arrive-IND
'It's at the village that those visitors arrived

c. **Ndi ku-mu-dzi kú-ná-f ík-á a-lendô-wo.*
COP 17-3-village 17-REL-RECPST-arrive-IND 2-visitor-2-those
Intd: 'It's at the village that arrived those visitors.'

(Bresnan and Kanerva 1989:33)

Furthermore, Bresnan and Kanerva assert that data in *Chichewa* show evidence in favour of treating locatives as DPs: because they freely occur in the subject and object positions of the semantically compatible verbs (Bresnan 1994:111).

With regard to the argument structure, locative inversion in *Chichewa* is reported to be an unaccusative phenomenon; that is, it is restricted to unaccusative and passivized transitive verbs that take an optional locative argument. (For a list of unaccusative verbs see Bresnan and Kanerva (1989:17)). The inverted and uninverted sentences are not used in free variation, rather their distribution is tied up by the discourse context. Locative inversion in *Chichewa*, as is the case with English, serves a special function in discourse, commonly referred to as presentational focus, in which the referent of the inverted subject is introduced or reintroduced on the (…) scene referred to by the preposed locative (Bresnan 1994:85).

4.2.2 Sesotho[13] (Machobane 1995)

Contrary to *Chichewa*, Machobane (1995) reports that *Sesotho* has lost the locative noun class prefixes. Only the subject prefix of class 17 *ho*- is preserved whereas the other classes (16/*fa*; 18/*mo*) have lost their subject prefix. According toMachobane, Sesotho makes use of the prefix *ho*- comparable to English preposition 'to' or the suffix –*eng* to derive locative reading. For that reason, the inverted sentence in *Sesotho* does not trigger real subject-verb agreement, differing in this respect from canonical subjects. Also, inherently locative nouns are used without any change of form. In the inverted sentence, the verb takes the invariant subject marker *ho*- irrespective of type of locative appears preverbally, as shown in (172).

(172) a. *Thab-eng* *hó-a-chés-a*.
9-mountain-LOC 17-PRS-burn-IND
'On the mountain it is hot.'

b. *Fátse* *hó-móngobo*.
ground-LOC 17-3-damp
'The ground is damp.'

(Machobane 1995:120)

Similar to any ordinary subjects, the preposed locative undergoes raising to subject, as in (173b), and the locative also undergoes raising to object, as shown in (174b).

(173) a. *Thab-eng* *hó-bonáhal-a* *ho-kúbélla* *haholo*.
9-mountain-LOC 17-seem-IND INF-smoke more
'In the mountain it seems to be smoking more.'

b. *Thab-eng* *hó-lébéléts-o-è* *ho-báta*.
9-mountain-LOC 17-expect-PAS-PRF INF-cold
'In the mountain it is expected to be cold.'

(Machobane 1995:121)

(174) a. *Banána* *bá-tseb-á* *hore thab-eng* *hó-mél-a* *lifáte*.
2-girls 2-know-IND that 9-mountain-LOC 17-grow-IND 8-trees
'The girls know that in the mountain grow trees.'

b. *Banána* *bá-tseb-á* *thab-eng* *hó-mél-a* *ifáte*.
2-girls 2-know-IND 9-mountain-LOC 17-grow-IND 8-trees
Intd: 'The girls know on the mountain to grow trees.'

(Machobane 1995:125)

[13] Sesotho belongs to zone S with 33 according to Guthrie's (1967-1971) referential classification of the Bantu language family.

With respect to the word order, like in *Chichewa*, data in *Sesotho* suggest that the locative subject is VP-external because it may not intervene between the postposed subject and the verb, as in (175).

(175) a. [$_{IP}$ *Sekólo-ng* [$_{VP}$ *hó-fíets-é* [$_{NP}$ *banána*]]].
7-school-LOC 17-sweep-PRF 2-girls
Intd: 'At school have swept girls.'

b. **Ho-fiets-e sekolo-ng banana.*
17-sweep-PRF 7-school-LOC 2-girls
Intd: 'At school have swept girls.'

(Machobane 1995:130)

Similar to *Chichewa*, the postposed logical subject can neither be expressed by an object marker (176b) nor be promoted to subject through passivization (176c).

(176) a. *Sekólo-ng ho-fiets-e banana.*
7-school-LOC 17-sweep-PRF 2-girls
Intd: 'At school have swept girls.'

b. **Sekólo-ng ho-**ba**-fiets-e.*
7-school-LOC 17-2-**OBJ**-sweep-PRF
Intd: 'At school have swept they.'

c. **Banana ba-fiets-o-e ke-sekólo-ng.*
2-girls 2-sweep-PAS-PRF by-7-school-LOC
Intd: 'The girls have been swept by (at) the school.'

(Machobane 1995:130)

Like canonical objects in *Sesotho*, as in (177a), the postposed subject may not be separated from the verb (178).

(177) a. [$_{IP}$ *Li-péré* [$_{VP}$ *lí-j-á jwanèg*]].
10-horses 10-eat-MOD 14-grass
'The horses are eating grass.'

b. [$_{IP}$ [$_{VP}$ *Lí-j-á jwanèg] li-pére*].
10-eat-MOD 14-grass 10-horses
'They are eating grass, the horses.'

c. **Li-ja li-pere jwanèg.*
10-eat-MOD 10-horses 14-grass

(178) a. *Hó-fihl-íl-é li-pére.*
17-arrive-PRF-MOD 10-horses
'There arrived horses.'

b. *Hó-fihl-íl-é* *li-péré* *bo-síu*.
17-arrive-PRF-MOD 10-horses 14-night.
'There arrived horses at night.'

c. **Ho-fihl-il-e* *bo-siu li-pere*.
17-arrive 14-night 10-horses

(Demuth 1990: 240)

With regard to status of the locative prefix, Demuth (1990:242) points out that inverted locatives display a number of subject properties comparable to the corresponding constructions in *Chichewa*, the subject prefix *ho*- patterns like an expletive. Thus, it is used in impersonal constructions, as exemplified in (179).

(179) a. *Hó-a-bát-a+ ká-ntlé*
17-PRS-cold-MOD PP-outside
'It's cold outside.'

b. *Hó-náhan-w-a* *hore malómé* *ó-bohlále*
17-believe-PAS-MOD COMP 1-uncle 1-COP-wise
'It is believed that (my) uncle is wise.'

Concerning the argument structure, the *Sesotho* inverted sentence, unlike *Chichewa*, allows a variety of verb types (for more details see table (4)). The information structure for the occurrence of the inverted construction is said to be similar to that of *Chichewa* (Demuth (1990:245)). However, these scholars did not give any further details about the issue, neither did they make an explicit statement as to whether impersonal constructions and locative inversion are structurally comparable or not.

4.2.3 *Kichaga* (Moshi 1995)

According to Moshi (1995), *Kichaga*, contrary to *Chichewa* and *Sesotho*, conserves two of the three locative prefixes widely found in many Bantu languages (16/*ha*- and 17/*ku*-). The first prefix denotes specific location and the second denotes general location or interior location. With regards to the nominal morphology, Moshi points out that there is only one noun that takes locative gender prefixes, namely -*ndu* 'place', as shown in (180). This means, subject-verb agreement is restricted to this prefix. While some nouns are inherently locative, other are obtained via suffixation of -*nyi*.

(180) ***Ha**-ndu* *ha* ***ha**-wozre kando.*
16-place here 16-have food
'The place here has food.'

(Moshi 1995:131)

The selection of a subject prefix with other nouns is constrained by their semantics. Salzmann (2004:45) observes that nouns like *mesanyi* 'on the table', referring to nouns of which the meaning includes surface areas tend to be associated with *ha-* (specific) while nouns like *mlri-nyi* 'in the city' that denoting interior locations tends to co-occur with *ku-*.

Preposed locatives in *Kichaga* undergo raising to subject, as in (181). Like *Sesotho*, this language exhibits instances of raising to object position as the raised locative triggers object agreement on the matrix verb, as shown in (182).

(181) a. *Ki-keri* *ruko-nyi* *ku-aka* *mozro.*
it-seem 9-kitchen-LOC 17-light fire
Lit.: 'It seems that in the kitchen burns a fire.'

b. *Ruko-nyi* *ku-keri* *i-aka mozro.*
9:kitchen-LOC 17-seem INF-light fire
Lit.: 'In the kitchen seems to burn a fire.'

(Moshi 1995:135)

(182) a. *Wafee* *we-chi (kye) kayi* *ku-kye-lrika* *shifoi.*
2:parent 2-know that attic 17-hab-hide 7-much
'The parents know that (in) the attic hides a lot of things.'

b. *Wafee* *wa-**ku**-ichi* *ku-kye-lrika* *shifoi.*
2:parent 2-17O-know 17-hab-hide 7-much
'The parents know there to hide a lot of things.'

(Moshi 1995:138)

Moshi did not provide information about the argument structure of the predicates that participate in locative inversion neither did he say something with regard to the information structure. However, according to Marten (2006), *Kichaga*, like *Chichewa*, takes unaccusative predicate types.

4.2.4 *Setswana*[14] (Demuth and Mmusi 1997)

Demuth and Mmusi (1997) give an account of locative inversion and presentational focus in *Setswana*, and some other Bantu languages, nd they argue that in *Setswana* locatives are very productive in displaying the three prefix types typical in Bantu family (16/*fa-*, 17/*ko-*/*kwa-* and 18/*-ng*). However, similar to *Sesotho*, and contrary to *Chichewa*, locatives are marked with an invariant locative suffix *–ng* and the verb takes the invariant class 17 prefix go- in subject-verb agreement, as shown in (183).

(183) a. *Ba-símané* *bá-éme* *fá-se-tlharé-ng*.
2-boys 2-stand-PRF 16-7-tree-LOC
'The boys are standing by the trees.'

b. ***Fá**-se-tlharé-ng* ***gó**-émé* *ba-símané*.
16-7-tree-LOC **17**-stand-PRF 2-boys
'By the trees are standing boys.'

c. **__Mó__-le-fátshé-ng* *di-kgomó* ***gó**-á-fula*.
18-5-country-LOC 10-cattle **17**-PRS-graze
'In the country the cattle are grazing.'

d. ***Mó**-le-fátshé-ng* *di-kgomó* ***dí**-á-fula*.
18-5-country-LOC 10-cattle **10**-PRS-graze
'In the country the cattle are grazing.'

(Demuth and Mmusi (1997:4)

Like the canonical subjects, preposed locatives can undergo subject-to-subject raising, as shown in (184).

(184) *Kwá-Gáúte-ng* *gó-lébéléts-w-é* *go-na*.
17-G-LOC 17-expect-PAS-PRF 15-rain
'In Johannesburg it is expected to rain.'

(Demuth and Mmusi 1997:6)

It should be noticed that these scholars did not give information about the properties of the logical subject, but Salzmann (2004:36) comments that *Setswana* patterns with closely related *Sesotho* in this respect.

[14] Setswana belongs to zone S with number 51 according to Guthrie's (1967-1971) referential classification of the Bantu language family.

With regard to the argument structure, Demuth and Mmusi (1997:11) argue that *Setswana* allows locative inversion with a wide range of verb types, excluding only active transitives and ditransitives, (i.e. sentences with argument structures which have both an agent and a theme). Concerning information structure, the discourse context in which locative inversion or, rather, the impersonal sentences are used, seem to be analogous to that of *Chichewa* (cf. Demuth and Mmusi 1997). However, Salzmann (2004) states that the passivized intransitives must be of a different type without providing further details.

4.2.5 *Otjiherero*[15] (Marten 2006)

Marten (2006), who studied locative inversion in *Otjiherero*, argues that this construction shows many parallels with many other Bantu languages (i.e., *Chichewa* and *Setswana*). It will suffice to note that this language, similar to *Chichewa* exhibits the three locative classes typical of most Bantu languages. Marten summarized his findings, contrasting it with *Chichewa* and *Setswana*, in the following way:

(i) The locative DP of the inverted sentence displays properties of the grammatical subject;
(ii) The postverbal DP exhibits properties related to the logical subject and cannot (easily) be omitted or separated from the verb;
(iii) The postverbal DP is presentationally focused.

Similar for *Chichewa* and contrary to *Setswana*,

(iv) Otjiherero displays a tree-way contrast of locative (classes 16, 17, 18) subject markers

but contrary to *Chichewa* and *Setswana*,

(v) The locative alternation is allowed with any type of verb, except ditransitives;
(vi) All locative subject markers support a locative reading, but the class 16 marker can also be used in expletive contexts, and;
(vii) Postverbal object clitics are allowed in locative alternation.

[15] Otjiherero belongs to zone R with number 31 according to Guthrie's (1967-1971) referential classification of the Bantu language family.

With respect to argument structure, Marten (2006:114) argues that locative inversion is felicitous with unaccusatives, unergatives, and passivized transitives: the verb *-rárá* in (185) is an unaccusative, while the verb *-vázéwá* in (186) is a passivized transitive. Both of these predicate types are also felicitous in *Chichewa* and Setswana. However, the verb *-pósé* in (187) is an active unergative predicate, as found in *Setswana*, but not in *Chichewa*.

(185) *pò-ndjúwó* *p-á-rárá* *é-rúngá*
16-9.house SC16-PAST-sleep 5-thief
'At the house slept a/the thief'

(186) *kò-mù-tí* *kw-á-pósé* *òzó-ndjìmá*
17-3-tree SC17-PAST-make_noise 10-baboons
'In the tree made noise (the) baboons'

(187) *mò-ndùndú* *mw-á-váz-éw-á* *ómu-àtjé*
18-9 mountain SC18-PAST-find-PASS-FV 1-child
'On the mountain was found a/the child'

Marten did not give details about the information structure of the sentences discussed, although, it is thought that it is similar to that found in the languages discussed so far.

4.2.6 English (Bresnan 1994)

Locative inversion in English is reported to be similar to the Bantu languages discussed above, although a number of differing aspects can be identified. While the Bantu languages examined above show either subject agreement with the preposed locative or some kind of impersonal agreement (i.e. Sesotho), in English, it is the theme that the verb agrees with, as in (188).

(188) a. In the swamps was/*were found a child.
b. In the swamp were/*was found two children. (Bresnan 1994:95)

The inverted locative PPs cannot be raised to the object position (or exceptionally case-marked subjects in Chomsky's 1981 theory), although they can be raised to subjects, as shown in (189).

(189) a *I expect on this wall to be hung a portrait of our founder.
b On this wall is likely to be hung a portrait of our founder.

(Bresnan (1994:109)

Like in Bantu languages, the preposed locatives can be relativized, as in (190), but unlike in *Chichewa*, attributive VPs headed by a participle cannot be inverted, as in (191b)

(190) a. I expect that on these trails can be found many kinds of mushrooms.
b. … these trails, on which I expect - can be found many kinds of mushrooms.

(Bresnan 1994:87)

(191) a. She stood on the corner [on which was standing another woman].
b. *She stood [on the corner] [VP standing another women]

With respect to structural position, locative inversion can occur in complement positions. This explains why the proposed locative does not occupy the Spec-of CP position (Bresnan 1994:102), as in (192).

(192) We all witnessed [CP how [IP down the hill came rolling a huge baby carriage]].

Apart from subject-verb agreement, there is no evidence in favour of the theme's subject status. Conversely, the theme's behaviour is also not clearly indicative of an object relation which makes it difficult to determine the syntactic status of the inverted theme (Salzmann 2004).

With regard to argument structure, not all verbs undergo locative inversion. In English, this alternation is restricted to unaccusative and passivized transitive verbs. Alternation with active transitive and unergative verbs is infelicitous. The same by-phrase restriction holds true in *Chichewa*.

Locative inversion in English seems to serve a similar discourse function to the corresponding constructions the languages discussed: firstly, the inverted sentences are used in the context of presentational focus in which the topical theme (already introduced) cannot be focused by postposing (193b). Only the uninverted construction in the sentence-initial topic position (193c) is felicitous in this context.

(193) a. .I'm looking for my friend Rose.
b. *Among the guests of honor was sitting Rose.
c. Rose was sitting among the guests of honor.

(Bresnan (1994:85)

The review from the languages above can be summarized as follows: (a) three languages, namely *Chichewa*, *Setswana* and *Otjiherero* preserve the three classical Bantu locative prefixes and they allow the three-way locative agreement, but unlike *Chichewa*, and *Setswana*, *Otjiherero* allows any type of predicate to undergo locative inversion except ditransitive verbs. The locative DP in *Setswana*, like in *Chichewa* and *Otjiherero* displays grammatical subject properties. *Sesotho* is the only language that has lost the locative noun class prefixes. Instead, it uses the prefix *ho*- comparable to the English preposition 'to' or the suffix -*eng* to derive a locative reading. This fact makes it difficult to confer DP properties to their preposed subjects. *Kichaga* is the only language that retains two of the three typical Bantu prefixes. The postposed DP is the logical subject and cannot at any instance be omitted or separated from the verb. The same postposed DP is presentationally focused. In *Otjiherero* locative subject agreement supports a locative reading, although the class 16 agreement can also be used in expletive contexts.

Chichewa and *Kichaga* are the two languages which exhibit a morphological contrast between locative subject markers. They both impose the same thematic restrictions but differ in subject marker morphology. In terms of agreement morphology *Otjiherero* patterns with *Chichewa*, but with respect to thematic structure *Otjiherero* constitutes a type of its own, and presents the most liberal system, while *Chichewa* presents the least liberal system.

However, contrary to *Chichewa*, *Setswana* only has one locative agreement, class 17, while in *Chichewa* the three locative classes, 16, 17, and 18 occur. In the absence of a full locative DP subject in *Setswana*, no locative reading results, but only a presentational focus[16] reading. Any verb may participate in locative inversion in *Setswana*, except active transitive and ditransitive verbs. In languages like *Sesotho* and *Setswana*, where locative markers are only available in the invariant form of class 17, locative properties are only active in the presence of the locative subject itself. This means, the class 17 serves only as a channel for transmitting locative properties, and is probably required for the well-formedness and interpretation of the expression.

With regard to the *Chichewa*, Bresnan and Mchombo (1987) observe that the subject marker is functionally ambiguous between a grammatical agreement marker and an incorporated

[16] Creissels (2009) challenges the characterization of the presentational focus in Tswana as a locative subject and proposes that this construction should be analysed as impersonal sentence-focus construction in a cross-linguistical field of inquiry involving an expletive subject marker, and in which locative DPs preceding the verbs are not core constituents and therefore must be analysed as frame adjuncts.

pronominal: When the lexical subject is present, the subject marker functions as a grammatical agreement marker. However, when pro-drop occurs and no lexical subject is present, Bresnan and Mchombo state that the subject marker is an incorporated pronominal and assumes the grammatical role of subject, with the complete phi-feature specification (person, number, gender features) of the lexical subject itself. This appears to be an adequate representation of the *Chichewa* facts, where locative anaphoric reference remains when the locative subject has been dropped.

With respect to English, data reveal that the preposed locative does not trigger agreement thereby it does not display subject properties, although similar to the Bantu languages studied, the preposed locative can undergo raising to subject. But, it can be relativized which makes it problematic in defining the properties of the subject DP. However, the preposed locative does not occupy the Spec-CP position. In terms of argument structure, preposed locatives in English are restricted to unaccusatives and passivized transitive predicates, and in terms of information structure the preposed locative is used in the context of informational focus, as summarised in table (4).

Language	**Verb type**	**Constituent structure**			**Thematic structure**
		Locative Morphology	SM morphology	Grammatical function of SM	Thematic role
Chichewa	Unaccusative	16/17/18	16/17/18	locative	theme
Kichaga	Unaccusative	-	17/18	locative	theme
Setswana	all except active transitives	16/17/18	17	expletive	*(agent+theme)
Sesotho	all except active transitives	-	17	expletive	*(agent+theme)
Otjiherero	all accept ditransitives	16/17/18	16/17/18	locative	*(agent+theme +beneficiary)
			16	expletive	
English	Unaccusative, passivized transitives	any prepositions	*	locative	theme

Table 4: Variation of locative inversion, as adapted from Demuth and Mmusi (1997)

Table 4 indicates that the grammatical function of the subject agreement is restricted to the morphology of subject markers in each specific language. Examples from *Kichaga* shows that even a two-way distinction (between classes 17 and 18) is sufficient to give rise to locative readings, and it also shows that locative nominal morphology (i.e. the presence of locative noun class prefixes) is not relevant to the distinction between locative and expletive readings. The English language lacks morphological agreement to the preposed locative

4.3 APPROACHES TO LOCATIVE INVERSION

The linguistic literature on locative inversion reveals that much of the account has referred to syntactic, semantic and pragmatic discourse (Mendikoetxea 2006:1). From the viewpoint of syntax, locative inversion has been characterized as syntactic properties of the predicates undergoing the alternation as unaccusatives (Bresnan and Kanerva 1989; Hoekstra and Mulder 1009) among others, although the examples above refute this view. From the viewpoint of semantics, verbs undergoing locative inversion are treated as existence and appearance verbs and semantic restrictions are derived from the discourse function of these verbs (Bresnan 1994).

Debate on locative inversion has also featured in the way in which such a phenomenon could be explicated in terms of theoretical orientation and finding a unified explanation for the diverse typology. In what follows, a brief characterization of two approaches, Lexical Functional Grammar and Principles and Parameters will be given and their main achievements will be presented.

4.3.1 Lexical Mapping Theory[17]

4.3.1.1 Bresnan (1994)

Bresnan, who analyzed locative inversion in terms of Lexical Mapping Theory (LMT), a sub-theory of Lexical Functional Grammar (LFG), argues that locative inversion is only felicitous with predicates whose highest thematic role is <theme>. This characterization of the restriction on predicates available for locative inversion is based on the thematic classification of verbs developed in LFG and summarized in table 5.

Verb type	Active	Passive
Unergatives	<ag, loc>	<(ag), loc>
Unaccusatives	<th, loc>	<(th), loc>
Transitives	<ag, th, loc>	<(ag), th, loc>
Ditransitives	<ag, th, pat, loc>	<(ag), th, loc>

Table 5: Predicate types and thematic roles from Demuth and Mmusi (1997)

Table 5 summarises the ways in which different predicate types are derived from a classification of their thematic information. According to Bresnan's analysis, only active unaccusatives and passivised transitives and ditransitives (i.e. those predicates with <theme>

[17] Discussion on LMT is largely basic on Salzmann (2004)

as their highest role) are felicitous to participate in locative inversion, unergative predicates are infelicitous as exemplified in (194).

(194) **m-mi-têngo* *mu-kú-imb-á* *a-ny ni*
18-4-tree SC18-PROGR-sing-FV 2-baboons
Intd: 'In the trees are singing baboons'

According to Bresnan, the infelicity of (194) results from the fact that *-imba*, 'sing', is an unergative predicate, whose highest thematic role is <agent>, and which cannot participate in locative inversion. They consider the possibility that such a restriction is a universal quality of this alternation. However, facts from other Bantu languages reviewed in the preceding section refute this possibility. Consider section 4.2 and its sub-sections.

The ordering of thematic roles in this approach is hypothesized to be hierarchically associated with each other in such a way that, given any two roles in an argument structure, one will be more prominent than the other (Alsina and Mchombo 1993:24). Each verb selects some thematic roles to build up its predicate argument structure, following a certain hierarchy.

In LMT syntactic functions are classified according to the features [±r] (thematically restricted or not) or [±o] (object or not). The restrictedness of a syntactic function refers to whether it can only be associated with a specific set of thematic roles [+r] or whether it can be related to some other thematic roles [-r]. Object functions [+o] are the functions that can be selected by transitive verbs and cannot appear with intransitive verbs. This means that each grammatical function has a [+] and [-] specification for each feature.

On the one hand, the feature [+r] is used in relation to grammatical relations that can only be associated with specific thematic roles. In the specification of grammatical relations, this implies that secondary and oblique objects carry the feature [+r], since they are thematically restricted. On the other hand, grammatical relations designated by the feature [-r] indicate functions that can be related to different thematic roles. Those relations that benefit from this mobility are the subject and the primary object. The feature [+o] means that the grammatical relation has access to object properties. Primary and secondary objects are the functions which take these sites. The feature [-o] is associated with syntactic functions that have no access to object properties and these are the subject and the oblique functions

Elaborating on the above view, Bresnan argues that the *Chichewa* unaccusative verb *khala* 'remain' selects two semantic roles, namely a <theme> and a <location>, and they receive their default classification, as in (195).

(195) agent: [-o] theme/patient: [-r] locative: [-o]

The classification in (195) means that the locative can be generated in the subject position. Then, in the normal situation, the default in (195) applies and makes the locative argument restricted. Because of monotonicity, the theme remains underspecified. Its specification [-r] is basically compatible with either the subject or the object function, as was stated above. However, building on the Principle of Subject Condition, which states that "Every lexical form must have a subject or rather every f-structure must have a subject[18]" the Theme is mapped onto the subject function, as shown in (196).

(196) *khala* 'remain'

	< th	loc >
intrinsic:	[-r]	[-o]
defaults:		[+r]
	S	OBL_{Loc}

Considering the view that the theme is the most prominent argument, the locative becomes unrestricted. The general subject default is now removed because the features it can assign would violate monotonicity. Thus, the theme remains underspecified again and hence eligible for the subject or the object function. The theme is mapped onto the object function because there is already a subject present, as shown in (197).

(197) *khala* 'remain'

	< th	loc >
intrinsic:	[-r]	[-o]
defaults:		[-r]
	O	S

The transitive predicate like *-peza* 'find' in (198) does not undergo locative inversion in *Chichewa*. This is explained by the fact that the context required for the special subject default to apply is not present.

[18] This principle is analogous to the Extended Projection Principle in the Minimalist Program

(198) < th ... loc >
|
[-r]

The theme in (198) is not the highest argument. By function-argument biuniqueness, the theme is mapped on the object function because the agent is already classified as subject, as shown in (199).

(199)	*peza*	'find'	< ag	th	loc >
			|	|	|
	intrinsic :		[-o]	[-r]	[-o]
	defaults:		[-r]		[+r]
			S	O	OBL_{Loc}

Passivized transitives, on the other hand, do undergo locative inversion for the reason that the morpholexical operation of passive removes the agent making the theme, the most prominent argument and, hence, giving the context for the special default, as in (200).

(200)	*peza*	'find'		< ag	th	loc >
				|	|	|
	intrinsic:			[-o]	[-r]	[-o]
	passive:		**-édw**	Ø		
	defaults:					[-r]
					O	S

The by-phrase restriction can be explained by assuming that the agent is still present by being bound to the adjunct agent, accordingly destroying the context for the special subject default. So, only the normal subject default (201) applies (Bresnan 1994: 81).

(201)	*peza*	'be found by	< ag_i	th	loc >	< θ_i >
			|	|	|	
	intrinsic:		[-o]	[-r]	[-o]	
	passive:	-édw	Ø			
	defaults:				[+r]	
				S	OBL_{Loc}	

The fact that passivized ditransitives and applied verbs do not undergo locative inversion in *Chichewa* can be explained as follows: since there is no theme present at all, the context for the special default is not present, as in (202).

(202)	*thamangira*	'run for'	< ag	ben	loc >
			|	|	|
	intrinsic:		[-o]	[-r]	[-o]
	passive:	-édw	Ø		
	defaults:				[–r]
				O	S

The reason why unergatives fail to undergo locative inversion is analogous to the case of passivised ditransitives: given that these predicates contain an agent argument, the special subject default in (203) cannot apply. This analysis applies equally to object-drop verbs.

(203)	*kodz*	'urinate'	< ag	loc >
			|	|
	intrinsic:		[-o]	[-o]
	defaults:		[–r]	[+r]
			S	OBL_{Loc}

Although the theme is assigned to the object function in locative inversion constructions, it is an atypical object: firstly, being the highest semantic role, it has the semantic properties of subject and secondly, it does not passivize. This fact is easily accounted for by this approach because the passive operation removes the theme argument. The context for locative inversion is no longer there; in this case, no grammatical form can result since the subject condition (204) is violated.

(204)	*khala*	'remain'		< th	loc >
				|	|
	intrinsic:			[-r]	[-o]
	passive:		-édw	Ø	
	defaults:				[+r]
				*	OBL_{Loc}

In the analysis of locative inversion, the grammatical function (GF) alternation of the theme argument (SUBJ <-> OBJ) and locative (OBL <-> SUBJ) is explained by (underspecified) intrinsic role classifications in Lexical Mapping Theory that constrain argument-function mapping. Bresnan's (1994) account of English and *Chichewa* locative inversion is only acceptable with a theme-locative argument structure and, therefore, she proposed feature decompositions of grammatical functions that allow locative to alternate between subject and oblique and theme between subject and object, but specify agent as non-objective so that alternation involving (active) unergative predicates is not allowed.

The approach characterizes most of the properties of the participants in the alternation as well as the argument structure restrictions in *Chichewa* and English. Also, the information structural properties of locative alternation are accounted for in this model and allow a clear statement of the trigger (Salzmann 2004). The f-structure level, allows an acceptable formulation of the similarities between English and *Chichewa*, while accounting for the differences by means of the more idiosyncratic surface structures.

However, the theory fails to capture adequately the implicational relationship between the different argument structure types. Languages that allow inversion with unergative verbs also do so with unaccusative verbs, but not vice versa (Salzmann 2004). With regard to the argument structure, the phenomenon of subject-object alternation, as was analyzed for *Sesotho* and *Setswana*, permits an agent to be mapped onto the object function which requires that the agent be intrinsically unspecified. This view, however, has been revealed to derive undesired results with transitive verbs. Furthermore, although it allows the preservation of the unaccusative analysis for both English and *Chichewa*, its application is still restricted to these two languages. Bresnan's comparative analysis of the two languages entails that only English locatives are topics while *Chichewa* locatives are subjects. Thus, there is no way to capture the information structural similarities between the two languages.

4.3.2 The Principle and Parameters approach of Generative grammar

In earlier versions of Generative grammar, lexical items were regarded to project into D-Structure which is a syntactic representation of argument structure. This level is mapped onto S-Structure via movement operations (raising, wh, extraposition etc.) in order to achieve the surface constituent order. No specification of movement was to be understood derivationally or representationally. At this point, the derivation splits in two interpretative levels. The phonological form, traces are deleted and certain phrasal phonological processes apply in order to achieve a form that can be processed by the articulatory-perceptive modules. The level of logical form is the interface for semantic interpretation. It represents the scope of quantifiers (quantifier-raising), among others and forms a syntactic input to semantic interpretation in the conceptual systems. Movement operations are often triggered by the need to evade the violation of some principle of grammar. For instance, the subject in a nonfinite complement has to raise to the subject position of the matrix sentence in order to get case, thus obeying the case requirement. Some scholars working within this approach assumed that movement is also triggered by morphology: verbs are assumed to get their inflectional

morphemes in the syntax by incorporating into affixes which are base generated in functional heads such as I, ASP, T or AgrS.

4.3.2.1 Levin and Rappaport Hovav (1995)

As was stated before, locative inversion is characterized by exhibiting non-canonical PP V DP order and is, thus, descriptively analyzed as a variant of the canonical sentence, as in (205b), which shows the order NP V PP. (205a) is thereby the result of changing relation position of the DP and the PP in (205).

(205) a. [$_{PP}$ Out of the house] came [$_{DP}$ a tiny old lady]
b. [$_{DP}$ A tiny old lady] came [$_{PP}$ out of the house]

(Mendikoetxea 2006:2)

The locative clause opens with a preverbal argument (i.e., locative or directional goal). The postverbal argument of the canonical clause occupies the preverbal position and the verb, converting it into intransitive or copulative. This restriction on the syntactic class, adding to the fact that in languages like English not all intransitive verbs undergo locative inversion, has led to the analysis of these constructions as an unaccusative diagnostic.

Recall that Perlmutter's (1978) Unaccusative Hypothesis distinguishes two classes of intransitive verbs, namely unergatives and unaccusatives, which are associated with different underlying syntactic structures. Within the Government and Binding approach (Chomsky 1981; Haegeman 1994), unergative predicates are associated with an external argument (a subject), but no object, at the level of D-Structure, is projected, as in (206a), whereas unaccusative verbs are associated with an internal argument (an object), but no external argument is projected, as in (206b).

(206) a. [DP The chorus] [VP [V sang]] Unergative
b. __ [VP [V sat] [DP the child]] Unaccusative

To generate the canonical DP V order, corresponding to (206b), an operation is required which moves the internal argument 'the child' to the external argument position. This operation is done through DP-movement: an operation which moves a DP to an empty subject position (Spec, IP = the specifier position in the IP), and this yields the following structure in (207).

(207) $[_{IP}\ [_{DP}$ The child$_i$ $[_{VP}$ [Vsat$[_{DPti}]]]]$

On this assumption, locative inversion, which exhibits the canonical DP V PP order, has been viewed as the result of the movement of such a DP to the external position in Spec-IP and the locative inversion structure arises from a movement rule which sets the PP in preverbal position, as shown in (208) and (209).

(208) a. $[_{DP}$ A tiny old lady] came $[_{PP}$ out of the house]
b. $[_{IP}$ DPi [VP V [DP$_{ti}$] PP]]

(209) a. $[_{PP}$ Out of the house] came $[_{DP}$ a tiny old lady]
b. $[_{IP}$ PPi [VP V DP [PP$_{ti}$]]

Under the unaccusative analysis, the postverbal DP in (208b) surfaces in the so-called D-structure in (209b). In addition, the prototypical unaccusative verbs are commonly found in locative inversion structures. It has often been pointed out that intransitive verbs belonging to the class of unergative are incompatible with the construction.

Locative inversion has been often discussed in support of the Unaccusative Hypothesis (Perlmutter 1978) because it was regarded as a crosslinguistically robust fact that the verbs attested in this construction are typically unaccusative and passive verbs, both of which lack an external argument (Bresnan and Kanerva 1989; Bresnan 1994; Hoekstra and Mulder 1990) among others).

However, Levin and Rappaport Hovav (1995) cast doubt on the view that locative inversion is associated with unaccusativity, partly because certain subclasses of unergative verbs do occur in English locative inversion. These authors argue that the distributional properties have to be described some other way and stand against a multiple meaning approach that posits several meanings for unergative verbs in order to preserve the diagnostic status of the construction because for them

> it is not easy to identify semantically coherent subclasses of the unergative verbs that map onto a single subclass of unaccusative verbs, allowing a simple statement of the meaning shift that might underlie the locative inversion data (Levin and Rappaport-Hovav 1995:217).

Levin and Rappaport Hovav propose that it is the discourse function of locative alternation that favours some types of verbs. For these authors, building on Birner (1994), the discourse function of presentational focus constrains the verb to be informationally light. If a verb did contribute a substantial amount of new information, the newness of the postverbal DP would be decreased and the construction would fail to be presentative. The condition of informational lightness is supposed to rule out transitive verbs, the unaccusatives in (210), and unergatives to occur in locative inversion (Salzmann 2004).

(210) a. * On the top floor of the skyscraper broke many windows.
b. * On the streets of Chicago melted a lot of snow.

On the contrary, verbs compatible with informational lightness – no matter whether they be unaccusative or unergative like those in (211) do occur in locative inversion, as studied by Bresnan (1994 and taken by Levin and Rappaport Hovav 1995:224).

(211) a. Through the window on the second story was shooting a sniper.
b. Behind the wheel lounged a man uniformed with distinct nautical flavor.
c. Above them pranced the horses on the Parthenon frieze.

They argue that since *presentational f*ocus naturally picks out a theme-locative argument structure a situation in which a referent is introduced by change of state or location/position, the unaccusative-like distribution falls into place.

A further argument against locative inversion as an unaccusative phenomenon is syntactic in nature: there is no evidence that the postverbal DP occupies the slot of direct object. Assuming the VP-internal subject hypothesis, there is now another possibility for the postposed argument to remain within VP. With respect to the unergative verbs, the discourse function or the case filter forces the logical subject to move out of the Spec-of VP position, most likely to the VP-adjoined position. Going back to unaccusative verbs, the same derivation is possible, especially where the theme appears to the right of a (VP-internal) PP. However, Levin and Rappaport Hovav acknowledge that there are instances where the theme must occupy the object position because it precedes a VP-internal PP as the constituency tests (212b-c) show

(212) a. From one cottage emerged [VP Ian with a spade, rubber boots and an enthusiastic expression].

b. ??Ian emerged from the cottage with a spade and Phil did so with a rake.

c. Ian emerged from the cottage with a spade and Phil did so too (emerge with sp).

They offer no further explication on how a violation of the case filter is prevented in the above case. Unergative predicates never occur before a VP-internal PP, lending further support to the adjunction analysis. The fact that sentential arguments cannot alternate, as exemplified in (213), seems to stand against the VP-adjoined position, which is usually not taken as a case position.

(213) *In this very room was discovered that cancer is caused by eating to many tomatoes

(Levin and Rappaport-Hovav 1995: 267)

The authors observe, however, that the position of the logical subject might qualify as a DP position. With respect to the locatives, Levin and Rappaport Hovav assume that they originate from VP-internally and move to the subject position without specifying whether the PPs remain there or they are topicalized. The derivations for unergative and unaccusative receive the following abstract structure as in (214).

(214) a. [IP PP_i [VP [VP_{tj} [V' V_{ti}] NP_j]]]
b. [IP PP_i [VP [VP [V' $V_{tj\ ti}$] NP_j]]

Levin and Rappaport Hovav's argument against restriction of verbs that occur in locative inversion to unaccusative diagnostic faces challenges in dealing with Bantu languages because facts from this group of languages, as discussed above, reveal that languages like *Otjiherero* does not show any restriction in participating in locative inversion. However, the argument structure restriction seems to be little motivated when stated in terms of verbs compatible with presentational focus. Salzmann (2004) argues that the unaccusative predicates that do not permit locative inversion happen to be those that do not take locative arguments but locative adjuncts.

4.3.2.2 Machobane (1995)

Machobane analysed the locative inversion in *Sesotho* within the framework of the Principle and Parameters approach. She argues that *Sesotho* displays the properties of both DPs and PPs. As DPs, they can be modified by various qualificative phrases and become subjects and

objects in a sentence. Similar to other PPs, preposed locatives serving as PPs are case-marked and subsequently subject to the Case Resistance Principle (CRP). To avoid such violation, this author proposes that when a locative is the subject of the sentence, nominative case should be assigned to the VP-internally while when a bare DP is the subject, nominative should be assigned to the Spec-of-IP.

Machobane's account of locative inversion in *Sesotho* differs from the account of the same construction in *Chichewa*. This difference is the result of the assumption proposed that locatives in *Sesotho* but not in *Chichewa* can appear as PPs. The arguments she offers in favour of her analysis are as follows: firstly, in *Sesotho* locatives cannot trigger object agreement. Secondly, locatives added through the applicative do not show the behaviour characteristic of a Bantu object, for example, they cannot immediately follow the verb. Given the fact that locatives exhibit subject properties, the PP has to occupy the Spec-of IP position.

(215) a. [IP PP_i [VP_{ti} V NP]]
b. [IP NP_i [VP_{ti} V PP]

(Salzmann 2004:112)

This explains that preposed locatives derive their subject properties from their moving from a VP-adjoined position (sic) to SpecIP whereby they trigger subject-verb agreement and display properties that are usually associated with the subject position (i.e., subject raising and extraction). The postverbal themes, on the other hand, are assumed to remain within VP, receiving an oblique case from the verb, possibly the partitive case in Belletti's (1988) terms.

Machobane argues that the oblique case, which is restricted to unaccusative verbs, is hypothetical to explain the inertness of the theme object. As is widely held in the linguistic literature, object properties are associated with the structural accusative case, a case that only transitive predicates are assigned. The restriction of locative inversion to unaccusative verbs is supposed to follow from the fact that locative subjects are base-generated in VP-adjoined position. Furthermore, she observes that *Sesotho* preposed locatives can appear in adjunct positions where they are not complements of the verb, but rather added to any verb phrase, as in (216).

(216) *Basäli* *bä-pheh-ile* *nama* *setofong*.
2-women 2sM-cook-PERF 9-meat 7-stove:LOC
The women have cooked meat on the stove.'

For Machobane the sensitivity to Case Resistance Principle (CRP) is the fact that preposed locatives in *Sesotho* are distributionally found in both DPs and PPs categories. The PPs are subject to CRP which stipulates that "Case" may not be assigned to a category bearing a case-assigning feature (Machobane 1995:128). The preposed locatives are regarded as subjects where they feature in the subject position, hence nominative case is assigned in VP-internally, as in the example sentence in (217).

(217) [$_{IP}$ *Sekolong* [$_{VP}$ *ho-fiets-e* [$_{NP}$ *banäna]]]*
7-school/LOC 17/SM-sweep-PERF 2-girls
'Girls have swept at school.'

Machobane (1995:128)

Elaborating on the view that the *Sesotho* locative cannot appear immediately after the verb even when it is the argument of the verb, as in (218a), Machobane suggests that the locative in Sesotho is a DP subject, but where they appear in the subject slot nominative case must be assigned at the level of VP-internally.

(218) a. ***Banana** *ba-pheh-el-a* *setofong* *nama.*
2-girls 2SM-cook-APPL-iND 7-stove/LOC 9-meat
The girls are cooking the meat on the stove.'

b. *Banäna* *bä-pheh-el-a* *nama* *setofong*.
2-girls 2sM-cook-APPL-iND 9-meat 7-stove/LOC
The girls are cooking the meat on the stove.

Machobane argues that the VP-internal subject is in the object position since no word can intervene between it and the verb, as shown in (219). However, it lacks object properties such as becoming the object in a passive sentence and exerting control in object agreement.

(219) ***Ho-fiets-e** *sekolong* *banäna.*
17sM-sweep-PERF 7-school/LOC 2-girls
'Girls have swept at school.'

(Machobane 1995:130)

Thus, she proposes that locative DPs in the subject position would violate the CRP postulated by Stowell (1981) according to which case may not be assigned to a category bearing a case assigning feature. Machobane adopts an analysis which involves the condition that when locatives move into Spec-of IP, I assigns its case in the VP-internally to the logical subject, thus, avoiding the violation of the CRP. The restriction of this construction to unaccusative

verbs is supposed to follow from the fact that locative subjects are base generated in VP-adjoined position. The derivation can be represented, as in (220a) for the inverted, and (220b) for the uninverted construction:

(220) a. [IP NPi -loc [VP ti [VP V NP-th]]]
b. [IP NPi -th [VP [VP V ti] NP-loc]]

(Salzmann 2004:111)

First, Machobane's argument that the locative never triggers object agreement is questionable for it can be explained by the simple fact that Sesotho lacks an agreement strategy for the locative class (see *Kikongo* data in chapter 7). Furthermore, the inability of the locative to appear postverbally is by no means unusual. In many Bantu languages, it is not necessarily the applied object that immediately follows the verb, but the argument highest with respect to animacy (Salzmann 2004). Taking this into account it is clear, why the locative should be an external argument and consequently occupy the VP-internal subject position.

Second, it is conceptually inexplicable to move a DP that does not need case into a case position so that it threatens to violate a principle of grammar which subsequently has to be adjusted by stipulation to allow just this one exception. It can be perceived that Machobane's analysis was influenced by the theory she used to analyse the *Sesotho* data.

The new development of the Minimalist Program introduced some radical changes in the theory. In the viewpoint of architecture, proponents of this approach replaced the static multi-level approach with D- and S-Structure by a more dynamic conception. Fully-fledged lexical items are taken from the lexicon and combined step by step by the Merge operation. Accordingly, there is no more D-structure. Since the lexical items are already inflected, there is no morphological trigger to any further extent. Instead, the so-called checking theory does the work: verbal categories such as tense, Aspect or Agr have to be licensed by the verb. It has to be generated, therefore, according to the respective functional categories to have its features checked. The same applies to DPs: their case feature is checked via a Specifier-head relation with either AgrS/Infl (nominative) or AgrO (accusative).

During the derivation, the structure-building operation 'Merge' (also called 'first Merge' or 'external Merge') reiteratively generates structures by combining new lexical items from the Numeration and/or existing structures in a pair-wise way. Once the numeration has been

exhausted, the derivation splits at a point known as 'Spell-Out'. At this point, the structure is transferred to the phonological component (PF) and also continues to Logical Form (LF). The derivation is evaluated at these two check points, and if a legitimate structure has been built, it is said to converge, and is assigned phonological and semantic representations, as represented in figure (11). However, no further explanation is given on how native speakers of a given language make mistakes.

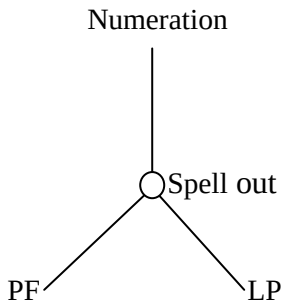


Figure 11: Basic concepts of the Minimalist Program

The lexical items are taken as the input for the structures to be built. Such items are firstly selected from the mental lexicon to form the exhaustive collection of items the sentence will consist of (Radford 2004). The syntax combines these lexical items to form (new) constituents. The combination is obtained by applying the operation "Merge", which is the only operation postulated in current Minimalist syntax (Chomsky 1995 and Radford 2004). This operation takes two elements and combines them, hence building a new unit (i.e., variables Y and Z are merged to form X in figure 12.

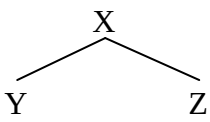


Figure 12: Combination of two linguistic elements

Merging another element to the new unit expands the derivation and forms another new unit. To this new unit another element can be merged and so forth. However, only one unit is added at a time, and thereby Merge creates binary branching structures, as in figure 13.

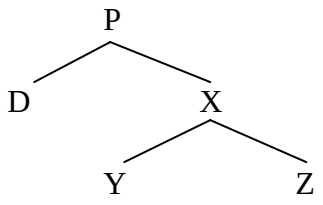


Figure 13: Combination of linguistic elements (external merge)

The first type of Merge in figure 13 is referred to as *External Merge* and the second in figure (4) is called *Internal Merge*. Since in *Internal Merge* an element leaves its original position in the derivation and is generated in another position (leaving a trace t).

Recall that when expanding the derivation, the element can be either new from the lexicon, or from the derivation itself, i.e., an element that has already been merged before, like Z in figure 14.

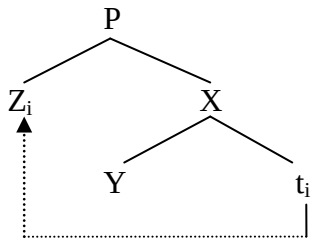


Figure 14: Internal Merge

The answer to the question whether internal merge is a 'legitimate structure' appeals to the notion of features. Lexical items can be taken as bundles of phonological, semantic and syntactic (formal) features, the last of which specify lexical items' categorial status, including agreement properties. The phonological and semantic features are legible to the PF and LF interfaces, as shown in figure 11.

Formal features are operated on by the syntactic component. Some lexical items enter the derivation with a fully valued (interpretable) feature set, while others may have unvalued features. One recalls the two principles of human languages (duality and arbitrariness) as discussed in Widdowson (2005). However, these unvalued features cannot be interpreted by the semantic component, and if they are not valued during the course of the derivation, the LF will take it as an illegal structure and the derivation will crash. Legitimate structures, then, are those which contain valued features and are in effect fully interpretable (cf. Chomsky's Principle of Full Interpretation).

Given the distribution and agreement behaviours of many languages studied above (see also the sentences with the Goal/Locative/Source argument as subject in chapter 7) it could be argued that there is in fact convincing evidence that there is some underlying difference between different languages. As pointed out by Dierck (2008) if we retained a theory of Case for all Bantu languages, there are a number of (common) Bantu constructions in which a noun phrase's uninterpretable Case feature could not have been checked (…), and, on the other side, there are many Bantu constructions where a noun phrase's uninterpretable Case feature should have been deleted, but it appears not to have been (i.e., long-distance raising constructions found in many Bantu languages).

4.4 THE SEMANTICS OF MOTION VERBS

4.4.1 Talmy (1985)

Talmy (1985:61) characterizes a motion event as a situation containing movement or maintenance of a stationary location. According to Talmy, motion events can be categorized into a set of six basic semantic components, the first four are the central or 'internal components', namely (i) *Figure*: the moving object; (ii) *Ground*: entity or entities that the Figure is moving in relation to; (iii) *Path*: the course followed (and route) of the Figure and (iv) *Motion*: the presence of motion per se. The last two are associated with 'external co-event components': (v) *Manner*: the way in which motion is performed, and (vi) *Cause*: what originates the motion itself. Each of these components is illustrated in (221a-b) as quoted from Talmy's classical.

(221)	a.	The pencil *Figure*	rolled *Motion* *Manner*	off *Path*	the table *Ground*
	b.	The pencil *Figure*	blew *Motion* *Cause*	off *Path*	the table *Ground*

In the example sentences in (221a-b), 'the pencil' has the role of the *Figure* and 'the table' has the role of the *Ground* which also expresses the source of movement. The particle '*off*' functions as the *Path*. The verbs 'roll' and 'blew' express the motion component. In addition, the verb 'roll' in (221a) gives information about the 'manner-of-motion', and the verb 'blew' in (221b) gives information about the 'cause-of-motion'.

Talmy (1985:200) proposes that languages can be grouped on the basis of how they encode the core information of a specific semantic domain onto syntactical and lexical structures. He distinguishes two different groups: the first which allocates information in the verb while the second does so in some other components called 'satellites'. Talmy (2000:102) defines a satellite as "the grammatical category of any constituent other than a DP or PP complement that is in a sister relation to the verb root". This grammatical category can be either a bound affix or a "free word". In the case of motion events, he argues that the basic information is precisely the motion of an entity along a path in a specified direction.

Building on the above proposition, Talmy (2000) posits a two-way typology depending on where a language characteristically encodes path. In S(atellite)-framed languages, manner is typically encoded in the verb and path in a satellite to the verb, where satellites subsume primarily particles and verbal affixes, as in (222a). In V(erb)-framed languages, path is encoded in the verb, with manner encoded via a separate adjunct clause or a satellite, as in (222b). Slobin (2004b) and Zlatev and Yangklang (2004) extend Talmy's typology and propose a third class, 'Equipollent-framed languages', encompassing languages in which path and manner are expressed by equivalent grammatical forms, as in (222c). This new class accommodates languages with serial verb constructions in which one verb may encode manner and one or more may encode path, as illustrated in examples taken from Beavers *et al* (2010:333).

(222) a. S(atellite)-framed: Manner is encoded as a MAIN VERB; path must be a satellite.
John limped into the house.

b. V(erb)-framed: Path is encoded as a MAIN VERB; manner must be a subordinate adjunct.
Je suis entre´ dans la maison (en boitant).
I am entered in the house in limping

c. E(quipollent)-framed: Manner and path are both encoded as MAIN VERBS.

Oli	omahe	la	o	vbi	oa
The	man	run	enter	at	house

'The man ran into the house.

4.4.2 Beavers *et al* (2010)

Beavers *et al* (2010:333) who challenge the above classification, argue that "nearly all languages straddle two or three of the classes." They further observe that research suggest that these classes can be usefully subdivided, for example, due to differences in preposition or verb inventories. They propse that "manner and path may be expressed using morphosyntactic means such as adjunct clauses or PPs that are neither verbs nor satellites, introducing further variation'. Additionally, "the resources available to a particular language for expressing 'manner' and 'path' are drawn from a larger set of grammatical devices and processes", such as the examples in (223), none of which is devoted to motion event encoding. Rather, they argue, the relevant options are those semantically compatible with the encoding of the components of motion events and, thus can, if available in a language, be deployed to encode such events.

(223) a. *Lexical*: manner and result verb roots/stems/affixes, spatial adpositions and particles, boundary markers;

b. *Morphological*: case markers, applicative affixes, aspectual affixes, compounding;

d. *Syntactic*: adjunction, verb serialization, subordination

Beavers et al furthermore argue that languages differ as to which resources they have available, with the options available to a particular language reflecting its basic typological profile. The set of options in (223), taken together, determines that in principle languages should fall into many crosscutting types, as many as there are permissible combinations of the options, explaining attested cross-linguistic diversity.

With regard to the relation between motion verbs and the notion of causation, research suggests that certain unergative predicates in some languages (i.e. Modern Greek) can form causative and anticausative counterparts. Theophanopoulou (2003), while analyzing motion verbs in Greek, points out that those unergative intransitives which also allow for a transitive syntax appear to fall into two classes: the first class involves predicates like *trexo* (run), *jelao* (laugh), *kalpazo* (gallop). For Theophanopoulou, this class has a potentially causative interpretation since these verbs may give rises to various degrees of causation, depending on the animate properties of the object. The second class of unergative verbs mainly involves predicates of maner-of-motion such as, *walk*, *stroll*, and *travel*. In the view of this author, this

class is referred to as pseudo-causative precisely because in their transitive use, these verbs do not give a causative reading.

Beavers *et al* (2010:258), in analyzing motion verbs, observe that figures of motion events and patients of change of state events tend to be realized as direct internal argument. This means that motion verbs in locative-subject alternation are analogous with the manner of result constructions of change of state, hence that change of location expressed in motion verbs are indeed similar to change of state. They argue,following the common assumption, that coming to be in/at a location is like coming to be in /at a state and vice-versa it is just an instance of more general constraint proposed by Levin and Rappaport Hovav (1992).

Motion verbs in their uninverted form have potentially a causative interpretation since they may give rises to various degrees of causation, depending on the animate properties of the object. This means that in causative-anticausative alternations, these verbs are comparable to the manner of results of change of state, hence that change of location expressed in motion verbs are indeed similar to change of state. The *Kizombo* motion verbs in chapter 7 will be studied with this proposition in mind and the cover term of change of location/position verbs and compared to change of state verbs.

4.5 ON THE UNACCUSATIVITY OF MOTION VERBS

Unaccusative predicates are intransitives whose (syntactic) argument is not semantically the agent. This means the verb does not initiate or is not responsible for the action of the predicate. The subject of an accusative verb is semantically similar to the direct object of the transitive verb or to the subject of a verb in the passive voice. Thus, unaccusative verbs are widely known to be acceptable in locative inversion (Bresnan and Kanerva 1989; Bresnan 1994; Levin and Rappaport Hovav 1995, among others). The surface subjects of unaccusative verbs originate as direct object. Thus subjects of unaccusative predicates share properties analogous with those of direct object of transitive predicates. Two competing approaches have been identified, namely the syntactic and the semantic approach.

In order to account for the UH, Government and Binding Theory (GB Theory) (i.e. Burzio 1986 and Haegeman 1994) adopts a syntactic view entailing that these two types of intransitive verbs are associated with different syntactic configurations. Role and Reference Grammar (i.e. Van Valin 1987) adopts a semantic view entailing that the split between

unergative and unaccusative should be accounted for based on semantic determinant factors. These two theories will be briefly reviewed. Two questions are posed: (a) why does a syntactic theory assume two different syntactic configurations and (b) how do these two approaches account for the assumption that subjects of unaccusative verbs, but not subjects of unergative verbs, share syntactic and/or semantic properties of a direct object?

4.5.1 The Syntactic approach

The syntactic view of unaccusativity, as introduced by Burzio (1986) in GB Theory, proposes that unaccusative and unergative predicates associate with a different underlying syntactic configurations. The syntactic difference between unaccusatives and unergatives is that the argument of an unergative predicate is underlyingly a subject, whereas the argument of an unaccusative predicate is underlyingly a direct object although it appears on the surface as a subject. The difference between the two classes is represented syntactically in underlying (D-structure) configurations as in (section 4.3.2, number 206) reproduced in (224) for ease of reference.

(224) a. NP [VP V] *unergative* John dances
b. [VP V NP] *unaccusative* John returned

This explains that early syntactic research on unaccusativity concentrated on the view that a D-structure object is the complement of V, as shown in (225), thus expressing the distinction between the two classes in terms of the specifier complement asymmetry. This argument raises two other crucial questions: (i) Why the object of an unaccusative verb has to move to the subject position, instead of staying where it is, and (ii) how the approach explains the assumption that subjects of unaccusative verbs, but not subjects of unergative verbs, share syntactic properties of direct objects of transitive verbs.

Burzio gave an account of *ne*-cliticization in order to explain the syntactic evidence for the internal and external asymmetry. He argues that the subject of an unaccusative verb such as *arrivare* ‘arrive’ can appear either before the verb or after the verb. According to Burzio, unaccusative verbs take the clitic *ne* (‘of-them’) only if the subject remains in a postverbal position, as he exemplified in his example presented in (225).

(225) a. Arriveranno **molti esperti**. (Burzio 1986:21)
will arrive many experts
'Many experts will arrive.'

b. **Ne** arriveranno **molti**. (Burzio 1986:22)
of them will arrive many
'Many of them will arrive.'

Burzio (1986:22) calls the DP (in bold) in (225a) an 'inverted subject' and he proposes that the clitic *ne* originates from the head position within the DP (inverted subject) and moves to the surface subject position (I-position in GB Theory). Accordingly, the underlying structure of (225b) can be represented as in (226).

(226) **Ne***i* [VP arriveranno [NP **molti t***i*]]

This shows that *ne* is extracted from a post-verbal DP. In addition, the cliticization of the objects of transitive verbs can be described with an underlying structure, as in (227).

(227) **Ne***i* [$_{VP}$ ha insultto [$_{DP}$ **due t***i*]] Giacomo.
of them has insulted two Giacomo
'Giacomo has insulted two of them.'
(Haegeman 1994:324

In addition, the subject of a passive verb undergoes *ne*-cliticization, and shows the underlying structure, as in (228).

(228) **Ne***i* [$_{VP}$ furono arrestati [$_{DP}$ **molti t***i*]]
of them were arrested many
'Many of them were arrested.'
(Haegeman 1994:326)

In an attempt to respond to the question why the object of an unaccusative verb has to move to the subject position, instead of staying where it is. Burzio explains in terms of Case and theta-roles as follows: the unaccusative verbs (also passive verbs) do not have an ability to assign a theta-role to the subject, thus, they will not assign the object Case. This is the reason why DP movement is necessary in both unaccusative and passive cases. If unaccusatives do not assign object Case, the postverbal DP is forced to move to the subject position to get Case.

This explanation also relates to the answer to the second question, how subject of unaccusative verbs shares syntactic properties of direct objects of transitive verbs (and subjects of passives.) It can be concluded that single arguments of unaccusative verbs, arguments of passive verbs, and objects of transitive verbs are all underlying objects, which cannot assign Case to the subject. Therefore, arguments of unaccusative verbs (and those of passive verbs) need to move to their subject positions.

4.5.2 The Semantic approach

The Semantic approach**,** within the framework of Role and Reference Grammar (RRG), Van Valin (1987; 1990) invokes a lexical decomposition analysis postulated by Dowty (1979). This scholar argues that the crucial facts of the two types of intransitives can be described in semantic terms without having recourse to the syntactic notions of "subject" and direct "object". According to Van Valin, verbs are classified according to their inherent aspectual properties in this lexical semantic theory. The lexical decompositions in RRG are based on Vendler's (1967) aspectual verb categorizations, as discussed in chapter 5. In RRG, formal decomposed lexical representations, which are called Logical Structures (LSs), are assigned to each aspectual verb class. The operators and connectives that are employed in LSs are: BECOME, which indicates inchoativeness; DO, which indicates agency; and CAUSE, which indicates a causal relation between two events (see details in Van Valin 1990).

Following Van Valin, a verb's thematic relations are attributable to its verb class and to its LS. In addition to the tier of thematic roles, he proposes the semantic macroroles of "actor" and "undergoer" in his analysis. They are two primary arguments of a transitive predication and determined on the thematic roles. In transitive predicates, the relationship between actor and undergoer is described by the Actor-Undergoer Hierarchy in (229) taken from Van Valin 1990:226):

(229) Actor ⇢ Undergoer

⇠

Agent Effector Experiencer Locative Theme Patient

The selection of the macroroles in (229) is determined on the basis of thematic roles in accordance with this hierarchy. The prototypical actor is an agent and the prototypical undergoer is a patient. Effectors and experiencers with verbs of cognition and perception can

be actors, and locative and themes can also be undergoers. For example, for the volitional transitive verb *throw*, which takes both agent and theme, the agent is an actor and the theme is an undergoer. For a verb which takes only one argument, either actor or undergoer is assigned to the single argument. Accordingly, Van Valin (1990:227) proposes the Macrorole Assignment Principle as given in (230):

(230) General Macrorole Assignment Principles

a. **Number**: the number of macroroles a verb takes is less than or equal to the number of arguments in its LS: this means that
(i) If a verb has two or more arguments in its LS, it will take two macroroles.
(ii) If a verb has one argument in its LS, it will take one macrorole.

b. **Nature**: for verbs which take one macrorole,
1. If the verb has an activity predicate in its LS, the macrorole is an actor.
2. If the verb has no activity predicate in its LS, the macrorole is an undergoer.

These principles explain how subjects of unaccusative verbs, but not subjects of unergative verbs, share syntactic and/or semantic properties of direct objects of transitive verbs. In RRG, although the semantic macroroles of actor and undergoer serve as the interface between thematic relations and grammatical relations, they are defined based on the thematic relations and they are not altered by grammatical operations such as passivization and causativization. Therefore, without the notion of "subject" and "object", noun arguments can share the same semantic properties. Consequently, it is not necessary to have the two different grammatical configurations. In addition, there is no assumption that subjects of unaccusative verbs share syntactic and/or semantic properties of direct objects of transitive verbs in RRG.

4.6 SUMMARY

The chapter has given a review of the typology of locative inversion in different Bantu languages and discussed the relation between the function and the form of locative subject markers. In languages with only one locative subject marker, the subject marker is semantically faded and does not independently encode locative meaning. Variation exists as to the thematic restrictions imposed on locative alternation, and three different types of language are found: in the *Chichewa* and *Kichaga* languages, locative inversion is only

permissible with unaccusative predicates. Except predicates with both an agent and a theme role, in the *Setswana* and *Sesotho* languages, locative inversion is possible with all predicates. English is the only language in which the preposed locatives trigger agreement with theme, but they can raise to subject and be relativized. Locative inversion is used in the context of information focus. As correctly pointed out by Marten (2006), this typological diversity further better understanding of the locative inversion, particularly in Bantu languages often characterized as having similar morphosyntactic properties.

The review has also demonstrated that a multidimensional architecture of parallel grammatical information structures like that of LMT can better deal with mismatches in prominence than a framework that fully relies on phrase structure representations to code non-phrase structural information. Recent developments in the Minimalist Program (MP) shed light on how locative inversion can be dealt with in Bantu languages. With regards to the status of motion verbs and the notion of causativity in terms of change of state (and change of location), it has been found that this class has potentially causative interpretation since they may give rises to various degrees of causation. That is, motion verbs in causative-anticausative alternations are comparable to the manner of results of change of state, hence that change of location expressed in motion verbs are indeed similar to change of state.

However, it has been noticed that some aspects relating to argument expression (i.e., the status of aspectual classes of the reversal sentences, and the degree of anticausativity) has received little attention in the study of African linguistics. Due to the fact that no study on *Kizombo* has ever been conducted before this dissertation aims to fill that gap.

CHAPTER 5
ARGUMENT STRUCTURE AND ASPECTUAL VERB CLASSES

5.1 INTRODUCTION

Argument structure plays an important role in the making of surface sentence structure, but the structuring is not a sole concern of lexical semantics, because information factors also contribute to the presentation of the content of the clause in a particular order rather than another. The major concern of scholars working on argument structure has been whether it is a few fixed semantic roles or aspectual verb classes or event structure, or even a combination of both that determines argument structure, or whether argument structure is projected from the lexical items themselves (Duguine *et al* 2010:1).

This chapter will review the syntax-semantics interface in terms of argument structure, thematic roles and aspectual verb classes. The chapter is organized as follows: following this introduction, section 5.2 will give a brief account of argument structure. Section 5.3 will review thematic roles and section 5.4 will give a review of approaches to thematic roles. Two approaches, namely the entailment based approach and predicate decomposition, will be reviewed. Section 5.5 will review aspectual classes and the event structure of sentences. The central idea behind aspectual verb classes is that they are classified according to their internal properties and their classification is based on lexical aspects. Language options determine which aspectual notions are grammaticalized. Finally a summary of the main points which were discussed will be given.

5.2 ARGUMENT STRUCTURE

"Our knowledge of language specifies how to use verbs and their arguments in the syntax, including the relation between verbs, their arguments, and the syntactic position that arguments appear in" (Rosen 1996:191). A-structure is a structured representation which represents prominent relations among arguments. The prominent relations are jointly determined by the thematic properties of the predicate (via thematic hierarchy) and by the aspectual properties of the predicate (Grimshaw 1990:4). The term refers to the lexical representation of grammatical information about a predicate.

A-structure has two levels of representation, namely a *semantic* and *syntactic* level. On the semantic level, it represents the core participants in events designated by a single predicator (Bresnan, 1995). A syntactic representation is composed of two levels of information: Grammatical relation structures and A-structure. The centre of variation is found in the link between the two levels of representation. A-structure corresponds roughly to a surface level of grammatical relations and it specifies the syntactic realization of certain semantic relations. With regard to the predicate, consider the following sentences in (231).

(231) a. [John $_{DP}$] [walked $_{VP}$]

b. [The girl $_{DP}$] [made $_{VP}$] [a cake $_{DP}$] [yesterday$_{AdvP}$]

c. [The boy $_{DP}$] [gave $_{VP}$] [the girl $_{DP}$] [the ring $_{DP}$]

The sentences in (231) are all composed of subject DPs and predicate VPs. The VP, in its turn, may also be composed of a verb and other clause elements. The fundamental clause element of a sentence is the predicate which is usually a verb or an adjective. There are no sentences without a predicate, which denotes an event or state. The predicate or the compositional meaning determines the presence or absence of other elements of the sentence (i.e., OBJ-DP). The sentence in (231b) have four clause elements, namely the SUBJ 'The girl', the PRED 'make', the OBJ 'a cake', and A 'yesterday'. In the indicative mood, some constituents are obligatory and others (i.e., adverb) are optional, as shown in (232).

(232) a. *gave the letter to Helen (quickly).

b. *John the letter to Helen (quickly).

c. *John gave to Helen (quickly).

d. *John gave the letter (quickly).

e. John gave the letter to Mary.

The sentences in (232), demonstrate that only (232e) is grammatical and that the adverb in all of them is optional but owing to the properties of the verb 'give' the other clause elements (SUBJ, direct and indirect OBJs) are obligatory. Whether some clause constituents are obligatory or optional depends upon the semantic properties of the predicate or the context in which the predicate is used. Going back to sentence in (231b) the verb 'make' selects two constituents, SUBJ and OBJ, and in the sentence in (232c), the verb 'give' selects three clause constituents, namely SUBJ, direct OBJ, and indirect OBJ. The clause constituents selected by the predicate are designated arguments. The verb walk in (233a) selects one argument and is

called a one-place predicate, the verb ‘make’ in (233b) assigns two arguments and is called a two-place predicate whereas the verb ‘give’ in (233c) selects three arguments and, therefore, is called a three-place predicate. The structure of the above sentences can be represented as in (233).

(233) a.

Predicate	Walk
Number of Arguments	ARG1

b.

Predicate	make	
Number of arguments	ARG1	ARG2

c.

Predicate	Give		
Number of arguments	ARG1	ARG2	ARG3

Every lexical category can be a predicate selecting an argument. For example, nouns, adverbs, and prepositions can also be predicates of the other clause elements, as shown in (234), schematically represented in figure 15.

(234) a. [The children $_{DP}$] [helped $_{VP}$] [the construction $_{DP}$] [of the building $_{PP}$].

b. [Richards $_{DP}$] [did $_{VP}$] [the homework $_{DP}$] [independently $_{ADV}$] [of other absent colleagues $_{PP}$].

c. [Judy $_{DP}$] [invited $_{VP}$] [her friend $_{DP}$] [for lunch $_{PP}$].

In (234a) the PP ‘of the building’ is the argument of ‘construction’ but not of the verb ‘help’. The verb ‘help’ has two arguments, the DPs ‘The children’ and ‘the construction of the building’. Within the DP ‘the construction of the building’, the N ‘construction’ has its own argument ‘of the building’. In (234b), the verb ‘did’ has two arguments, the DPs ‘Richards’ and ‘the homework’. The AdvP ‘independently of other colleagues’ absent’ is not an argument of the verb ‘did’; the Adv ‘independently’ takes the PP ‘of other colleague’s absent’ as its argument. In (234c) the verb ‘invite’ has two arguments, the DPs ‘Judy’ and ‘her friend’ and the Prep ‘for’ takes its argument the DP ‘lunch’ as its argument. The exercise in (234) suggests that every predicate has its own domain and these domains of the predicates are represented in figure 15.

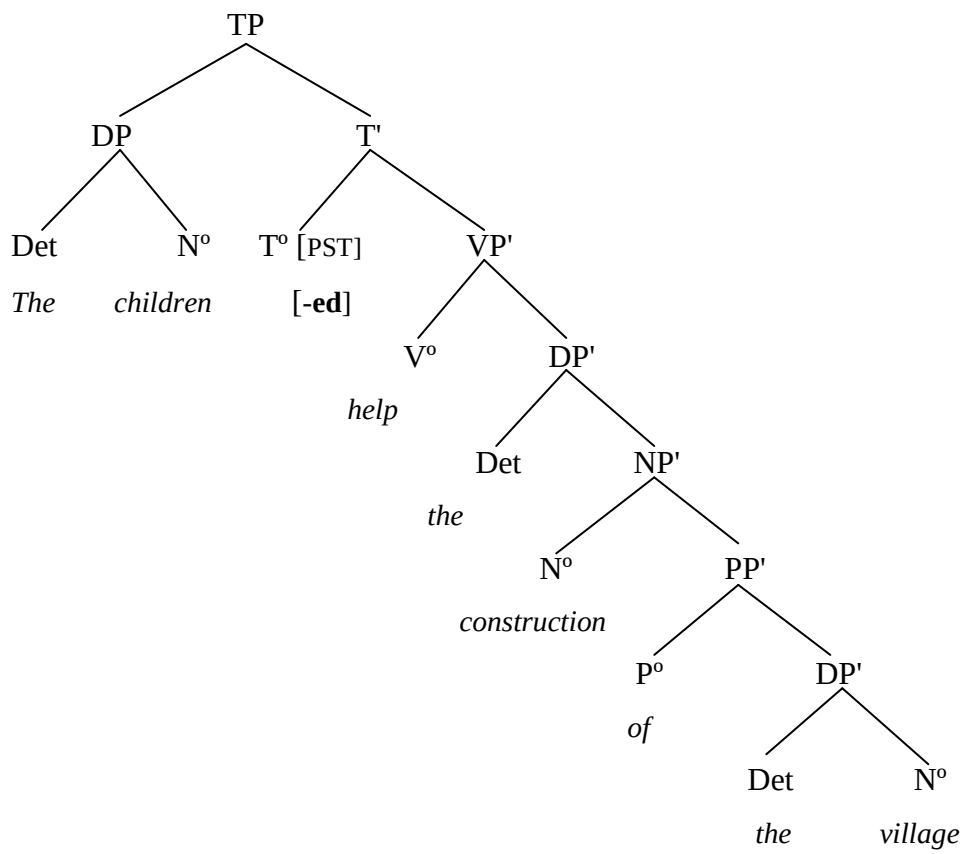


Figure 15: Representation of arguments of the sentence (234a)

Figure 15 presents two argument domains of the predicates, namely 'help' and 'the construction'. Every predicate has its own argument(s) as its semantic properties. The syntactic structure of the sentence or the relevant phrase of which the predicate is the head is determined by the semantic property, namely its argument(s). The distinction between transitive and intransitive verbs is based on the argument structure of the predicate and in the context in which the predicate is used.

Predicates, the main verbs of sentences, are undoubtedly the most complex word categories, from a semantic viewpoint. They do not only incorporate syntactic and semantic features such as tense, aspect, mood, agreement, but also govern arguments of any size. The number of arguments a predicate can bear is dependent on its syntactic and semantic properties. Kageyama (1997) observes that predicates have a central role in the composition and interpretation of the sentence since they determine the number and the kind of semantic properties of arguments in it. Projection of predicates and their arguments from the lexicon into syntax, also known as a computational system in Chomsky's (1995) terms, has to be legitimized both semantically and syntactically. To be precise, while predicates syntactically legitimize their arguments due to their head status by giving syntactic positions they

subcategorize for, arguments semantically legitimize predicates because they refer to entities in the universe (ibid.). For example, Chomsky's (1981) Theta-Criterion requires arguments to be expressed as syntactic constituents, and such constituents to be bound to the A-structure.

A-structure gives information about the number and type of parameters of a predicate. Recent developments in A-structure theory (Williams 1981; Grimshaw 1990 and Pustejovsky 1995) suggest that to account for how arguments are associated with syntactic positions, various types of distinctions should be made. Williams distinguishes between external and internal arguments which correspond to syntactic subject and object of a sentence, whereas Grimshaw argues in favour of A-structure on the basis of thematic roles of diverse parameters. Like Grimshaw, Manning (1996), who characterizes A-structure as a syntactic representation, points out that grammatical structure is a result of the grammaticization of discourse roles. This scholar states that one needs two mappings between the grammatical-structure and A-structure: The first mapping is the argument projection which is based on the meaning of predicates. The second mapping is the linking which connects the A-structure to grammatical structure.

Pustejovsky, however, argues that any difference based only on thematic roles prove to be inadequate to account for restrictions regarding the realization of arguments, for example the difference between true argument (obligatory parameters) and adjuncts (optional parameters). Thus, he distinguished four types. See discussion in chapter 2, sub-sections 2.6 and 2.6.1.

Contrary to Pustejovsky, Ravin (1990:160) characterizes arguments as place holders for entities, because they assign as many arguments as there are entities represented in their meaning, whether these are syntactically realized or not. There are four types of relations logically possible for arguments and complements. He, then, presents four linking possibilities, namely (i) arguments that inherently exist in the meaning of the verb but never have syntactic realizations (ii) arguments which are inherently and obligatorily realized (iii) arguments which are inherently, but optionally realized and finally (iv) syntactic arguments which do not correspond to semantic arguments.

Thus, while a semantic representation that determines the number and hierarchy of syntactic arguments is part of a verb's entry in the lexicon, the syntactic structure of the VP may be projected directly from the lexicon depending on the argument hierarchy. Certain arguments

in a sentence are independent of the verb´s entry in the lexicon, therefore they are regarded optional.

5.3 THEMATIC ROLES (THETA-ROLES)

In section 5.2 it was said that each predicate has argument(s), and that the argument itself does not contain semantic information, but instead considered to be a place-holder. This means, if a verb takes one argument, it forms an intransitive construction where the OBJ position is left empty. If a verb takes two arguments, it forms a transitive construction where the positions of SUBJ and OBJ are filled by their relevant clause constituents.

However, linguists have observed that arguments contain semantic information which is determined by the predicate. For example, the verb 'make' in (231b, on page 140) , takes two arguments. One of the arguments is 'the maker' and the other is 'the makee'. The maker can take the thematic role 'Agent' and the makee takes the thematic role 'Theme', where the Agent is the causer of the event described by the predicate, and the Theme is the causee, the entity, which undergoes the event described by the predicate.

The relationship between clause constituents and meaning involves the interaction between the syntactic rules governing the structure of sentences and the semantic rules of reference and thematic role assignment. Terms such as Agent, Patient, Experiencer, Instrument, Theme, among others which identify the semantic functions of the participants in the event described by the sentence are known in the linguistic literature as thematic roles. Participants of the thematic roles are associated with the arguments of the predicate. Each thematic role is assigned to a particular syntactic position in the sentence. Thematic roles are characterized as semantic functions that the arguments of a given predicate play in the event represented by predicate arguments. They are different from grammatical roles. The former are semantic relations of entities and events while the latter are syntactic relations of nouns and verbs. In the sentence *It rains everyday,* the pronoun *It* used as expletive, is realized as the subject of the sentence because it determines the singular form of the verb, but it does not represent an argument. Therefore it does not receive any thematic role.

One may distinguish individual thematic roles from their semantic function in the sentence. For example, in (235a) interviewer and interviewee are individual thematic roles, since they are specific to the verb 'interview'. To compare the behavior of thematic roles across many

verbs, linguists assign these roles to more generic thematic role types such as Agent and Theme, (Dowty 1991). Thus, the interviewer in (235a) takes the thematic role Agent and the interviewee takes the thematic role Theme.

(235)	a.	Jonas is interviewing a student.	'interview'	(Agent: x, Theme: y)
	b.	Madonna is singing.	'sing'	(Agent: x)

The classification of the arguments of predicates into participant types according to the manner of their involvement in an event can be characterized as a process, an action or a state. The term has been variously called *semantic cases* Fillmore (1968), *semantic roles* Dillon (1977), *thematic relations* Gruber (1976), Jackendoff (1972), *θ-roles* or *theta-roles* (Chomsky 1981). Ever since there has been comprehensive research for the purpose of defining a set of thematic roles for describing the role that each of the participants plays within an event or state. In what follows, the discussion will revolve around the proposals of Fillmore (1968), Jackendoff (1972), Givón (1984), Dowty (1991), and Foley and Van Valin (1984). One of the reasons for choosing these scholars is that they have been widely cited in many studies.

5.3.1 Fillmore (1968)

The idea of semantic roles was first discussed in Fillmore's (1968) seminal work 'The Case for Case', which argues that 'the propositional component of a sentence can be represented as an array consisting of the verb and a number of DPs specifically marked with semantic functions such as Agent, Patient, Instrument, and Goal/source.' These labels identify the grammatically relevant aspects of the roles that pertain to argument realization in the syntax. In Case theory (see Mirriam 2000), a predicate is analyzed by the number of semantic cases that it takes, which is its case frame. For example, the verb *write* in (236a) assigns an Agent and a Patient, while the verb *cry* in (236b) takes an experiencer, instead of Agent.

(236) a. John writes a letter
b. The child is crying

As was said in section 5.2, a fundamental assumption is that A-structure is directly determined by the lexical properties of the predicate. This means, the lexical entry of a verb directly determines its syntactic behavior. In the context of Relational Grammar, Perlmutter and Postal (1984:97) propose a principle which is also known as Universal Alignment Hypothesis (UAH) presented as in (237):

(237) There exist principles of Universal Grammar (UG) which predict the initial relation borne by each nominal in a given clause from the meaning of the clause.

In addition, Baker (1988:46) postulates that the mapping between semantic arguments (i.e., thematic roles) and syntactic positions is universal, and, therefore, determined by the meaning of individual verbs. This postulation is known as the principle of *Uniformity of Theta Assignment Hypothesis (UTAH).*

Identical thematic relationships between items are represented by identical structural relationships between those items at the level of D-Structure. Fillmore's Case theory is said to be originally designed to address argument realization patterns typical in English such as those illustrated in (238).

(238) a. *John* opened the door with *the key*.
b. *The key* opened *the door*.
c. *The door* opened.

In (238a), *John*, the Agent, is associated with the grammatical subject; *the door*, the Patient, is associated with the grammatical direct object; *the key*, the instrument, is associated with a prepositional phrase headed by the preposition *with*. In (238b), the Agent role is missing, and in its place, the instrument plays the role of the grammatical subject. In (238c) only the Patient, the door, is present, and is linked to the grammatical subject position.

A central assumption underlying 'Case Grammar' is that a relatively small number of fixed semantic roles are sufficient to describe the grammatically relevant aspects of arguments. It is also believed that a small number of universal 'linking rules' can capture numerous ways semantic arguments can be expressed in the surface form of a sentence. Fillmore (1968:33) posits rules like the one stated in (239) to account for different thematic roles observed with various constructions.

(239) If there is an [Agentive], it becomes the subject; otherwise, if there is an [Instrumental], it becomes the subject; otherwise, the subject is the O [Object].

The rule in (239) suggests that the verb *open*, in (238a) for example, selects A[gent] as an obligatory role while it can optionally select Instrument and Patient. Thus, Fillmore (1968:24) proposes a set of universal concepts which identify certain types of judgements human beings

are capable of making about the events that are going on around them. This mapping from thematic roles to their expression in the syntax is sometimes designated argument selection. Fillmore elaborated a preliminary list of cases, as shown in (240), noting, however, that additional cases would surely be added.

(240) *Agent*: the typically animate perceived instigator of the action
Instrument: inanimate force or object causally involved in the action or state
Dative: the animate being affected by the state or action
Factitive: the object or being resulting from the action or state.
Locative: the location or spatial orientation of the state or action
Objective: the semantically most neutral case … conceivably the concept should be limited to things which are affected by the action or state'

For Fillmore, the subjects of (241a) and (241b) have different thematic roles, namely Agent and Instrument, assuming the principle of biuniqueness of role assignment, which states that one role is assigned per argument DP. The unacceptability of the sentence in (241c) represents a failed attempt to assign both Agent and Instrument roles to the compound subject, whereas in (241d) the Instrument role is assigned to two different dependent syntactic elements, namely hammer and stone.

(241) a. John broke the window.
b. A hammer broke the window.
c. *[John and a hammer] broke the window.
d. *A hammer broke the window with a stone.

Fillmore's original assumption that each argument DP in a sentence occupies a unique thematic role is often called into question. In reaction to Fillmore's list, a number of scholars (i.e. Jackendoff and Givón) propose different lists.

5.3.2 Jackendoff (1972)

Jackendoff (1972) proposes that every sentence contains a Theme role. In the construction with motion verbs, the Theme is the participant which undergoes the motion. With verbs of location, however, the Theme is the participant whose location is denoted by the verb. For

example, in the sentences in (242) the italized DPs function as the Theme according to the definition given by Jackendoff.

(242) a. *The book* fell on the floor.
b. John gave Mary *a book*.
c. John cooked *a chicken* in the garden.
d. John put *the book* on the table.

5.3.3 Givón (1984)

Givón (1984) argues that a state is an existing condition which does not involve change across time and that a patient (also referred to as 'accusative') is a participant which exhibits a state or undergoes the change in state. The italized DPs in (243) illustrate some examples of Patient semantic role given by Givón.

(243) a. T*he water* warmed up.
b. *The car* belongs to Paul.
c. They moved *the stone*.

The thematic roles proposed by both Jackendoff and Givón appears to overlook the possibility that both thematic roles (i.e., Theme' and 'Patient) should coexist. These thematic roles are in fact referring to the same kind of participants in an event. For instance, Givón's definition of Patient, 'the water' in (243a) is also functioning as Theme since it was the participant which underwent the change of state. The Theme 'the car' in (243b) can also be taken as a Patient in Givón's terms because it was the participant which was in the state of belonging to Paul. Similarly, since the Patient 'the stone' in (243c) underwent the motion 'move', it is also a Theme in Jackendoff's sense.

Berk (1999) appears to give an exhaustive list of thematic roles as described below though, with some modifications and extensions.

Agent: the typically animate perceived instigator of an action. The DP 'Helen' expresses the *Agent* in the example sentences in (244).

(244) a. *Helen* ate all the kimchi.

b. All the kimchi was eaten by *Helen*.

c. It was *Helen* who ate the kimchi.

d. Why did *Helen* eat the kimchi?

Involuntary Causer (interpreted as Natural force or *Causer*): the participant that causes an event without doing so with intention (on purpose). The DP 'water' refers to an *Involuntary Causer* in the example sentence in (245).

(245) a. The *water* destroyed the wall.

b. The city was inundated by *water*.

Instrument (an intermediate cause or auxiliary): usually an *Agent* acts upon an *Instrument*, and the *Instrument* affects the event or situation. The DP 'hammer' refers to an *Instrument* in the example sentences in (246).

(246) a. Percival broke the window with the *hammer*.

b. This *hammer* will break the window.

c. The window was broken by the *hammer*.

Experiencer: Animate, but unintentional locus of a sensory impression or psychological state. 'Jack' is the Experiencer in the examples in (247).

(247) a. *Jack* heard a train coming.

b. *Jack* felt sad when he heard the news.

c. The answer seemed wrong to *Jack*.

Patient: a participant that is affected by the action of a verb. The more obviously and concretely a participant is affected by the action of the verb, the better example of a *Patient* it is. 'Jack' refers to a *Patient* in the examples in (248).

(248) a. *Jack* fell off the ladder.

b. Lucretia slapped *Jack*.

c. *Jack* died.

d. She dropped the flowerpot on *Jack*.

Theme: a participant whose properties, location or involuntary movement is predicated. "Ball" refers to the *Theme* in the example sentences in (249).

(249) a. The *ball* rolled into the kitchen.
b. Percival saw the *ball*.
c. The *ball* is in the kitchen.
d. There is a *ball* in the suitcase.

Recipient: the typically animate endpoint of a transferred item. "Helen" expresses a *Recipient* in the example sentences in (250).

(250) a. *Helen* received the letter.
b. Lucretia sent the letter to *Helen*.
c. Lucretia sent *Helen* the letter.

Benefactive: the typically animate participant that benefits from an action or situation. 'Helen' refers to the *Benefactive* in the following example sentences in (251).

(251) a. This book is for *Helen*.
b. I made *Helen* a sandwich.

Locative/location participant (see also Dowty 1989): Any participant that describes the location of an action or situation, or the source, path or goal of a moving object. The DP 'Table' refers to a *Locative* participant in the following examples in (252).

(252) a. Your sandwich is on the *table*.
b. He put the book under the *table*.
c. He had to walk around the *table*.
d. The pen fell off the *table*.

Note: In a sentence like 'The table is in the bedroom,' the semantic role 'table' is the *Theme* (described or located subject according to Berk). 'The bedroom' is the *Location*.

Source: an entity from which something moves, either literally or metaphorically. The DP policeman refers to the *source* in the following example in (253, on page 151).

(253) Percival run from *the policeman*

Goal: an entity towards which something moves, either literally or metaphorically. The DP_{Loc} to school refers to the *goal* in the following example in (254).

(254) The child walked to *school*

Possessor (not explicitly mentioned by Berk): the typically animate participant that owns or is temporarily in control of some other participants. 'Helen' refers to the *Possessor* in the following examples in (255):

(255) a. *Helen* has three cats.

b. *Helen's* cats are annoying.

c. Those cats are *Helen's*.

The next section will focus on approaches to thematic roles.

5.4 APPROACHES TO THEMATIC ROLES

5.4.1 The Entailment-based approach (Dowty 1991)

In the Entailment-based approach a verb assigns to each argument a set of entailments describing its role in the event, which determines argument realization according to some set of mapping principles. Dowty (1991) defines subject/object selection in terms of two thematic proto-roles. He argues that many of the shortcomings inherent to developing a system of thematic roles can be worked out if they are regarded as a cluster of concepts or prototypes, which bring together related notions without imposing necessary and sufficient conditions for membership to a category. He postulated two prototype-based generalized thematic roles, namely the *Agent-Proto Role* and the *Patient-Proto Role* as the only two semantic roles relevant for argument realization. These two thematic roles are basically prototypes for a conceptual space of properties. In Dowty's view, the thematic role of an argument can be reduced to lexical entailments imposed on it by the verb, but no single property is either necessary or sufficient.

Dowty's (1991:572) main *Agent-Proto Role* and *Patient-Proto Role* entailments are given as listed in (256, on page 151). The idea about this entailment approach is that there are only two

thematic-role-like concepts involved in argument selection, and these are 'cluster concepts,' and not discretely defined concepts. These are to be the (only) thematic categories on which linking principles are stated.

(256) a. *Contributing properties for the Agent Proto-Role*:

i. volitional involvement in the event or state
ii. sentence (and/or perception)
iii. causing an event or change of state in another participant
iv. movement (relative to the position of another participant)
v. (exists independently of the event named by the verb)

b. *Contributing properties for the Patient Proto-Role*:

i. undergoes change of state
ii. incremental theme
iii. causally affected by another participant
iv. stationary relative to movement of another participant
v. (does not exist independently of the event, or not at all)

The above properties are prototypical: no single property is essential for either role. Instead, Dowty (1991:576) postulates the argument selection principle which is as follow:

> In predicates with grammatical subject and object, the argument for which the predicate entails the greatest number of Proto-Agent properties will be lexicalized as the subject of the predicate; the argument having the greatest number of Proto-Patient entailments will be lexicalized as the direct object.

It suffices to note that there is no attempt to find some unifying semantics between the defining properties in (256a/b). The *Proto-Agent* and *Proto-Patient* are 'cluster concepts' or 'higher-order generalizations about meanings' that need not even be considered as part of the grammar competence. Rather, Dowty suggests that the argument selection principle stated above acts as a default in the acquisition of lexical items.

1. If there are two arguments which have the same number of proto agent and proto patient properties both of them can be lexicalized as subjects/objects;

2. If the predicate is a three-place predicate the argument which has the most proto patient properties is lexicalized as the direct object and the one which has the less proto patient properties is lexicalized as the oblique object or the prepositional object.
3. If there are two arguments which have the same number of proto-patient properties both of them can be lexicalized as direct objects.
4. Some arguments may have none of these roles.
5. Some arguments may share the same role.
6. Some arguments may have the properties of both proto roles either in an equal or a partial degree.

The postulation of Dowty's approach is that each lexical entailment is equally important, and that there is no precedence relationship between the properties.

Levin and Rappaport Hovav (1995) present some evidence that linking rules are ordered, at least partially, nothing of which, in Dowty's approach, precludes such a modification (for example, assigning certain entailments higher weights). Agent-Proto Role and Patient-Proto Role properties capture important generalizations about the realization of arguments. Therefore many linguists have borrowed aspects of the Proto Role idea in their models of competence grammar (cf. Davis 2001). Davis's (2001) theory of linking word meaning and syntax uses proto-role properties in a multiple inheritance type hierarchy within the Head-Driven Phrase Structure Grammar framework. Each proto-role property is encoded in the lexicon within a rich hierarchy of types and sub-types. Davis, however, assumes two 'macro-roles' called Actor and Undergoer following the terminology of Foley and Van Valin (1984) which are, for Davis, unified versions of Dowty's (1991) Proto Role cluster concepts.

5.4.2 Predicate decompositions (Foley and Van Valin 1984)

Foley and Van Valin (1984) have adopted a unified version of Dowty's logical expressions as a basis for linking theories. They, for example, posited logical structures based on Dowty (1979). A table of universal correspondences maps these positions in logical structure onto the two 'Macro-Roles' Actor and Undergoer, equivalent to proto-agent and proto-patient types, and these in turn are mapped onto the morphosyntax of the sentence. Predicate decomposition takes the semantic determinants of argument realization to derive from verb meanings, but instead decomposing thematic roles, the meanings of verbs themselves are decomposed into more basic elements (Levin and Rappaport Hovav 2005:71). Such elements take a

representation of meaning formulated in terms of one or more primitive predicates chosen to represent components of meanings that occur in a set of verbs.

This approach posits two components to a verb's meaning: (i) an event template built of a small number of basic predicates (i.e. CAUSE and BECOME) that capture the subevent structure of the event, and (ii) an idiosyncratic root associated with the particular verb, as in the following example taken from Levin and Rappaport Hovav (1998:119,as shown in (257).

(257) Phil swept the floor clean.

[[x ACT y] CAUSE [BECOME y STATE]]

In (257) the template defines an ACT event between two participants and, subscripted by the idiosyncratic root SWEEP, indicating that the ACT is a sweeping event. This serves as the first argument of a CAUSE predicate whose second argument is a resultant BECOME predicate indicating that comes to change state as a result of the event. The relative prominence in the template determines their relative morphosyntactic prominence in the clause, such that the least embedded participant is the subject and the more embedded participant is the object.

In the Predicate decomposition approach, primitive predicates are arguments taking functions, so that a verb's arguments are represented by the open argument positions related to the predicates. Taking into account the regularities between argument realizations of different predicates, the argument that the syntax of sentences is determined by the meaning of predicates has gained interest among many linguists. Levin and Rappaport Hovav (1996:487) observe that the linking regularities and the rules which map thematic roles onto syntactic positions are called linking rules. They suggest that the best way to find out the syntactically relevant aspects of meaning of a predicate is to express the lexical semantic representations of predicates with a predicate-centred approach. They maintain that the mapping between the semantic representation and syntactic expression of arguments is fully predictable. Equally, they consider that languages may even differ in the linking of the arguments of two verbs which seem to be the translations of each other. Thus, the meanings of verbs have some kind of internal structure and have some primitive elements; subsequently, they group the verbs into semantically coherent classes.

This notion of a universal thematic hierarchy relevant to linking has since reappeared in many ways (Jackendoff 1972; Foley and Van Valin 1984; Bresnan and Kanerva 1989, to name few). A relative (often partial) ordering is imposed on thematic role types and on grammatical relations, as shown in (258).

(258) a. Agent > beneficiary > recipient/experiencer > instrument > theme > location
b. Subject > Object

The linking between the two hierarchies in (258b) must respect both orders, so that, for example, in a transitive Agent/Theme verb, the Agent must link to the Subject and the Theme to the Object, and not the other way around. This idea has been influential in several different syntactic frameworks. Psych verbs, which describe psychological states, are problematic for theories of A-structure based on thematic hierarchies. Such verbs typically take two roles, *experiencer* and *Theme*. The assignment of each violates any possible role ordering, as illustrated in (259).

(259) a. John's comments worried Mary.
b. Mary worried about John's comments.

The experiencer in (259) can either appear in the subject or object position, apparently violating the Uniformity of Theta assignment Hypothesis (UTAH). Belletti and Rizzi (1988) argue, however, that both sentences in (259) share the same underlying structure. More recently, Pesetsky (1995) refutes Belletti and Rizzi's analysis, questioning the validity of thematic hierarchies. Although there is consensus that Agent is the most prominent role, little agreement has been reached beyond that. In fact, the current inventory of semantic roles, along with precise definitions and diagnostics, remains an unsolved problem. On the other hand, research shows that semantic roles are too coarse-grained to account for certain semantic distinctions. The only recourse, to expand the collection of roles, comes with the price of increased complexity, i.e., in the linking rules.

Theories of thematic roles have been criticized (see Rappaport Hovav and Levin 2005 for a review). One of the problems is the difficulty of finding reliable diagnostics or definitions for the role types. Semantic criteria tend to lead to a fragmentation into finer subtypes. In addition, a single event participant often seems to play more than one role. For example the Agent 'John' in (260) is arguably both the Agent (since he volitionally carries out the action)

and the Theme (because he undergoes a change of location). Similarly, in the event described by Maria in (260b) it receives three thematic roles: Maria is simultaneously the Agent, the Recipient (of the car), and the Source (of the money) (Jackendoff 1990:59).

(260) a. John ran to the store.

b. Maria bought the car from Ann for $5000.

Recognizing the drawbacks of theories based purely on semantic roles, there is now a general consensus among linguists that A-structure is, to a large extent, predictable from event semantics, hence, patterns of argument realization should be inferable from lexical semantic representations grounded in a theory of events. The next section will focus on research on aspectual classes.

5.5 ASPECTUAL VERB CLASSES

Over the last thirty or so years aspectual notions have been increasingly appealed to in structuring verbal lexical-semantic representations and, concomitantly, in formulating principles of argument expression. This move has been further fuelled by the significant insights that have emerged from this line of research. The goal of research in the linguistic event has been to identify a number of event types into which all events can be classified (Rosen 1999:1). Early studies on event structure attempted to classify a verb, a verb phrase or a predicate and the purpose of such classification was to identify types of eventuality that cover all propositions. Aspectual classification refers to the types of situations described by a verb or a verb phrase, or more generally, a predicate. The major divisions among the aspectual classes is between stative and non-stative, and non-statives are further divided into atelic (activities and states) vs. telic events (accomplishments and achievements) (Dowty 1979). The terms *aspect*, *event* and *eventuality* have been used interchangeably in linguistic literature.

Event classifications, started at least as early as Aristotle (384-322 B.C.) and was taken up more recently by Kenny (1963); Vendler (1967); Dowty (1979; Verkuyl (1993); Smith (1991, 1997) and Pustejovsky (1995) among others. Aristotle's classification was based on the distinction between states and events, and between events that have a culminating point and those that are ongoing with no definite terminus (Rosen 1999). Aristotle postulated three events: (i) *actuality* expresses the existence of the thing, (ii) *movement* expresses an

incomplete process; that is, an event which lacks an inherent terminus and (iii) *action* taken as a process with an inherent terminus. Aristotle's analysis of event shed light to what is today the study of aspectual classes and established the necessary vocabulary used in the literature.

5.5.1 Kenny (1963)

Kenny adopted and elaborated on the Aristotle's three way classification of events by assigning verbs to each and developing diagnostic tests for membership to each class. However, Kenny changed some names: *States*, A*ctivities* (actions with no terminus) and P*erformance* (actions with a terminal state). Kenny's diagnostic tests are argued to be based on semantic entailments and about whether the event can be construed as having taken place when it is still in progress. For example, at any point during the unfolding of an activity, the event described by such an activity has taken place. However, the same cannot be true for the performance class verbs. The examples in (261) suggest the distinction between an activity and performance, as proposed by Kenny.

(261) a. *Activity*
John is running → entails that John has run.
b. *Performance*
John is building a house → does not entail that John has built a house

The major difference between *activity* and *performance* (in Kenny's term) turns out to be one of delimitation. A delimited event is one that has an inherent or natural end. Delimitation is the key characteristic of performance that Kenny's test is sensitive to.

5.5.2 Vendler (1967)

Vendler's work is the most influential on event classification. It offers a theory of the ontological types of events, which grounds them in their temporal contours. He proposed a four-way classification – expanding both Aristotle's and Kenny's work. Vendler proposed that all verbs can be classified as denoting (i) *state*, (ii) *activity*, (iii) *Achievement*, and (iv) *Accomplishment*. Vendler's event classification is characterized by using the following 'time schemata.'

a. *State*: **x** loved **y** from t_1 to t_2: means that at any instance between t_1 and t_2 **x** loved **y**.
b. *Activity*: **x** was walking at time t this means that time instant t is on a time stretch throughout in which **x** was walking.
c. *Accomplishment*: **x** was writing a letter at t this means that t is on the time stretch in which **x** wrote that letter.
d. *Achievement*: **x** won a race between t_1 and t_2. This means that the time instant at which **x** won the race is between t_1 and t_2.

It will suffice to recall that the terms *instant* and *stretch* are the two important parameters involved and the *definiteness* and *indefiniteness* of the temporal unit in English are expressed by 'any', and indefinite or definite article respectively, namely (a) and (the), as shown in table 6.

	-Process	**+ Process**
-Definite	States	Activities
+Definite	Achievements	Accomplishments

Table 6: Vendler's verb classes and parameter features

In Table 6, the vertical division is also known as the Continuous Tense Criteria (CTC) and the horizontal division is called Definiteness Criteria (DC), the Continuous Tense Criteria are opposite to the non-continuous tense (i.e. the progressive form, Prog-F). The Prog-F is bound to accomplishment and activity verbs. It is not found with state and achievement verbs, as exemplified in (262).

(262) a. *Mary is loving someone/*I am missing you (both *love* and *miss* denote state)
b. John is walking/we are cooking (both *walk* and *cook* denote activity)
c. Andrew is writing a letter/Helen is drawing a picture (both *write* and *draw* denote accomplishment)
d. *We are understanding the teacher's explanation (the verb *understand* denote achievement)

The sentences in (262), (262a and 262d) are marked with asterics, indicating that they are unacceptable while sentences in (262b and 262c) are acceptable. Recall that the concept of agentivity and the use of present progressive form are interdependent, and the use of the

progressive form which is not essentially related to the Criteria of Progress in time, is closely related to temporality, as illustrated in table 7.

	Agentivity	**Process**
Mary is loving someone	+	-
John is walking	+	+
Prices of commodity are increasing	-	+
Little things are distracting my attention	-	-

Table 7: Temporality and agentivity

According to Vendler, *States* and *Accomplishments* are placed in the same category so that they can be distinguished from achievement. However, as seen later, Verkuyl (1963) challenges such combination of *State* and *Achievement* because, for Verkuyl, these two classes form one natural class.

With regard to the Definiteness Criteria (DC), Vendler proposes that A*ccomplishments* and A*chievements* should be set apart from *Activities* and *States*. This suggestion did not receive consensus in the linguistic community. Verkuyl, for example, opposes it because, in his view, the definiteness criteria are restricted only to opposition between *Accomplishments* and *Activities*. No clear further explanation was given on the difference between *Achievements* and *States*, although Vendler divided *Activities* and *Accomplishments* into two types of linguistic criteria:

(a) Those based on co-occurrence also called FTI-criteria,
(b) Those based on entailment.

The For, In, and Tense (FIT) criterion is about certain restrictions on co-occurrence of verbs with adverbials or simply verbs followed by (For-phrases), verbs followed by (In-phrases), and verbs followed by (Tense-verb), as shown in (263), (264) and (265).

(263) a. Mary walked for an hour. (*For-phrase*)
b. *Mary walked a mile for half an hour. (*For-phrase*)

(264) a. ?Mary walked in half an hour. (*In-phrase*)
b. Mary walked a mile in half an hour. (*In-phrase*)

(265) a. ?It took her half an hour to walk. (*Tense-verb*)

b. It took her half an hour to write a letter. (*Tense-verb*)

The For-criterion (263) is well-known in the study of aspectuality. It reveals the intuitive interpretation in a clear way. The time expressed by adverbial phrases is incompatible with the concept of a unique definite event that is discernable by its bounds. The In-criterion in (264) seems to have a similar effect to the For-criterion. Vendler presents the In-criterion in such a manner that it is related to the concept of agentivity. Verkuyl opposes this proposal arguing that one can use the In-criterion without an agent and that such a criterion is somehow attached to some form of agency, and therefore, it excludes *Achievements*.

Pertaining to the entailment-criterion, Vendler argues that if it is true that someone is running or pushing a cart now, then even if s/he stops in the next moment it will still be true that s/he did ran or pushed a cart. On the other hand, even if it is true that someone is drawing a circle or is running a mile now, if s/he stops in the next moment it may not be true that s/he drew a picture or ran a mile. In other words, if someone stops running a mile, s/he did run a mile, if s/he stops drawing a circle, he did not draw a circle. However, the person who stops running, did run and the one who stops pushing a cart did push it.

5.5.3 Dowty (1979)

Dowty's work is said to be a reproduction of Vendler's classification in more linguistic terms. He, however, adopted a reductionist approach, in that Dowty merged *Activity*, *Accomplishment* and *Achievement* as being formed out of one or more stative predicates and operators like BECOME and CAUSE. For example, if V_n is an n-place predicate and $a_1 \ldots a_n$ area its arguments (s), the four classes are represented as follows:

States	V_n ($a_1 \ldots$, a_n)
Activities	Do (a_1, v_n ($a_1 \ldots a_n$))
Accomplishments	Do (a_1, V_n ($a_1 \ldots a_n$)) CAUSE BECOME (V_n ($a_1 \ldots$, a_n))
Achievements	BECOME (V_n (a_1, …, a_n))

Dowty's classification system can be represented as in table 8, formed from three of the five partially cross-classifying semantic distinctions which serve as bases of Dowty's Scheme which he regards as Vendler's classification system revised.

	Process	**Definite**	**Definite**
States	-	-	Ø
Activities	+	-	Ø
Accomplishments	+	+	+
Achievements	+	+	_

Table 8: Dowty's Aspectual matrix based on partial ordering

5.5.4 Verkuyl (1989)

Verkuyl who reviewed Vendler's class system argues that event themselves can be seen as primitive. He identified a number of shortcomings in Vendler's class diagnostics (i.e. the diagnostic test for continuousness, an event characteristic, or for agentivity, a semantic characteristic). Verkuyl observes that Dowty's classification itself is not a useful parameter for forming the classes. Thus, he proposes combinations of two binary features which generate the four Vendler classes: (i) continuousness, whether the event has direction, (ii) boundness, or whether the event has a (natural) terminal endpoint, (iii) *Activities* and *Accomplishments* take place over a period of time, (iv) *States* and *Achievements* do not, and (v) *Accomplishments* and *Achievements* have a terminus bound; S*tates* and *Activities* do not. Verkuyl's four classes are summarized in table 9.

State	**-bounded**	**- continuous**
Activity	-bounded	+continuous
Achievement	+ bounded	- continuous
Accomplishment	+ bounded	+continuous

Table 9: Verkuyl's Parameters of event classes

5.5.5 Pustejovsky (1991, 1995)

Pustejovsky's aspectual model is similar to many other theories of lexical semantic representations developed around the notion of argument structure and event structure. The

major difference is that in Pustejovsky's model, the lexicon is treated as an active and integral component in the composition of sentence meaning. For that reason it accounts for word meaning and for the meaning of words in combination (compositionality) and contrastive polysemy which implies the creative use of words in new contexts. It is worth saying that Pustejovsky puts emphasis on complementary polysemy, because of the use of different lexical entries. He argues that a generative lexical theory must be able to explain, for example, the polysemy of sentences as the ones in (266) taken from Pustejovsky (1995:415).

(266) a. John baked the potato.
b. John baked the cake.

In Pustejovsky's view, what allows the alternation (change of state versus creation) is the interface of the semantics of the verb with the semantics of the complement itself, both of which are available in the lexical representation of the generative lexicon. The combination of lexical representations with the derivational process denotes polysemy.

Pustejovsky outlines an approach based essentially on the notions of co-compositionality and type coercion. He proposes a number of generative devices that generate semantic expressions. To be precise, Pustejovsky develops a 'Qualia Structure', a formal representation for lexical items which helps explain polysemy while eliminating lexical ambiguity from the lexicon. Thus, the Generative Lexicon Theory distinguishes four levels of representation to capture lexical meaning, notably Argument structure (AS), Event Structure (ES), Qualia structure (QS), and Lexical Inheritance Structure (LIS).

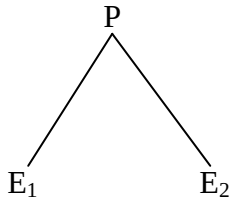
The AS deals with the semantic arguments that a word takes, whereas the QS focuses on the more defining features of a word and includes formal, constitutive, telic and agentive roles. The LIS deals with the relation between an individual lexical structure and other lexical items in the lexicon. For that reason it lends the necessary principles of global organization for the lexicon. The ES refers to the classification of distinct types of eventualities in the world into semantic verbal class. Building on Vendler's (1957) and Dowty's (1979) classes, Pustejovsky acknowledges three classes, namely States, Activities and Transitions, of which the last class is subdivided into Achievements and Accomplishments. Activities can become processes while Accomplishments and Achievements can become transitions.

State (S) is taken as a single event, which is evaluated relating to no other events: The sentence in (267) does have any event as illustrated by its structural representation.

(267) John is sick

Process (P), on the other hand, is regarded as a sequence of events identifying the same semantic expression, as shown in (268) illustrated by its structural representation where E is a variable for an event type.

(268) John built a house



Building on the diagram above the possible listing of event variables can be as follows:

A-Structure = $Arg_1, Arg_2, Arg_3 \ldots Arg_n$

E-Structure = $Event_1, Event_2, Event_3 \ldots Event_n$

Going back to the verb "build" in example (268), it involves a development process and a resulting state that can be represented, as shown in figure 16.

$$\begin{bmatrix} (\textit{build}) \\ \text{Event Struct} \begin{bmatrix} E_1 = \text{Process} \\ E_2 = \text{State} \end{bmatrix} \end{bmatrix}$$

Figure 16: Event structure of the verb 'build' as proposed by Pustejovsky (1995)

Contrary to the verb 'build', which contains two sub-events process and state. The verb 'accompany' permits either telic events, transitions (Ti) and Process (P), as shown in figure 17, on page 164.

$$\left(\begin{array}{l} (\textit{accompany}) \\ \text{Event Struct} = \left(\begin{array}{l} E_1 = T_1 \\ E_2 = T_2 \end{array} \right) \end{array} \right)$$

Figure 17: Event structure of verb accompany as proposed by Pustejovsky (1995)

The process will change something into state i.e. two things are connected referring to states. The above four levels of representation are linked via three generative devices (or operators that generate polysemy) these are: Type coercion, Selective binding and Co-composition. Type coercion is a semantic operation composed of coercing or shifting an argument to the type required by another word in the phrase. Selective binding is a mechanism of semantic composition whereby a lexical unit selects some feature from the qualia structure of another lexical unit in order to correctly interpret the former. This process does not involve change in the semantic type of lexical entities. Co-composition deals with the derivation of a new reading of a word via composition with its arguments. In the case of verbs, this implies that it is not polysemous in itself. Instead, the complements add to its basic meaning by co-composition. In order for this process to occur, both a verb and the complement must share similar qualia value.

Some scholars (cf. Grimshaw 1990) postulate different levels of representation for event structure, adopting the view that event structure contains information concerning time, space, and causation and that they hold for different status from their kind of thematic, conceptual or lexical information. In GLT, event structures are characterized as the event type of a lexical unit and phrase. They can be simple or complex independently of their syntactic representation as either a simple or a complex clause. When a clause is complex it is dealt with in terms of subevent, as the example in (268). This view contrasts some approaches which treat events as atomic units with no internal structure. Thus, Pustejovsky proposes an analysis of the structure of events that depicts their internal configuration, and which puts emphasis on aspectual factors such as *telicity* and *causation*.

Levin and Rappaport Hovav (2005:117) offer a counter-proposal which, in their opinion, appears to work better than more frequently cited notions such as telicity. Their view is that event complexity is better dealt with in terms of the temporal relation existing between subevents. Thus, in the case of causative events, for example, the CAUSE and the RESULT are different subevents because they are not temporally aligned. In contrast, Pustejovsky

develops the notion of event complexity in relation to that of telicity. This means, that telic events are syntactically complex, in that they involve a transition to a new result state. The mechanism developed by Pustejovsky avail "Orthogonal Parameter binding", which allows the structure of subevents to be related to the arguments of the verbs. Therefore, the semantics of the verb is defined by combining information from QS, ES, and AS. Pustejovsky acknowledges that the subeventual structure of events does not prove so helpful in the causative constructions, given that the varied nature of these constructions prevent an accurate account of the projection of subevents to syntax. (For a discussion about causal structure in verbal semantics and argument realization, see also Croft (2012)).

5.5.6 Smith (1991, 1997)

Smith's (1997) aspectual model is theorised in terms of situation aspect and viewpoint aspect. These two components are essentially independent. The information in the situation type is conveyed by the verb constellation, while in the viewpoint type such information is conveyed by a grammatical morpheme, usually verbal or adverbial. The viewpoint aspect can present a situation with full or partial view, whereas the situation aspect indirectly classifies the events or states according to their temporal properties.

In Smith's perspective, argument realization is based on temporal and mereological properties of the predicates that describe event. The main assumption is that the aspectual class should present a unified theory of aspect within Universal Grammar. Among the theoretical innovations is a principled account of the interaction between viewpoint (perfective, imperfective and neutral) and situation type (state, event) - a level of pragmatic analysis at which the contrastive and aspectual meaning of a clause can be divided into two independent aspectual components, *viewpoint aspect* and *situation aspect*. Aspectual meaning of a clause results from the interaction of aspectual viewpoint and situation type (Smith 1997).

5.5.6.1 Viewpoint types

Viewpoint aspect, according to Smith, is the temporal perspective from which the situation is presented. A viewpoint type can span an entire situation, (i.e. in the perfective), or it can span only part of the situation, (i.e. in the imperfective), as shown in (269, on page 166).

(269) a. Ana cooked the meals

b. Ana is cooking the meals

The perfective in (269a) indicates that the situation is to be viewed as a bounded whole. It looks at the situation from outside, without necessarily distinguishing any of its internal structure. The imperfective in (269b) looks at the situation from inside, or simply it looks inside its temporal boundaries, and it is essentially concerned with its internal temporal structure. Perfective and imperfective are not objective properties of a situation, because a similar situation can be viewed from either viewpoint. For example, in the sentences *Ana cooked the meals yesterday*. *While she was cooking the meals*, *her husband arrived*, the different forms of the verb 'cook' refer to the same situation of cooking (which in both cases is in the past through the use of the appropriate tense (*cooked* and *was cooking*), but the situation in the above sentence is presented from two different viewpoints, with a difference in grammatical aspect, namely the perfective in the first clause, and the imperfective in the second.

5.5.6.2 Situation types

The Situation types, on the other hand, give details of time in different ways. This component of the aspectual meaning of a clause indirectly classifies the situation according to its temporal properties. Building on Vendler (1967); Kenny (1963) and Dowty (1979) among others, Smith (1997) distinguishes five types of situation, as shown in table 10. These classes differ in the temporal properties of dynamism, durativity, and telicity.

Situation types	Sentences examples	Temporal properties
States	John loves Judy. He knows the answer.	stative vs durative
Activities	My sister drives a blue car. They run.	dynamic, durative, atelic)
Accomplishments	John builds a house. Helen walks to school. Jack made a chair.	dynamic, durative and telic (process and result)
Semelfactives	Mary is coughing. Someone is knocking the door.	dynamic, atelic, punctual (i.e. non-durative/instantaneous)
Achievements	She has found the solution for the problem. She recognized the burglar.	dynamic, telic, punctual (i.e. durative/instantaneous)

Table 10: Situation types and their temporal properties

5.5.6.2.1 Temporal features of situation types

The five situation types presented in Table 8 go along with the defining cluster of conceptual temporal properties. The temporal properties of *dynamism*, *telicity* and *duration* distinguish the basic situation types. Regarded as semantic features, these temporal properties form three contrasting pairs and they can be expressed by opposing positive features. Thus, they will be briefly described before the discussion turns to the different situation types as postulated by Smith (1997).

5.5.6.2.1.1 **Stative** vs. **dynamic**

The notions stative and dynamic, roughly, refer to situations which continue and do not change over the time (stative), versus situations which necessarily involve change (dynamic), that is, unless something happens to change the state, such a state will continue, see the examples in table 10. With regard to the feature dynamic, the situation will only continue if it is constantly subject to a new input of energy, whether from inside or outside (i.e. driving, or running). Since punctual situations inherently involve a change of state, they are always dynamic. Sometimes the distinction between states and non-states is referred to as 'states' vs. 'action'. However, the term 'action' is also used in a more restricted sense, for a dynamic situation that requires the involvement of an agent. Equally, the term *event* is used to refer to a dynamic situation viewed perfectively, and the term *process* – to refer to a dynamic situation viewed imperfectively.

5.5.6.2.1.2 **Telic** vs. **atelic**

The temporal features *telic* and *atelic* refer to situations which have an internal structure consisting of a process leading up to the terminal point (telic), versus situations which do not have an inherent endpoint (atelic). In this semantic distinction, it is particularly clear that situations are not described by verbs alone, but rather by the verb with its arguments (complements), (see also discussion in Rothstein 2004). According to Comrie (1976:44-45), the telic nature of a situation can often be tested as follows:

"if a sentence referring to this situation in a form with imperfective meaning (such as the English progressive sentence in (269b)) implies the sentence referring to the same situation in a form with perfective meaning (such as the English Perfect sentence in (269a)), then the

situation is atelic, otherwise the situation is telic". From the sentence *John is singing*, it can be assumed that *John has sung*, but from the sentence *John is making a chair* it cannot be assumed that *John has made a chair*. A telic situation is the one that involves a process that leads up to an end point, beyond which the process cannot continue.

This view is bolstered by Garey (1957:106) who maintains that "telic events have a change of state which constitutes the outcome, or goal of the event when the goal is reached, a change of state occurs and the event is complete". Some constructions which denote a telic feature may include events without agentives. For example, the sentence "*A rock is falling to the ground*" is a telic event and the final endpoint is reached when the rock reaches the ground. In contrast, atelic events are simple processes. They can stop at any time and there will be no outcome. In other words, atelic events have arbitrary final endpoints.

5.5.6.2.1.3 **Durative** vs **punctual**

These temporal features refer to situations which are not conceived of as lasting in time *punctual*, also known as *instantaneous*, versus situations which are conceived of as lasting for a certain period of time, though short, it may be *durative*. Inherently punctual situations can further be interpreted as semelfactive (taking place only once) or iterative (repeated). Many languages recognize a class of verbs that under normal circumstances can only refer to punctual situations (or iteration of punctual situations). However, semelfactive and iterative predicates are frequently derivational. The cluster of the temporal features that distinguish the situation types are summarized in table 11.

Situation	**Stative**	**Durative**	**Telic**
States	[+]	[+]	[-]
Activity	[-]	[+]	[-]
Accomplishment	[-]	[+]	[+]
Semelfactive	[-]	[-]	[-]
Achievement	[-]	[-]	[+]

Table 11: Temporal features that distinguish the situation types

After presenting the temporal properties of the situation types, in the discussion that follows will revolve around the situation types.

5.5.6.2.2 Statives

States are constant situations which hold for a moment or an interval. They have the temporal features + stative, + durative and – telic, as shown in table 11, on page 168. The properties of duration hold for states, even the most temporary ones. States have a single, undifferentiated period without internal structure. The initial and final endpoints of a stative situation are regarded as part of state. The temporal schema of the sentence in (270a) consists of an undifferentiated period, as exemplified in (270b).

(270) a. John loves Judy.

b. Temporal schema of states: (I) ---------- (F)

The reason why the endpoints are given in parentheses is because they are not regarded as part of a state. The temporal schema reflects the intuition that states do not take time. When they happen for some period of time, the whole schema is true every moment in time. For example, there is no moment throughout the time during which the state of love do not hold in just the same way as every other. This reality is reflected in the entailment[19] given in (271), as postulated by Smith (1997).

(271) When a state holds for an interval it holds for every sub-interval of that interval.

It can be said that in real life no one classifies internal situations, because they are unobservable. However, in classifying individual predicates, taking the example in English, the speakers agree unanimously that a sentence with the predicate (i.e. think that) is Stative, while a sentence with the predicate (i.e. think about) is Activity.

Verb constellations of posture and location have special properties in different languages. In English, for example, such verbs allow the progressive viewpoint with a stative, resultative interpretation, as shown in (272).

(272) a. John is sitting on the chair.

b. The photo is hanging on the wall.

[19] An entailment is defined as a logical relation among propositions such that the truth of one proposition is determined by the truth of another proposition or other propositions, and this determination is a function solely of the meaning and syntax of the propositions concerned.

The sentences in (272) focus a static interval after the change of state denoted by the verb constellation. It is important to note that, in principle, the progressive form of the two verbs in (272) denote dynamic interpretation. Verbs that denote posture and location can often appear in both stative and event sentences. As statives they present a position or posture, the result of a change of a state; as non-statives the focus is earlier on the causal chain, the change of state.

Many languages have anticausative verbs (i.e. get and become predicates) or have verbal affixes. Habitual sentences, as discussed in sub-section 5.5.6.3.3, generally, have frequency adverbials. In the context of a frequency adverbial almost all verb constellations can be taken as habitual. For example, in the sentence *Every morning John eats an orange* has an individual nominal and a quantized object, yet it is clear.

5.5.6.2.3 Activities

Contrary to States, Activities are processes that involve physical or mental activity and they consist exclusively in the process. They have the temporal properties *dynamic*, *durative* and *atelic*, as instantiated in table 11, on page 168, and represented in temporal schemata in (273b).

(273) a. My sister drives a yellow car.
b. Temporal schema of activities: I…….$F_{Arbitrary}$

The sentence in (273a) does not deduce that the activity of driving a car has finished. The determination of an activity does not follow from the structure of the event. An arbitrary final endpoint of an activity is a temporal bound, explicit or implicit. It terminates or stops, but it does not finish, as the notion of completion is irrelevant to a process event. In the sentence in (273a), the activity of driving a car continues in time in a homogenous manner any part of the activity is of the same nature as the whole. This is correctly exemplified by Vendler (1967:133) when he points out that "if someone walked in the park for the same interval, the sub-event of his/her walking for a few minutes of the interval is also an instance of walking." The part-whole relation is realized as a characteristic pattern of entailment between the whole and the part of an activity (Smith 1997). Thus, entailment pattern of activity can be explained as follows:

If an activity event **A** holds at interval **I** then the process associated with that event holds at all intervals of **I**, down to intervals too small to count as **A**.

The qualification of interval size is necessary because activities cannot be said to take place at vanishingly small intervals. Certain activities, (e.g. that denoted by verb 'run'), require certain motions. At a small enough interval, for example one may be lifting a foot, but this may not mean that one is running (Taylor 1977:212). However, activities are not entirely homogenous as the endpoints involve change to and from a state of the other. Generally, they may have explicit, independent bounds as when they appear with certain adverbs of time. "For example, *John runs every morning*." The explicit bound in this sentence has a transformative effect on the verb constellation, resulting in a sentence with telic properties. This means, the situation type values an activity shift in the presence of an explicit bounding adverbial.

Verbs that denote activities fall into two categories: the first category consists of processes that are limitless in principle (such as sleep, push a cart and, laugh, etc) and; the second category consists of activities which have an indefinitely successive number of interval stages (such as eat and, run) and final derived activities.

5.5.6.2.4 Accomplishments

Accomplishments are heterogeneous and have a natural final point. They consist of a process and an outcome, or change of state and have the temporal properties *dynamic*, *durative* and *telic*, as shown in table 11, on page 168. The change is the completion of the process; that is, Accomplishments are finite, and intrinsically bounded. They have successive stages in which the process advances to its natural final endpoint and the outcome is the new state, as exemplified in (274). Once the process with a natural final endpoint reaches its outcome, the event is completed and cannot continue. In the sentence in (274), if *the house* has been built or if *Helen* has reached the school, the event is regarded complete and it cannot go on, as illustrated in (274c). Smith (1997:26) observes that "the notion of completeness is crucial while dealing with Accomplishment." The difference between Accomplishment and Activity is that the former finishes or is completed while the latter stops or terminates.

(274) a. John builds a house.
b. Helen walks to school.
c. Temporal schema of Accomplishment: I……..$F_{Natural}$ (Result)

According to Smith, the result state of an Accomplishment may or may not be relevant. The process of component, however, renders to be essential to the notion of event. For example, in (274a) the current process of building a house cannot be ignored. In other words, the relation between the process and the outcome is inseparable. Therefore, there is an entailment relation between process and outcome which is the formal correlate of a notion of non-detachability in Smith's (1997) term. If the outcome of accomplishment is reached, the process occurred as stated in the Entailment pattern in (275).

(275) If an event **A** occurs at interval **I**, then the process associated with **A** occurs during the interval stages of that interval.

However, Smith (1997) observes that "not all Accomplishments are regarded complete. One may change his/her mind, for example, while drawing a circle and decide to draw an eggplant instead. In the middle of crossing the street one may decide to stroll down the centre, or may be hit by a truck and never complete the process." For Smith, in these cases, one may judge that the Accomplishments were in progress, therefore the progressive viewpoint can be used (i.e. Ana was crossing the street...).

Accomplishments have the temporal feature duration. This explains the fact that they take time to occur, thus, they cannot often be perceived directly. In real life it is common for people to interpret different stages, as consisting of a single event. For instance in (274a) the process involves John getting bricks and cement and then placing the bricks step by step. It is normal to constellate the verb "*John built a house*". This reinforces the idea proposed by Smith that in talking about an event as an Accomplishment, one makes a judgement about how events are associated in the world.

The change of state of an Accomplishment takes various forms but always "some state of affairs over and above that which consists in the performance of the subservient task activity (Ryle 1947:151). The new state may affect a number of elements, which includes Affected object: [bend an iron bar, break a glass], Constructed object: [build a house, cook the meals], Consumed object: [destroy the wall, drink a glass of wine], Affected experience: [amuse Mary] and Path-Goal: [walk to the river, work from 3 to 3]).

According to Levin and Rappaport Hovav (1995) change of state verbs are also classified by type of process, with distinctions between contact and process orientation, as well as manner-

of-motion predicates. The result construction verbs have complements with the telic verb constellation. The complement extends the lexical span with information about the outcome state of a telic event. Such complements appear as arguments, as shown in (276).

(276) The police shot the man *dead*.

Among derived Accomplishments are process sentences with independent explicitly stated bounds as in (277).

(277) a. We crossed by the river *for 2 hours*.
b. Sam worked *from 2 to 3 this afternoon*.

Temporally bounded processes are like telic events in having specific, finite endpoint, as in (277). However, they may also show properties similar to atelic events, because there is no change of state, as in (277b). The difference is conceptual: one thinks of traversing time and space differently, as illustrated in (278).

(278) a Peter ran to river.
b. Peter ran for 3 meters.
c. Peter ran in 3 hours.

The sentences in (278a-b) show the result state, but the sentence in (278c) does not. Conventionally, the time of change as arrival is not very relevant. Sentences with atelic verb constellations and telic adverbials are also designated derived Accomplishments, as in "*John swam laps in two hours*". This sentence may receive an interpretation as telic: an amount of swimming has occurred during two hours. In fact, according to Smith (1997), derived Accomplishments may have super-lexical verbs such as [begin], [start], [finish], which focus on one endpoint of an event, see discussion in sub-section 5.5.6.3. The endpoints of the sentences with super-lexical verbs are change of state with internal structure, as illustrated in (279).

(279) a. They *gradually* understood the lesson.
b. She *slowly* stopped smoking cigarettes.

From the sentences in (279), it can be seen that the outcome is the change of a new state, or a durative event, or the change out of an event to a state of rest.

5.5.6.2.5 Semelfactives

Semelfactive situations lack preliminary stages, nor resultant stages. It is considered as single-stage event without result or outcome. This aspectual type has the temporal properties of *dynamic*, *atelic* and *punctual*/*instantaneous*, as seen in table 11. Verbs *knock*, *cough* are typical examples of semelfactives. The Semelfactive situation is the simplest type of event, consisting only of occurrence, as illustrated in the temporal schema in (280b). The letter E indicates a single-stage event.

(280) a. Somebody knocked the door

b. Temporal Schema of Semelfactive: E

The verb in (280a) denotes an inherently bounded situation because it is of single events. Verbs that denote semelfactive aspect may involve perceptible period of time which does not obfuscate the notion of instantaneity. This is supported by Smith (1997) when she observes "a person coughs, or a bird flaps a wing, the events take some fractions of a second to occur. Nevertheless, they are conceptualized as punctual/instantaneous." In real life, Semelfactive events are considered as the ones that happen very quickly, without outcome or result as it happens with Accomplishments.

With respect to the verb constellation, Semelfactives are limited in distribution. They do not appear in sentences with imperfective viewpoint, with *for*-phrases or other expressions of duration. Sentences which have Semelfactive verb constellations and durative features receive the reading of multi-event Activities: "Mary coughed for an hour = Mary was coughing." According to Smith (1997:30) the derived interpretation is triggered by the clashing temporal features of the verb constellation and other forms.

5.5.6.2.6 Achievements

Achievements are instantaneous events that result in a change of state. They have the temporal properties *dynamic*, *duration*, *instantaneous*, as shown in table 11. Typical examples of Achievements are the verbs: 'recognize' and 'reach the top', among others. Resultant stages may be associated with the event, but they are not considered part of it. The Temporal schema of Achievement is composed of single stage, a change of state, as shown in (281b).

(281) a. She has found the solution for her problem.

b. Temporal Schema of Achievement:…E_R…

The dots in (281b) indicate both preliminary and resultant stages, included in the concept of an Achievement situation (Smith 1997). The concept of Achievement is essentially a single-stage-event derived from any related process. In such cases, there is no whole-part entailment. An Achievement situation is true for the moment of the event; that is, if the clause "*Spain won the 2010 world cup*" is true for the given time t, it does not follow that the clause "*Spain was winning other competitions*" is true at that given moment. It comes down that if the second clause is true at some given moment, this moment can only be earlier than the time, t. Similarly to Accomplishment situations discussed above, Achievements are changes of state that occur very fast, as shown in (282).

(282) a. John broke a plate

b. John recognized the way to the village

The lexical span may focus on the outcome of a sequence of events (i.e. reach the top and arrive) or the event may be spontaneous (i.e. find, lose). The result states of Achievements are similar to those of Accomplishments: (i) Affected object: [break a glass, tear a paper], (ii) Constructed object: imagine a city, define a parameter, (iii) Consumed object: explode a bomb (iv) Affected experience: see a comet, and (v) Path-Goal: reach the top, arrive in a big city.

Certain verbs that denote Achievements allow preliminary stages (i.e. win a race, reach the top). In order to win a running race, one must run it. Other Achievements have preliminaries in some aspects. For instance, the sentence "*John recognizes the burglar*" presupposes preliminary stages: he saw the burglar at the scene and gradually find him familiar. Certain Agent-oriented adverbials are sometimes odd with Achievements, as shown in (283).

(283) a. ?John *deliberately* found his watch.

b. ?Mary *deliberately* hit the target.

The oddity of the sentences in (283) derives from the fact that Achievement situations are typically controlled by an agent and for that reason should not be compatible with the adverbial 'deliberately'. However, the sentences are less odd when one thinks about the nature

of the particular events they present. Ryle (1947) points out "neither finding nor hitting the target can be completely controlled by an agent". This means, one can look for his/her wallet, may find it; the act of finding the wallet is uncontrollable, but the temporal structure of Achievements is not regarded incompatible with control. There are Achievement situations that allow agent-oriented adverbials. They may deny control (284a-b) or present plausible cases of control in (284c-d).

(284) a. I *accidentally* lost my car key.
b. She *accidentally* hit the tree.
c. Andrew missed the classes *deliberately*.
d. Helen *deliberately* broke the glass.

The factor of control is orthogonal to temporal structure (Smith 1997:32) and certain Achievements may allow agent-oriented adverbials, others not.

5.5.6.3 Derived situation types

Smith gives an account of what she termed derived situation types. This scholar argues that languages have ways of shifting the aspectual value of a verb constellation in which a situation can be presented in a broad view or in a narrow view, as discussed below.

5.5.6.3.1 Super-lexical morphemes

Expressions like "begin" and "finish" in (285) provides narrow view of the situation.

(285) a. Mary *began* to build a house. (Telic)
b. Mary *finished* to build a house

In (285a) the situation is viewed as a whole and in (285b) is viewed as focussing on the endpoint or the middle of it. Smith stipulated super-lexical morphemes which can modulate the focus of situation, although these morphemes do not determine the situation themselves. Beginning and endings are viewed as events on their own, a transition from state of affairs to a process, or from a process which ceases to a state (Smith 1997:49). This means, the endpoints of all situations are telic: they bring about a change of state, either into a situation or out of it.

5.5.6.3.2 Multiple-event activities

These Activity situation types include events which consist of a series of events. They contain a series of repetitions with arbitrary endpoint. Verbs constellation of multiple – event Activity sentences have the basic – level categorization of its sub-event. Such constructions often have durative adverbials which trigger the shift in interpretation from single to multiple events, as shown in (286).

(286) a. Sahara knocked the door (*Semelfative*)
b. Sahara *repeatedly* knocked the door (*Activity*)
c. Sahara knocked the door *for 20 minutes* (*Activity*)

For Smith, the distinction between telic and atelic events turn on whether an event has a natural endpoint, a goal, outcome or other change of state (Smith 1997). The situation type of a sentence indirectly classifies the event or state talked about according to its temporal properties. It can be said that aspectual meaning holds for sentences, rather than for individual verbs or verb phrases, hence a situation type of a sentence is determined not by the verb alone but by the verb constellation. Derived, multiple-event activity interpretation usually arises when there is no compatibility between the times presented in a sentence. For example an event may have short duration, but the temporal adverbial in a sentence may be a source of such long duration.

5.5.6.3.3 Habitual statives

Smith postulates another type of derived situation type that she called habitual statives. This type of situation is characterized as semantically stative, as shown in (287).

(287) a. Sam rode his bicycle on *Fridays*.
b. Jim was *often* unemployed.

The verb constellation of the sentences with habitual state reading denotes a single event or state at the basic level of categorization (Smith 1997:51). The habitual reading may also be triggered by information in the context. There is always a discrepancy between the intervals involved in these sentences. Such a discrepancy triggers the shift to a habitual stative interpretation. Although sentences that denote habitual stative are semantically stative, they

do not display the syntactic characteristic of stative sentences. This is in line with Bach (1986:1) when he observes that stative can be divided into two types: Dynamic stative and static stative. Habitual sentences have the semantic properties of states, and syntactic properties of the events that constitute them.

5.5.6.3.4 Marked focus

Some sentences may present states as event or vice-versa. In Smith's view, such constructions present aspectual choices which give a marked focus to a situation. Some sentence may be in progress but with stative reading as shown in example (288).

(288) a. She was thinking that she wanted to go home
b. The river is smelling particularly bad *these days*.

According to Smith, the examples in (288) denote states with dynamism, a property related to events, and focus on that situation. In some instances, adverbials like in (288b) may invite the inference that the situation is unusual. In conversational domain, speakers may choose marked focus with present events as states. In using marked focus, the speaker may wish to emphasize the event's internal stage as continuous or homogenous. Contrary to habitual stative, Smith observes that marked focus is syntactically stative. The truth-conditions for sentences with marked and basic-level focus do not usually differ. To assess the truth of the basic-level sentence, one should look for an appropriate situation at appropriate coordinates of space and time. Similarly, the basic-level verb constellation is always recognizable to the receiver of the sentence.

5.5.6.4 Basic-level constellations

A verb and its arguments all contribute to situation type. Thus, the interpretation of situation type depends on the particular verb, DPs, PPs/Locatives and sentential complements of verbs constellation. In Smith's view, interpretation is the key notion. Speakers compose or interpret the situation type of a verb constellation by considering the relevance of its component forms (Smith 1997:54).

Compositional rules give a natural method for situation type which in its turn determines value of verb constellation according to internal makeup/properties. Features of PPs and

locatives are informative and are also needed independently. For instance, a verb with intrinsic features [-Telic] combines with two arguments, as in (289). Such a sentence yields the following intrinsic features:

(289) a. The child walks the dog
$_{DP}$[+Count] + $_{V}$[-Telic] + $_{DP}$[Count] →Vcon [-Telic]

b. The child walk to school
$_{DP}$[+Count] + $_{V}$[-Telic] + $_{PP}$[Direct] →Vcon [+Telic]

(Smith 1997:55)

The verb in (289a) bears an atelic feature values and combines with a telic argument, whereas the verb in (289b) bears a telic feature and combines with a dynamic goal locative. This explains that aspectual values of the basic-level verb constellation are overridden by other relevant forms. This is known as the principle of compositional rule. This principle states that the aspectual value of the basic-level verb constellation is overridden by that of an adverbial or similar relevant form (Smith 1997:55).

The output of the rule is the derived verb constellation with its interpretation of an aspectual value. The rule reads that a verb constellation (Vcon) with certain temporal features, combined with an adverbial, is interpreted as a derived constellation (DVCon) with certain temporal features, as exemplified in (290).

(290) The child coughed for an hour
$_{VCon}$ [+Dyn -Telic - Dur]] + $_{Adv}$[+Dur] →Dvcon [+Dyn –Telic + Dur]

(Smith 1997:55)

By the principle of external override the [+Dur] feature of the adverbial determines the feature value of the derived verb constellation. However, particulars of compositional rules vary according to the language in question, but the basic factors are similar across languages, though.

5.6 SUMMARY

This chapter has reviewed research on A-structure, thematic roles and aspectual verb classes. It was established that thematic role theories of argument realization are not taken as theoretical primitives. They are posited as emergent constructs defined by the semantic

structures in which they are embedded. The highest argument in the sentence typically appears as the subject while the lowest argument the first one to compose with the verb appears as the direct object. This decompositional approach preserves many of the insights of thematic role lists, mainly because of the fixed correspondence between thematic roles and the arguments of primitive predicates. It also demonstrated that theories of thematic role share two distinct properties: firstly, the different roles that participants play in a given event can be categorized into a limited number of them and secondly, a set of rules that map such roles onto different syntactic functions are employed.

However, considering that the nature of human languages is enormously infinite, irregular and continually evolving, it proves difficult to establish a comprehensive list of thematic roles for the types of arguments that can satisfy every human language's predicates. In other words, no universally accepted list of guidelines on defining the set of thematic roles and the properties each thematic role possesses is still available. Different scholars give various interpretations of the types of participants involved in different events and their semantic properties.

With regard to the aspectual verb classes, argument realization is based on temporal and mereological properties of the predicates that describe events, therefore, aspectual properties such as telicity, measure, and incremental theme play central roles in selecting components of transitivity and especially in the choice and expression of direct objects. Despite the radical differences, the previous research reviewed contributes greatly to the understanding of event structure. The core idea behind aspectual classes is that they are classified according to their internal properties and their classification is based on lexical aspect (Rappaport Hovav 2010:3). Language options determine which aspectual notions are grammaticalized, (i.e. verbal particles marking telicity (Van Hout 1996), morphological marking of perfectivity (Joseph 1983) or progressive (Smith 1997). These options, along with language differences in the syntactic status of arguments DP, give a typology of possible interactions between the category of aspect and argument structure.

CHAPTER 6
THE CAUSATIVE AND THE ANTICAUSATIVE ALTERNATION WITH CHANGE OF STATE VERBS IN *KIZOMBO*

Languages differ essentially in what they ***must*** *convey and not in what they* **may** *convey"* Roman Jakobson (1959:236)

6.1 INTRODUCTION

In chapter 3 it was pointed out that early research on the causative and anticausative alternation, as well as phenomena related to this construction, has mostly focused on how the argument structure of the causative variant is associated with that of the anticausative, how the anticausative is related to other operations affecting core syntactic relations - passive and middle voice - and how the class of verb roots that allow for anticausative alternation can be singled out.

The goal of this chapter is to examine properties of change of state verbs that undergo the causative and anticausative alternation and other transitivities in *Kizombo*. As will be the case with the locative-subject alternation in chapter 7, the analysis of *Kizombo* verb classes, which will be examined in this chapter, will make extensive use of Levin's (1993) verb classes. Futhermore, the empirical data that support the psychological reality of differences in the behaviour of various verbs that participate in anticausative and other alternations will be explored.

A further division that will be drawn on is that of externally caused change of state verbs, sometimes referred to as *break-type* verbs and internally caused change of state verbs, known by their prototypical class name as *bloom-type* verbs (Levin & Rappaport Hovav 1995). An externally caused change of state verb is conceptualized as the coming about because of an external force to the entity that undergoes the change of state. The responsibility for an event to happen is not with the object itself, but with some external force. An internally caused change of state verb, on the other hand, is a change of material for which the means of bringing about the change of event is conceptualized as being in the entity undergoing the change. Flowers, for example, bloom because of something internal to them. These definitions are based on intuitions of speakers about how such verbs are used to describe events in a given language.

As pointed out in chapter 1, section 1.4, to study the *Kizombo* verb classes comprehensively, the judgement criterion of sentence acceptability has been employed. For each sentence in analysis, native speakers of *Kizombo* were asked to judge whether or not they thought it was an acceptable sentence.

This chapter is divided into two parts: part I presents the range of change of state verbs in *Kizombo* examined with various modification phrases, invoking studies by Smith (1997), Alexiadou *et al* (2006) and other sources related to these. Following this introduction, section 6.2 will examine externally caused change of state verbs: sub-section 6.2.1 will give an account of the *-gula* 'break' verbs, while sub-section 6.2.2 will focus on the *-zenga* 'cut' verbs. Sub-section 6.2.3 will examine the *-fumbika* 'bend' verbs and sub-sections 6.2.4 and 6.2.5 will discuss the *-lamba* 'cook' and the *-dya* 'eat' verbs, respectively. Sub-section 6.2.6 will examine the *-tuunga* 'build' verbs. Section 6.3 will shift to internally caused change of state verbs and it will examine the *-gyuma* 'bloom' verbs. The second part of the chapter will be devoted to discussion of the example sentences presented in part I, followed by the summary.

In the presentation of data, one verb will be selected as representative of the class. Where the result of the application of the diagnostic tests varies among the members, such a difference will be identified in the body of the text for ease of reference. If not, data of other class members are provided in appendix A.

6.2 EXTERNALLY CAUSED CHANGE OF STATE VERBS

6.2.1 *-gula* 'break' verbs

This section examines 'break' verbs. Hale and Keyser (1987) describe 'break' verbs as the class of verbs that refers to actions that bring about a change in material integrity of some entity. However, for these scholars, the meaning of these verbs does not give information about how the change in material integrity comes about; to be precise, their meaning may not specify how such a change happened. Following discussion on this verb class by Levin (1993, section 45.1), five verbs, namely *-gula* 'crack/break', *-tolola* 'break', *-tuuta* 'plough' and *-nika* 'grind' are examined.

6.2.1.1 Causative

6.2.1.1.1 *Agent* as external causer

The sentence with *-gula* verb in (291) exemplifies properties of causation. In (291), as is the case with the other class members, the preverbal argument *n'tungi wa nzo* 'the builder' is regarded as the external causer of the event and the postverbal argument *gyaka* 'wall' is the causee undergoing the change of state.

(291) *N'tungi wa nzo uwdidi gyaka*
Ø-n'tungi wa nzo *uwd-idi* *Ø-gyaka*
1-builder of house break-PST 7-wall
Builder broke wall. (Intd: the builder broke the wall).

6.2.1.1.2 *Instrument/natural force* as external causer

The example sentences in (292) demonstrate that the constructions with the *-gula* 'break' verb in (292a) accept *instrument* and *natural force* as the external causer of the event. However, sentences with the verb *-nika* 'grind' in (292b) does not accept either *instrument* or *natural force* as the external causer. The reason is that these verbs denote human-driven activity. For that reason they require a volitional agentive argument.

(292) a. *Malutelo/tembo (i)kiuwdid gyaka*
Ma-lutelo/Ø-tembo *i-ki-uwd-idi* *Ø-gyaka*
6-hammer/7-wind 8-7/AgrS-brask-PST 7-wall
Hammer/wind broke wall (Intd: someone broke the wall with the help of hammer or the wind broke the wall)

b. *N'tuutu/tembo (u)kinikini mwamba*
#Ø-n'tutu/#Ø-tembo *u-ki-nik-ini* *Ø-mwamba*
3-botle/7-wind 3-7/AgrS-ground-PST 3-butter
Bottle/wind grinded peanut (Intd: someone grinded the peanuts)

6.2.1.1.3 *Agent-oriented* phrase modification

The sentences with *-gula* verbs examined in this section are felicitous with the *agent-oriented* phrase, as exemplified by the verb *-gula* 'break' in (293).

(293) *N'tungi wa nzo uwdidi gyaka mundwenga*
Ø-n'tungi wa nzo *uwd-idi* *Ø-gyaka* ***mu-ndwenga***
1-builder of house break-PST 7-wall 18-cautiously
Builder broke wall cautiously (Intd: the builder broke the wall cautiously)

The example sentence in (293) is used with the interpretation of 'the wall was broken with particular expertise' or rather 'the builder used additional skills to break the wall.'

6.2.1.1.4 *By-self* phrase modification

As is the case with the *agent-oriented* phrase in (6.2.1.3), the four examined sentences can be modified by the *by-self* phrase under the interpretation of 'the builder broke the wall without external help', as exemplified by the sentence with the verb *-gula* in (294).

(294) *N'tungi wa nzo uwdidi gyaka yani mosi*

Ø-n'tungi wa nzo	*uwd-idi*	*Ø-gyaka*	***yani-mosi***
1-builder of house	break-PST	7-wall	him/herself

Builder broke wall him/herself (Intd: the builder broke the wall on his/her own)

6.2.1.1.5 *Again* phrase modification

The four sentences are felicitous with the *again* phrase, as illustrated by the example sentence with the verb-*gula* in (295).

(295) *N'tungi wa nzo uwdidi dyaka gyaka*

Ø-n'tungi wa nzo	*uwd-idi*	***dyaka***	*Ø-gyaka*
1-builder of house	break-PST	again	7-wall

Builder broke again wall. (Intd: the builder broke the wall again)

The example sentence in (295) shows that the *again* phrase has two possible interpretations: it can presuppose the existence of a previous time at which the builder broke the wall again (repetitive) or it can pressupose that there is an earlier time at which the builder broke the wall, but not that there was a previous event (restitutive).

6.2.1.1.6 *Purpose* clause modification

The four sentences with *-guwla* verbs examined in this section can be modified by a *purpose* clause, with the interpretation of 'Agent argument as subject' can exert control in the purpose clause, as illustrated by the sentence in (296).

(296) *N'tungi wa nzo dikauwdidi gyaka mpasi vo katungulula kyo*
Ø-n'tungi wa nzo ***di****-ka-uwd-idi* *Ø-gyaka* ***mpasi vo*** *ka tungulula kyo*
1-builder of house Cp-1-break-PST 7-wall so that s/he rebuild it
Builder broke wall so that s/he rebuits it. (Intd: the builder broke the wall so that s/he rebuilds it).

6.2.1.1.7 *Temporal* phrase modification

Two of the four sentences with the verbs, *-gula* and *-tolola*, are acceptable with a *time* frame adjunct and unacceptable with a *durative* adjunct, as exemplified in (297a). The other two sentences with the verbs - *-nika* and *–tuuta* - are acceptable with a *durative* adjunct and unacceptable with a *time* frame adjunct, as shown in (297b). The four verbs denote an activity event in their basic category, and hence have an atelic interpretation. When a count DP combines with a verb that denotes an activity event, as the example in (297a), the resulting sentence has a telic interpretation, but when a bare DP combines with a verb that denotes an activity event, as the example in (297b), the resulting sentence has an atelic interpretation.

(297) a. *N'tungi wa nzo uwdidi gyaka (#kolo kya-/mu-) ngunga imosi*
Ø-n'tungi wa nzo *uwd-idi* *Ø-gyaka* *(kolo kya-/mu-)ngunga imosi*
1-builder of house break-PST 7-wall for/in an hour
Builder broke wall for/in an hour (Intd: the builder broke the wall for/in an hour).

b. *N'kento nikini mwamba (kolo kya-/#mu-) ngunga imosi*
Ø-n'kento *nik-ini* *Ø-mwamba* *(kolo kya-/mu-)ngunga imosi*
1-woman grind-PST 3-butter for/in an hour
Woman grinded butter for/in an hour (Intd: the woman grinded the peanut for/in an hour).

6.2.1.2 Anticausative

The four sentences with *-gula* verbs examined in this section participate in the anticausative alternation. For instance, the postverbal argument g*yaka*, which bears the thematic role Theme in (291), appears as the preverbal argument in (298) in which it appears to be interpreted as the thematic role Theme in the sentence with the verb *-gula*. The anticausative variant is marked by the stative suffix **-ik-** which serves as the controller of intransitivity.

(298) *Gyaka kiuwdikidi*
Ø-gyaka *ki-uwd-****ik****-idi*
7-wall 7/AgrS-break-CI-PST
Wall broke (Intd: someone/something broke the wall).

6.2.1.2.1 PP-modification

Two of the four sentences examined in this section can be modified by both instrument and natural force as implicit argument, as exemplified by the verb *-gula* in (299a), whereas the other two sentences can only be modified by an instrument as implicit argument, as exemplified by the sentences with the verb *-nika* in (299b). None of the sentences can be modified by an *by-agent* phrase.

(299) a. *Gyaka kiuwdikidi mumalutelo/mutembo/#kwa n'kento*
*Ø-gyaka ki-uwd-**ik**-idi mu-Ø-malutelo/Ø-mu-tembo/kwa nkento*
7-wall 7/AgrS-broke-CI-PST 18-9-hammer /18-7-wind/by woman
Wall broke with hammer/from wind/by woman (Intd: someone broke the wall by means of hammer/the wall crashed from the wind)

b. *Mwamba unikukini mun'tuutu/#mutembo/#kwa n'kento*
*Ø-mwamba u-nik-**uk**-ini mu-Ø-n'tutu/mu-Ø-tembo/kwa n'kento*
3-butter 3/AgrS-grind-CI-PST 18-3-bottle/18-7-wind/by woman
Butter grinded in bottle/from wind/by woman (Intd: someone grinded peanut by means of bottle/the peanut grinded from the wind)

The acceptability of a natural force with some break verbs and the unacceptability with others, i.e the verb *-nika*, reinforce the idea that verbs that convey human-driven activity disallow the participation of a non-human argument. Furthermore, the participation of the instrument is taken as the auxiliary and not as the causer of event, as illustrated in the glosses.

6.2.1.2.2 *Agent-oriented* phrase modification

Like the exemple sentences with PP-modification, two sentences with the verbs, *-gula* and *-toloka*, cannot be modified by an *agent-oriented* phrase for semantic reasons, as exemplified by the verb-*gula* in (300a). The other two sentences with the verbs - *-nika* and *-tuuta* - are acceptable, as exemplified by the verb in (300b). Regarding the construction in (300b), it is assumed that the activity of *-nika* 'ground' can only be exerted by human beings, and there is a possibility of such an event to receive a collective intention.

(300) a. *# Gyaka kiuwdikidi mundwenga*
*Ø-gyaka ki-uwd-**ik**-idi **mu-ndwenga***
7-wall 7/AgrS-broke-CI-PST 18-cautiously
Wall broke cautiously (Intd: someone broke the wall cautiously)

b. *Mwamba unikukini mundwenga*
Ø-mwamba *u-nik-**uk**-ini* ***mu-ndwenga***
3-butter 3/AgrS-grind-CI-PST 18-cautiously
Peanuts grinded cautiously (Intd: someone grinded the peanuts cautiously)

6.2.1.2.3 *By-self* phrase modification

Similarly to what is pertaining for constructions in (300), the two sentences with the verbs - -*gula* and -*toloka* - can be modified by a *by-self* phrase, as exemplified by the verb-*gula* in (301a), whereas the other two sentences with the verbs - -*nika* and -*tuuta* - cannot be modified by a by-self phrase, when considering the verb -*nika* in (301b). In (301b), it is supposed that the event of -*nika* 'ground' and -*tuuta* 'pound' can only be practised by human beings, thus, it cannot happen by itself.

(301) a. *Gyaka kiuwdikidi kyau mosi*
Ø-gyaka *ki-uwd-**ik**-idi* ***ky-au mosi***
7-wall 7/AgrS-break-CI-PST 7/AgrS- itself
Wall broke by itself (Intd: the wall broke without external help)

b. *#Mwamba unikuini wau mosi*
Ø-mwamba *u-nik-u**k**-ini* ***w-au mosi***
3-butter 3/AgrS-grind-CI-PST 3/AgrS-itself
Butter grinded by itself (Intd: the butter grinded without external help)

6.2.1.2.4 *Again* phrase modification

As is the case with the examples in section 6.2.1.5 with an Agent argument as subject, the four sentences can be modified by an *again* phrase, as illustrated by the sentence with -*gula* in (302). The adverb *again* has two possible interpretations: it can signify the existence of a previous time at which the builder broke the wall again (repetitive) or can it presuppose that there is an earlier time at which the builder broke the wall, but not that there was a previous event (restitutive).

(302) *Gyaka kiuwdikidi dyaka*
Ø-gyaka *ki-uwd-**ik**-idi* ***dyaka***
7-wall 7/AgrS-break-CI-PST again
Wall broke again (Intd: someone broke the wall again)

6.2.1.2.5 *Purpose* clause modification

The example sentences with the four verbs examined cannot be modified by a *purpose* clause, as exemplified by the verb *-gula* in (303).

(303) *#Gyaka dikiuwdikidi mpasi vo kya tungulula*
Ø-gyaka ***di****-ki-uwl-****uk****-idi* ***mpasi vo*** *kya* *tungulula*
7-wall Cp-7/AgrS-break-CI-PST so that it it rebuilds
Wall broke so that it can be rebuilt (Intd: someone broke the wall so that s/he can rebuild it)

Speakers of *Kizombo* would prefer using constructions like in (304) by topicalizing the object and with the subject occurring through the clitic /-N-/ realized as [-n/m-] depending on the phonological properties of the intial sound of the following verb.

(304) *Gyaka dinuwdidi kyo mpasi vo kya tungululwa*
Ø-gyaka ***di****-n-uwd-idi* *kyo* ***mpasi vo*** *kya tungululwa*
7-wall Cp-1-grind-PST it so that it can be rebuilt
Wall I broke so that I rebuilt (Intd: I broke the wall so that I rebuild it)

6.2.1.2.6 *Temporal* phrase modification

Contrary to constructions in (297), the four sentences with the Theme argument as subject are felicitous with both a *durative* and *time* frame adjunct, as shown in (305). The sentence with a *durative* adjunct has the interpretation of "it has been an hour since the wall broke" and the sentence with *time* frame adjunct has the interpretation of "the event of breaking the wall occurred in an hour". The difference between (297) and (305) is that the latter yields an inchoative reading and the situation is seen as a state, (Smith 1997).

(305) *Gyaka kiuwdikidi (kolo kya-/mu-)ngunga imosi*
Ø-gyaka *ki-uwd-****ik****-idi* *(kolo kya-/mu-)ngunga imosi*
7-wall 7-break-CI-PST for/in an hour
Wall broke for/in an hour (Intd: someone broke the wall for/in an hour)

6.2.1.3 Passive and PP-modification

The four sentences analyzed can occur in the passive form. With respect to PP-modification, they can all be modified by *instrument* and *by-agent* phrases, as exemplified by the sentences with the verb *-gula* in (306). This means that *Kizombo* allows for an *instrument* and a *by-agent* as implicit arguments of a passive construction, but disallow the use of *natural force*.

An *instrument* is always taken as an auxiliary used by an agent (Alexiadou and Anagnostopoulou, 2007), therefore their participation is understood as an implicit presence of an Agent. For example the sentence in (306) infers that 'someone has held the tree and broke the wall.'

(306) *Gyaka kiuwdilwe mun'ti/#mutembo/kwa n'tungi wa nzo*
Ø-gyaka ki-uwd-il-w-e mu-Ø-n'ti/mu-Ø-tembo/kwa n'tungi wa nzo
7-wall 7/AgrS-break-APPL-PASS-PST 18-3-tree/ 18-7-wind/by builder
Wall broke for from hammer/from wind/by builder (Intd: the wall was broken from the hammer/by the wind/ by the builder)

6.2.1.3.1 *Agent-oriented* phrase modification

All the example sentences with the *-gula* 'break' verbs can be modified by an *agent-oriented* phrase, as shown in sentence (307) with the verb *-gula*.

(307) *Gyaka kiuwdilwe mundwenga*
Ø-gyaka ki-uwd-il-w-e ***mu-ndwenga***
7-wall 7/AgrS-break-APPL-PASS-PST 18-cautiously
Wall broke for was cautiously (Intd: the wall was broken cautiously)

6.2.1.3.2 *By-self* phrase modification

Contrary to what is obtaining in (307), the construction in (308) cannot be modified by a *by-self* phrase for grammatical constraints. The presence of a passive morpheme presupposes the existence of an Agent taken as the instigator of the event. Thus the inclusion of a *by-self* phrase cannot hold.

(308) **Gyaka kiuwdilwe kyau mosi*
Ø-gyaka ki-uwd-il-w-e ky-au mosi
7-wall 7/AgrS-break-APPL-PASS-PST 7/AgrS-self
Wall broke for was by itself (Intd: someone broke the wall without external help)

6.2.1.3.3 *Again* phrase modification

Like the example sentences in (295) and (302) the sentences in (309) are felicitious with an *again* phrase, as illustrated by the sentence with the verb-*gula*. The sentence with *again* has two possible interpretations: it can pressuppose the existence of a previous time at which the wall broke (repetitive) or can pressuppose that there is a past time at which the wall broke, but not that there was an earlier event (restitutive).

(309) *Gyaka kiuwdilwe dyaka*
Ø-gyaka *ki-uwd-il-w-e* ***dyaka***
7-wall 7/AgrS-break-APPL-PASS-PST again
Wall was broken again (Intd: the wall was broken again)

6.2.1.3.4 *Purpose* clause modification

Like the example sentences in (296), the four sentences with the *-gula* verbs examined, can be modified by a *purpose* clause, with the interpretation of 'the agent can exert control in the purpose clause' as shown in (310).

(310) *Gyaka kyaki dikiuwdilwe mpasi vo atungulula kyo*
Ø-gyaka kyaki ***di****-ki-uwd-il-w-e* ***mpasi vo*** *a-tungulula kyo*
7-wall this Cp-7/AgrS-break-APPL-PASS-PST so that 2-they rebuild it
This wall was broken so that they can rebuild it

6.2.1.4 *Middle* construction

Constructions with the middle voice exhibit similar morphological properties to those of the anticausative in sense that verb in both alternations exhibits the morpheme **-k-** as the controller of intransitivity. However, middles differ from anticausatives because they denote genericity in meaning and more importantly, the subject of the middle requires specific properties, as shown in (311). For example, it is necessary to add a modifier like mud to the subject of the sentence so that it gives the meaning of genericity, as discussed in chapter 3, section 3.4.1.1. Nevertheless, diagnostic tests with an *agent-oriented* phrase and a *by-self* phrase, proved these sentences to be unacceptable, as shown in the example sentences in (311).

(311) a. *Gyaka kya n'toto kitoma uwdikanga #mundwenga/#kyau mosi*
*Ø-gyaka kya n'toto ki-tom-a uwd-****ik****-ang-a mundwenga/kyau mosi*
7-wall 7/AgrS-be-good-FV break-CI-PRS-FV cautiously/by itself
Wall of mud breaks well cautiously/by itself (Intd: this wall made of mud breaks well cautiously/by itself)

b. *Lutai lwa ntoko lutoma tolokanga #mundwenga/#lwau mosi*
*Lu-tai lwa ntoko lu-tom-a tol-****ok****-ang-a mundwenga/lwau mosi*
11-branch fresh 11-br good-FV break-CI-PRS-FV cautiously/by itself
Branch of fresh breaks caustiouly/by itself (Intd: the fresh branch breaks cautiously/by itself)

However, when these sentences are used in the past tense, they do not have the meaning of genericity, rather they convey the meaning of 'the event of breaking the wall made out of mud and the event of breaking a fresh branch was easily done'.

(312) a. *Gyaka kya n'toto kitomene uwdika #mundwenga/#kyau mosi*
*Ø-gyaka kya n'toto ki-tom-ene uwd-**ik**-a mundwenga/kyau mosi*
7-wall 7/AgrS-be good-PST break-CI-FV cautiously/by itself
Wall of mud broke well/cautiously/by itself (Intd: this wall made of mud broke well cautiously/by itself)

b. *Lutai lwa ntoko lutomene toloka #mundwenga/#lwau mosi*
*Lu-tai lwa ntoko lu-tom-ene tol-**ok**-a mundwenga/lwau mosi*
11-branch fresh 11-be good-PST break-CI-FV caustiouly/by itself
Branch of fresh broke easily cautiously/by itself (Intd: the fresh branch breaks easily cautiously/by itself)

To sum up, sentences with *-gula* 'break' verbs examined in this section occur in the causative and the anticausative alternation, as discussed in section 6.2.1.2. The causative alternant is morphologically unmarked whereas the anticausative counterpart is morphologically marked with the morpheme **-ik-**, which serves as the controller of intransitivity. The acceptability of sentences in the anticausative to which some diagnostic tests are applied, is constrained by semantic/pragmatic factors. For example, sentences with the verbs, *-nika* and *-tuuta* cannot be modified by both an *Agent* and a *natural force* as implicit argument, as discussed in section 6.2.1.2.1, but they are acceptable with an *instrument* under the assumption that the instrument is the auxiliary and not the agent of an event. The sentences with the verbs *–gula -'break'* and *-tolola*, on the other hand, cannot be modified by an *agent-oriented* phrase, as discussed in section 6.2.1.2.2. None of the sentences examined in this section with passive construction can be modified by a *natural force* phrase. This explains the fact that the presence of the passive morpheme in a sentence is associated with the presence of an agent and for that reason natural force regarded as causer, are not felicitous, as discussed in section 6.2.1.3. Passive constructions with a *by-self* phrase are regarded ungrammatical because these constructions cannot co-occur with the *by-self* phrase, as discussed in section 6.2.1.3.2.

Again phrase modification is felicitous with the causative, anticausative and the passive constructions, but with two different readings: depending on the context, the use of *again* with either Agent argument or Theme argument may denote a repetitive or restitutive action. The four sentences in the anticausative may take both a *durative* and a *time* frame adjunct with different readings, as discussed in section 6.2.1.2.6. Depending on the specific properties of subject, sentences with *-gula* 'break' verbs can form middle constructions with a generic interpretation, but similar constructions in the past do not yield the same interpretation, as discussed in section 6.2.1.4. Table 12 summarises the properties of acceptability with diagnostic tests of the example sentences with '*break*' verbs.

Verbs	**Causative type of external argument and other diagnostic tests**									**Anticausative and other diagnostic tests**									**Passive and other diagnostic tests**							**Middles**		
								Temp. modif		PPs							Temp. modif		PPs									
	Agent	Natural force	Instrument	Agent-oriented	By-self modif	Again modif	Purpose modif	F	I	Agent	Natural force	Instument	Agent-oriented	By-self modif	Again modif	Purpose modif	F	I	Agent	Natural force	Instrument	Agent-oriented	By-self modif	Again modif	Purpose modif	Middle	Agent-oriented	By-self modif
-gula	√	√	√	√	√	√	√	#	√	#	√	√	#	√	√	#	√	√	√	#	√	√	*	√	√	√	#	#
-tolola	√	√	√	√	√	√	√	#	√	#	√	√	#	√	√	#	√	√	√	#	√	√	*	√	√	√	#	#
-nika	√	#	#	√	√	√	√	√	#	#	#	√	√	#	√	#	√	√	√	#	√	√	*	√	√	√	#	#
-tuuta	√	#	#	√	√	√	√	√	#	#	#	√	√	#	√	#	√	√	√	#	√	√	*	√	√	√	#	#

Table 12: Summary of diagnostic tests with ‘break’ verbs in *Kizombo*

6.2.2 -*zenga* 'cut' verbs

Like -*gula* 'break' verbs in section 6.2.1, -*zenga* 'cut' verbs denote an action that brings about change in the material (Levin 1993, section 21.1). This class of verbs provides information about *how* the change of state comes about. Some verbs show a degree of intention (i.e. -*zenga* 'cut', -*fwela* 'chop') others not necessarily (i.e. -*tabula*, -*vasuna* 'cut'). Class members examined include -*zenga* 'cut', -*tyaza,* 'tear' -*tabula* 'cut' -*vasuna* 'cut', -*nyanzuzuna* 'to cut (into pieces)', and -*fwela* 'chop'. Although some of the verbs examined have similar meanings in English, they have different meanings in *Kizombo*.

6.2.2.1 Causative

6.2.2.1.1 *Agent* as external causer

The -*zenga* 'cut' verbs occur in the causative and the anticausative alternation. The example sentence with the -*zenga* verb in (313) exemplifies properties of causation in which the preverbal argument *n'kento* is the external causer of the event and the postverbal argument *n'ti* 'tree' is the causee undergoing the event of cutting.

(313) *N'kento/#nkombo zengele n'ti/lutai*
Ø-n'kento/Ø-nkombo zeng-ele Ø-n'ti/lu-kaya
1-woman/ 3-goat cut-PST 3-tree/11-leave
Woman/goat cut tree/leave (Intd: the woman/goat cut the tree/leave)

Although all -*zenga* 'cut' verbs select/require an external argument as causer of event, the sentences with the verbs -*zenga*, and -*fwela* can only accept a human being as subject, as shown in (314b/c). Other verbs can refer to a both human being and a non-human being as the external causer, as exemplified by the verb -*tabula* 'cut' in (314a).

(314) a. *Luzolo/nkombo tabwidi n'singa*
Luzolo/Ø-nkombo tabw-idi Ø-n'singa
1-PN/3-goat cut-PST 3-wire
Luzolo/goat cut wire (Intd: Luzolo/goat cut the wire)

b. *Aana/#nkombo avasuni dyoko*
a-ana/Ø-nkombo a-vasun-i Ø-dyoko
2-child/ 3-goat 2/AgrS-cut-PST 5-manioc
Children/goat cut manioc (Intd: the children cut the manioc)

c. *Mwana/#nkombo fwele nkovi*
Mw-ana/Ø-nkombo *fwel-ele* *nkovi*
1-child/ 3-goat chop-PST cabbage
Child/goat chopped cabbage (Intd: the child/goat chopped the cabbage)

The reason sentences with the verbs *-zenga*, and *-fwela* do not accept a non-human as an external causer is that, as mentioned in section 6.2.1.2, these verbs denote a human-driven activity and show a degree of intentionality, whereas verbs *-tyaza*, *-nyanzuzuna* and *-tabula* show a certain degree of unintentionality and thus sentences with these verbs can select both a human and non-human argument as the instigator of the event. Furhermore, the selection of a Theme argument is constrained by the meaning of the verb. For instance, one may say *N'kento tyeze m'bati* 'Intd: the woman tore the trousers' but cannot say '*N'kento tabwidi m'bati*' 'the woman cut the trousers'. Thus, the selection of the object Theme argument is constrained by the inherent lexical semantics of the verb.

6.2.2.1.2 *Instrument/natural force* as external causer

In chapter 3, it was argued that sentences with the agentive verbs do not accept the participation of both *instrument* and *natural force* as external argument. The example sentences in (315) with the verb *-zenga* suggest that, as is the case with verb *-vasuna*, a sentence with this verb allows *instrument*, but disallows *natural force* as the Theme argument, as shown in (315a). Like the sentence with the verb *-tabula*, the sentence with the verb *-tyaza* accepts both *instrument* and *natural force* as external causer[20], as shown in (315b). The reason is that such constructions have the interpretation of implicit participation of an agent since instruments are taken as auxiliary. The sentence with the verb *-nyanzuzuna*, however, only allows a *natural force* phrase and disallows an *instrument* phrase as external causer, as shown in (315c), whereas the sentence with the verb *-fwela* disallows both *instrument* and *natural force* as external causer, as illustrated in (315d). This means, the change cannot come about independently, without (implicit) intervention of a human being.

[20] For example if someone throws a machete or a knife angrily and such a machete or knife cuts the branch, one may say: *Tanzi Kizengele lutayi* ´the machete cut the branch.' The same is true with *tyaza* in which someone sitting next to a knife and s/she did not see it and mistakenly it tears his/her trousers; one may say: *Mbele ityeze mbat'ame* 'the knife tore my trousers'. With regard the to verb *-nyanzuzuna*, provide that it is windy and someone put chothes in the drying line and because of the pressure of wind, the clothe cuts into piece!: one may very well say: *Tembo kinyanzuzuni nlele* 'the clothes cut into pieces from wind.'

(315) a. *Tanzi/#tembo kizengele n'ti/lutai*

Ø-tanzi/#Ø-tembo	*ki-zeng-ele*	*Ø-n'ti/lu-tai*
7-machete/7-wind	7/AgrS-cut-PST	3-tree/11-branch

Machete/wind cut branch (Intd: someone cut the tree by means of knife)

b. *Mbele/tembo (i)kityeze m'bati*

Ø-mbele/Ø-tembo	*i-ki-tyez-e*	*Ø-m'bati*
9-knife/7-wind	9-7/AgrS-tear-PST	3-trousers

Knife/wind tore trousers (Intd: someone tore the trousers by means of knife)

c. *#Mbele/tembo (i)kinyanzuzuni mbizi/nlele*

Ø-mbele/Ø-tembo	*i-ki-nyanzuzun-i*	*Ø-mbizi/Ø-nlele*
9-knife/7-wind	9-7/AgrS-cut-PST	9-meat/3-clothe

Knife/wind cut (into pieces) meat/clothing (Intd: someone cut the meat into piece by means of knife)

d. *#Mbele/#tembo (i)kifwele nkovi*

Ø-mbele/Ø-tembo	*i-ki-fwel-ele*	*Ø-nkovi*
9-Knife/7-wind	9-7/AgrS-chop-PST	9-cabbage

Knife/wind chopped cabbage (Intd: someone chopped the cabbage by means of knife)

6.2.2.1.3 *Agent-oriented* phrase modification

Unlike the diagnostic test with *instrument*/*natural force* in section 6.2.1.1.2, all the sentences with *-zenga* 'cut' verbs examined in this section are felicitous with an *agent-oriented* phrase, as exemplified in (316) with the verb *-zenga*.

(316) *N'kento zengele n'ti mundwenga*

Ø-n'kento	*zeng-ele*	*Ø-n'ti*	***mu-ndwenga***
1-woman	cut-PST	3-tree	18-caution

Woman cut tree cautiously (Intd: the woman cut the tree cautiously)

The inclusion of the adverb *mu-ndwenga* gives the interpretation of how such an event has been conducted or, rather, the event of cutting the tree was done by the woman with expert skills.

6.2.2.1.4 *By-self* phrase modification

Like the case with the sentence with the *agent-oriented* phrase in section 6.2.1.1.3, all the sentences with *-zenga* 'cut' verbs examined in this section are felicitous with a *by-self* phrase, as exemplified in (317). The example sentence in (317) has the interpretation of 'the woman cut the tree without external help'.

(317) *N'kento zengele n'ti yani mosi*
Ø-n'kento *zeng-ele* *Ø-n'ti* ***yani mosi***
1-woman cut-PST 3-tree herself
Woman cut tree herself (Intd: the woman cut the tree herself)

6.2.2.1.5 *Again* phrase modification

Also the six sentences with *-zenga* 'cut' verbs examined are acceptable with an *again* phrase, as illustrated by the example in (318). The use of *again* holds two possible interpretations: depending on the context, *again* can have a repetitive or restitutive meaning.

(318) *N'kento zengele dyaka n'ti*
Ø-n'kento *zeng-ele* ***dyaka*** *Ø-n'ti*
1-woman cut-PST again 3-tree
Woman cut again tree (Intd: the woman cut the tree again)

6.2.2.1.6 *Purpose* clause modification

The subject argument of sentences with *-zenga* 'cut' verbs examined in this section can exert control in a purpose clause, as shown by the example in (319) with the verb *-zenga*.

(319) *N'kento dikazengele n'ti mpasi vo kavanga wo lukuni*
Ø-n'kento ***di****-ka-zeng-ele* *Ø-n'ti* ***mpasi vo*** *ka-vanga wo lukuni*
1-woman Cp-1-cut-PST 3-tree so that 1-make it firewood
Woman cut tree so that she makes it firewood (Intd: the woman cut the tree so that she makes it firewood)

6.2.2.1.7 *Temporal* phrase modification

The acceptability of *temporal* phrase modification is constrained by the nature of the object. Sentences with a singular count noun objects are felicitous with a *time* frame adjunct, as exemplified in (320a) with the verb *-zenga*. However, if the sentence takes plural count nouns or mass nouns, it is felicitous with a *durative* adjunct, as shown in the example sentence in (320b) with the *-vasuna* verb.

(320) a. *N'kento zengele n'ti (#kolo kya-/mu-)ngunga imosi*
Ø-n'kento *zeng-ele* *Ø-n'ti* *(kolo kya-/mu-)ngunga imosi*
1-woman cut-PST 3-tree for/in an hour
Woman cut tree in an hour (Intd: the woman cut the tree in an hour)

b. *N'kento zengele n'ti myole (kolo kya-/mu-)ngunga imosi*
Ø-n'kento *zeng-ele* *Ø-n'ti myole (kolo kya-/#mu-)ngunga imosi*
1-woman cut-PST 3-tree two for/in an hour
Woman cut two trees in an hour (Intd: the woman cut two trees in an hour)

6.2.2.2 Anticausative

Like the example sentences with the *-gula* 'break' verbs in section 6.2.1.2, almost all the sentences with *-zenga* 'cut' verbs occur in the anticausative alternation. For example, the postverbal argument *n'ti* which bears the thematic role Theme in (313), is in the preverbal position in (321) in which it appears to be interpreted as the Theme argument of the verb *-zenga*. In the case of the sentence with the verb *-fwela* is speakers' judgements waver, as shown in (321b).

(321) a. *N'ti uzengokele*
Ø-n'ti *u-zeng-**ok**-ele*
3-tree 3/AgrS-cut-CI-PST
Tree cut (Intd: someone cut the tree)

b. *?Nkovi ifwelokele*
Ø-nkovi *i-fwel-**ok**-ele*
9-cabbage 9/AgrS-chop-CI-PST
Cabbage chopped (Intd: someone chopped cabbage)

6.2.2.2.1 PP- modification

With respect to the diagnostic test with PP-modification, as is the case with the sentence with the verb *-vasuna*, the sentence with the verb *-zenga* (322a) can only license an *instrument* (*tanzi* and *mbele*) as the implicit argument. The sentence with the verb *-tyaza*, as is the case with the verb *–tabula*, can license both *instrument* and *natural force*, as shown in (322b). However, the sentence with the verb *-nyanzuzuna* (322c) can only license *natural force*, whereas the sentence with the verb *-fwela* (322d) can only license *instrument*. In all these constructions, a *by-agent* phrase is not accepted as implicit argument.

(322) a. *N'ti uzengokele mutanzi/#mutembo/#kwa n'kento*
Ø-n'ti *u-zeng-**ok**-ele* *mu-Ø-tanzi/mu-Ø-tembo/kwa nkento*
3-tree 3/AgrS-cut-CI-PST 18-7-machete/18-7-wind/by woman
Tree cut in machete/from wind/by woman (Intd: someone cut the tree by means of a machete)

b. *Makaya manyazuzukini #mumbele/mutembo/#kwa n'kento*
*Ma-kaya ma-nyanzuz-**uk**-ini mu-Ø-mbele/mu-Ø-tembo/kwa n'kento*
6-leaf 6/AgrS-cut-CI-PST 18-9-knife/18-7-wind/by woman
Leaves cut (into pieces) in knife/from the wind/ woman (Intd: the leaves cut into pieces from the wind)

c. *M'bati utyazukidi mumbele/mutembo/#kwa mwana*
*Ø-m'bati u-tyaz-**uk**-idi mu-Ø-mbele/mu-Ø-tembo/kwa mwana*
3-trousers 3/AgrS-tear-CI-PST 18-9-knife/18-7-wind/by the child
Trousers tore in knife/from wind/by the child (Intd: someone cut the trousers by means of knife or the trousers cut from the wind)

e. *? Nkovi ifwelokele mumbele/#mutembo/#kwa mwana*
*Ø-nkovi i-fwel-**ok**-ele mu-Ø-mbele#mu-Ø-tembo/#kwa mwana*
9-cabbage 9/AgrS-chop-CI-PST 18-9-knife/18-7-wind/by child
Cabbage chopped in knife/from the wind/by the/a child (Intd: someone chopped cabbage by means of a knife)

6.2.2.2.2 *Agent-oriented* phrase modification

Unlike the example sentences illustrating the causative in section 6.2.2.1.3, not all the sentences examined with *-zenga* 'cut' verbs can be modified by an *agent-oriented* phrase. Two sentences with the verbs *-zenga* and *-tabula*, are acceptable with an *agent-oriented* phrase, as shown in (323). The sentences with the verbs *-tyaza* and *-nyanzuzuna* are infelicitous, as illustrated in (323b). In the case of the sentences with the verbs, *-fwela*, and *-vasuna* speakers' judgement waver, as shown in (323c).

(323) a. *N'ti uzengokele mundwenga*
*Ø-n'ti u-zeng-**ok**-ele **mu-ndwenga***
3-tree 3/AgrS-cut-CI-PST 18-cautious
Tree cut cautiously (Intd: someone cut the tree cautiously)

b. *#M'bati utyazukidi mundwenga*
*Ø-m'bati u-tyaz-**uk**-idi **mu-ndwenga***
3-trousers 3/AgrS-tear-CI-PST 18-cautious
Trousers tore cautiously (Intd: someone tore the trousers cautiously)

c. **?***Dyoko divasukini mukinsweki*
*Ø-dyoko di-vas-**uk**-ini **mu-kinsweki***
5-manioc 5/AgrS-cut-CI-PST 18-secretly
Manioc cut secretly (Intd: someone cut the manioc)

In fact, the acceptability of an *agent-oriented* phrase implies the possibility of a causer in the anticausative variants, since an *agent-oriented* phrase presupposes the presence of an agent.

6.2.2.2.3 *By-self* phrase modification

The sentences with the verb *-zenga*, similarly to the sentence with the verb *-nyanzuzuna*, can be modified by a *by-self* phrase, as shown in (324), whereas the sentences with the verb *-vasuna*, like to the sentences with the verbs *-tyaza* and *–tabula*, can be modified by a *by-self* phrase, as exemplified in (324b) with the verb *-vasuna*. fIn the case of the sentence with the verb *-fwela* speakers' judgement waver, as shown in (324c).

(324) a. *#N'ti uzengokele wau mosi*
Ø-n'ti *u-zeng-**ok**-ele* ***w-au mosi***
3-tree 3/AgrS-cut-CI-PST AgrS-itself
Tree cut by itself (Intd: someone cut the tree without external help)

b. *Dyoka divasukini dyau mosi*
Ø-dyoko *di-vas-**uk**-ini* ***dy-au mosi***
5-manioc 5/AgrS-cut-CI-PST 5/AgrS-self
Manioc cut by itself (Intd: someone cut manioc without external help)

c. **?***Nkovi ifwelokele yau mosi*
Ø-nkovi *i-fwel-**ok**-ele* ***y-au mosi***
9-cabbage 9/AgrS-chop-CI-PST AgrS-itself
Cabbage chopped by itself (Intd: someone chopped cabbage without external help)

The constructions in (324b) are quite complex in the sense that by no means they can receive the interpretation of 'without external help' because it is widely held that these events can never occur without external intervention. Thus, there is always a possible implicit intervention of the external force. Hence, the acceptability of the sentences with a *by-self* phrase, presupposes a presence of causer.

6.2.2.2.4 *Again* phrase modification

Like the example sentences in the causative variant in section 6.2.2.1.5, sentences with *-zenga* 'cut' verbs examined in this section can license an *again* phrase, as shown in (325a). These constructions have two possible interepretations, namely repetitive and restitutive. In the case of the sentence with the verb *-fwela* speakers' judgement waver, as shown in (325b).

(325) a. *N'ti uzengokele dyaka*
Ø-n'ti *u-zeng-**ok**-ele* ***dyaka***
3-tree 3/AgrS-cut-CI-PST again
Tree cut again (Intd: someone cut the tree again)

b. ?*Nkovi ifwelokele dyaka*
Ø-nkovi *i-fwel-**ok**-ele* ***dyaka***
9-cabbage 9/AgrS-chop-CI-PST again
Cabbage chopped again (Intd: someone chopped cabbage again)

6.2.2.2.5 *Purpose* clause modification

Contrary to what is obtaining with the causative alternant in section 6.2.2.1.6, the sentences with the *-zenga* 'cut' verbs examined in this sub-section cannot be modified by a *purpose* clause, as exemplified in (326) with the verb *-zenga*. This means, Theme argument as subject cannot exert control in a purpose clause.

(326) a. *#N'ti diuzengokele mpasi vo wa tunga wo nzo*
Ø-n'ti ***di**-u-zeng-**ok**-ele* ***mpasi vo** wa tunga wo nzo*
3-Tree Cp-3/AgrS-cut-CI-PST so that it build it house
The trees cut so that it builds it house (Intd: someone cut the tree so that s/he can use it to build a house)

6.2.2.2.6 *Temporal* phrase modification

Sentences with the six verbs with a Theme argument as subject can be modified by both a *durative* and *time* frame adjunct. The difference between them is that sentences with a *durative* adjunct are used with the interpretation of "it has been an hour since the tree cut" whereas sentences with a *time* frame adjunct have the interpretation of "the event of cutting the tree occurred in the interval of an hour". The example sentence in (327) is an event seen as state, (Smith 1997), as discussed in chapter 5, sub-section 5.3.6.3.4. However, in the case of the sentence in (327b) speakers' judgement waver.

(327) a. *N'ti uzengokele (kolo kya-/mu-)ngunga imosi*
Ø-n'ti *u-zeng-**ok**-ele* *(kolo kya-/mu-)ngunga imosi*
3-tree 3/AgrS-cut-CI-PST for/in an hour
Tree cut for/in an hour (Ind: someone cut the tree for/in an hour)

b. ?*Nkovi ifwelokele (kolo kya-/mu-)ngunga imosi*
Ø-nkovi *i-fwel-**ok**-ele* *(kolo kya-/mu-)ngunga imosi*
9-cabbage 9/AgrS-chop-CI-PST for/in an hour
Cabbage chopped for/in an hour (Intd: someone chopped the cabbage for/in an hour)

6.2.2.3 Passive and PP-modification

In the sentences with the *-zenga* 'cut' verbs examined in (328) the passive construction occurs. With respect to PP-modification, the passive sentences with the *-zenga* verbs are all felicitous with an *instrument* and a *by-agent* phrase, but they do not allow a *natural force* phrase, as illustrated in (328a) with the *-zenga* verb. Once again, for the sentence with the verb *-fwela* in (328b) speakers' judgement waver.

(328) a. *N'ti uzengelwe mutanzi/#tembo/kwa n'kento*
Ø-n'ti *u-zeng-el-w-e* *mu-Ø-tanzi/mu-Ø-tembo/kwa n'kento*
3-tree 3/AgrS-cut-APPL-PASS-PST 18-7-machete/18-7-wind/by woman
Tree was cut in machete/from wind/by woman. (Intd: the tree was cut by means of machete/by the woman).

b. ?*Nkovi ifwedilwe mumbele/kwa Mafuta*
Ø-nkovi *i-fwed-il-w-e* *mu-Ø-mbele/kwa Mafuta*
9-cabbage 9/AgrS-chop-APPL-PASS-PST 18-9-knife/by Mafuta
Cabbage was chopped with knife/by Mafuta (Intd: cabbage was chopped by means of knife/by Mafuta)

6.2.2.3.1 *Agent-oriented* phrase modification

The six sentences with *-zenga* verbs examined in this section can be modified by an *agent-oriented* phrase, as exemplified in (329) with verb-*zenga*.

(329) *N'ti uzengelwe mundwenga*
Ø-n'ti *u-zeng-el-w-e* ***mu-ndwenga***
3-tree 3/AgrS-cut-APPL-PASS-PST 18-cautiously
Tree was cut cautiously (Intd: the tree was cut cautiously).

6.2.2.3.2 *By-self* phrase modification

None of the sentences with *-zenga* 'cut' verbs examined in this sub-section can be modified by a *by-self* phrase for grammatical reasons, as shown in (330) with the verb *-zenga*. The presence of the passive morpheme presupposes the existence of an agent. Thus such an agent cannot co-occur with a *by-self* phrase.

(330) * *N'ti uzengelwe wau mosi*
Ø-n'ti u-zeng-el-w-e ***w-au mosi***
3-tree 3/AgrS-cut-APPL-PASS-PST 3/AgrS-self
Tree was cut by itself (Intd: the tree was cut without external help)

6.2.2.3.3 *Again* phrase modification

Contrary to the sentences with a *by-self* phrase in (330), and except for the sentence with the verb *-fwela* for which speakers' judgement waver in (331b), all the sentences with other *-zenga* 'cut' verbs examined, are felicitous with a *purpose* clause, as exemplified in (331a) with the verb *-zenga*.

(331) a *N'ti uzengelwe dyaka*
Ø-n'ti u-zeng-el-w-e ***dyaka***
3-tree 3/AgrS-cut-APPL-PASS-PST again
Tree was again cut (Intd: the tree was cut again)

b. **?***Nkovi ifwedilwe dyaka*
Ø-nkovi i-fwed-il-w-e ***dyaka***
9-cabbage 9/AgrS-chop-APPL-PASS-PST again
Cabbage was again chopped (Intd: cabbage was chopped again)

6.2.2.3.4 *Purpose* clause modification

The diagnostic test with a *purpose* clause suggests that the four sentences with the verbs *-zenga*, *--vasuna*, *-tyaza* and *-tabula* can be modified by a *purpose* clause, but for the sentences with the verbs *-nyznzuzuna* and *-fwela* in (332b/c) speakers' judgement waver.

(332) a. *N'ti diuzengelwe mpasi vo atungila wo nzo*
Ø-n'ti ***di****-u-zeng-el-w-e* ***mpasi vo*** *a-tungila wo nzo*
3-tree Cp-3/AgrS-cut-APPL-PASS-PST so that 2-build it house
Tree was cut so that they use it to build house (Intd: tree was cut so that they use it to build a house)

b. **?***Mbizi diinyanzuzunwe mpasi vo kaizingidi vya ko*
Ø-mbizi ***di****-i-nyanzunun-w-e* ***mpasi vo*** *ka-i-zingidi vya ko*
9-meat Cp-9/AgrS-cut-PASS-PST so that NEG[1]-AgrS-long tender NEG[2]
Meat was cut so that it does not take long to get tender (Intd: meat was cut (into pieces) so that it does not take long to get tender)

c. *?Nkovi diifwedilwe mpasi vo alambila yo mbizi*
Ø-nkovi *di-i-fwed-il-w-e* ***mpasi vo*** *a-lamba yo mbiz*
9-cabbage Cp-9/AgrS-chop-APPL-PASS-PST so that 2-cook it meat
Cabbage was chopped so that they cook it with meat (Intd: cabbage was chopped so that they cook it with meat)

6.2.2.4 *Middle* formation

Both the anticausative sentences in (321) and the middle sentences in (333) share similar morpho-syntactic properties. The major difference is that unlike the anticausative sentences in (321), the middle sentences in (333) denote a generic meaning and their acceptability is restricted to specific properties of the Theme subject of the sentence. In the case of the sentences with the verbs *-vasuka*, *-tabula* and *-fwela* in (333b/d and 333f) speakers' judjement waver, whereas sentences with the verbs *-tyazuna* and *-nyanzuzuna* are unacceptable, as shown in (333c and 333e).

(333) a. *N'ti wa nzewa utoma zengokanga #mundwenga/#wau mosi*
*Ø-n'ti wa nzewa u-tom-a zeng-**ok**-ang-a mundwenga/wau mosi*
3-tree fresh 3/AgrS-be good-FV cut-CI-HAB-FV cautiously/ by itself
This fresh tree cuts well cautiously/ by itself

b. **?** *Dyoko ditoma vasukanga #mundwenga/#dyau mosi*
*Ø-dyoko di-tom-a vas-**uk**-ang-a mundwenga/dyau mosi*
5-manioc 5/AgrS-be good-FV cut-CI-HAB-FV cautiously/ by itself
The manioc cuts well cautiously/ by itself

c. *#M'bati wau utoma tyazukanga #mundwenga/#wau mosi*
*Ø-m'bati wau u-tom-a tyaz-**uk**-ang-a mundwenga/wau mosi*
3-clothe this 3/AgrS-be good-FV tear-CI-HAB-FV cautiously/ by itself
This trouser tears well cautiously/ by itself

d. **?** *N'singa wau utoma tabukanga #mundwenga/#wau mosi*
*Ø-n'singa wau u-tom-a tab-**uk**-ang-a mundwenga/wau mosi*
3-wire this 3/AgrS-be good-FV cut-CI-HAB-FV cautiously/ by itself
This wire cuts well cautiously/ by itself

e. *#Mbizi yayi itoma nyanzuzukanga #mundwenga/#yau mosi*
*Ø-mbizi yayi i-tom-a nyanzuz-**uk**-ang-a mundwenga/yau mosi*
9-meat this 9/AgrS-be ggod-FV cut-CI-HAB-FV cautiously/ by itself
This machete cuts well cautiously/ by itself

f. **?***Nkovi itoma fwelokanga #mundwenga/#yau mosi*
*Ø-nkovi i-tom-a fwel-**ok**-ang-a mundwenga/yau mosi*
9-cabbage 9/AgrS-be good-FV chop-CI-HAB-FV cautiously/ by itself
The/a cabbage chops well cautiously/ by itself

As was pointed out in sub-section 6.2.1.4, when a middle construction is used in the past, this construction does not have generic meaning, rather it has the interpretation of 'the event of cutting tree was done well'.

(334) *N'ti wa nzewa utomene zengoka*

Ø-n'ti wa nzewa	*u-tom-ene*	*zeng-**ok**-a*
3-tree fresh	3/AgrS-be good-PST	cut-CI-FV

Fresh tree cut well (Intd: the fresh tree cut well)

To sum up, almost all the sentences examined with the *-zenga* 'cut' verbs can occur in the causative and the anticausative alternation. However, the sentence with the verb *-fwela* speakers' judgements waver. Similarly to the sentences examined in section 6.2.1, the causative variant of the *-zenga* 'cut' the verbs is morphologically overt whereas the anticausative variant is morphologically covert with the morpheme **-ik-**, which serves as the controller of intransitivity, as discussed in section 6.2.2.2. Three sentences with the verbs *-zenga*, *-vasa* and *-fwela* - cannot take *natural force* as the external causer; also the sentences with the verbs *-nyanzuzuna* and *-fwela* cannot take *instrument* as the external causer, as discussed in sub-section 6.2.2.1.2. Constructions with a *temporal* phrase modification are constrained by properties of object, as examined in sub-section 6.2.2.1.7.

The acceptability of the sentences in the anticausative alternation to which some diagnostic tests are applied is constrained by semantic/pragmatic factors. Apart from the sentences with the verb *-zenga*, the remaining sentences cannot be modified by an *agent-oriented* phrase, as discussed in sub-section 6.2.2.2.2. Also none of the sentences with the examined *-zenga* verbs in the anticausative can be modified by a *purpose* clause, as seen in sub-section 6.2.2.2.5. Contrary to the causative variant, sentences with both a *durative* and *time* frame adjunct are felicitous with the anticausative alternation, as discussed in sub-section 6.2.2.2.6.

Like the constructions with *-gula* 'break' verbs discussed in section 6.2.1, none of the sentences with *-zenga* verbs examined with the passive construction is modified by *natural force*. This is due to the fact that the presence of a passive morpheme is associated with agentivity and for that reason an *instrument*, regarded as auxiliary, are not acceptable. Passive constructions with a *by-self* phrase are regarded ungrammatical because their verbs cannot co-occur with a passive morpheme, as discussed in sub-section 6.2.2.3.2. The a*gain* phrase modification is acceptable in the causative, the anticausative and the passive sentences, but with two different readings: depending on the context, the use of again with either Agent argument or Theme argument may denote repetitive or restitutive meaning. Example

sentences in the anticausative may take both a *durative* and *time* frame adjunct with different readings, as discussed in section 6.2.2.2.6. One out of the six sentences examined with the verbs, *–zenga* is felicitous with middle formation. Table 13 summarises the properties of acceptability with diagnostic tests of the example sentences with *cut* verbs.

Verbs	**Causative type of external argument and other diagnostic tests**									**Anticausative and other diagnostic tests**									**Passive and other diagnostic tests**							**Middles**		
										PPs									PPs									
	Agent	Natural force	Instrument	Agent-oriented	By-self modif	Again modif	Purpose modif	Temp. modif		Agent	Natural force	Instument	Agent–oriented	By-self modif	Again modif	Purpose modif	Temp. modif		Agent	Natural force	Instrument	Agent-oriented	By-self modif	Again modif	Purpose modif	Middle	Agent-oriented	By-self modif
								F	I								F	I										
-zenga	√	#	√	√	#	√	√	#	√	#	#	√	√	#	√	#	√	√	√	#	√	√	*	√	√	√	#	#
-vasa	√	#	√	√	√	√	√	√	#	#	#	√	**?**	√	√	#	√	√	√	#	√	√	*	√	√	**?**	#	#
-tyaza	√	√	√	√	√	√	√	#	√	#	√	√	#	√	√	#	√	√	√	#	√	√	*	√	√	#	#	#
-tabula	√	√	√	√	√	√	√	#	√	#	√	√	#	√	√	#	√	√	√	#	√	√	*	√	√	**?**	#	#
-nyanzuzuna	√	√	#	√	√	√	√	√	#	#	√	#	#	#	√	#	√	√	√	#	√	√	*	√	√	#	#	#
-fwela	√	#	#	√	√	√	√	√	#	#	#	√	#	**?**	√	#	**?**	**?**	√	#	√	√	*	**?**	**?**	**?**	#	#

Table 13: Summary of diagnostic tests with ‘cut’ verbs in *Kizombo*

6.2.3-*fumbika* 'bend' verbs

Following Levin (1993, section 45.2), -*fumbika* 'bend' verbs are related to a change in the shape of an entity that does not disrupt its material integrity. This means these verbs change the shape, but not necessarily the integrity of the material. However, they show similar properties to those of -*gula* 'break' and -*zenga* 'cut' verbs, although bend verbs describe reversible actions. Class members examined in this section include the verb -*fumbika* 'bend', -*koneneka* 'fold/bend', -*vweteka* 'bend'. The discussion will center around the verb -*fumbika* 'bend'.

6.2.3.1 Causative

6.2.3.1.1 *Agent* as external causer

Comparable to the sentences with the two verb classes discussed in sections 6.2.1.1 and 6.2.2.1, the example sentence with the verb -*fumbika* in (335) express properties of causal relations between the argument theta-roles. In the sentence in (335), the preverbal argument *Luzolo*/*nkombo* is regarded as the external causer and the postverbal argument *lutayi* is regarded as the causee undergoing the *bending* event. Contrary to what is obtaining with -*zenga* 'cut' verbs in section 6.2.2.1.1, all the sentences with -*fumbika* verbs examined in this section select both human and non-human causers.

(335) *Luzolo/nkombo fumbikidi lutai*
Luzolo/Ø-nkombo *fumbik-idi* *lu-tai*
1-PN/9-goat/ bend-PST 11-branch
Luzolo/goat bent branch (Intd: Luzolo/goat bent the branch)

6.2.3.1.2 *Instrument/natural* as causer

The three sentences with the verbs examined take both *instrument* and *natural force* as external causers. In the example sentence with the -*fumbika* 'bend' verb in (336), the Theme argument *malutelo* 'hammer' and *tembo* 'wind' are regarded as the external causers of the event.

(336) *Malutelo/tembo (i)kifumbiki lutai*
Ø-malutelo/Ø-tembo *i-ki-fumbik-idi* *lu-tai*
9-hammer/7-wind 9-7/AgrS-bend-PST 11-branch
Hammer/wind bent branch (Intd: someone used a hammer to bend the branch or the wind bent the branch)

The acceptability of the instrument with the *-fumbika* verbs can be constrained by an affected object. For example, while the participation of the argument *malutelo* 'hammer' and *tembo* 'wind' as the external causer of the event in the sentence with the verb *-vweteka* is acceptable, the replacement of the object argument *-lutayi* by an object argument *kuulu* renders the sentence unacceptable, as shown in (337) because such a replacement introduces a new reading: the hammer or wind folds the leg. The act of folding a leg is a human-driven activity therefore it requires an agentive argument as external causer.

(337) *#Malutelo/tembo (i)kifumbikidi kuulu*

Ø-malutelo/Ø-tembo	*i-ki-konenek-ene*	*ku-ulu*
9-hammer/7-wind	9-7AgrS-fold-PST	15-leg

Hammer/wind folded leg (Intd: the hammer/wind folded the leg)

6.2.3.1.3 *Agent-oriented* phrase modification

Like the diagnostic test with *instrument/natural force* in sub-section 6.2.3.1.2, the three sentences examined with the *-fumbika* verbs are felicitous with an *agent-oriented* phrase, as exemplified in (338) with the verb *-fumbika*. The sentence in (338) is used with the interpretation of 'Luzolo bent the branch with specific attention/skill'.

(338) *Luzolo fumbikidi lutai mundwenga*

Luzolo	*fumbik-idi*	*lu-tai*	***mu-ndewnga***
1-PN	bend-PST	11-branch	18-caution

Luzolo bent branch cautiously (Intd: Luzolo bent the branch cautiously)

6.2.3.1.4 *By-self* phrase modification

As is the case with the sentence with the *agent-oriented* phrase in sub-section 6.2.3.1.3, the three sentences examined in this sub-section can be modified by a *by-self* phrase, as exemplified in (339) with the verb *-zenga*. The example sentence has the interpretation of 'Luzolo bent the branch without external help'.

(339) *Luzolo fumbikidi lutai yani mosi*

Luzolo	*fumbik-idi*	*lu-tai*	**yani-mosi**
1-PN	bend-PST	11-branch	him/herself

Luzolo bent branch him/herself (Intd: Luzolo bent the branch him/herself)

6.2.3.1.5 *Again* phrase modification

The three sentences with the examined *-fumbika* verbs are acceptable with an *again* phrase, as illustrated in the example in (340) with the verb *-zenga*. The use of *again* holds two possible interpretations: depending on the context, *again* can have repetitive or restitutive meaning.

(340) *Luzolo fumbikidi dyaka lutai*

Luzolo	*fumbik-idi*	***dyaka***	*lu-tai*
1-PN	bend-PST	again	11-branch

Luzolo bent branch (Intd: Luzolo bent the branch again)

6.2.3.1.6 *Purpose* clause modification

Sentences with *-fumbika* verbs discussed in this sub-section can have a subject argument that exerts control in a *purpose* clause, as shown in (341) with the verb *-zenga*.

(341) *Luzolo dikafumbikidi lutai mpasi vo katulula 'manga*

Luzolo	***di****-ka-fumbik-idi*	*lu-tai*	***mpasi vo*** *ka-tulula*	*'manga*
1-PN	Cp-1-bend-PST	11-branch	so that	1-fetch mango

Luzolo bent branch so that s/he fetches mangoes (Intd: Luzolo bent the branch so that s/he fetches mongoes)

6.2.3.1.7 *Temporal* phrase modification

The acceptability of sentences with a *temporal* phrase modification is constrained by the nature of the object that a verb can take. When a sentence takes a singular count noun object, it can be acceptable with a *time* frame adjunct, but when a sentence takes a plural count noun or a mass noun, it can be acceptable with a *durative* adjunct, as shown in the examples in (342a/b) with the *-vasuna* verb.

(342) a. *Luzolo fumbikidi sengo kimosi (kolo kya-/#mu-)ngunga imosi*

Luzolo	*fumbik-idi*	*Ø-sengo ki-mosi*	*(kolo kya-/mu-)ngunga imosi*
1-PN	bend-PST	7-iron 7-one	for/in an hour

Luzolo bent one iron-bar for/in an hour

b. *Luzolo fumbikidi sengo itatu (#kolo kya-/mu-)ngunga imosi*

Luzolo	*fumbik-idi*	*Ø-sengo i-tatu*	*(kolo kya-/mu-)ngunga imosi*
1-PN	bend-PST	7-iron 8-three	for/in an hour

Luzolo bent three iron-bars for/in an hour

6.2.3.2 Anticausative

Contratry to *-gula* 'break' and *-zenga* 'cut' verbs in sections 6.2.1.2 and 6.2.2.2, *-fumbika* 'bend' verbs form their anticausative with a morpheme **-am-** which is regarded as the controller of intransitivity in Visser's (1998) view, as illustrated in (343).

(343) a. *Lutai lumbamene*
Lu-tai *lu-fumb-**am**-ene*
11-branch 11/AgrS-bend-CI-PST
Branch bent (Intd: someone bent the branch)

b. *Sengo kifumbamene*
Ø-sengo *ki-konan-a**n**[21]-e*
7-iron 7/AgrS-bend-CI-PST
Iron bar bent (Intd: someone bent the iron-bar)

At first glance, one would say that these verbs are sensitive to repeated morphemes. In other words, when a verb ends in **-ik-**, it disallows the co-occurence of another **-ik-** morpheme in the verb root. However, through a careful analysis of other verbs like *-kaanga* 'close' and *-vanga* 'make/do' it is evident that these two verbs form the anticausative with an **-am-** morpheme instead of a **-ik-** morpheme, as shown in (344) and (345).

(344) a. *Mwana keenge kyelo*
mu-ana *keeng-e* *ky-elo*
1a-child close-PST 7-door
Child closed door (Intd: the child closed the door)

b. *Kyelo kikaangamene*
ki-elo *ki-kaang-**am**-ene*
7-door 7/AgrS-close-CI-PST
Door closed (Intd: someone closed the door)

(345) a. *Mwana veenge mfulu*
Mu-ana *veeng-e* *mfulu*
1a-child make-PST bed
Child made bed (Intd: the child made bed)

b. *Mfulu ivaangamene*
Ø-mfulu *i-vaang-**am**-ene*
9-bed 9/AgrS-make-CI-PST
Bed made (Intd: someone made the bed)

[21] The morpheme -n- in the verb kon-a**n**-en-e is due to phonological conditions.

The examples in (344) and (345) suggest that verbs that cannot take the morpheme **-ik-** in their anticausative form, take the morpheme **-am-** as the controller of the intransitive.

6.2.3.2.1 PP-modification

One of the three sentences with *-fumbika* verbs examined in this sub-section can take *natural force* as the implicit argument. The other sentences are infelicitous, as shown in (346a/b).

(346) a. *Lutai lufumbamene #mumalutelo/mutembo/#kwa n'kento*
lu-tai *lu-fumb-**am**-ene* *#mu-Ø-malutelo/mu-Ø-tembo/#kwa n'kento*
11-branch 11/AgrS-bend-CI-PST 18-9-hammer/18-7-wind/by woman
Branch bent in hammer/from wind/by woman (Intd: someone bent the branch by means of hammer/the wind bent the iron-bar)

c. *Lutai luvwetamene #mulusinga/#mutembo/#kwa mwana*
lu-tayi *lu-vwet-**am**-ene* *mu-Ø-lusinga/mu-Ø-tembo/kwa mwana*
11-branch 11/AgrS-bend-CI-PST 18-11-iron/18-7-wind/by child
Branch bent in iron bar/from the wind/by child (Intd: someone bent the branch/the wind bent from the branch)

6.2.3.2.2 *Agent-oriented* phrase modification

Contrary to sentences with *-zenga* 'cut' verbs discussed in sub-section 6.2.2.2.2, the three verbs examined cannot be modified by an *agent-oriented* phrase. Speakers of *Kizombo* would prefer using a passive form to an anticausative form, as will be seen in section 6.2.2.3.1.

(347) *#Lutai lufumbamene mundwenga*
lu-tai *lu-fumb-**am**-ene* ***mu-ndwenga***
11-branch 11/AgrS-bend-CI-PST 18-cautiously
Branch bent cautiously (Intd: someone bent the branch cautiously)

6.2.3.2.3 *By-self* phrase modification

The three sentences with *-fumbika* 'bend' verbs can be modified by a *by-self* phrase, as illustrated in (348) with the verb *-fumbika*. The construction in (348) has the interpretation of 'the event of bending happened without external help'.

(348) *Lutai lufumbamene lwau mosi*
lu-tayi *lu-fumb-**am**-ene* ***lw-au mosi***
11-branch 11/AgrS-bend-CI-PST 11- itself
Branch bent by itself (Intd: the branch bent without external help)

6.2.3.2.4 *Again* phrase modification

Likewise, the three sentences examined can be modified by an *again* phrase, as shown in (349). As is the case with the causative variant in (335), the use of *again* holds two possible interpretations: depending on the context, *again* can have a repetitive or restitutive meaning.

(349) *Lutai lufumbamene dyaka*

lu-tayi	*lu-fumb-**am**-ene*	***dyaka***
11-branch	11/AgrS-bend-CI-PST	again

Branch bent again (Intd: the branch bent again)

6.2.3.2.5 *Purpose* clause modification

Unlike the causative alternants discussed in sub-section 6.2.3.1.6, the three sentences with -*fumbika* verbs examined in this sub-section cannot be modified by a *purpose* clause, as exemplified in (350) with the verb -*fumbika*. That is, the Theme argument as subject cannot exert control over a *purpose* clause.

(350) *#Lutai dilufumbamene mpasi vo lwa katula lo makaya*

lu-tai	***di**-lu-fumb-**am**-ene*	***mpasi vo*** *lwa katula lo ma-kaya*	
11-branch	Cp-11-bend-TC-PST	so that	11- fetch it 6-leaves

Branch bent so that it takes it leaves (Intd: someone bent the branch so that s/he fetches the leaves)

6.2.3.2.6 *Temporal* phrase modification

Unlike the contructions with Agent argument as subject in section 6.2.3.1.7, the three sentences with a Theme argument as subject examined in this sub-section are felicitous with both a *durative* and *time* frame adjunct. The difference between them is that the sentences with a *durative* phrase have the interpretation of "it has been an hour since the branch bent" whereas the sentences with a *time* frame adjunct have the interpretation of "the event of bending the branch occurred in the interval of an hour". The acceptability of both *durative* and *time* frame adjuncts is explained by the fact that sentences like the one in (351) holds an inchoative reading.

(351) *Lutai lufumbamne (kolo kya-/mu-)ngunga imosi*

lu-tai	*lu-fumb-**am**-ene*	*(kolo kya-/mu-)ngunga imosi*
11-branch	11/AgrS-bend-CI-PST	for/in an hour

Branch bent for/in an hour (Intd: the branch bent for/in an hour)

6.2.3.3 *Passive and PP-modification*

The formation of passive with -*fumbika* 'bend' verbs is marked by the inclusion of the applied suffix **-il-** taken as an expansion. That is, the verbs -*fumbika* and -*vweteka* require the presence of an applied morpheme, namely **-il-**/-**el-** depending on morpho-phonological conditions. With regards to PP-modification, sentences with -*fumbika* 'bend' verbs examined in this section license *instrument* and *agentive* as implicit arguments and do not license *natural force*, as shown in (352).

(352) *Lutai lufumbikilwe mutanzi/#mutembo/kwa Luzolo*
lu-tai *lu-fumbik-il-w-e* *mu-Ø-tanzi/mu-Ø-tembo/kwa Luzolo*
11-branch 11/AgrS-bend-APPL-PASS-PT 18-7-machete/18-7-wind/by Luzolo
The branch was bent by means of a machete/from the wind/by Luzolo

6.2.3.3.1 *Agent-oriented* phrase modification

The three sentences examined with the -*fumbika* verbs can be modified by an *agent-oriented* phrase, as exemplified in (353) with -*fumbika* verb.

(354) *Lutai lufumbikilwe mundwenga*
lu-tai *lu-fumbik-il-w-e* ***mu-ndwenga***
11-branch 11/AgrS-bend-APPL-PASS-PT 18-cautiously
Branch was bent cautiously (Intd: the branch was bent cautiously)

6.2.3.3.2 *By-self* phrase modification

However, the three sentences examined in this sub-section cannot be modified by a *by-self* phrase for syntactic reasons, as exemplified in (355) with the verb -*fumbika*.

(355) **Lutai lufumbikilwe lwau mosi*
lu-tai *lu-fumbik-il-w-e* *lw-au mosi*
11-branch 11/AgrS-bend-APPL-PASS-PT 11-itself
Branch was bent by itself (Intd: the branch was bent by itself)

6.2.3.3.3 *Again* phrase modification

Like the constructions with the causative alternation in sub-section 6.2.3.1.5 and the anticausative alternation in sub-section 6.2.3.2.4, the three constructions are felicitous with an

again phrase, as illustrated in (356) with the verb *-fumbika*. As stated earlier, *again* has two possible interpretations: it pressuposes the existence of a previous time at which the wall broke again (repetitive) or can presssuppose that there is a past time at which the wall broke, but not that there was an earlier event (restitutive).

(356) *Lutai lufumbikilwe dyaka*
lu-tai *lu-fumbik-il-w-e* ***dyaka***
11-branch 11/AgrS-bend-APPL-PASS-PST again
Branch was bent again (Intd: the branch was bent again)

6.2.3.3.4 *Purpose* clause modification

The three sentences examined with the *-fumbika* verbs can be modified by a *purpose* clause, as exemplified in (357) with the verb *-fumbika*.

(357) *Lutai dilufumbikilwe mapsi vo atulula ko 'manga*
lu-tai ***di-*** *lu-fumbik-il-w-e* ***mpasi vo*** *a-tulula ko manga*
11-branch Cp-11/AgrS-bend-APPL-PASS-PST so that 2-take it mangos
Branch was bent so that they take it mangoes (Intd: the branch was bent so that they take mangoes from it)

6.2.3.4 *Middle* formation

With regards to middle formation, the constructions with the verb *-fumbika* in (358), the Theme argument DP *lutayi* 'branch' which is the object of the causative variant in (335) appears in the position of the subject in (358a) although it is understood as if it is 'undergoing the bending' event. For this reason, this DP is associated with what is conventionally called a Theme theta-role. The common property between anticausative sentences in section 6.2.3.2 and middle sentence in this section is that both have non-active morphology represented by **-m-** morpheme. With regard to acceptability, only sentence (358a) is regarded as acceptable, whereas for sentences (358b-c) the speakers' judgement wavers. The diagnostic test with an *agent-oriented* and *by-self* phrase reveals that such constructions are unacceptable.

(358) a. *Luswaswa lutoma fumbamanga #mundwenga/#lwau mosi*
lu-swaswa *lu-tom-a* *fumb-**am**-ang-a* *mundwenga/lwau mosi*
11-branch 11/AgrS-be good-FV bend-CI-HAB-FV cautiously/by itself
The/a branch bends well cautiously/by itself

b. ?*Lusinga lwalu lutoma konananga mundwenga/lwau mosi*
*lu-singa lwalu lu-tom-a kon-**an**-ang-a #mundwenga/#lwau mosi*
11-iron-bar this AgrS-be good-FV bend-CI-PRS-FV cautiously/by itself
This iron-bar bends well cautiously/by itself

In summary, the three sentences examined with the *-fumbika* 'bend' verbs occur both the in causative and anticausative alternation. Similarly to the example sentences examined in section 6.2.1 and 6.2.2, the causative alternant in this section is morphologically overt whereas the anticausative variant exhibits the morpheme **-am-**, which serves as the controller of intransitivity, as discussed in section 6.2.3.2. Also, sentences with *natural force* and *instrument* as subject argument and other modifications are all acceptable, as illustrated in table 14. The diagnostic test with a *temporal* adjunct is constrained by properties of the object, as discussed in sub-section 6.2.3.1.7.

The acceptability of some diagnostic tests with sentences in the anticausative alternation is constrained by semantic/pragmatic factors reasons. While none of the sentences can take *agent* and *instrument* as an implicit argument, the sentences with the verbs *-fumbika* and *-vweteka* can be modified by *natural force*, as discussed in sub-section 6.2.3.2.1. Sentences with an *agent-oriented* phrase and a purpose clause are infelicitous, but sentences with a *by-self* and an *again* phrase are felicitous. Unlike the causative variant, *durative* and *time* frame adjuncts are both felicitous with anticausative sentences, as discussed in sub-section 6.2.3.2.6, but with different interpretations. One of six sentences with *-fumbika* verbs is felicitous in a middle sentence. Table 14 summarises the properties of acceptability with diagnostic tests of the example sentences with *bend* verbs.

Verbs	Causative type of external argument and other diagnostic tests									Anticausative and other diagnostic tests									Passive and other diagnostic tests							Middles		
										PPs									PPs									
	Agent	Natural force	Instrument	Agent-oriented	By-self modif	Again modif	Purpose modif	Temp. modif		Agent	Natural force	Instument	Agent–oriented	By-self modif	Again modif	Purpose modif	Temp. modif		Agent	Natural force	Instrument	Agent-oriented	By-self modif	Again modif	Purpose modif	Middle	Agent-oriented	By-self modif
								F	I								F	I										
-fumbika	√	√	√	√	√	√	√	#	√	#	√	#	#	√	√	#	√	√	√	#	√	√	*	√	√	√	#	#
-koneneka	√	√	√	√	√	√	√	#	√	#	#	#	#	√	√	#	√	√	√	#	√	√	*	√	√	?	#	#
-vweteka	√	√	√	√	√	√	√	#	√	#	√	#	#	√	√	#	√	√	√	#	√	√	*	√	√	?	#	#

Table 14: Summary of diagnostic tests with *-zenga* ‘cut verbs’ in *Kizombo*

6.2.4 -*lamba* 'cook' verbs

Levin (1993, section 46.3) defines cook verbs as the class of verbs that exhibit properties of both change of state and build-type verbs of creation and transformation. This means some members of this class only describe the cooking process while others involve creation and transformation. Verbs from this class discussed in this section include -*lamba* 'cook', -*gyoka* 'roast'-*vuula* 'boil', -*kaanga* 'to toast' and -*syokesa* 'to fry'. The verb *syokesa* is an example of ideophone. The discussion will be based on the verb -*lamba* 'cook'.

6.2.4.1 Causative

6.2.4.1.1 *Agent* as external causer

The sentence in (359) exemplifies the properties of causation with the verb -*lamba* 'cook'. In (359) the preverbal argument *Luzolo* is the external causer and the postverbal argument *madya,* 'food' is the causee undergoing the change of state. Sentences with -*lamba* 'cook' verbs do not accept a non-human being argument as external causer.

(359) *Luzolo/#nkombo lembe madya*

Luzolo/Ø-nkombo	*lemb-e*	*ma-dya*
1-PN/9-goat	cook-PST	6-meal

Luzolo/goat meal food (Intd: Luzolo/goat cooked the meal)

6.2.4.1.2 *Instrument/natural force* as causer

Contrary to what obtains with -*zenga* 'cut', the verbs discussed in sub-section 6.2.2.1.2, in sentences with -*lamba* 'cook' verbs do not accept *instrument* and *natural force* as external causer, as exemplified in (360) with the verb -*lamba*. The reason why these verbs disallow instrument and natural force as external agument is that they are associated with the degree of agentivity. In fact, most of -*lamba* 'cook' activities are human driven events.

(360) *#Nzungu/#tembo (i)kilembe madya*

Ø-nzungu/Ø-tembo	*i-ki-lemb-e*	*ma-dya*
8-pan/7-wind	8-7AgrS-cook-PST	6-meal

Pan/wind cooked meal (Intd: someone cooked the meal in the pan)

6.2.4.1.3 *Agent-oriented* phrase modification

In contrast with the diagnostic test with *instrument*/*natural force*, the five sentences with–*lamba* 'cook' verbs examined in this sub-section are felicitous with an *agent-oriented* phrase, as exemplified in (361) with the verb -*lamba*.

(361) *Luzolo lembe madya munswalu*

Luzolo	*lemb-e*	*ma-dya*	***mu-nswalu***
1-PN	cook-PST	6-food	18-fast

Luzolo cooked meal fast (Intd: Luzolo cooked the meal fast)

6.2.4.1.4 *By-self* phrase modification

Similarly to an *agent-oriented* phrase modification, the five sentences examined with -*lamba* verbs can be modified by a *by-self* phrase, as exemplified in (362) with the verb -*lamba*. The example sentence in (362) has the interpretation of 'Luzolo cut the tree without external help'.

(362) *Luzolo lembe madya yani mosi*

Luzolo	*lemb-e*	*ma-dya*	***yani mosi***
1-PN	cook-PST	6-meal	him/her-self

Luzolo cooked meal him/herself (Intd: Luzolo cooked the meal him/herself)

6.2.4.1.5 *Again* phrase modification

In addition, the sentences with the five verbs analyzed are acceptable with an *again* phrase, as illustrated in (363) with the verb -*lamba*. The use of *again* has two possible interpretations: depending on the context, *again* can have a repetitive or restitutive meaning.

(363) *Luzolo lembe dyaka madya*

Luzolo	*lemb-e*	***dyaka***	*ma-dya*
1-PN	cook-PST	again	6-meal

Luzolo cooked again food (Intd: Luzolo cooked the meal again)

6.2.4.1.6 *Purpose* clause modification

The example sentences with -*lamba* 'cook' verbs illustrate that the subject argument of these verbs can exert control in a purpose clause, as shown in the example sentence with the verb -*lamba* in (364).

(364) *Luzolo dikalambidi madya mpasi vo kavaana mo nzenza*
Luzolo ***di****-ka-lamb-il-i* *ma-dya* ***mpasi vo*** *ka-vana mo nzenza*
1-PN Cp-1-cook-APPL-PST 6-meal so that 1-give it guests
Luzolo cooked meal so that s/he gives it guests (Intd: Luzolo cooked the meal so that s/he gives it to the guests)

6.2.4.1.7 *Temporal* modification

As is the case with -*gula* 'break' verbs discussed in sub-section 6.2.1.1.7, -*zenga* 'cut' verbs discussed in sub-section 6.2.2.1.7, and -*fumbika* 'bend' verbs discussed in sub-section 6.2.3.1.7, the acceptability of sentences with a *temporal* phrase is constrained by the nature of the object argument that a verb can take. When a sentence takes a singular count noun object, it can be felicitous with a *time* frame adjunct, but when a sentence takes a plural count noun or mass noun, it can be felicitous with a *durative* phrase adjunct, as shown in (365) with -*lamba* verb.

(365) *Luzolo lembe madya (kolo kya-/#mu-)ngunga imosi*
Luzolo *lemb-e* *ma-dya* *(kolo kya-/mu-)ngunga imosi*
1-PN cook-PST 6-meal for/in an hour
Luzolo cooked meal for/in an hour (Intd: Luzolo meal the food for/in an hour)

6.2.4.2 Anticausative

Unlike the sentences discussed in section 6.2.1.2, 6.2.2.2 and 6.2.3.2, only two sentences with the verbs -*lamba* and -*vuula* can alternate. The anticausative with -*lamba* 'verbs' is formed by the suffix **-ik-**, (including its allomorph **-ek-** and related porte-manteau morphs like **-uk-** and **-ok-**) which serves as the controller of intransitivity bearing the semantic features of the anticausative. The sentence with the verb -*syokesa* cannot alternate, while for sentences with the verbs -*yoka* and -*kaanga* speakers' judgement waver, as shown in (366).

(366) a. *Madya malambukidi*
ma-dyama *lamb-**uk**-idi*
6-meal 6/AgrS-cook-CI-PST
Meal cooked (Intd: someone cooked the meal)

b. **?***Munsambu uyokokele*
mu-nsambu *u-yok-**ok**-ele*
3-fish 3/AgrS-roast-CI-PST
Dry fish roasted (Intd: someone roasted the fish)

c. *Madezo mavulukidi*
ma-dezo *ma-vul-**uk**-idi*
6-bean 6/AgrS-boil-CI-PST
Beans boiled (Intd: someone boiled the beans)

d. **?***Nguba zikaangukidi*
Ø-nguba *zi-kaang-**uk**-idi*
10-peanut 10/AgrS-toast-CI-PST
Peanuts toasted (Intd: someone toasted the peanut)

e. **Maaki masyokesekele*
ma-aki (ma-iki) *ma-syokes-**ek**-ele*
6-egg 6/AgrS-fry-CI-PST
Eggs fried (Intd: someone fried eggs)

6.2.4.2.1 *PP-modification*

With respect to diagnostic test with PP-modification, sentences with the *-lamba* 'cook' verb can license neither *instrument* nor *natural force* as the implicit argument. In addition, all constructions with a *by*-phrase are not acceptable with an implicit argument, as shown in (367a). The sentence with the verb *-syokesa* cannot alternate, as shown in (367b)

(367) a. *Madya malambukidi #munzungu/#mutembo/#kwa Luzolo*
ma-dya *ma-lamb-**uk**-idi* *mu-Ø-nzungu/mu-Ø-tembo/kwa Luzolo*
6-meal 6/AgrS-cook-CI-PST 18-9-pot/18-7-wind/by Luzolo
Meal cooked by means of pot/from wind/by Luzolo (Intd: someone cooked the meal by means of pot)

b. ?*Munsambu uyokokele #vaziku/#mutembo/#kwa Luzolo*
mu-nsambu *u-yok-**ok**-ele* *va-Ø-ziku/mu-Ø-tembo/kwa Luzolo*
3-fish 3/AgrS-roast-CI-PST 16-5-fire/18-7-wind/by Luzolo
Fish roasted from wind/in fire/by Luzolo (Intd: someone roasted the fish on the fire)

6.2.4.2.2 *Agent-oriented* phrase modification

As is the case with the causative variant discussed in section in 6.2.4.1.3, two of the five sentences with verbs *-lamba* and *-vuula* can be modified by an *agent-oriented* phrase, as exemplified in (368a) with the verb *-lamba*. The sentence with the verbs *-yoka* and *-kaanga* show that the speakers' judgements waver, as illustrated in (368b), and the sentence with the verb *-syokesa* cannot alternate, as in (368c).

(368) a. *Madya malambukidi mundwenga*
*ma-dyama-lamb-**uk**-idi* ***mu-ndwenga***
6-meal 6/AgrS-cook-CI-PST 18-cautiously
Meal cooked cautiously (Intd: someone cooked the meal cautiously)

b. ?*Munsambu uyokokele mundwenga*
mu-nsambu *u-yok-**ok**-ele* ***mu-ndwenga***
3-fish 3/AgrS-roast-CI-PST 18-cautiously
Fish roasted cautiously (Intd: someone roasted the fish cautiously)

d. #*Maaki masyokesekele mundwenga*
ma-aki *ma-syok-es-**ek**-ele* ***mu-ndwenga***
6-egg 6/AgrS-fry-CAUS-CI-PST 18-cautiously
Eggs fried cautiously (Intd: someone fried eggs cautiously)

6.2.4.2.3 *By-self* phrase modification

None of the five sentences with the verbs *-lamba* 'cook' examined in this sub-section can be modified by a *by-self* phrase, as shown in (369a). This means the cooking events cannot be interpreted as occurring without external help.

(369) #*Maaki malambukidi mau mosi*
ma-dya *ma-lamb-**uk**-idi* ***ma- au mosi***
6-meal 6/AgrS-cook-CI-PST 6- iteslf
Meal cooked by itself (Intd: someone cooked the meal by him/herself)

6.2.4.2.4 *Again* phrase modification

Similarly to the example sentences with the causative variant in sub-section 6.2.4.1.5, some sentences with verbs *-lamba* 'cook' are felitious with an *again* phrase, as demonstrated in (370a). The ag*ain* phrase has two possible interpretations: it can pressupose the existence of a previous time at which the meal is cooked again (repetitive) or can pressuppose that there is a past time at which the meal is cooked, but not that there was an earlier event (restitutive). The sentences with the verb *-kaanga*, *-yoka* show that the speakers' judgements waver, as in (370b).

(370) a. *Madya malambukidi dyaka*
ma-dya *ma-lamb-**uk**-idi* ***dyaka***
6-meal 6/AgrS-cook-CI-PST again
Meal cooked again (Intd: someone cooked the meal again)

b. ?*Munsambu uyokokele dyaka*
mu-nsambu *u-yok-**ok**-ele* ***dyaka***
3-fish 3/AgrS-roast-CI-PST again
Fish roasted again (Intd: someone roasted the dry fish ag

6.2.4.2.5 *Purpose* clause modification

Contrary to the causative alternants in sub-section 6.2.4.1.6, the four sentences with the cook verbs cannot be modified by a *purpose* clause, as exemplified by the verb *-fumbika* in (371). This means, the Theme argument as subject cannot exert control into a purpose clause. With regard to sentences with the verb *-kaanga* the speakers' judgements waver, as shown in (371b).

(371) a. *#Madya dimalambukidi mapsi vo madya antu*
ma-dya ***di****-ma-lamb-****uk****-idi* ***mpasi vo*** *ma-dya antu*
6-meal Cp-6AgrS-cook-CI-APPL-PST so that people 6-eat people
Meal cooked so that people can eat them (Intd: someone cooked the meal so that people can eat it)

b. *?#Munsambu diuyokokele mpasi vo adiila wo luku*
mu-nsambu ***di****-u-yok-****ok****-ele* ***mpasi vo*** *a-diila wo luku*
3-fish Cp-3/AgrS-roast-CI-PST so that 2-eat it with porrige
Fish roasted so that they eat it for porrige (Intd: someone roasted dry fish so that they eat it with porridge)

6.2.4.2.6 *Temporal* modification

Unlike the example sentences with the Agent argument, two sentences with the Theme argument are felicitous with both a *durative* and *time* frame adjunct. With regard to sentences with the verbs *-yoka* and *–kaanga,* the speakers' judgements waver. While the sentence with the verb *-syokesa* cannot alternate, as illustrated in (372b/c). The sentence with a *durative* phrase has the interpretation of "it has been an hour since the event of cooking occurred", whereas the sentence with a *time* frame phrase has the interpretation of "the event of cooking occurred in the interval of an hour".

(372) a. *Madya malambukidi (kolo kya-/mu-)ngunga imosi*
*ma-dyama-lamb-****uk****-idi* *(kolo kya-/mu-)ngunga imosi*
6-meal 6/AgrS-cook-CI-PST for/in an hour
Meal cooked for/in an hour (Intd: someone cooked the meal for/in an hour)

b. **?***Munsambu uyokokele (kolo kya-/mu-)ngunga imosi*
mu-nsambu *u-yok-****ok****-ele* *(kolo kya-/mu-)ngunga imosi*
3-fish 3/AgrS-roast-CI-PST for/in an hour
Dry fish roasted for/in an hour (Intd: someone roasted the fish for/in an hour)

c. *#Maaki masyokesekele (kolo kya-/mu-)ngunga imosi*
ma-aki *ma-syok-es-****ek****-ele* *(kolo kya-/mu-)ngunga imosi*
6-egg 6/AgrS-fry-CAUS-CI-PST for/in an hour
Eggs fried for/in an hour (Intd: someone fried eggs for/in an hour)

6.2.4.3 Passive and PP-modification

With respect to passive constructions, while the five sentences with the cook verbs can license *Agent* as implicit argument, only sentences with the verbs *-lamba* and *-vuula* can license *instrument* as implicit argument, as exemplified in (373a) with the verb *-lamba*.

(373) a. *Madya malmbilwe munzungu/#mutembo/kwa Luzolo*
ma-dya ma-lamb-il-w-e mu-Ø-nzungu/#mu-Ø-tembo/kwa Luzolo
6-meal 6/AgrS-cook-APPL-PASS-PST 18-9-pot/18-7-wind/by Luzolo
Meal was cooked in pot/from wind/by Luzolo (Intd: the meal was cooked in pot/from wind/by Luzolo)

b. *Munsambu uyokelwe #mukaanga/#mutembo/kwa n'kento*
mu-nsambu u-yok-el-w-e mu-Ø-kaangu/mu- Ø-tembo/kwa Luzolo
3-fish 3/AgrS-roast-APPL-PASS-PST 18-7-toaster/18-7-wind/by Luzolo
Dry fish was roasted with toaster/from the wind/by (Intd: the dry fish was roasted in a toaster/from the wind/by Luzolo)

6.2.4.3.1 *Agent-oriented* phrase modification

The sentences examined with the five verbs can be modified by an *agent-oriented* phrase, as exemplified by sentence with the *-lamba* verb in (374).

(374) *Madya malambilwe muntima wa mbote*
ma-dya ma-lamb-il-w-e ***mu-ntima wa mbote***
6-meal 6/AgrS-cook-APPL-PASS-PST 18-good of heart
Meal was cooked happily (Intd: the meal was cooked happily)

6.2.4.3.2 *By-self* phrase modification

The five sentences with cook verbs examined in this sub-section cannot be modified by a *by-self* phrase for syntactic reasons, as exemplified in (375) with the verb *-lamba.* This means the *by-self* phrase cannot co-occur with the passive morpheme.

(375) **Madya malembwe mau mosi*
ma-dya ma-lemb-w-e ***m-au mosi***
6-meal 6/AgrS-cook-PASS-PST 6-itself
Meal was cooked by itself (Intd: the meal was cooked by itself)

6.2.4.3.3 *Again* phrase modification

Similarly to the sentences with the Agent argument in sub-section 6.2.4.1.5, the five sentences are felitious with an *again* phrase, as illustrated with *-lamba* in (376). However, the use of the *again* phrase holds two possible interpretations: it pressuposes the existence of a previous time at which the wall broke again (repetitive) or can pressuppose that there is a past time at which the wall broke, but not that there was an earlier event (restitutive).

(376) *Madya malembwe dyaka*
ma-dya *ma-lemb-w-e* ***dyaka***
6-meal 6/AgrS-cook-PASS-PST again
Meal was cooked again (Intd: the meal was cooked again)

6.2.4.3.4 *Purpose* clause modification

Of the five sentences examined in this sub-section, four can be modified by a *purpose* clause, as exemplified in (377a) with the verb *-lamba*. The sentence with the verb *-syokesa* is not acceptable, as shown in (377b).

(377a) a. *Madya dimalambilwe mpasi vo antu adya mo*
ma-dya ***di****-ma-lamb-il-w-e* ***mpasi vo*** *a-ntu a-dya mo*
6-food Cp-6/AgrS-cook-APPL-PASS-PST so that 2-person 2-eat them
Meal was cooked so that people eat it (Intd: the meal was cooked so that people eat it)

b. *#Maaki dimasyokeselwe mpasi vo adiila mo mbolo*
ma-aki ***di****-ma-syok-es-el-w-e* ***mpasi vo*** *a-diila mo mbolo*
6-egg Cp-6/AgrS-fry-CASUS-APPL-PASS-PST so that 2-eat for them bread
Eggs were fried so that they eat them with bread (Intd: eggs were fried so that they eat them with bread)

6.2.4.4 Applicate locative sentence

The diagnostic test with *-lamba* 'cook' verbs suggests these verbs can be used in applicate locative sentences, as shown in (378). The inclusion of the applicative suffix gives the meaning of exclusiveness, as shown in the glosses.

-lamba 'cook'

(378) a. *N'kento lambidi mwana madya munzungu*
Ø-n'kento *lamb-il-i* *mw-ana* *ma-dya* *mu-Ø-nzungu*
1-woman cook-APPL-PST 1-child 6-meal 18-9-pot
Woman cooked for child meal in pan (Intd: 'The woman cooked the meal for the child exclusively in the pot)

b. *Nzungu ilambidi n'kento mwana madya*
Ø-nzungu *i-lamb-il-i* *Ø-n'kento* *mw-ana* *ma-dya*
9-house 9/AgrS-cook-APPL-PST 1-woman 1-child 6-food
Pot cooked woman child meal (Intd: the pot is the exclusive place which the woman cooked the meal for the child)

-vuula 'boil'

c. *Luzolo uvuudilanga aana madezo munzungu*
Luzolo *u-vuud-il-ang-a* *a-ana* *ma-dezo* *mu-Ø-nzungu*
1-PN AgrS-boil-APPL-HAB-FV 2-child 6-bean 18-9-pot
Luzolo boils for children beans in pan (Intd: Luzolo boils the beans for the children exclusively in the pot)

d. *Nzungu yoyo ivuudilanga Luzolo aana madezo*
Ø-nzungu yoyo *i-vuud-il-ang-a* *Luzolo* *a-ana* *ma-dezo*
9-pot that 9/AgrS-boil-APPL-HAB-FV 1-PN 2/child 6-bean
That pot that boils Luzolo children beans (Intd: that pan is the exclusive place in which Luzolo boils the beans for the children)

-yoka 'roast'

e. *Luzolo ugyokelanga aana munsambu vaziku*
Luzolo *u-gyok-el-ang-a* *a-ana* *mu-nsambu* *va-Ø-ziku*
1-PN 1/AgrS-roast-APPL-HAB-FV 2-child 3-fish 16-5-fire
Luzolo roasts children the dry fish at fire (Intd: Luzolo roasts the dry-fish for the children exclusively on the fire)

f. *Ziku digyokelanga Luzolo aana munsambu*
Ø-ziku *di-gyok-el-ang-a* *Luzolo* *a-ana* *mu-nsambu*
5-fire 5/AgrS-roast-APPL-HAB-FV 1-PN 2-child 3-fish
Fire roasts Luzolo childern dry fish (Intd: the fire is the exclusive place which the woman roasts the fish for the children)

-kaanga 'toast'

g. *Luzolo ukaangilanga aana nguba vakaanga*
Luzolo *u-kaang-il-ang-a* *a-ana* *Ø-nguba* *va-kaangu*
1-PN 1/AgrS-toast-APPL-HAB-FV 2-child 10-peanut 16-toaster
Luzolo toasts children peanuts on toaster (Intd: Luzolo toasts peanuts for the children exclusively on the toaster)

h. *Kaangu kikaangilanga Luzolo aana nguba*
Ø-kaangu *ki-kaang-il-ang-a* *Luzolo* *a-ana* *Ø-nguba*
7-toaster 7/AgrS-toast-APPL-HAB-FV 1-PN 2-child 10-peanut
Toaster toasts Luzolo children peanuts (Intd: the toaster is the exclusive place which Luzolo toasts peanuts for the children)

-syokesa 'fry'

i. *N'kento usyokeselanga aana maaki vakaangu*
Ø-n'kento *u-syok-es-el-ang-a* *a-ana* *ma-aki* *va-mengo*
1-woman 1/AgrS-fry-CAUS-APPL-HAB-FV 2-child 6-egg 16-frying pan
Woman fries children eggs on frying pan (Intd: the woman fries eggs for the children exclusively in the frying pan)

j. '*Mengo kisyokeselanga n'kento aana maaki*
Ø-'mengo *ki-syok-es-el-ang-a* *Ø-n'kento* *a-ana* *ma-aki*
7-frying pan 7/AgrS-fry-CAUS-APPL-HAB-FV 1-woman 2-child 6-egg
Frying pan fries woman children eggs (Intd: the frying pan is the exclusive place in which the woman fries eggs for the children)

6.2.4.5 *Middle* formation

Constructions with the middle voice exhibit similar morphology to those discussed in sub-sections 6.2.1.4, 6.2.2.4 and 6.2.3.4. They are all marked by the morphemes **-ik-** and **-am-**, depending on morphological conditions. With regard to the interpretation of the sentence (379a), it reads that 'chicken is easy to cook or anybody can cook chicken'. This is one of the diagnostic tests widely used with the middle construction, as discussed in chapter 3, sub-section 3.4.1 However, the sentence with the verb *-syokesa* is regarded as unacceptable as, shown in (379b).

(379) a. *Nsusu itoma lambukanga #mundwenga/#yau mosi*
Ø-nsusu *i-tom-a* *lamb-**uk**-ang-a* *mundwenga/yau mosi*
9-meat 9- be good-FV cook-CI-HAB-FV cautiously/by itself
Chicken cooks well cautiously/by itself (Intd: the chicken cooks)

b. *#Maaki mama mayoma syokesekanga mundwenga/mau mosi*
ma-aki *ma-ma* *ma-tom-a* *syokes-**ek**-ang-a #mundwenga/#mau mosi*
6-egg 6-these 6-be good-FV fry-CI-HAB-FV cautiously/by itself
These eggs fry well cautiously/by itself

As is the case with other middle sentences discussed in sub-sections 6.2.1.4, 6.2.2.4 and 6.2.3.4, when the sentences is used in the past tense, they do not have the meaning of

genericity, rather they have the meaning of 'the event of cooking chicken was easily done/performed, as shown in (380).

(380) *Nsusu itomene lambuka*

Ø-nsusu	*i-tom-ene*	*lamb-**uk**-a*
9-meat	9-be good-PST	cook-CI-FV

Chicken cooked well (Intd: someone cooked the chicken well)

In summary, four of the five examined sentences with -*lamba* 'cook' verbs occur in the causative and anticausative alternation. The causative variant is morphologically overt whereas the anticausative variant exhibits the morpheme **-ik-**, which serves as the controller of intransitivity, as discussed in section 6.2.4.2.

The acceptability with sentences in the anticausative to which some diagnostic tests are applied is controlled by semantic/pragmatic and syntactic factors. Three of the five sentences examined with cook verbs cannot take *agent*, *natural force* and *instrument* as implicit arguments, whereas for the two other sentences with the verbs -*gyoka* and -*kaanga* speakers' judgement waver. The two sentences with the verbs -*lamba* and -*vuula*, can be modified by an *agent-oriented* adverbial, as discussed in sub-section 6.2.4.2.2. This fact presupposes the presence of a causer in the anticausative, because *agent-oriented* adverbials are associated with agentivity. Sentences with -*lamba* 'cook' and –*vuula* 'boil', can be modified by an *again* phrase. The introduction of the *again* phrase has two possible interpretations: it can pressupose the existence of a previous time at which the meal is cooked again (repetitive) or it can pressupose that there was a past time at which the meal was cooked, but not that there was an earlier event (restitutive).

Contrary to the example sentences in the causative variant, only the two sentences with the verbs, -*lamba* and -*vuula*, are acceptable with both *durative* and *time* frame adjuncts. As far as the other two sentences with the verbs -*gyoka* and -*kaanga* are concerned, the speakers' judgements waver, as discussed in sub-section 6.2.4.2.6. Like the constructions with cut verbs, discussed in section 6.2.2.3, none of the examined passive verbs can be modified by *natural force*, but two of the five verbs, -*lamba* and -*gyoka* can be modified by both *Agent* and *Instrument*, as discussed in section 6.2.4.3. None of the five verbs examined can be modified by a *by-self* phrase for syntactic reasons. In fact the passive morpheme is associated with the agentive, thus it does not co-occur with the *by-self* phrase. Four of the five verbs are felicitous with middle formation. However, such acceptability is constrained by properties of

the Theme argument as the subject. Table 15 summarises the properties of acceptability with diagnostic tests of the example sentences with *cook* verbs.

Verbs	Causative type of external argument and other diagnostic tests									Anticausative and other diagnostic tests									Passive and other diagnostic tests							Middles		
										PPs									PPs									
	Agent	Natural force	Instrument	Agent-oriented	By-self modif	Again modif	Purpose modif	Temp. modif.		Agent	Natural force	Instrument	Agent-oriented	By-self modif	Again modif	Purpose modif	Temp. modif		Agent	Natural force	Instrument	Agent-oriented	By-self modif	Again modif	Purpose modif	Middle	Agent-oriented	By-self modif
								F	I								F	I										
-lamba	√	#	#	√	√	√	√	√	#	#	#	#	√	#	√	#	√	√	√	#	√	√	*	√	√	√	#	#
-gyoka	√	#	#	√	√	√	√	√	#	?	?	?	?	#	?	?	?	?	√	#	√	√	*	√	√	√	#	#
-vuula	√	#	#	√	√	√	√	√	#	#	#	#	√	#	√	#	√	√	√	#	#	√	*	√	√	√	#	#
-kaanga	√	#	#	√	√	√	√	√	#	?	?	?	?	#	?	?	?	?	√	#	#	√	*	√	√	√	#	#
-syokesa	√	#	#	√	√	√	√	√	#	#	#	#	#	#	#	#	#	#	√	#	#	√	*	#	#	#	#	#

Table 15: Summary of diagnostic tests with –*lamba* ‘cook’ verbs in *Kizombo*

6.2.5 -*dya* "ingesting verbs"

Both *eat* and *chew* verbs are related to the ingesting of food (Levin 1993, section 39). They are known in the linguistic literature by their variation to whether or not they allow unspecified object alternation. In *Kizombo* both the -*dya* 'eat' and -*tafuna* 'chew' verbs can occur in the causative and anticausative alternation.

6.2.5.1 Causative

6.2.5.1.1 *Agent* as external causer

Like the example sentences discussed in sub-sections 6.2.1.1, 6.2.2.1.1, 6.2.3.1.1 and 6.2.4.1.1, the sentences with the verbs -*dya* 'eat' and -*tafuna* 'chew' in (381) exhibit the properties of causation. In the case of the verb -*dya*, the preverbal arguments *Nzumba* and *nkombo* 'the goat' are regarded as the external causers and the postverbal arguments Themes *dyoko* and *dinkondo* are the causees undergoing the eating and chewing events. These two verbs accept the animate as external causer.

(381) a. *Nzumba/nkombo diidi dinkondo*

Nzumba/Ø-nkombo	*di-idi*	*di-nkondo*
1-PN/9-goat	eat-PST	5-banana

Nzumba/goat ate a banana

6.1.5.1.2 *Instrument/natural force* as causer

Similarly to sentences with *cook* verbs discussed in section 6.2.4.1.2, sentences with -*dya* verbs do not accept both *instrument* and *natural force* as external causers, as shown in (382). The reason is that these verbs express human-driven activity, therefore they denote degree of intentionality.

(382) a. *#Nsati/#tembo (i)kidiidi dinkondo*

Ø-nsati/Ø-tembo	*i-ki-di-idi*	*di-nkondo*
9-fork /7-wind	8-7/AgrS-eat-PST	5-banana

This fork/wind ate a banana

b. *#Mbele/tembo (i)kitafuni dyoko*

Ø-mbele/#Ø-tembo	*i-ki-tafun-i*	*dy-oko*
9-knife/7-wind	9-7AgrS-chew-PST	5-manioc

Knife/wind chewed manioc (Intd: the knife/wind chewed the manioc)

6.2.5.1.3 *Agent-oriented* phrase modification

Unlike the diagnostic test with *instrument*/*natural force* in (382), the two sentences with the verbs -*dya* and -*tafuna* examined in this sub-section are acceptable with an *agent-oriented* phrase, as exemplified in (383) with verb -*dya*.

(383) *Nzumba diidi dinkondo mukinsweki*

Nzumba	*di-idi*	*di-nkondo*	***mu-kinsweki***
1-PN	eat-PST	5-banana	18-secret

Nzumba ate banana secretly

6.2.5.1.4 *By-self* phrase modification

Likewise, the two sentences examined can be modified by a *by-self* phrase, as exemplified by the sentence in (384) with the verb -*dya*.

(384) *Nzumba diidi dinkondo yani mosi*

Nzumba	*di-idi*	*di-nkondo*	***yani mosi***
1-PN	eat-PST	5-banana	him/herself

Nzumba ate a banana herself

6.2.5.1.5 *Again* phrase modification

The two sentences with verbs -*dya* and -*tafuna* examined are acceptable with an *again* phrase, as shown in (385) with the verb -*dya*. The use of *again* holds for two possible readings: depending on the context, *again* can have a repetitive or restitutive meaning.

(385) *Nzumba diidi dyaka dinkondo*

Nzumba	*di-idi*	***dyaka***	*di-nkondo*
1-PN	eat-PST	again	5-banana

Nzumba ate again banana (Intd: Nzumba ate a banana again)

6.2.5.1.6 *Purpose* clause modification

As is the case of the -*lamba* verbs examined in sub-section 6.2.4.1.6, the subject argument of example sentences with the verb -*dya* can exert control in a purpose clause, as shown in (386) with the verb -*dya*.

(386) *Nzumba dikadiidi dinkondo mpasi vo kanwina dyo maaza*
Nzumba ***di****-ka-di-id-idi* *di-nkondo* ***mpasi vo*** *ka-nwina dyo maaza*
1-PN Cp-1-eat-PST 5-banana so that 1-drink it water
Nzumba ate a banana so that s/he drinks water for it

6.2.5.1.7 *Temporal* phrase modification

The acceptability of a *temporal* phrase is restricted by properties of the object argument that a verb can take. For example, when a sentence takes a singular count noun object, it can be felicitous with a *time* frame adjunct, but when it takes a plural count noun or mass noun, it can be felicitous with a *durative* adjunct, as shown in (387) with the verb *-dya*.

(387) a. *Nzumba diidi dinkondo (#kolo kya-/mu-)ngunga imosi*
Nzumba *di-idi* *di-nkondo (kolo kya-/mu-)ngunga imosi*
1-PN eat-PST 5-banana for/in an hour
Nzumba ate banana for/in an hour

b. *Nzumba diidi mankondo moole (kolo kya-/#mu-)ngunga imosi*
Nzumba *di-idi* *ma-nkondo moole (kolo kya-/mu-)ngunga imosi*
1-PN eat-PST 6-banana two for/in an hour
Nzumba ate two bananas for/in an hour

6.2.5.2 Anticausative

The two sentences with the verbs *-dya* and *-tafuna* can occur in the anticausative alternation. Syntactically, the Theme argument *dinkondo*, regarded as the object of the causative sentence in (381), is taken as the subject argument of the sentences in (388) in which it appears to be interpreted as the Theme.

(388) *Dinkondo didiukidi*
di-nkondo *di-di-****uk****-idi*
5-banana 5/AgrS-eat-CI-PST
Banana ate (Intd: someone ate a banana)

6.2.5.2.1 *PP-modification*

With respect to the diagnostic tests with PP-modification, *-dya* verbs, similarly to the *-lamba* verbs discussed in sub-section 6.2.4.2.1, can license neither *instrument* nor *natural force* as implicit argument. In addition, all constructions with *by*-phrase are not accepted as an implicit argument, as shown in (389).

(389) *Dinkondo didiukidi #munsati/#mutembo/#kwa Luzolo*
Di-nkondo *di-di-**uk**-idi* *mu-Ø-nsati/mu-Ø-tembo/kwa Luzolo*
5-banana 5/AgrS-eat-CI-PST 18-9-fork/18-7-wind/by Luzolo
Banana ate with fork/from wind/by Luzolo (Intd: Someone ate a banana with the help of a fork)

6.2.5.2.2 *Agent-oriented* phrase modification

The two sentences examined in this sub-section can be modified by an *agent-oriented* phrase, as exemplified in (390) with the verb *-dya*. The acceptability of an *agent-oriented* phrase pressuposes a presence of causer of event.

(390) *Dinkondo didiukidi kumakasi*
di-nkondo *di-di-**uk**-idi* ***ku-makasi***
5-banana 5/AgrS-eat-CI-PST 17-angrily
Banana ate angrily (Intd: someone ate a banana angrily)

6.2.5.2.3 *By-self* phrase modification

Contrary to the example sentence with the verb *-fumbika* in (348), sentences with the verb *-dya* 'ingesting' cannot be modified by a *by-self* phrase, as illustrated in (391).

(391) *#Dinkondo didiukidi dyau mosi*
di-nkondo *di-di-**uk**-idi* ***dy-au mosi***
5-banana 5/AgrS-eat-CI-PST 5-itself
Banana ate itself (Intd: someone ate a banana him/herself)

6.2.5.2.4 *Again* phrase modification

Like the causative variant discussed in sub-section 6.2.5.1.5, the two sentences examined in this sub-section are acceptable with an *again* phrase, as shown in (392) with the verb *-dya*. The use of *again* has two possible readings: depending on the context, it can mean a repetitive or restitutive meaning.

(392) *Dinkondo didiukidi dyaka*
di-nkondo *di-di-**uk**-idi* *dyaka*
5-banana 5/AgrS-eat-CI-PST again
Banana ate again (Intd: someone ate a banana again)

6.2.5.2.5 *Purpose* clause modification

With regard to *purpose* clause modification, the subject argument of only the sentence with the verb *-tafuna* can exert control in a purpose clause, as shown in (393). For sentences with the verb *-dya* is the speakers' judgements waver, as shown in (393b).

(393) a. ?[22]*Dinkondo didiukidi mpasi vo anwina dyo maaza*
di-nkondo ***di**-di-di-**uk**-idi* ***mpasi vo** a-nwina dyo maaza*
5-banana Cp-5/AgrS-eat-CI-PST so that 2- drink it water
Banana ate so that they can drink water (Intd: someone ate a banana so that they can drink water for it)

b. *Dyoko diditafukini mpasi vo twanwina dyo maaza*
dy-oko ***di**-di-taf-**uk**-ini* ***mpasi vo** twanwina dyo maaza*
5-manioc Cp-5/AgrS-chew-CI-PST so that we drink it water
Manioc chewed so that we can drink water with it (Intd: someone ate a manioc so that s/he can drink water for it)

6.2.5.2.6 *Temporal* phrase modification

Unlike the example sentences with the Agent argument in (387), only the sentence with the verb *-tafuna* is felicitous with both *durative* and *time* frame adjunct. The difference between them is that the sentences with the *durative* phrase have the interpretation of "it has been an hour since the event of chewing occurred" whereas the sentences with the *time* frame adjunct has the interpretation of "the event of chewing occurred in the interval of an hour". On sentences with verb *-dya* the speakers' judgements waver, as illustrated in (394)

(394) a. ?*Dinkondo didiukidi (kolo kya-/mu-)ngunga imosi*
di-nkondo *di-di-**uk**-idi* *(kolo kya-/mu-)ngunga imosi*
5-banana 5/AgrS-eat-CI-PST for/in an hour
Banana ate for/in an hour (Intd: someone ate a banana in/for an hour)

b. Dyoko ditafukini *(kolo kya-/mu-)ngunga imosi*
dy-oko *di-taf-**uk**-ini* *(kolo kya-/mu-ngunga imosi*
5-manioc 5/AgrS-chew-CI-PST for/in an hour
Manioc chewed for/in an hour (Intd: someone chewed a manioc in/for an hour)

[22] Although some speakers acknowledged this construction, some others said that such a construction sounds awkward due to phonological constraints. People would say '*dinkondo di-n-didi dyo mpasi vo ya nwa maaza*.'

6.2.5.3 Passive and PP-modification

The object argument of one of the two constructions examined in this sub-section can occur as subject of the passive sentence. With regard to sentences with the verb *-dya* the speakers' judgements waver, as shown in (395a). With regard to PP-modification, the sentence with the *-tafuna* 'chew' verb can license *instrument* and *agent* as implicit argument, but *natural force* is not acceptable, as shown in (395).

(395) a. ?*Nguba zidilwe munsati/#mutembo/kwa Luzolo*
Ø-nguba zi-di-il-w-e mu-Ø-nsati/mu-Ø-tembo/kwa Luzolo
10-peanut 10/AgrS-eat-APPL-PASS-PST 18-9-fork/18-7-wind/by Luzolo
Peanuts were eaten with fork/from wind/by Luzolo (Intd: the peanuts were eaten with a fork/from the wind/by Luzolo)

b. *Nguba zitafunwe mumeeno/#mutembo/kwa Luzolo*
Ø-nguba zi-tafun-w-e mu-me-eno/mu-Ø-tembo/kwa Luzolo
10-peanut 10/AgrS-chew-PASS-PST 18-6-tooth/18-7-wind/by Luzolo
Peanuts were chewed with teeth/from wind/by Luzolo (Intd: the peanuts were chewed with help of teeth/from the wind/by Luzolo)

6.2.5.3.1 *Agent-oriented* phrase modification

Only the sentence with the verb *-tafuna* 'chew' can be modified by the *agent-oriented* phrase, as exemplified in (396a). As regards the sentence with the verb *-dya* 'eat', the speakers' judgement wavers, as shown in (396b).

(396) a. ?*Nguba zidiilwe kumakasi*
Ø-nguba zi-di-il-w-e ***ku-makasi***
10-peanut 10/AgrS-eat-APPL-PASS-PST 17-angrily
Peanuts were eaten angrily (Intd: the peanuts were eaten angrily)

b. *Nguba zitafunwe kumakasi*
Ø-nguba zi-tafun-w-e ***ku-makasi***
10-peanut 10/AgrS-chew-PASS-PST 17-angrily
Peanuts were chewed angrily (Intd: the peanuts were chewed angrily)

6.2.5.3.2 *By-self* phrase modification

Like the case with the sentences in sub-section 6.2.4.3.2, example (375), the two sentences examined in this sub-section cannot be modified by a *by-self* phrase for syntactic reasons, as exemplified in (397) with the verb *-dya*.

(397) **Nguba zidiilwe zau mosi*
Ø-nguba *zi-di-il-w-e* ***z-au mosi***
10-peanut 10/AgrS-eat-APPL-PASS-PST 10-it self
Peanuts were eaten by itself (Intd: the peanuts were eaten on its own/not mixed with anything alse)

6.2.5.3.3 *Again* phrase modification

Only the sentence with the verb *-tafuna* is regarded as acceptable with an *again* phrase, as shown in (398b). For the sentence with the verb *-dya* the speakers' judgements waver, as illustrated in (398a). The use of *again* holds two possible interpretations: depending on the context, *again* can mean a repetitive or restitutive.

(398) a. ?*Nguba zidiilwe dyaka*
Ø-nguba *zi-di-il-w-e* ***dyaka***
10-peanut 10/AgrS-eat-APPL-PASS-PST again
Peanut were eaten again (Intd: the peanuts were eaten again)

b. *Nguba zitafunwe dyaka*
Ø-nguba *zi-tafun-w-e* ***dyaka***
10-peanut 10/AgrS-chew-PASS-PST again
Peanut were chewed again (Intd: the peanuts were chewed again)

6.2.5.3.4 *Purpose* clause modification

The two sentences with ingesting verbs cannot exert control in a purpose clause, as shown in (399).

(399) #*Nguba dizidiilwe mpasi voz zanwina maaza*
Ø-nguba ***di****-zi-di-il-w-e* ***mpasi vo*** *za-nwina maaza*
10-peanut Cp-10/AgrS-eat-APPL-PASS-PST so that 10-drink water
Peanuts were eaten so that they (peanut) can drink water (Intd: the people ate peanuts so that they can drink water for it)

6.2.5.4 Applicative locative sentence

With regards to the applicative locative sentence, the two sentences with ingesting verbs are felicitous, as shown in (400) with the verb *-dya*. The inclusion of the applicative suffix brings about the interpretation of exclusiveness, as shown in glosses.

(400) a. *Nzumba udilanga madya vameeza*

Nzumba	*u-di-il-ang-a*	*ma-dya*	*va-Ø-meeza*
1-PN	AgrS-eat-APPL-HAB-FV	6-food	16-6-table

Nzumba ate meal on table (Intd: Nzumba eats the meals exclusively on the table)

b. *Meeza madilanga Nzumba madya*

Ø-meeza	*ma-di-il-ang-a*	*Nzumba*	*ma-dya*
6-table	6/AgrS-eat-APPL-HAB-FV	1-PN	6-food

Table eat for Nzumba meal (Intd: the table is the exclusive place where Nzumba eats meals)

6.1.5.5 *Middle* formation

The two sentences examined in this sub-section are not felicitous in a middle construction, as illustrated by the sentence in (401) with the verb *-dya*.

(401) *#Nguba zanzewa zitoma diukanga #mundwenga/#zau mosi*

Ø-nguba zanzewa	*zi-tom-a*	*di-uk-ang-a*	*mundwenga/zau mosi*
10-peanut	10/AgrS-be good-FV	eat-CI-HAB-FV	caustiously/by itself

The fresh peanuts eat well caustiously/by itself

To summarise, the two ingesting verbs examined, can occur in the causative and the anticausative alternation. The causative variant is morphologically unmarked, whereas the anticausative variant is morphologically marked, as discussed in sections 6.2.5.1 and 6.2.5.2. The diagnostic tests with the causative variant suggest that the example sentences with *-dya* 'ingesting' verbs can take either *natural force* or *instrument* as the external causer, as discussed in sub-section 6.2.5.1.2. This means that the events of these verbs are human-driven activities. However, the two sentences are acceptable with other modifications, as summarised in table 16. The diagnostic test with a *temporal* phrase modification is constrained by properties of the object argument. Sentences with a count single noun are acceptable with the *time* frame adjunct, but when they take a count plural noun or mass noun they are felicitous with the *durative* adjunct, as discussed in sub-section 6.2.5.1.7.

The acceptability of sentences in the anticausative to which some diagnostic tests are applied is constrained by semantic/pragmatic and syntactic factors. The two sentences with ingesting verbs examined cannot take *agent*, *natural force* and *instrument* as implicit arguments, but they can be modified by an *agent-oriented* adverbial, as discussed in sub-section 6.2.5.2.2. This fact explains a presence of a causer in the anticausative construction, because *agent-oriented* adverbials are associated with agentive. Sentences with ingesting verbs can also be

modified by an *again* phrase. The use of the *again* phrase has two possible interpretations: depending on the context, *again* can have a repetitive or restitutive meaning. Contrary to what obtains with the example sentences in the causative alternant, only the sentence with the verb -*tafuna*, is acceptable with both *durative* and *time* frame adjuncts. The sentence with the verb -*dya* is the speakers' judgement waver, as discussed in sub-section 6.2.5.2.6. The two sentences in the passive cannot be modified by *natural force* and *instrument*. Only the sentence with the verb -*tafuna* can be modified *by an agent-oriented* phrase, as discussed in sub-section 6.2.5.3.1. Sentences with the *by-self* phrase is infelicitous for syntactic reasons. Table 16 summarises the properties of acceptability with diagnostic tests of the example sentences with ingesting verbs.

Verbs	Causative type of external argument and other diagnostic tests									Anticausative and other diagnostic tests									Passive and other diagnostic tests							Middles		
										PPs									PPs									
	Agent	Natural force	Instrument	Agent-oriented	By-self modif	Again modif	Purpose modif	Temp. modif.		Agent	Natural force	Instrument	Agent–oriented	By-self modif	Again modif	Purpose modif	Temp. modif		Agent	Natural force	Instrument	Agent-oriented	By-self modif	Again modif	Purpose modif	Middle	Agent-oriented	By-self modif
								F	I								F	I										
-dya	√	#	#	√	√	√	√	#	√	#	#	#	√	#	√	?	?	?	?	#	#	?	*	√	#	#	#	#
-tafuna	√	#	#	√	√	√	√	#	√	#	#	#	√	#	√	√	√	√	√	#	#	√	*	√	#	#	#	#

Table 16: Summary of diagnostic tests with *-dya* ‘ingesting’ verbs in *Kizombo*

6.2.6 *-tuunga* "build verbs"

According to Levin (1993, section 26.1) *-tuunga* 'build' verbs describe the creation of a product through the transformation of (raw) material. If the creation is done on someone's behalf, then these verbs like verbs of obtaining and 'get' verbs are found in benefactive alternation. In this section, two verbs, namely *-tuunga* 'build' and *-kusa* 'paint', are examined. The discussion will center around the verb *-tuunga*.

6.2.6.1 Causative

6.2.6.1.1 *Agent* as external causer

The example sentence with the verb *-tuunga* 'build' in (402) expresses properties of a causal relation between the two argument theta-roles. As is the case with the verb *-kusa*, in (402b), the preverbal argument *Luzolo* is regarded as external causer and the postverbal argument *gyaka* is the causee undergoing the building event. It should also be noted that the sentence with the verb *-kusa* 'paint' does not accept any non-human entity as external causer, as shown in (402b).

(402) a. *N'tungi wa nzo/nuni tungidi gyaka/zala*
Ø-n'tungi wa nzo/Ø-nuni *tung-idi* *Ø-gyaka/ Ø-zala*
1-builder/3-bird build-PST 7-wall/5-nest
Builder/bird built wall/nest (Intd: the builder/bird built a wall/nest)

b. *Toko/#nkombo (di)ikusidi mpemba munzo*
Ø-toko/Ø-nkombo *di-i-kus-idi* *mpemba* *mu-Ø-nzo*
5-boy/9-goat 5-9/AgrS-paint-PST paint 18-9-house
Boy/goat painted house with paint (Intd: The boy/goat painted the house with the help of paint)

6.2.6.1.2 *Instrument/natural force* as causer

The two sentences examined in this sub-section do not license *instrument* and *natural force* as external causer, as shown in (403) with the verb *-tuunga*.

(403) *#Mbele ya mason/tembo (i)kitungidi gyaka*
Ø-mbele ya mason/# Ø-tembo[23] *i-ki-tung-idi* *Ø-gyaka*
9-trowel/7-wind 9-7/AgrS-build-PST 7-wall
Trowel/wind built wall (Intd: the knife/wind built the wall)

[23] The unacceptability of this particular sentences is related to the noun gyaka, because one can say a tembo kitungidi kimbongela (the wind built/erected a dune)

6.2.6.1.3 *Agent-oriented* modification

Unlike the diagnostic test with *instrument* and *natural force* as causer, the two sentences with *build* verbs examined in this sub-section are felicitous with an *agent-oriented* phrase, as exemplified by (404) with the verb *-tuunga*.

(404) *N'tungi wa nzo tungidi gyaka mundwenga*

Ø-n'tungi wa nzo	*tung-idi*	*Ø-gyaka*	***mu-ndwenga***
1-builder of house	build-PST	7-wall	18-cautiously

Builder/bird built wall cautiously (Intd: the builder built a wall cautiously)

6.2.6.1.4 *By-self* phrase modification

As is the case with the sentence with the *agent-oriented* phrase in (404), the two sentences examined in this sub-section can be modified by a *by-self* phrase, as exemplified in (405) with the verb *-tuunga*. The example sentence has the interpretation of 'the builder builds the wall without external help'.

(405) *N'tungi wa nzo tungidi gyaka yani mosi*

Ø-n'tungi wa nzo	*tung-idi*	*Ø-gyaka*	***yani mosi***
5-builder of house	build-PST	7-wall	by him/herself

Builder/bird built wall by him/herself (Intd: the builder/bird built the wall by him/herself)

6.2.6.1.5 *Again* phrase modification

Likewise, the two sentences with *build* verbs are acceptable with an *again* phrase, as shown in (406) with the verb *-tuunga*. As was said before, the use of the *again* phrase holds two possible readings: depending on the context, it can have a repetitive or restitutive meaning.

(406) *N'tungi wa nzo tungidi dyaka gyaka*

Ø-n'tungi wa nzo	*tung-idi*	*dyaka*	*Ø-gyaka*
1-builder of house	build-PST	again	7-wall

Builder built again wall (Intd: the builder built the wall again)

6.2.6.1.6 *Purpose* clause modification

The subject argument of two sentences examined in this sub-section can exert control in a *purpose* clause, as shown in (407) with the verb *-tuunga*.

(407) *N'tungi wa nzo dikatungidi nzo mpasi vo kateka yo*
Ø-n'tungi wa nzo *di-ka-tung-idi* *Ø-nzo* *mpasi vo* *ka-teka* *yo*
1-builder Cp-1-build-PST 9-house so that 1-sell it
Builder built house so that s/he sells it (Intd: the builder built a house so that s/he sells it)

6.2.6.1.7 *Temporal* phrase modification

Similarly to the *ingesting* verbs discussed in sub-section 6.2.5.1.7, in example (387), the acceptability of a *temporal* phrase is constrained by properties of the object argument. When a verb takes a singular count noun object, it can be modified by a *time* frame adjunct, but when it takes a plural count noun or mass noun, it can be modified by a *durative* adjunct, as shown in the example sentences in (408) with the verb *-tuunga*.

(408) a. *N'tungi wa nzo tungidi gyaka (#kolo kya-/mu-) ngunga imosi*
Ø-n'tungi wa nzo *tung-idi* *Ø-gyaka* *(kolo kya-/mu-) ngunga imosi*
1-builder build-PST 7-wall for/in an hour
Builder built wall for/in an hour (Intd: The builder built a wall for/in an hour)

b. *N'tungi wa nzo tungidi gyaka (kolo kya-/#mu-) ngunga imosi*
Ø-n'tungi wa nzo *tung-idi* *Ø-gyaka yole* *(kolo kya-/mu-) ngunga imosi*
1-builder build-PST 7-wall two for/in an hour
Builder built two walls for/in an hour (Intd: the builder built two walls for/in an hour)

6.2.6.2 Anticausative

The example sentences in (409) suggest that only the sentence with the verb *-tuunga* in (409a) can occur in the anticausative alternation. For sentence with the verb *-kusa* 'paint' in (409b) the speakers' judgements waver. Like in the sentence with the *-fumbika* verbs, discussed in section 6.1.3.2, number (343), the verb *-tuunga* takes the morpheme **-am-** as the controller of the intransitive, as shown in (409).

(409) a. *Gyaka kitungamene*
Ø-gyaka *ki-tung-**am**-ene*
7-wall 7/AgrS-CI-PST
Wall built (Intd: someone built the wall)

b. *#Nzo ikusukidi mpemba*
Ø-nzo *i-kus-u**k**-idi* *Ø-mpemba*
9-house 9/AgrS-paint-CI-PST 9-paint
House painted (Intd: someone painted the house)

6.2.6.2.1 PP-modification

With respect to the diagnostic test with PP-modification, the sentence with the verb *-tuunga* can only license *instrument* as implicit argument, as shown in (410).

(410) *Gyaka kitungamene mumbele mumbele/#mutembo/#kwa Luzolo*
Ø-gyaka *ki-tung-**am**-ene* *mu-Ø-mbele/mu-Ø-tembo/kwa Luzolo*
7-wall 7/AgrS-build-CI-PST 18-9-knife/18-7-wind/by Luzolo
Wall built in knife/from the wind/by Luzolo (Intd: someone built the wall by means of knife of builder)

6.2.6.2.2 *Agent-oriented* modification

The example sentence with the verb *-tuunga* examined in this sub-section is felicitous with the *agent-oriented* phrase, as exemplified by (411).

(411) *Gyaka kitungamene mundwenga*
Ø-gyaka *ki-tung-**am**-ene* *mu-ndwenga*
7-wall 7/AgrS-CI-PST 18-cautiously
Wall built cautiously (Intd: someone built the wall cautiously)

6.2.6.2.3 *By-self* phrase modification

Like the causative variant discussed in sub-section 6.2.6.1.4, in example (405), the sentences with the verb *-tuunga* in the anticausative cannot be modified by a *by-self* phrase, as illustrated in (412).

(412) a. *#Gyaka kitungamene kyau mosi*
Ø-gyaka *ki-tung-**am**-ene* ***ky-au mosi***
7-wall 7/AgrS-build-CI-PST 7-itself
Wall built by itself (Intd: someone built the wall without external help)

6.2.6.2.4 *Again* phrase modification

The two sentences with the verb *-tuunga* are acceptable with the *again* phrase, as shown in (413). The use of the *again* phrase holds two possible interpretations: depending on the context, it can have a repetitive or restitutive meaning.

(413) *Gyaka kitungamene dyaka*
Ø-gyaka *ki-tung-**am**-ene* ***dyaka***
7-wall 7/AgrS-build-CI-PST again
Wall built again (Intd: the wall is built again)

6.2.6.2.5 *Purpose* clause modification

With regard to purpose clause modification, the subject argument of the sentence with the verb *-tuunga* cannot excert control in a purpose clause, as shown in (414).

(414) *#Nzo dyintungamene mpasi vo ta lekanga aana*
Ø-nzo ***di-** i-tung-a**m**-ene* ***mpasi vo** ya lekanga aana*
9-house Cp-9/AgrS-build-CI-PST so that the children sleep in it
House built so that the children sleep in it (Intd: the house was built so that the children sleep in it)

6.2.6.2.6 *Temporal* phrase modification

Unlike the example sentences with the Agent argument in sub-section 6.2.6.1.7, in example (387), the sentence with the verb *-tuunga* is felicitous with both *durative* and *time* frame adjuncts, as shown in (415). The difference between them is that the sentence with the *durative* phrase has the interpretation of "it has been an hour since the event of building the wall started", whereas the sentence with the *time* frame phrase has the interpretation of "the event of building the wall occurred in the interval of an hour".

(415) *Gyaka kitungamene (kolo kya-/mu-)ngunga imosi*
Ø-gyaka *ki-tung-**am**-ene* *(kolo kya-/mu-)ngunga imosi*
7-wall 7/AgrS-build-CI-PST for/in an hour
Wall built for/in an hour (Intd: the wall was built for/in an hour)

6.2.6.3 Passive and PP-modification

With respect to the passive formation, the two sentences with the verbs *-tuunga* can license both *agent* and *instrument*, but cannot license *natural force* as implicit argument, as exemplified in (416).

(416) *Gyaka kyaki kitungilwe mumbele/tembo/kwa n'tungi wa nzo*
Ø-Gyaka kyaki ki-tung-il-w-e *mu-Ø-mbele/#mu-Ø-tembo/kwa n'tungi wa nzo*
7-wall this 7/AgrS-build-APPL-PASS-PST 18-9-knife/18-7-wind/by builder
This wall was built by means of the trowel/wind/the/by a builder

6.2.6.3.1 *Agent-oriented* phrase modfication

The two sentences examined in this sub-section are felicitous with an *agent-oriented* adverbial, as exemplified in (417) with the verb *-tuunga*.

(417) *Gyaka kyaki kitungilwe kumaksi*
Ø-gyaka kyayi ki-tung-il-w-e ***ku-makasi***
7-wall this 7/AgrS-build-APPL-PASS-PST 17-angrily
This wall was built angrily

6.2.6.3.2 *By-self* phrase modification

In contrast to the diagnostic test with the sentence in (417), the two sentences with the ingesting verbs cannot be modified by a *by-self* phrase for grammatical reasons, as shown in (418).

(418) **Gyaka kyaki kitungilwe kyau mosi*
Ø-gyaka kyaki ki-tung-il-w-e ky-au mosi
7-wall this 7/AgrS-build-APPL-PASS-PST 7-itself
This wall was built by itself

6.2.6.3.3 *Again* phrase modification

The two sentences examined in this sub-section are acceptable with an *again* phrase, as shown in (419) with the verb *-tuunga*. The *again* phrase holds two possible interpretations: depending on the context, *again* can have a repetitive or a restitutive meaning.

(419) *Gyaka kayki kitungilwe dyaka*
Ø-gyaka kyayi ki-tung-il-w-e ***dyaka***
7-wall this 7/AgrS-build-APPL-PASS-PST again
This wall was built again

6.2.6.3.4 *Purpose* clause modification

The subject argument of the two sentences with *-tuunga* 'build' verbs can exert control in a purpose clause, as shown in (420) with the verb *-tunga* 'build'.

(420) *Nzo yayi dyitungilwe mpasi vo ya lekwa*
Ø-nzo yayi ***di****-i-tung-il-w-e* ***mpasi vo*** *ya tekwa*
9-house this Cp-9/AgrS-build-APPL-PASS-PST so that it can be sold
This house was built so that it can be sold

6.2.6.4 *Middle* formation

The two sentences examined with *-tuunga* 'build' verbs in (421) can occur as middle sentences. However, as is the case with middle sentences in sections 6.2.1.4, 6.2.2.4 and 6.2.3.4, none of the sentences examined can be modified by an *agent-oriented* adverbial and a *by itself* phrase.

(421) a. *Nzo ya suku dimosi itoma tungamanga #mundwenga/#yau mosi*
*Ø-nzo ya suku dimosi i-tom-a tung-**am**-ang-a mundwenga/yau mosi*
7-house of room one 9/AgrS-be good-FV build-CI-HAB-FV cautiously/by itself
A bed-room house builds well cautiously/by itself

b. *Gyaka kya lengwa sima kitoma kusukanga mpemba #mundwenga/#kyau mosi*
*Ø-gyaka kya lengwa sima ki-tom-a kus-**uk**-ang-a mpemba mundwenga/kyau mosi*
7-wall ciment 7/AgrS-be good-FV paint-CI-HAB-FV paint cautiously/by itself
The cimented wall paints well cautiously/by itself

Also, when these sentences are used in the past tense they do not have the meaning of genericity, as shown in (422).

(422) a. *Nzo ya suku dimosi itomene tungama*
*Ø-nzo ya suku dimosi i-tom-ene tung-**am**-a*
9-house of room one 9/AgrS-be good-PST build-CI-FV
A bed-room house builds well

b. *Gyaka kya lengwa sima kitomene kusuka mpemba*
*Ø-gyaka kya lengwa sima ki-tom-ene kus-**uk**-a mpemba*
7-wall of ciment 7/AgrS-be good-PST paint-CI-FV paint
The cimented wall paints well

To sum up, one of the two examined *-tunga* 'build' verbs can occur in the causative and anticausative alternation. The causative variant is morphologically unmarked, whereas the anticausative variant is morphologically marked, as discussed in sections 6.2.6.1 and 6.2.6.2. The diagnostic tests with the causative variant reveal that sentences with *build* verbs can take either *instrument* or *natural force* as external causer, as discussed in sub-section 6.2.6.1.2. This means the events denoted by these verbs are an animate-driven activity. The acceptability of a *temporal* phrase modification is constrained by the properties of an object argument. Sentences with a count single noun are acceptable with a *time* frame phrase, but

when they take a count plural noun or mass noun they are felicitous with a *durative* phrase, as discussed in sub-section 6.2.6.1.7.

The acceptability of sentences in the anticausative to which certain diagnostic tests are applied is constrained by semantic/pragmatic and syntactic factors. Sentences with the verb *-tunga* cannot take an *agent*, a *natural force* and an *instrument* as implicit arguments, but can be modified by an *agent-oriented* phrase, as discussed in sub-section 6.2.6.2.2. Also, sentence with the verb *-tunga* can be modified by an *again* phrase with two possible interpretations. The ag*ain* phrase can have a repetitive or restutitive meaning. Contrary to what obtains with example sentences in the causative alternant, sentence with *–tunga* verbs can be acceptable with both *durative* and *time* frame adjuncts.

Sentences with *-tuunga* verbs in the passive can be modified by an *agent* and *instrument* argument, but not by a *natural force* argument. The two sentences are felicitous with an *agent-oriented* adverbial, as discussed in sub-section 6.2.6.3.1. The two sentences with a b*y-self* phrase is infelicitous for syntactic reasons, that is passive morpheme cannot co-occur with the *by-self* phrase. The two sentences are felicitous with middle voice. However, such acceptability is constrained by the properties of the Theme argument as subject. Table 17 summarises the properties of acceptability with diagnostic tests of the example sentences with the build verbs

Verbs	Causative type of external argument and other diagnostic tests									Anticausative and other diagnostic tests									Passive and other diagnostic tests							Middles		
										PPs									PPs									
	Agent	Natural force	Instrument	Agent-oriented	By-self modif	Again modif	Purpose modif	Temp. modif.		Agent	Natural force	Instrument	Agent–oriented	By-self modif	Again modif	Purpose modif	Temp. modif		Agent	Natural force	Instrument	Agent-oriented	By-self modif	Again modif	Purpose modif	Middle	Agent-oriented	By-self modif
								F	I								F	I										
-tuunga	√	#	#	√	√	√	√	#	√	#	#	#	√	#	√	#	√	√	√	#	√	√	*	√	√	√	#	#
-kusa	√	#	#	√	√	√	√	√	#	#									√	#	√	√	*	√	√	√	#	#

Table 17: Summary of diagnostic tests with ‘build verbs’ in *Kizombo*

6.3 INTERNALLY CAUSED CHANGE OF STATE VERBS

6.3.1 *-gyuma* '**parch**' verbs

Levin (1993) observes that members of the class of internal change of state verbs are listed in the class of verbs of entity-specific modes of being. Alexiadou & *et al* (2006) characterize these types of verbs as verbs that do not accept the *Agent* theta-role as external causer. Therefore they are taken as verbs that denote an internal change of state. In this section, seven verbs, namely *-gyuma* 'parch', *-lekoka* 'wilt', *-gola* 'rot', *-mmena* 'blossom', *-vuma* 'bloom', *-bwaka* 'wripen', *-lomba* 'wripen' and *-vya* 'wripen' will be examined. The discussion will center around the verbs *-gyuma* and *-lekoka*.

6.3.1.1Causative

6.3.1.1.1 *Agent* as external causer

Internally caused change of state verbs are known not to accept the Agent as the causer of the event. However, the example sentences in (423) suggest that the verb *-lekoka* 'wilt' in (423b) may accept the Agent argument *n'kento* 'woman' as external causer.

(423) a. *#M'vati yumini mvuma*
Ø-m'vati *yum-ini* *Ø-mvuma*
1-famer parch-PST 10-flower
Farmer parched flower (Intd: the flowers parched)

b. *N'kento lekole nsaki*
Ø-n'kento *lekol-e* *Ø-nsaki*
1-woman wilt-PST 9-cassava-leave
Woman wilted cassava-leaves (Intd: the woman wilted the cassava-leaves)

6.3.1.1.2 *Instrument/natural force* as causer

Except for the sentence with the verb *-lekola*, the other sentences examined in this sub-section accept neither *instrument*, nor *natural* force as causer of event, as shown in (424).

(424) a. *#Tanzi/#mwini kiyumini mvuma*
Ø-tanzi/Ø-mwini *ki-u-yum-ini* *Ø-mvuma*
7-machete/3-wind 7-3/AgrS-parch-PST 10-flower
Machete/sunshine parched flowers (Intd: the flowers parched)

b. *#Mwisu/tuya (u)tulekole nsaki*
Ø-mwisu/tuya *u-tu-lekol-e* *Ø-nsaki*
3-pounding wood/14-fire 3-14/AgrS-wilt-PST 9-cassava-leave
Pounding/fire wilted cassava-leaves (Intd: the cassava-leaves wilted from the fire)

6.3.1.1.3 *Agent-oriented* phrase modification

Apart from the sentence with the verb *-lekoka* 'wilt' in (425b), the other remaning sentences cannot be modified by an *agent-oriented* phrase, as shown in (425a).

(425) a. *#M'vati yumini mvuma mundwenga*
Ø-m'vati *yum-ini* *Ø-mvuma* ***mu-ndwenga***
1-famer parch-PST 10-flowers 18-caution
Farmer parched flower coutiously (Intd: the flowers parched cautiously)

b. *N'kento lekole nsaki mundwenga*
Ø-n'kento *lekol-e* *Ø-nsaki* ***mu-ndwenga***
1-flowers wilt-PST 9-cassava-leave 18-caution
Woman wilted cassava-leaves caution (Intd: the woman wilted the cassava-leaves cautiously)

6.3.1.1.4 *By-self* phrase modification

Likewise, example sentences with *-gyuma* 'parch' verbs suggest that only the sentence with the verb *-lekoka* 'wilt' can be modified by a *by-self* phrase. The sentence has the interpretation of 'the woman wilted the cassava-leaves without external help. The other sentences are not acceptable, as shown in (426a) with the parch verb.

(426) a. *#M'vati yumini mvuma yani mosi*
Ø-m'vati *yum-ini* *Ø-mvuma* ***yani mosi***
1-famer parch-PST 10-flowers him/her self
Farmer parched flower by itself (Intd: the flowers parched by itself)

b. *N'kento lekole nsaki yani mosi*
Ø-n'kento *lekol-e* *Ø-nsaki* ***yani mosi***
1-flowers wilt-PST 9-cassava-leave her self
Woman wilted cassava-leaves herself (Intd: the woman wilted the cassava-leaves without any external help)

6.3.1.1.5 *Again* phrase modification

Like the constructions in (426), the diagnostic test with an *again* phrase is only acceptable with the example sentences (427b) with the verb *-lekoka*. The phrase *again* holds two possible interpretations: depending on the context, it can have a repetitive or restitutive meaning.

(427) a. *#M'vati yumini dyaka mvuma*
Ø-m'vati *yum-ini* ***dyaka*** *Ø-mvuma*
1-famer parch-PST again 10-flower
Farmer parched again flowers (Intd: the flowers parched again)

b. *N'kento lekole dyaka nsaki*
Ø-n'kento *lekol-e* ***dyaka*** *Ø-nsaki*
1-woman wilt-PST again 9-cassava-leave
Woman wilted again cassava-leaves (Intd: the woman wilted cassava-leaves again)

6.3.1.1.6 *Purpose* clause modification

The diagnostic test with a *purpose* clause proved that only the sentence with the *-lekoka* verb in (428b) is acceptable. The others are all unacceptable, as shown in (428) with the *-gyuma* verb.

(428) a. *#M'vati dikayumini mvuma mpasi vo ka….*
Ø-m'vati ***di****-ka-yum-ini* *Ø-mvuma* ***mpasi vo*** *ka...*
1-famer Cp-1-parch-PST 9-flower so that s/he..
Farmer parched flowers so that s/he (Intd: the flowers parched so that it..)

b. *N'kento dikalekolele nsaki mpasi vo kalamba yo*
Ø-n'kento ***di****-ka-lekol-el-e* *Ø-nsaki* ***mpasi vo*** *ka-lamba yo*
1-woman Cp-1-wilt-PST 8-cassava-leave so that 1-cook it
Woman wilted cassava-leaves so that she cook them (Intd: the woman wilted the cassava-leaves so that she cooks them)

6.3.1.1.7 *Temporal* phrase modification

Likewise, the diagnostic test with a *temporal* phrase suggests that the sentence with the verb *-lekoka* 'wilt' only is felicitous with a *durative* phrase, but it is infelicitous with a *time* frame adjunct, as shown in (429b)

(429) a. *#M'vati yumini mvuma (kolo kya-/mu) ngunga imosi*
Ø-m'vati *yum-ini* *Ø-mvuma* *(kolo kya-/mu) ngunga imosi*
1-famer parch-PST 10-flower for/in an hour
Farmer parched flowers for/in an hour (Intd: the flowers parched for/in an hour)

b. *N'kento lekole nsaki (kolo kya-/#mu) ngunga imosi*
Ø-n'kento *lekol-e* *Ø-nsaki* *(kolo kya-/mu) ngunga imosi*
1-woman wilt-PST 9-cassava-leave for/in an hour
Woman wilted cassava-leave for/in an hour (Intd: the woman wilted the cassava-leaves for/in an hour)

6.3.1.2 Anticausative

The example sentences in (430) demonstrate that *-gyuma* parch verbs are basically anticausative variants. Unlike the other anticausative sentences discussed in section 6.2, this class of verbs are morphologically unmarked, with the exception of the verb *-lekoka* 'wilt' which takes **-ik-** as illustrated in (430b).

(430) a. *Mvuma ziyumini*
Ø-mvuma *zi-yum-ini*
10-flower 10/AgrS-parch-PST
Flowers parched (Intd: the flowers parched)

b. *Nsaki ilekokele*
Ø-nsaki *i-lek-o**k**-ele*
9-cassava-leave 9/AgrS-wilt-CI-PST
Cassava-leaves wilted (Intd: the cassava-leaves wilted)

6.3.1.2.1 *PP- modification*

The example sentences in (431) suggest that *-gyuma* 'parch' verbs can only license *natural force* as implicit argument. This means that, as is the case with the anticausative sentences discussed in section 6.2, sentences with internally caused verbs presuppose the presence of an implicit causer.

(431) a. *Mvuma ziyumini mumwini/#mumbele/#kwa mvati*
Ø-mvuma *zi-yum-ini* *mu-Ø-mwini/mu-Ø-mbele/kwa mvati*
10-flower 10/AgrS-parch-PST 18-3-wind/18-9-knife/by farmer
Flower parched in son/with knife/by farmer (Intd: the flowers parched in the sunshine/with the knife/by the farmer)

b. *Nsaki ilekokele mumwini/#mumbele/#kwa mvati*
Ø-nsaki *i-lekok-ele* *mu-Ø-mwini/mu-Ø-mbele/kwa mvati*
9-cassava-leave 9/AgrS-wilt-PST 18-3-sunshine/18-9-knife/by farmer
Cassava-leave wilted in wind/in knife/by farmer (Intd: the cassava-leaves wilted fom the wind/with the knife/by the farmer)

6.3.1.2.2 *Agent-oriented* phrase modification

The sentences with the *-gyuma* 'parch' verbs in (432) cannot be modified by an *agent-oriented* phrase, as is evident in the sentence with the verb *-lekoka* 'wilt' which occurs in the causative alternation.

(432) a. *Mvuma ziyumini #mundwenga*

Ø-mvuma	*zi-yum-ini*	***mu-ndwenga***
10-flower	10/AgrS-parch-PST	18-cautiously

Flowers parched cautiously (Intd: the flowers parched cautiously)

b. *Nsaki ilekokele #mundwenga*

Ø-nsaki	*i-lekok-ele*	***mu-ndwenga***
9-cassava-leave	9/AgrS-wilt-PST	18-cautiously

Cassava-leaves wilted cautiously (Intd: the cassava-leaves wilted cautiously)

6.3.1.2.3 *By-self* phrase modification

Also, all the sentences with the *-gyuma* 'parch' verbs examined in (433) cannot be modified by a *by-self* phrase. This means, although these verbs are regarded as internally caused, they are presumed to have an external force that cause the change of state.

(433) a. *#Mvuma ziyumini zau mosi*

Ø-mvuma	*zi-yum-ini*	***z-au mosi***
10-flowers	10/AgrS-parch-PST	10-itself

Flowers parched itself (Intd: the flowers parched without external help)

b. *#Nsaki ilekokele yau mosi*

Ø-nsaki	*i-lekok-ele*	***y-au mosi***
9-cassava-leave	9/AgrS-wilt-PST	9-itself

Cassava-leave wilted by itself (Intd: the cassava-leaves wilted without external help)

6.3.1.2.4 *Again* phrase modification

The example sentence with an *again* phrase is acceptable with two possible interpretations: depending on the context, the phrase *again* can have a repetitive or restitutive meaning.

(434) a. *Mvuma ziyumini dyaka*

Ø-mvuma	*zi-yum-ini*	***dyaka***
10-flowers	10/AgrS-parch-PST	again

Flowers parched again (Intd: the flowers parched again)

b. *Nsaki ilekokele dyaka*

Ø-nsaki	*i-lekok-ele*	***dyaka***
9-cassava-leaves	9/AgrS-wilt-PST	again

Cassava-leaves wilted again (Intd: the cassava-leaves wilted again)

6.3.1.2.5 *Purpose* clause modification

As is the case with the sentences with the anticausative examined in section 6.2, the subject argument of the sentences with the *-gyuma* 'parch' verb cannot exert control in a purpose clause, as shown in (435).

(435) a. *#Mvuma diziyumini mpasi voz a....*
Ø-mvuma ***di****-zi-yum-ini* ***mpasi vo*** *za...*
10-flower Cp-10/AgrS-parch-PST so that 10-they
Flowers parched so that they

b. *#Nsaki dyilekokele mpasi vo kalamba yo*
Ø-nsaki ***di****-i-lekok-ele* ***mpasi vo*** *ka-lamba yo*
9-cassava-leaves CP-9/AgrS-wilt-PST so that it 3/Gs-cook them
Cassava-leaves wilted so that she cooks them

6.3.1.2.6 *Temporal* phrase modification

All the sentences with the *-gyuma* 'parch' verbs are felicitous with both *durative* and *time* frame adjuncts, as illustrated in (436). The difference between them is that sentences with a *durative* phrase have the interpretation of "it has been an hour since an event occurred" whereas sentences with a *time* frame phrase have the interpretation of "the event occurred in the interval of an hour".

(436) a. *Mvuma ziyumini kolo kya-/mu-)ngunga imosi*
Ø-mvuma *zi-yum-ini* *(kolo kya-/mu-)ngunga imosi*
10-flowers 10/AgrS-parch-PST for/in an hour
Flowers parched for/in an hour (Intd: the flowers porched for/in an hour)

b. *Nsaki ilekokele kolo kya-/mu-)ngunga imosi*
Ø-nsaki *i-lekok-ele* *(kolo kya-/mu-)ngunga imosi*
9-cassava-leave 9/AgrS-wilt-PST for/in an hour
Cassava-leaves wilted for/in an hour (Intd: the cassava-leaves wilted for/in an hour)

To summarise, contrary to externally caused change of state verbs, discussed section 6.2, and except for the verb *-lekola* 'wilt', all the sentences with internally caused change of state verbs examined in this section do not occur in the causative construction, as discussed in section 6.3.1.1. For that reason sentences yielded by application of all other diagnostic tests with causative alternant proved to be unacceptable, as summarized in table 18. Unlike the sentences with the causative construction, the example sentences with the anticausative

construction suggest that they can all be modified by a *natural force* argument, but not by an *instrument* argument, as discussed in sub-section 6.3.1.2.1. The acceptability of *natural force* as implicit argument, amounting to the fact that in the anticausative form these constructions cannot be modified by a *by-self* phrase, presupposes the presence of an implied external causer. Like the anticausative constructions discussed in section 6.2, example sentences with -*gyuma* verbs are felicitous with *durative* and *time* frame adjuncts, as discussed in sub-section 6.3.1.2.6. Sentences with the -*lekola* 'wilt' verb show properties analogous to those of externally caused verbs: they have a causative variant and can be modified by an *agent-oriented* phrase. However, an example sentence with the -*lekoka* verb cannot take *instrument* as an external causer. Therefore, while analyzing *Kizombo* verbs, it is inappropriate to classify the verb -*lekola* as an internally caused verb. Table 18 summarises the results yielded through application of the diagnostic test to the example sentences with parch verbs.

Verbs	Causative and other diagnostic tests									Anticausative and other diagnostic tests								
										PPs								
	Agent	Natural force	Instrument	Agent-oriented	By-self modif.	Again modif	Purpose modif	Temp. Modif.		Agent	Natural force	Instrument	Agent -oriented	By itself phrase	Again modif	Purpose clause	Temp. Modif.	
								F	I								F	I
-gyuma	#	#	#	#	#	#	#	#	#	#	√	#	#	#	√	#	√	√
-lekoka	√	√	#	√	√	√	√	√	#	#	√	#	#	#	√	#	√	√
-gola	#	#	#	#	#	#	#	#	#	#	√	#	#	#	√	#	√	√
- ‘mena	#	#	#	#	#	#	#	#	#	#	√	#	#	#	√	#	√	√
-bwaka	#	#	#	#	#	#	#	#	#	#	√	#	#	#	√	#	√	√
-lomba	#	#	#	#	#	#	#	#	#	#	√	#	#	#	√	#	√	√
-vya	#	#	#	#	#	#	#	#	#	#	√	#	#	#	√	#	√	√
-yuma	#	#	#	#	#	#	#	#	#	#	√	#	#	#	√	#	√	√

Table 18: Summary of diagnostic tests with internally caused change of state verbs in *Kizombo*

6.4 DISCUSSION

6.4.1 Defining criterion of causative alternation of the *Kizombo* causative and anticausative verbs

In chapter 3, it was seen that a common interest shared by lexical semanticists revolves around the question about what a native speaker knows about his/her language. The general assumption has been that the lexicon, a memorized storage of a speaker's knowledge of a language, is a structured body, organized according to semantically coherent verbs (cf. Levin 1993; Levin & Rappaport Hovav 1995).

This assumption led the author of this research to consult native speakers of *Kizombo* about the acceptability of the sentences discussed in this chapter and in chapter 7. With regard to the findings, except for the example sentence with the verb *-syolola*, in sub-section 6.2.4.2, example (366e), which cannot alternate, all other sentences with externally caused change of state verbs discussed in section 6.2 have anticausative variants, including verbs that denote human-driven activity, as examined in sub-sections 6.2.2, 6.2.4, 6.2.5 and 6.2.6. On the other hand, apart from the example sentence with the verb *-lekola* 'wilt', all other internally caused change of state verbs discussed cannot occur in the causative alternation. The question to address, here is: what properties make the *Kizombo* change of state verbs alternate?

Invoking the syntactic decomposition approach, as discussed in chapter 3, section 3.3.3, verbs are derived from category a mental roots via the addition of verbalizing heads. These roots are related to non-syntactic information, the encyclopaedic or conceptual knowledge, which can restrict the syntactic frame of a root to alternate. This explains that roots of the verbs examined in sections 6.2.1, 6.2.2, 6.2.3, 6.2.4, 6.2.5 and 6.2.6 are categorized in terms of the node vCAUS and this generalization explains the reason why all the *Kizombo* externally caused verbs occur in the causative and anticausative alternation, and why these alternants are hence base-generated.

The fact that sentences with agentive verbs discussed in section 6.2 have an anticausative variant is supported by Levin & Rappaport Hovav 1995:102-105), when they argue that change of state verbs do not necessarily need the direct intervention of the Agent in order to convey an event denoted by them. Although these scholars acknowledge that agentive verbs rarely occur in the anticausative alternation, the example sentences in sub-sections 6.2.2.2 and 6.2.4.2, replicated in (437) for ease of reference, suggest that *Kizombo* agentive verbs can alternate.

(437) a. *Madya malambukidi*
ma-dya *ma-lamb-**uk**-idi*
6-food 6/AgrS-cook-CI-PST
Meal cooked (Intd: someone cooked the meal)

b. *N'ti uzengokele*
Ø-n'ti *u-zeng-**ok**-ele*
3-tree 3/AgrS-cut-CI-PST
Tree cut (Intd: someone cut the tree)

Evidence from (437) and from many other examples discussed in section 6.2 suggest that agentivity is not a reliable criterion to account for in examining sentences in the causative and anticausative alternation in *Kizombo*. Thus, the inherent semantic properties of a verb are crucial for determining whether the verb is eligible to alternate or not.

The *Kizombo* example sentences examined in this chapter are related to the availability of more than one classification cross-linguistically, i.e. seemingly corresponding verbs do not mean the same in all languages. According to the classification of the root discussed in chapter 3, section 3.3.3, agentive roots do not alternate, as they require the presence of an Agent argument. Recall that externally caused and internally caused states are not properties of verbs, but they are properties of a causer of event they describe. The diagnostic tests with both externally caused verbs and internally caused verbs suggest that they all involve existence of an external causer the former with immediate control over bringing about the event described by the predicate: an *Agent*, an *Instrument*, and a *Natural force* argument, the latter through an implicit argument.

In conclusion, all the sentences with externally caused verbs occur in the causative alternation, including verbs that describe human-driven activity (i.e. *-zenga* and, *-lamba* verbs). Except for the sentence with the verb *-lekoka*, other sentences with internally caused verbs cannot occur in the causative alternation, but the events they describe presuppose involvement of external participation. In addition, some verbs classified as internally caused in some languages are regarded as exhibiting properties of externally caused states in other languages. Thus, the classification of a verb as internally or externally caused change of state is not free of "arbitrariness" in the sense that a verb that denotes an internally caused change of state can have a translation equivalent in another language that is externally caused (i.e., verb *lekoka* in section 6.3). Indeed, the concept of the English verb *-wilt*, which is classified as internally caused change of state, is conceptualized in *Kizombo* equivalent *-lekoka* as externally caused since it satisfies many of the diagnostic tests.

6.4.2 Derivational direction of the *Kizombo* change of state verbs

With respect to derivational direction, discussion has revolved around the reason why the anticausative alternant does not have an explicit external argument (i.e. a lexically realized expression corresponding to the subject argument in the transitive use of a verb) and which of the two uses, the causative or the anticausative, is basic and where this derivation takes place in grammar, see the discussion in chapter 3, sections 3.2.1 and 3.2.2.

Data in *Kizombo* suggest that the causative variant of an externally caused verb is morphologically unmarked whereas the anticausative variant is morphologically marked, see sub-sections 6.2.1.1, 6.2.2.1, 6.2.3.1 and 6.2.4.1, for the causative sentences and sub-sections 6.2.1.2, 6.2.2.2, 6.2.3.2, and 6.2.4.2, for the anticausative sentences. However, internally caused change of state verbs have overt morphology, as they were studied in section 6.3, sub-section 6.3.1.2. Also, as will be seen in chapter 7, example sentences with locative-subject alternation are morphologically unmarked in both causative and anticausative variants. Hence, for an adequate account of the causative and the anticausative of the *Kizombo* change of state and change of location/position verbs, this study adopts the syntactic decomposition approach, as discussed in sub-section 3.3.3.

In this approach, causative and anticausative alternations are all based on a Root and a Theme which express a resultant state and a CAUS which takes the resultant state as its complement, see the discussion in chapter 3, sub-section 3.3.3. For that reason, these two alternations are based-generated, which means no variant is derived from another. For example, the decomposition of events of the causative sentence of example (395) reproduced in (438) account for two components: a *Voice* and a *vCAUS*, which are regarded as the core structure of verb. The vCAUS represents the *causal relation* between a causing event and the resultant state denoted by the verbal root. Thus, the construction in (438a) yields the abstract structure in (438b), represented in (439, on page 264).

(438) a. *Luzolo lembe madya*
Ø-Luzolo *lemb-e* *ma-dya*
1-PN cook-PST 6-food
Luzolo cooked food (Intd: Luzolo cooked the food)

b. [*Luzolo* [*Voice* [CAUS [*lembe madya*]]]

(439) [Voice (+ext. arg. +AG) [vCAUS [√Root]]]

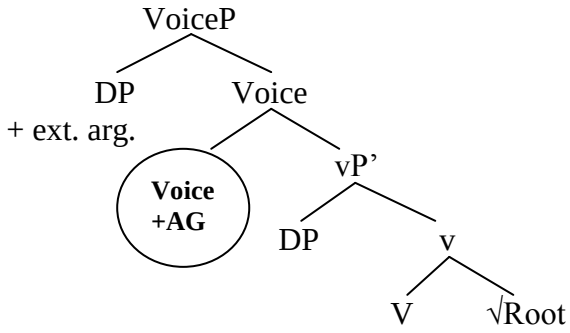


Figure 18: Decomposition of causative sentence with verb *-lamba* in *Kizombo*

Figure 18 explains that the Voice on the top of the tree diagram only denotes a relation between the Agent argument (*Luzolo*) and the cooking event and it introduces the external argument, therefore bearing the semantic properties associated with agentivity (+AG). The vCAUS feature in (439) introduces the cooking event and takes a stative as its complement. The two thematic notions are captured by an Agent and a causer, and two distinct voices are distinguished, R(caus) and R(agent). They differ in the sense that in the R(caus), the DP argument only designates the causal event that brings about the change, whereas in the R(agent), certain properties of DP are crucial for the coming about of the event. For that reason verbs *-lamba* 'cook', *-zenga* 'cut' and *-tunga* 'build' can alternate, but the *-vonda* 'assassinate' verb cannot, because it requires R(agent) as shown in (440).

(440) *#Mfumu wa vata vondokele*
Ø-mfumu wa vata *vond-**ok**-ele*
1-chief of village kill-CI-PST
Chief of village assassinated (Intd: someone assassinated the chief)

Under this analysis, verbs that occur in the causative and anticausative alternation are base-generated, but they differ only in the presence vs. absence of *Voice*. Causative sentences have the decomposition in (438b), and marked anticausative sentences yield the decomposition in (441b).

(441) a. *Madya malambukidi*
*ma-dyama-lamb-**uk**-idi*
6-food 6/AgrS-cook-CI-PST
Meal cooked (Intd: someone cooked the meal)

b. [CAUSE [the door broken]

The stative morpheme **-ik-** is regarded as the anticausativizing suffix. Thus, the sentence in (441) yields the abstract structure of the decomposition of the event in (442), as represented in figure 19.

(442) [Voice (- ext. -arg.) [vCaus [Root]]]

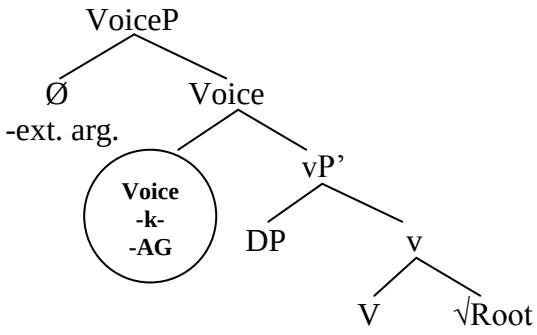


Figure 19: Decomposition of anticausative sentences with the verb-*lamba* in *Kizombo*

The suffix **-k-** associated with the anticausative variant is the morphological instantiation of the absence of the external argument in (442), also regarded as the voice feature associated with anticausativity converting the construction to DP V-intransitive. The *mu*-phrases (*instrument* and *natural force* found in various anticausative constructions as subject of causative sentences are licensed by vCAUS.

The unmarked anticausative variants examined with sentences of internally caused change of state verbs in section 6.3, (see also the locative subejct alternation sentences in chapter 7), receive the abstract decomposition structure in (443b) and represented in figure 20.

(443) a. *Mvuma ziyumini*
Ø-mvuma *zi-yum-ini*
10-flowers 10/AgrS-parch-PST
The flowers parched

b. [vCAUS [Root]]

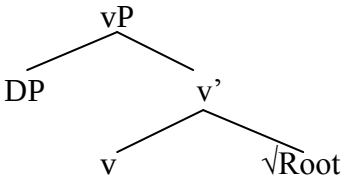


Figure 20: Decomposition of unmarked anticausative sentences with *-gyuma* verbs in *Kizombo*

As was discussed in section 6.2, depending on the inherent semantic properties of the verb, An Agent argument introduced by a '*by* phrase' is not felicitous with anticausative sentences,

but *instrument* and *natural force* are. Taking into account that *mu*-phrases in Kizombo are licensed by structural layers that contain the relevant semantic features, Alexiadou & *et al* has taken equivalents of this as evidence for the existence of vCAUS component in the structure of marked anticausative, as shown in the sentences with *-zenga* 'cut' verbs discussed in sub-section 6.2.2.2.1 in example (322), replicated in (444) for ease of reference.

(444) a. *N'ti uzengokele mutanzi/#mutembo/#kwa n'kento*
*Ø-n'ti u-zeng-**ok**-ele mu-Ø-tanzi/mu-Ø-tembo/kwa nkento*
3-tree 3/AgrS-cut-CI-PST 18-7-machete/18-7-wind/by woman
Tree cut in machete/from wind/by woman (Intd: someone cut the tree with the help of machete)

b. *M'batu utyazukidi mumbele/mutembo/#kwa mwana*
*Ø-m'bati u-tyaz-**uk**-idi mu-Ø-mbele/mu-Ø-tembo/kwa mwana*
3-trousers 3/AgrS-tear-CI-PST 18-9-knife/18-3-wind/by the child
Trousers tore in knife/from wind/by the child (Intd: the trousers tore through the help of knife/ or the trousers tore from the wind)

Indeed, as is the case with many other sentences, the sentences in (444) can be modified by *mu*-phrases (both *instrument* and *natural force*) the first working as auxiliary and the second as causer of the event described by the verb. The constraint for those sentences that fail to do so has nothing to do with the capacity of the verb, but rather, is due to semantic reasons. As was seen in (444a), the sentence with the verb *-zenga* 'cut' cannot be modified by a natural force argument *tembo* 'wind'. The reason is that the event which the verb *-zenga* describes, is a human-driven activity and, as will be seen in section 6.4.3, a *natural force* argument is taken as acting on its own, hence the sentences are not regarded as felicitous. By contrast, the example sentence with the verb *-tyaza* in (444b) can be modified by both an *instrument mbele* 'knife' and *natural force tembo* 'wind' argument. Thus, such a constraint on a verb accepting or not an argument is related to the idiosyncratic properties of the root.

The sentences with internally caused verbs discussed in section 6.3, taken as morphologically unmarked, have a causal relation similar to that for the constructions found in marked anticausative sentences examined in section 6.2. The sentences in (445), the DP arguments *wunga* 'snow' and *mwini* 'the sun' have a relational effect with the DP arguments *mvuma* 'flowers' and *mankondo* 'banana'; that is, the former are taken as the causer of the event of *blooming* and *ripening* of flowers and bananas, respectively. Building on the above, the two anticausative types have an external causer represented by the node vCAUS, this node represents the participation of the implicit argument, as shown in (445) and (446).

(445) a. *Mvuma zimmene muwunga/#munsengo/#kwa mvati*
Ø-mvuma zi-mmen-ene mu-Ø-wunga/#mu-Ø-nsengo/#kwa mvati
10-flowers 10/AgrS-bloom-PST 18- Ø/5-snow/18- Ø/7-hoe/by farmer
Flower bloomed from snow/hoe/by farmer (Intd: the flowers bloomed from the snow/the hoe/by the farmer)

e. *Mankondo mabwakidi mumwini/#munsengo/#kwa mvati*
ma-nkondo ma-bwak-idi mu-Ø-mwini/mu-Ø-nsengo/kwa mvati
6-banana 6/AgrS-ripen-PST 18-3-sunshine/18-9-hoe/by farmer
Bananas ripened from sunshine/with hoe/by farmer (Intd: bananas ripened from the sunshine/with hoe/by the farmer)

(446) a. *N'ti uzengokele mutanzi/#mutembo/#kwa n'kento*
*Ø-n'ti u-zeng-**ok**-ele mu-Ø-tanzi/mu-Ø-tembo/kwa nkento*
3-tree 3/AgrS-cut-CI-PST 18-7-machete/18-7-wind/by woman
Tree cut in machete/from wind/by woman (Intd: someone cut the tree by means of machete)

b. M'bati utyazukidi mumbele/mutembo/#kwa mwana
*Ø-m'bati u-tyaz-**uk**-idi mu-Ø-mbele/mu-Ø-tembo/kwa mwana*
3-trousers 3/AgrS-tear-CI-PST 18-9-knife/18-Ø/7-wind/by the child
Trousers tore in knife/from wind/by the child (Intd: someone cut the trousers by means of knife or the trousers cut from the wind)

The difference between sentences with morphogically marked verbs and sentences with morphologically unmarked verbs is constrained at the level of verb root. As certain sentences with morphologically marked verbs can sanction *instrument*/*natural force* others cannot, the same is true for sentences with morphologically unmarked verbs.

(447) a. *Madya malambukidi #munzungu/#mutembo/#kwa Luzolo*
*ma-dya ma-lamb-**uk**-idi mu-Ø-nzungu/mu-Ø-tembo/kwa Luzolo*
6-meal 6/AgrS-cook-CI-PST 18-9-pot/18-7-wind/by Luzolo
Meal cooked in pot/from the wind/by Luzolo (Intd: Someone cooked the meal in pot)

b. *Madezo mavuulukidi #munzungu/#mutembo/#kwa Luzolo*
*Ma-dezo ma-vuul-**uk**-idi #mu-Ø-nzungu/#mu-Ø-tembo/#kwa Luzolo*
6-bean 6/AgrS-boil-CI-PST 18-9-pot/18-7-wind/by Luzolo
Cabbage boiled in pot/from the wind/by Luzolo (Intd: someone boiled the cabbage boiled in pot)

The verb root plays a crucial role in explaining various phenomena of argument expression found in *Kizombo*. The constraint of verbs that do not license *instrument* or *natural force* can be found with both externally or internally caused change of state verbs.

The passive constructions discussed in section 6.2, license both an *Agent* and *Instrument* argument, therefore they are regarded to have feature [+/-AG]. The causer *mu*-phrases found in anticausatives such as *mu-lucinga* 'by means of iron-bar' are thematically licensed by CAUS, as exemplified by the sentence discussed in section 6.2.3.3, in example (352) replicated in (448) for ease of reference.

(448) *Lutai lumbikilwe mutanzi/#mutembo/kwa Luzolo*
Lu-tai *lu-fumbik-il-w-e* *mu-Ø-tanzi/mu-Ø-tembo/kwa Luzolo*
11-branch 11/AgrS-bend-APPL-PASS-PT 18-7-machete/18-Ø/7-wind/by Luzolo
The/a branch was bent by means of machete/from the wind/by Luzolo

The example sentence in (448), suggests that pure *instruments* are auxiliary in that they cannot act on their own. Thus, the sentence in (448) has the interpretation of 'the branch was bent by someone (an agent omitted, though) but that someone used a machete to do so'. Clearly *natural force* that can hardly be managed by the agent is disallowed in these constructions. The sentence (448) yield the same abstract structure of the decomposition of events in (442), reproduced in (449), and represented schematically in figure 21.

(449) [Voice (-ext. arg.) [vCAUS [√Root]]]

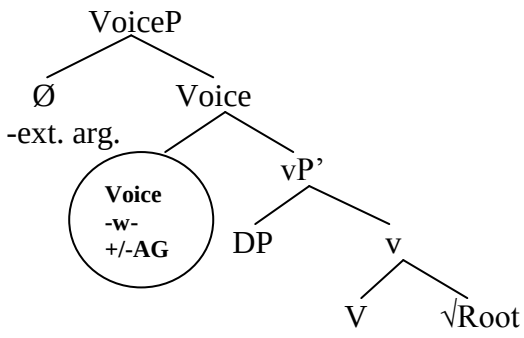


Figure 21: Decomposition of passive sentences with the verb-*gula*

The Voice in figure 21 bears features associated with the thematic role of the external argument and features associated with manner. The presence of a [+/-agentive] feature presupposes the presence of an agent and accordingly the external argument in both active and passive constructions. Specifically, agentive voice (Voice [+AG]) licenses agent and (*mu*-phrases) in active and in passive. Non-agentive Voice (Voice [-AG]) licenses causer in active and in passive refer to discussion in section 3.3.3. For that reason one cannot find constructions in *Kizombo* like the one in (450).

(450) *#Gyaka kiuwdilwe kwa tembo*
Ø-gyaka *ki-uwd-il-w-e* *kwa* *Ø-tembo*
7-Wall 7/AgrS-brea-APPL-PASS-PST by 7-wind
The wall was broken by the wind

The construction in (450) suggests that *tembo* 'wind' is an agent that practiced the event of breaking the wall. If a Voice head is active, the argument with the relevant thematic role is realized in its specifier; if it is passive, then the argument with the relevant thematic role is realized in implicit argument, as shown in (451).

(451) *Gyaka kiuwdilwe mun'ti/#mutembo/kwa n'tungi wa nzo*
Ø-gyaka *ki-uwd-il-w-e* *mu-Ø-n'ti/mu-Ø-tembo/kwa n'tungi wa nzo*
7-wall 7/AgrS-break-APPL-PASS-PST 18-3-tree/ 18-7-wind/by builder
Wall crashed for was with hammer/by builder (Intd: the wall was crashed by means of the hammer/by the wind/ the builder)

The decomposition of the event of the sentence in (442) is similar to that of (449). They differ in the sense that the passive morpheme *-w-* holds feature [+/-AG] is responsible for licensing *instruments* and *agents*, whereas feature [-AG] is responsible for introducing *instrument* and *natural force*.

The Root, regarded as the remainder of lexical entry, bears information which to a certain extent determines whether a verb alternates or not, refer to the discussion in section 3.3.3. Indeed, all sentences with externally caused change of state verbs examined in section 6.2 and its sub-sections have the same template, which means that the syntactically relevant part of their meaning is assumed to be the same for all of them. Likewise, the part of meaning that is syntactically relevant is assumed to be the same for all internally caused change of state verbs, as discussed in section 6.3. It is only in the content (root) parts of their inherent semantic properties that the verbs within a semantic class are assumed to differ from each other. This is one of the reasons that verbs from an identical semantic class vary with respect to the different diagnostic test.

Following the discussion in chapter 3, section 3.3.3, roots are classified according to the properties of the verbs. Such a classification can be exemplified with the *Kizombo* change of state verbs examined in this chapter, as shown in (452).

(452) √agentive (*-vonda, -lamba, -tunga, -zenga*)
√externally caused ((*-gula, tolola*)
√internally caused (*-gyuma, -mmena, -grow*)[24]
√cause unspecified (*-zibula*,)

The *Kizombo* Roots chassified in (452) reveal that certain so-called agentive verbs that are regarded not to alternate, do, as was discussed in sub-section 6.2.4.2. For that reason classes of the agentive verb can be proposed to differentiate verbs that can alternate and those that cannot alternate. During the data collection, it was noticed that the specific context from which the root came was crucial. For example, it was necessary, sometimes, for speakers to think of the context in which such a construction is used. From this perspective, it can be said that the selectional restrictions can be applied at the level of discourse context. For instance, the acceptability of the *-gula* verb in (453) is constrained by the affected object. While property of *-gyaka* 'wall' is believed to be breakable, that of '*sengo* 'iron-bar' is not. In that the substitution of such an object by *sengo* 'iron' renders the sentence unacceptable, as shown in (453b).

(453) a. *Gyaka kiuwdikidi*
Ø-gyaka *ki-uwd-**ik**-idi*
7-wall 7/AgrS-break-CI-PST
Wall broke (Intd: someone broke the wall)

b. *#Sengo kiuwdikidi*
Ø-sengo *ki-uwd-**ik**-idi*
7-iron 7/AgrS-break-CI-PST
Iron-bar broke (Intd: someone broke the iron-bar)

The event of 'breaking iron', which is conceptualized as necessarily being caused by an agent, is not acceptable, because the Theme argument *iron,* in *Kizombo,* cannot be expressed with the verb *-gula*, 'break', but it can be expressed with the verb *bukuna* 'cut'.

(454) *Sengo kibukuknini*
Ø-sengo *ki-buk-**uk**-ini*
7-iron 7/AgrS-break-CI-PST
Iron-bar broke (Intd: someone broke the iron-bar)

The selectional restrictions prove that the relevant information cannot be strictly linguistic and, more specifically, it cannot only be stored in the lexical entry of a verb Root. Rather, it

[24] The verb *-lekola* classified as internally caused change of state, presents properties of externally caused change of state.

shows that the relevant information is associated with the world knowledge, i.e. conceptual information about Roots when these are construed in specific events.

6.4.3 The status of instrument/natural force as subjects

The acceptability of *instrument* and *natural force* as subject in *Kizombo* is found, both within and across semantic classes, as discussed in section 6.2. Yet the question is which semantic properties allow *Kizombo* verb roots to accept the *instrument*/*natural force* as the subjects? The acceptability of *instrument* as subject can be explained only under two conditions: (i) verbs that are restricted to human-driven activities cannot license *instrument* as subject, see discussion in sub-sections 6.2.2.1.2, 6.2.4.1.2, among others. But verb roots that are not restricted to human-driven activities can license *instrument* as subject, as in (455).

(455) a. *Malutelo/tembo (i)kiuwdidi gyaka*
Ø-malutelo/Ø-tembo *i-ki-uwd-idi* *Ø-gyaka*
8-hammer/7-wind 8-7/AgrS-break-PST 7-wall
Hammer/wind crashed wall (Intd: someone broke the wall through the help of hammer)

b. *#N'tuutu/tembo (u)kinikini mwamba*
Ø-n'tutu/# Ø-tembo *u-ki-nik-ini* *Ø-mwamba*
3-botle/7-wind 3-7/AgrS-ground-PST 3-butter
Bottle/wind grinded peanuts (Intd: the bottle/wind grounded peanuts

In the example sentences in (455) the verb *-gula*, in (455a), is acceptable, and has the interpretation of 'there is a volitional agent who used hammer to break the wall and as a result the wall is broken'. However, the example in (455b), similar to other constructions examined in this chapter, the same interpretion cannot hold because the verb *-nika* 'grind' requires direct intervention of a human argument and this intervention cannot be expressed by indirect participation of the agent. Thus, *instruments* make good subjects in *Kizombo*, if they are agentive involved in an event.

Contrary to what obtains with *instrument*, *natural force* is prototypically characterized as agent. The example sentences with change of state verbs, discussed in section, 6.2, suggest that no agent, say a human being, has power to act up on the wind/rain, as reproduced in (456).

(456) *Malutelo/tembo (i)kiuwdidi gyaka*
Ø-malutelo/Ø-tembo *i-ki-uwd-idi* *Ø-gyaka*
9-hammer/7-wind 9-7/AgrS-brask-PST 7-wall
Hammer/wind broke wall (Intd: someone broke the wall with the help of hammer or the wind broke the wall)

Thus, the participation of *natural force* in an event is taken independently, though subject to properties of the verb. This means that contrary to *instrument*, *natural force* is an agent for it acts upon event independently, as discussed in sub-sections 6.2.1.1.2, among many others.

To summarise, *instrument* as subject in *Kizombo* function as causer and not as agent since it never acts on it own. Its participation in an event is always understood as being used by someone, (i.e. volitional agent). *Natural force*, on the other hand, functions as agent for its participation cannot be understood as being manipulated by a volitional agent. However, the acceptability of both *instrument* and *natural force* is constrained by the human being criterion. Verbs that denote activities restricted to human beings cannot license both *instrument* and *natural force*, this includes implicit arguments in anticausative sentences, as discussed in sub-section 6.2.4.2.1, among others.

6.4.4 Anticausative and agentivity diagnostic tests with the *Kizombo* COS verbs

In chapter 3, section 3.2 it was pointed out that modification and control into a purpose clause have been regarded as the diagnostic tests that distinguish anticausative from passive constructions. Passive, but not anticausative has an external causer realized by a *by*-phrase. The diagnostic test with an *agentive-oriented* phrase suggests that similar to passive sentences, some *Kizombo* anticausative sentences can be modified by an *agent-oriented* phrase, as discussed in sub-section 6.2.1.2.2., example (300), sub-section 6.2.2.2.2, example (323a), and sub-section 6.2.4.2.2, example (368a). Furthermore, the acceptability of the *mu*-phrase with anticausative sentences, as discussed in sub-sections 6.2.1.2.1, example (299a/b), 6.2.2.2.1, example (322a/b), among others, suggest the existence of an implicit causer. Since the acceptability of both an *agent-oriented* phrase and *instrument* phrase presupposes that an activity has been carried out by an agent, it can be assumed that both anticausative and passive licence an external causer. Recall, that *instrument* as subjects are not agents because they cannot act on their own.

Data in *Kizombo* demonstrate that while sentences with passive verb, on the one hand, may sanction both *instrument* and *kwa*-phrases, sentences with anticausative verb, on the other

side, can sanction both *instrument* and *natural force* phrases as implicit argument and they can be modified by an *agent-oriented* phrase. This means, *Kizombo* merges with regard to the distribution of *by*-phrases introducing the subject argument in passives and *from*-phrases introducing a causer in anticausatives. Hence, the acceptability of these modifiers, amounting to the fact that anticausative can be modified by an *agent-oriented* phrase, is evidence of the existence of a causer of the event in question.

6.4.5 Anticaustivity and the *Kizombo* COS aspectual verb class

This section gives an account of aspectual properties of verbs that denote change of state verbs, as discussed in sub-sections 6.2 and 6.3 and their sub-sections. Verbs can be categorized into different aspectual classes on the basis of their relation to a time scale (see discussion by Smith 1997 in chapter 5, section 5.5.6 and its sub-sections). The four aspectual classes that the verb can denote, are exemplified by the *Kizombo* sentences in (457).

(457) a. *Mwana zeye mvutu* (State)
mu-ana *zey-e* *Ø-mvutu*
1a-child know-PST 9-answer
Child *knew* the answer (Intd: the child *knew* the answer)

b. *Mwana sevele* (Activity)
mu-ana *sev-ele*
1a-child laugh-PST
Child *laughed* (Intd: the child *laughed*)

c. *Mwana sonekene n'kanda* (Accomplishment)
mu-ana *sonek-ene* *Ø-n'kanda*
1a-child write-PST 3-letter
Child wrote letter (Intd: the child wrote a letter)

d. *Taata tambudi n'kanda* (Achievement)
taata *tambud-i* *Ø-n'kanda*
Father receive-PST 3-letter
Father *received* letter (Intd: the father *received* a letter)

State and Activity verbs in (457a/b) are similar in that they denote eventualities that are *atelic*. In other words, they are on-going in time and have no clear beginnings or endpoints, see temporal schema of State and Activity in chapter 5, sub-sections 5.5.6.2.1, and 5.5.6.2.2 as discussed by Smith 1997. Accomplishment verbs and Achievement verbs in (457c/d), on the other hand, denote actions that have a natural completion and, hence, these aspects are *telic*, refer to discussion in chapter 5, sub-sections 5.5.6.2.4 and 5.5.6.2.6.

The action denoted by the Activity verb, exemplified in (457a) holds for an unspecified number of stages on the time scale, but does not include a specific endpoint. The same is true with the example sentence in (457b). The event denoted by the Accomplishment verb in (457c), includes an endpoint as well as the stages leading up to it. For example, the event of *soneka* 'writing' may last for a couple of minutes, but it ends with the completion of *n'kanda* 'the letter'. Finally, the event denoted by the Achievement verb in (457d) is instantaneous. In other words, there are no intermediate stages and the only thing of importance is the endpoint of the action.

As observed by Smith (1997) (see the discussion in section 5.5.6), an event denoted by an Activity verb can result in an endpoint, as in (458b) and, therefore, be interpreted as Accomplishment, if the complement is a count noun. But if the complement is a *bare DP*, it does not in any sense limit the durability and, therefore, it does not result in an endpoint. The verb phrase in (458a), therefore, denotes an Activity, but the one in (458b) denotes Accomplishment.

(458) a. *Mwana nwini maaza* (Activity)
mu-ana *nw-ini* *maaza*
1a-child drink-PST water
Child drank water (Intd: the child drank a glass of water)

b. *Mwana nwini kopo dya maaza* (Accomplishment)
mu-ana *nw-ini* *Ø-kopo dya maaza*
1a-child drink-PST 5-glass of water
Drank glass of water (Intd: the drank a glass of water)

With regards to the example sentences with the verb that denotes Achievements in (459), it does not appear to be the complements *mafuta* 'oil' and *n'langi wa mafuta* ' bottle of cooking oil' that provide the action with an endpoint, since the endpoint is implied regardless of whether the complement is a mass or a count noun, as shown in (459).

(459) a. *Mwana solole mafuta mukikuku* (Achievement)
mu-ana *solol-e* *mafuta mu-ki-kuku*
1a-child discover-PST oil 18-7-kitchen
Child discovered cooking oil in kitchten (Intd: the child discovered cooking oil in the kitchten)

b. *Mwana solole n'langi wa mafuta mukikuku* (Achievement)
mu-ana *solol-e* *Ø-n'langi wa mafuta* *mu-ki-kuku*
1a-child discover-PST 3-bottle of oil 18-7-kitchen
Child discovered bottle of cooking oil in kitchen (Intd: the child discovered a bottle of cooking oil in the kitchen)

Findings regarding change of state verbs reveal that the acceptability of *durative* and *time* frame adjuncts is constrained by properties of the object argument. When a verb takes a singular count noun object, it can be felicitous with a *time* frame phrase, but when it takes a plural count noun or mass noun, it can be felicitous with a *durative* phrase, as shown by the example sentence in (351), replicated in (460) for ease of reference. Consider also other similar constructions in sub-sections 6.2.1.1.7, 6.2.2.1.7, 6.2.3.1.7, 6.2.4.1.7 and 6.2.6.1.7.

(460) a. *Nzumba diidi dinkondo (#kolo kya-/mu-)ngunga imosi*
Nzumba *di-idi* *di-nkondo (kolo kya-/mu-)ngunga imosi*
1-PN eat-PST 5-banana for/in an hour
Nzumba ate a banana for/in an hour

b. *Nzumba diidi mankondo moole (kolo kya-/#mu-)ngunga imosi*
Nzumba *di-idi* *ma-nkondo moole (kolo kya-/mu-)ngunga imosi*
1-PN eat-PST 6-banana two for/in an hour
Nzumba ate two bananas for/in an hour

In the anticausative variant, however, both *durative* and *time* frame adjuncts are acceptable, but with different interpretations, as illustrated by the sentences in (351, on page 210) reproduced in (461) for ease of reference.

(461) *Lutai lufumbamnene (kolo kya-/mu-)ngunga imosi*
Lu-tayi *lu-fumb-**am**-ene* *(kolo kya-/mu-)ngunga imosi*
11-branch 11/AgrS-bend-CI-PST for/in an hour
Branch bent for/in an hour (Intd: the branch bent for/in an hour)

The sentence with a *durative* phrase has the interpretation of "it has been an hour since the branch bent" whereas the sentence with a *time* frame adjunct has the interpretation of "the event of bending the branch occurred in the interval of an hour". Following Smith (1997, as dicussed in chapter 5, sub-section 5.5.6.3.4), the example sentence above exhibits events seen as states. This means, they are of the derived situation type.

6.4.6 Candidates on middle sentences

Middle sentences are distinguished from the anticausative in the sense that they denote: (i) genericity, (ii) modality, and (iii) adverbial effect, see discussion in chapter 3, section 3.4. Genericity, usually describes a generic property to what would be realized as the object of the verb. Modality typically conveys a generic model notion of ability/possibility, indicating to what extent an activity expressed by the verb can be carried out. However, properties of the

verb and the grammatical subject are also crucial in determining the felicity of middle formation.

Middle constructions discussed in section 6.2, with the *Kizombo* change of state verbs present some peculiarities. Morphologically, they are similar to anticausatives in the sense that they are marked by the stative suffix, (**-ik-**) or (**-am-**), as the controller of intransitivity. Syntactically, as is the case with anticausatives, the structural subject, the sole syntactic argument, is understood as if it is 'undergoing the event described by the verb, as shown in (462). These characteristics make them look analogous to an anticausative alternant.

(462) a. *Nsusu itoma lambukanga*

Ø-nsusu	*i-tom-a*	*lamb-**uk**-ang-a*
9-meat	9/AgrS-be good-FV	cook-CI-HAB-FV

Chicken cook well (Intd: the chicken cooks well)

b. *N'ti wa nzewa utoma zengokanga*

Ø-n'ti wa nzewa	*u-tom-a*	*zeng-**ok**-ang-a*
3-tree fresh	3/AgrS-be good-FV	cut-CI-HAB-FV

This fresh tree cuts well

The difference between middle and anticausative sentences is that the former has a generic interpretation. For example, the sentences in (462) have the interpretation of '*chicken is easy to cook* or *anybody can cook chicken*', or *a fresh tree is easy to cut'*. Another difference found is that candidates to middle sentences require a Theme subject argument with particular properties. For example, while the constructions in (462) are semantically acceptable, if one omits the adjectives, *wa nzewa* 'fresh' in (462b), such sentences will not have a generic interpretation. A further aspect worth mentioning is the fact that when these constructions are used in the past tense, they do not have a generic reading, as shown in (463).

(463) *Nsusu itomene lambuka*

Ø-nsusu	*i-tom-ene*	*lamb-**uk**-a*
9-meat	9/AgrS-be good-PST	cook-CI-FV

Chicken cooked well (Intd: the chicken cooked well)

The example sentence in (463) has the reading that *the chicken was very well cooked*. Therefore, the sentences do not denote genericity, it takes the adverb toma "well', though.

This explains that the middle constructions discussed in this chapter have properties of kind-referring and genericity in a single sentence. This is supported by Krifka *et al*. (1995:16) when they argue that "stative sentences express a *property* of the subject referent," whereas

"dynamic sentences report an *event* in which the subject referent is involved." Although one should acknowledge that there are some stative sentences that are also episodic (i.e., *longa vana meeza dina* 'the plate is on the table'), the most important point here is that such sentences are always stative. This means, genericity is hypothetically comparable to "stativity" of the predicate, because stative predicates do not express a specific event but report a kind of general property of the subject. *Kizombo* middle verbs are lexically stative; that is they lacks such an episodic counterpart, and accordingly they cannot express a statement that is premised on the existence of any actual events.

6.4.7 Applicative locative sentence

In chapter 2, it was stated that locatives in *Kizombo* are represented by three prefixes: *va-* *ku-* and *mu-* see also chapter 7 in this regard. However, their use varies and may receive different interpretations. Depending on the inherently semantic meaning of the verb and the properties of the direct object of the sentence, *mu-* can denote *instrument* ' by means of' (464) *natural force* 'from' or location 'in'.

(464) *N'kento zengele mbizi mumbele*

Ø-n'kento	*zeng-ele*	*Ø-mbizi*	*mu-Ø-mbele*
1-woman	cut-PST-FV	9-meat	18-9-knife

'Woman cut meat in knife (Intd: the woman cut the meat by means of knife)

The sentence in (464) suggests that *mbele* 'knife' is the instrument with which *n'kento* used to execute the task of cutting the meat. Contrary to what is obtaining in (464), the example sentences in (465), due to the properties of the verbs *-cut* and *-lamba* in amalgamation with the properties of the objects, they have the interpretation of the place where the woman cuts and cooks the meat and porridge respectively, as shown in the gloss.

(465) a. *N'kento utulanga madya mulonga*

Ø-n'kento	*u-tul-ang-a*	*ma-dya*	*mu-Ø-longa*
1-woman	1/AgrS-put-HAB-FV	6-food	18-5-plate

Woman put food on plate (Intd: the woman dishes up the food)

b. *N'kento ulambanga luku munzungu*

Ø-n'kento	*u-lamb-ang-a*	*luku*	*mu-Ø-nzungu*
1-woman	1/AgrS-cook-HAB-FV	porridge	18-9-pot

Woman cooks porridge in pot (Intd: the woman cooks the porridge in the pot)

As it will also be seen in chapter 7, sub-sections 7.3.11, 7.4.11, 7.5.11, among others, when the applied affix ***-il***-/-***el***- is introduced in the verb, it acquires the interpretation of exclusiveness, as shown in (466) with -*dya* 'eat' and -*beta* 'beat'.

(466) a. *N'kento udiilanga madya mupidi*

Ø-n'kento	*u-di-il-ang-a*	*ma-dya*	***mu-Ø-pidi***
1-woman	1/AgrS-eat-APPL-HAB-FV	6-meal	18-7-bowl

Women eat meal exclusively in bowel (Intd: the woman eats the meals exclusively in the bowl

b. *N'kento udiilanga madya munsoma*

Ø-n'kento	*u-di-il-ang-a*	*ma-dya*	***mu-Ø-nsoma***
1-woman	1/AgrS-eat-HAB-FV	6-eat	18-3-fork

Woman eat meal exclusively in fork (Intd: the woman eats the meal exclusively by means of fork)

-*beeta* 'beat' verb

(467) a. *N'kento ubetelanga mbwa mupidi*

Ø-n'kento	*u-bet-el-ang-a*	*Ø-mbwa*	***mu-Ø-pidi***
1-woman	1/AgrS-beat-APPL-HAB-FV	3-dog	18-7-bowl

Woman beat dog exclusively in bowl (Intd: the woman beats the dog exclusively by means of a bowl)

b. *N'kento ubetelanga mbwa munsoma*

Ø-n'kento	*u-bet-el-ang-a*	*Ø-mbwa*	***mu-Ø-nsoma***
1-woman	1/AgrS-beat-APPL-HAB-FV	3-dog	18-3-fork

Woman beat dog exclusively in fork (Intd: the woman beats the dog exclusively by means of fork)

Both constructions in (466) and (467) have the same structure composed of the locative prefix *mu*- and the DPs -*pidi* 'bowl and *n'soma* 'fork'. While the DP *mupidi* in (466a) has the interpretation of the exclusive place where the woman eats the meal, in (466b) the DP *munsoma* has the interpretation of the exclusive instrument with which the woman eats the meal. However, the sentences in (467), owing to the semantic properties of the verb -*beta*, do not give locative meaning, rather it reads that both *pidi* 'bowl' and *n'soma* 'fork' are the exclusive instruments which the woman uses to beat the dog.

6.5 SUMMARY

There is a wide range of acceptability judgments associated with anticausative uses of the *Kizombo* externally and internally caused change of state verbs. Data demonstrated that semantic and pragmatic properties - as opposed to syntactic properties - are responsible for

the range of acceptability ratings found across anticausative uses with such diagnostic tests. Such factors combine to determine the argument expression options related to a particular verb and verb classes. These factors include controllability - the degree to which an event can be externally manipulated - causer-type whether it involves a human-driven or non-human-driven activity, and subject-modification - whether the causer is in a modified or non-modified form.

All sentences with externally change of state verbs, except the sentence with the verb -*syokesa*, occur in the anticausative alternation, as discussed in sub-sections 6.2.1.2, 6.2.2.2, 6.2.3.2, 6.2.4.2, 6.2.5.2 and 6.2.6.2, respectively. Data demonstrated that although verbs whose activities are human-driven events, alternate, they disallow both *instrument* and *natural force* as causer. The acceptability of sentences with *instrument* and *natural force* as causer is controlled by properties of the verb: verbs whose activities are human-driven do not allow both *instrument* and *natural force* as causer, see sub-sections 6.2.1.1.2, example (292b), sub-section 6.2.2.1.2 and sub-section 6.2.4.1.2. However, sentences with verbs whose activities are non-human-driven event can take *instrument* or *natural force* as causer, as discussed in sub-section 6.2.1.1.2, example (292a), among others. Instruments as subject are causers and not agents since they do not act upon their own, but natural forces as subject are agents because they can act independently.

It was also found that example sentences with the anticausative are felicitous with an *agent-oriented* phrase. The acceptability of the *agent-oriented* phrase and that of *instrument* as implicit argument presuppose a presence of causer of event. Thus, both the passive and the anticausative hold an external causer. The former can license both *instrument* and *by-phrase* and the latter can license *instrument* and *natural force*.

Data demonstrated that some verbs classified as internally caused change of state verbs have causative counterparts in *Kizombo* i.e. -*lekola* 'wilt', see the analysis in section 6.3. In that such a verb cannot be classified as an internally caused verb since this classification appears to be inappropriate. The syntactic decomposition approach appears to address adequately the constructions examined with change of state verbs. Finally, middle and anticausative sentences are morphologically similar, but semantically different. They differ in the sense that the former, but not the latter, denotes genericity and a *Kizombo* candidate to a middle subject is constrained to specific properties.

Thus, the analysis of sentences with the *Kizombo* change of state verbs attested that the general theoretical endeavor which postulates that semantic representations of syntactically relevant information are a significant part of the lexical encodings. Verb alternations occur in base-generated constructions. The causative alternation has effect on the aspectual properties since they alter the aspectual verb class. Semantic classes, used as referential, proved to be helpful, but they do not provide accurate information about syntactic behaviour of the *Kizombo* change of state verbs.

CHAPTER 7
THE LOCATIVE-SUBJECT ALTERNATION OF MOTION VERBS IN *KIZOMBO*

> The semantic and syntactic characterization of *jog* and *run* must be based on an encyclopedic view of the two activities, and that therefore it does not make sense to divide the meanings of words into syntactically relevant and syntactically irrelevant components. (Taylor 1996)

7.1 INTRODUCTION

Chapter 6 gave an account of the status of verbs of change of states that occur in the causative and anticausative alternations and in passive and middle constuctions. The goal of this chapter is to examine the causative and anticausative properties of motion verbs – under the cover term of change of location/position – i.e., verbs that occur in the locative-subject alternation in *Kizombo*. In so doing, the chapter will also explore the status of the postverbal argument, occurring as the subject of the anticausative sentence, the acceptability of the anticausative sentences with various adjunct modifications and whether this alternation is associated with aspectual verb class changes. The *Kizombo* verb constructions, which will be examined in this chapter, make extensive use of Levin's (1993) verb classes. In addition, Asher and Sablayrolles' (1994) four subclasses of motion verbs, as shown below, will be considered:

(i) Change of location (i.e. *enter*, *arrive*, *go out* etc,)
(ii) Change of position (i.e. *circulate*/*surround*, *bend down*, *lean over*, etc,)
(iii) Inertial change of position (i.e., *run*, *dance*, *fly*, etc,)
(iv) Change of posture (*sit down*, *lie down*, etc,)

The chapter is structured as follows: the first part will explore the example sentences discussed with *Kizombo* native speakers with regard to the acceptability or not, of sentences with the application of a range of diagnostic tests for agentivity and aspectual verb class (situation type) as posited by Smith 1997, reviewed in chapter 5, section (5.5.6). Section 7.2 will give a brief account of the semantics of the *Kizombo* motion verbs. Section 7.3 will examine verbs of Inherently Directed Motion (VIDMs), section 7.4 will explore verbs of Manner-of-motion and section 7.5 will examine verbs of existence. Section 7.6 will explore Verbs of Modes of Being involving motion and section 7.7 will examine Verbs of Spatial configuration. In part II, the focus will shift to discussion of the data presented in part I.

7.2 THE SEMANTICS OF MOTION VERBS IN *KIZOMBO*

As was seen in chapter 4, section 4.4.1, the discussion on physical motion verbs revolves around two semantic units: Motion and Direction (Talmy 1985). While motion describes the act of physical dislocation, direction describes the route taken by the object in motion. The discussion in chapter 4 pointed out that Talmy (1985) has typified two language groups: The Verb-framed languages and the Satellite-framed languages. Both types are distinguished with respect to their strategies for expressing Motion and Direction (see also Beavers *et al* (2010) in section 4.4.2 for a counterargument with regards to Talmy's classification).

V-languages are said to incorporate Motion and Direction in a single lexical unit, as exemplified by the sentence in (468a) taken from (Richards & Gines 2001). S-languages, on the other hand, express both Motion and Direction in different syntactic units. The former surfaces in the verb whereas the latter surfaces in a separate syntactic category, for example, a preposition, as in the English sentence in (468b).

(468) a. *L´home* *traverse* *la rue*
The man cross over the street

b. The man crosses **over** the street

The *Kizombo* language presents both strategies. While some verbs incorporate both Motion and Direction in the verb, as shown in (469), others seem to distinguish these categories, as exemplified in (470).

(469) a. *Mwana saukidi n'koko*
mu-ana *sauk-idi* *Ø-n´koko*
1a-child cross-PST 3-river
Child crossed over river (Intd: the child crossed over the river)

b. *Mwana takukidi gyaka*
mu-ana *takuk-idi* *Ø-gyaka*
1a-child jump-PST 7-wall
Child jumped wall (Intd: the child jumped over the wall)

In the example sentences in (469), both Motion and Direction are lexicalized through the verbs *sauka* 'cross over' and *takuka* 'jump over'. The sentence in (469a) means that the child moved (crossed over) from one bank of the river to the other; the sentence (469b) means that the child overcame a barrier by jumping the wall. Both sentences express displacement, but

such a displacement does not require a separate element to express direction. However, in another context, the motion can be expressed by a verb, and the direction either by the verb, or by a locative complement denoting direction, as shown in (470a) or by a separate syntactic element, e.g. a locative prefix, as in (470b).

(470) a. *Mwana kotele musuku*

mu-ana	*kot-ele*	*mu-Ø-suku*
1a-child	enter-PST	18-5-room

Child entered in bedroom (Intd: the child entered the bedroom)

b. *N'kento wele kun'koko*

Ø-n´kento	*w-ele*	*ku-Ø-nkoko*
1-woman	go-PST	17-3-river

Woman went to river (Intd: the woman went to the river)

The example sentences in (470) demonstrate that while the motion is expressed by the verbs -*kota* 'enter' and -*kwenda* 'go', the direction is expressed differently. In (470a) the verb -*kota* also carries the directional meaning; the movement is toward an enclosed place, with the locative complement *musuku* 'in the bedroom'. In (470b) the verb expresses movement whereas the direction is expressed by the directional locative complement *kun'koko* 'to the river'.

With regards to manner of motion, *Kizombo* seems to encode manner in complex ways. While some verbs encode manner in their inherent lexical semantics, others express manner through a separate morpho-syntactic element, as shown in (471).

(471) a. *Mwana tyatikidi kun'koko*

mu-ana	*tyatik-idi*	*ku-Ø-n'koko*
1a-child	run-PST	17-3-river

Child ran to river (Intd: the child ran to the river)

b. *Masolai mazyetele muvata*

ma-solai	*ma-zyet-ele*	*mu-Ø-vata*
6-soldier	6/AgrS-circle-PST	18-5-village

Soldiers circulated in village (Intd: the soldiers circulated the village)

The example sentences in (471) show that the verbs -*tyatika* and -*zyeta* express manner of motion, because they specify the way in which the movement is performed. For example, in (471a) the child went to the river running, responding to the question how did the child go to the river. In (471b) the soldiers performed specific movement, circulating the village. The

manner is lexicalized in the inherent verb meaning. However, other verbs do not behave in the same way, as illustrated by the example sentences in (472).

(472) a. *Mwana kotele musuku munswalu*

mu-ana	*kot-ele*	*mu-Ø-suku*	*mu-nswalu*
1a-child	enter-PST	18-5-room	18-fast

Child entered in room fast (Intd: the child entered the room fast)

b. *Mwana vaikidi munzo munswalu*

mu-ana	*vaik-idi*	*mu-Ø-nzo*	*mu-nswalu*
1a-child	exit-PST	18-9-house	18-fast

Child exied in house fast (Intd: the child exited from the house fast)

Contrary to the sentences in (471), the example sentences in (472) suggest that the verbs *-kota* and *-vaika* can encode Manner in a separate category, namely via the manner adverbials *mu-nswalu* 'fast'. In addition, even the so-called manner-of-motion verbs may also encode manner with a separate syntactic element.

Within the typology of Talmy (1985), the figure represents the object in motion, for example, *mwana* 'child' in the example sentences in (472a-b) is generally the Agent argument subject of the sentence. The Ground represents the reference point from which the figure is moving (i.e., *suku* 'bedroom' and *nzo* 'house'). After this brief characterization of the *Kizombo* motion verbs, the focus will shift to the analysis of locative-subject alternation.

In the discussion, one verb is taken as the representative of each semantic class. Where the diagnostic test varies among the members, such a difference will be discussed in the body of the text for ease of reference. If not, the data about the other class members are given in appendix B.

7.3 VERBS OF INHERENTLY DIRECTED MOTION (VIDMS)

'Verbs of Inherently Directed Motion' include a specification of the direction of motion, even in the absence of an overt directional complement (Levin 1993:264, section 51.1). For some verbs, this specification is in deictic terms; for others in nondeictic terms. However, the class members do not behave consistently in all respects. They differ as to how they can express Goal, Source, or Path of motion. This chapter will examine the non-deitic verbs. Four verbs (*-kwenda* 'go', *-kwiza* 'come', *-kota* 'enter' and *vaika* 'go out/exit') are examined. The discussion will center around the verb *-kwenda* 'go'.

In principle, VIDMs do not specify the manner of motion; however, they denote a path component inherent in the lexical meaning of the verb. These verbs have the ability to take direction/path locatives. When the verbs *-kwenda*/*-kwiza* and *-kota* 'enter' take the static goal locative complement *mu-*, they denote static location (i.e.,*-kwenda/kwiza/kota* ***mu****suku* 'go/come/enter (in) the bedroom') and when they take the directional goal locative complement *ku-*, they denote dynamic location (i.e., *-kwenda/-kwiza/kota* ***ku****zandu* 'go/come to/into the market'). When the verb *-vaika* (exit) takes the static goal locative complement *mu-*, it denotes implicitly an initial location, the place where people come from; the locative prefix *mu-*, here, is understood as positional rather than associated with movement. Thus, it denotes the static spatial relation *suku*, the source (i.e., *nyoka vaikidi* ***mu****suku* 'the snake exited from the bedroom). However, when the prefix *ku-* takes dynamic spatial relation with the goal *vata*, (e.g. *masolai mavaikidi* ***ku****vata* means 'the soldiers came out to the village'), the interpretation of the locative results from the encyclopaedic lexical meaning of the verb with the locative prefix attached to it.

The four verbs examined in this section occur in the locative-subject alternation (see also appendix B, section 7.2 for the other three class members). Two types of alternants are identified: one with locative morphology and another without locative morphology. However, they both have similar, but not identical interpretations. Also, while verb *-kwenda* does not take a Theme argument as subject, the verb *-vaika* does, as shown in (473b).

7.3.1 Agent/Theme argument as subject

(473) a. *Mwana/mwivi wele kuzandu*

mu-ana/#Ø-mwini	*w-ele*	*ku-Ø-zandu*
1a-child/7-sunshine	go-PST	17-5-market

Child/sunshine went to market (Intd: the child/sunshine went to the market)

b. *Mwana/mwivi uvaikidi musuku*

mu-ana/Ø-mwisi	*u-vaik-idi*	*mu-Ø-suku*
1a-child/3-smoke	3/AgrS-exit-PST	18-5-room

Child/smoke went out of of bedroom (Intd: the child/smoke went out of the bedroom)

7.3.1.1 *Goal/Source argument as subject*

(474) a. *Kuzandu kuwele mwana/mwivi*

Ku-Ø-zandu	*ku-w-ele*	*mu-ana/#Ø-mwini*
17-5-river	17/AgrS-go-PST	1a-child/ 3-sunshine

To river went child/sunshine' (Intd: the market is the place where the child/sunshine went)

b. *Musuku muvaikidi mwana/mwisi*
Mu-Ø-suku *mu-vaik-idi* *mu-ana/ Ø-mwisi*
18-5-bedroom 18-exit-PST 1a-child/3-smoke
In bedroom exited child/smoke (Intd: from the bedroom is the place which the child/smoke exited)

7.3.1.2 *Goal/Source (without loc prefix) argument as subject*

(475) a. *Zandu/mwini (dy-)wele mwana*
Ø-zandu/#Ø-mwini *di-u-e-ele* *mu-ana*
5-river/3-sunshine 5-3/AgrS-14-go-PST 1a-child
Market/sunsine went child (Intd: the market/sunshine is the place where the child went)

b. *Suku divaikidi mwana/mwisi*
Ø-suku *di-vaik-idi* *mu-ana/Ø-mwisi*
5-bedroom 5/AgrS-exit-PST 1a-child/3-smoke
In bedroom exited child/smoke (Intd: from the bedroom is the place where the child/smoke exited)

In the example sentences in (473), the preverbal argument *mw-ana* 'child', is the subject of (473a/b), a position in which it is interpreted with the thematic role Agent, whereas the postverbal argument *kuzandu*, is the complement, a position in which it is understood with the thematic role Goal in (474a) and Source in (474b). In the sentences in (474), the verbs agree with the locative prefixes, whereas in (475) the verbs agree with the nominal class prefixes. Although the sentences in (474 and 475) have similar meanings, they differ in that in the former the Goal/Source argument is realized with locative morphology and the latter the Goal/Source argument is realized without locative morphology, which means the Goal noun is used in its canonical form. In terms of discourse, these two constructions are used interchangeably which means the choice of either variant is left up to speakers' preference.

7.3.2 Subjecthood properties of the Goal/Locative/Source argument

The example sentences with Verbs of Inherently Directed Motion suggest that the Goal/Source argument as subject exhibits the usual subject properties: the verb *-kwenda*, as is the case with the other verbs discussed in this section, exhibits subject-verb agreement, as seen in (474 and 475). Furthermore, like the Agent/Theme argument in (473), the Locative argument as subject can occur in the subject position of the matrix clause and agrees with the locative class prefix, as exemplified in (476).

7.3.2.1 *Occurrence in subject position*

(476) *Kuzandu nze kwau kuwele mwana*
ku-Ø-zandu nze kw-au ku-w-ele mu-ana
17-5-market seem 17-there 17/AgrS-go-PST 1a-child
To market seem there went child (Intd: it seems that the child went to the market)

7.3.2.2 *Passivization*

With regards to passivization, only the Goal/Source argument of verbs *-kota* and *-vaika* occur as subject of a passive clause, as exemplified in (477c/d). The example sentences with the other two verbs are unacceptable, as shown in (477a/b).

(477) a. *#Kuzandu kuwelwe*
ku-Ø-zandu ku-w-el-w-e
17-5-market 17-go-APPL-PASS-PST
To market was gone (Intd: someone went to the market)

b. *#Kuzandu kwizilwe*
ku-Ø-vata kw-iz-il-w-e
17-5-village 17-come-APPL-PASS-PST
To village was come (Intd: someone came to the village)

c. *Musuku muvaikilwe*
mu-Ø-suku mu-vaik-il-w-e
18-5-room 18-enter-APPL-PASS-PST
In bedroom was exited (Intd: someone exited from the bedroom)

d. *Musuku mukotelwe*
mu-Ø-suku mu-kot-el-w-e
18-5-room 18-enter-APPL-PASS-PST
In bedroom was entered (Intd: someone/something entered in the bedroom)

7.3.2.3 *Relativization*

Like the other three sentences with the verbs examined in this section, the Goal/Locative argument as subject can occur as relative clause antecedent, with or without locative morphology, as shown in (478).

(478) a. *Kun'koko ko kuwele mwana mvula ita ko noka*
Ku-Ø-n'koko ko ku-w-ele mu-ana Ø-mvula i-ta ko noka
17-3-river 17 17-go-PST 1a-child 9-rain 9-be 17/there rain
To river there where went child fall rain' (Intd: it is raining at the river where the child went)

b. *N'koko wowo wele mwana mvula ita ko noka*
Ø-n'koko *wowo* *w-ele* *mu-ana* *mvula* *i-ta* *ko* *noka*
3-river 3/Rel go-PST 1a-child rain 9-be 17/there rain
River there where went child fall rain' (Intd: it is raining at the river where the child went)

7.3.2.4 *Locative prefix as expletive*

Locative prefixes do not seem to have impersonal readings, as exemplified in (479). The locative morphology determines the class that it belongs to.

(479) *Ko kuwele mwana mvula ita ko noka*
ko ku-w-ele *mw-ana* *Ø-mvula* *i-ta* *ko* *noka*
17 17-go-PST 1a-child 9-rain 9-be 17/there rain
There where went child fall rain' (Intd: there (to some place) where the child went, it is raining)

7.3.3 Object agreement with the Agent argument

The Agent/Theme argument of the sentences examined in this section cannot co-occur with the object agreement prefix, as exemplified in (480) with verb -*kwenda*.

(480) *#Kuzandu kumwele mwana*
ku-Ø-zandu *ku-m-w-ele* *(mu-ana)*
17-5-river 17-1/AgrO-go-PST 1a-child
To market (him/her) went child (Intd: the child went to market)

7.3.4 *Purpose* clause modification

While the example sentences with Agent/Theme argument in (481) are acceptable with the subject argument exerting control into a *purpose* clause, the example sentences with the Goal argument with locative morphology in (482) and the Goal argument without locative morphology in (483) are not acceptable in a similar way. This means the Locative argument as subject in (482 and 483) cannot exert control into a *purpose* clause.

7.3.4.1 *Agent/theme argument as subject*

(481) *Mwana dikendele kuzandu mpasi vo kasumba kinkutu*
mu-ana ***di**-ka-end-ele* *ku-Ø-zandu* ***mpasi vo*** *ka-sumba* *ki-nkutu*
1a-child Cp-1-go-PST 17-5-market so that 1-buy 7-shirt
'Child went to market so that s/he buys t-shirt' (Intd: child went to the market so that s/he buys a t-shirt)

7.3.4.2 *Goal/Locative/Source argument as subject*

(482) *#Kuzandu dikwendele mwana mpasi vo kwa sumba kinkutu*

ku-Ø-zandu	***di**-kwend-ele*	*mw-ana*	***mpasi vo***	*kwa*	*sumba*	*ki-nkutu*
17-5-market	Cp-go-PST	1a-child	so that	17/market	buy	7-shirt

'To market went child so that there buys shirt' (Intd: the market is the place which the child went so that s/he buys a t-shirt)

7.3.4.3 *Goal/Locative/Source argument (without loc prefix) as subject*

(483) *#Zandu didyendele mwana mpasi vo dya sumba kinkutu*

Ø-zandu	***di**-di-end-ele*	*mu-ana*	***mpasi vo***	*dya sumba*	*ki-nkutu*
5-market	Cp-5-go-PST	1a-child	so tha	5-of buy	7-shirt

'Market went child so that it buy shirt' (Intd: the market is the place which the child went so that s/he buys a t-shirt)

7.3.5 *Agent-oriented* phrase modification

Unlike the case with the diagnostic test with a *purpose* clause, the example sentences with Goal/Locative argument as subject in (484) and (485 and 486) can be modified by an *agent-oriented* phrase.

7.3.5.1 *Agent argument as subject*

(484) *Mwana wele kuzandu munswalu*

mu-ana	*w-ele*	*ku-Ø-zandu*	***mu-nswalu***
1a-child	go-PST	17-5-market	18-fast

'Child went to market fast' (Intd: the child went to the market fast)

7.3.5.2 *Goal/Locative/Source argument as subject*

(485) *Kuzandu kuwele mwana munswalu*

ku-Ø-zandu	*ku-w-ele*	*mw-ana*	***mu-nswalu***
17-5-market	17-go-PST	1a-child	18-fast

'To market went child fast' (Intd: the market is the place which the child went fast)

7.3.5.3 *Goal/Locative/Source argument (without loc prefix) as subject*

(486) *Zandu dyele mwana munswalu*

Ø-zandu	*di-y-ele*	*mu-ana*	***mu-nswalu***
5-market	5/AgrS-go-PST	1a-child	18-fast

'Market went child fast (Ind: the market is the place where the child went fast)

The example sentences in (485 and 486) differ in the sence that in (485) the Goal/Locative argument is realized with locative morphology, while in (486) the verb is realized without locative morphology. Nevertheless, they both have similar, but not identical, interpretations since the Goal/Loctive argument in (486) is used in its bear nominal form.

7.3.6 *By-self* phrase modification

The example sentence in (487) with the Agent argument as subject is acceptable with a *by-self* phrase, whereas the example sentences with Goal/Locative argument with locative morphology in (488) and without locative morphology in (489) are infelicitous. The constructions with the *by-self* phrase have the interpretation of someone did something without external help.

7.3.6.1 *Agent argument as subject*

(487) *Mwana wele kuzandu*

mu-ana	*w-ele*	*ku-Ø-zandu*	***yani mosi***
1a-child	go-PST	17-5-market	by him/herself

Child went to market him/herself (Intd: the child went to the market alone)

7.3.6.2 *Goal argument as subject*

(488) *#Kuzandu kuwele mwana kwau mosi*

ku-Ø-zandu	*ku-w-ele*	*mu-ana*	***kw-au mosi***
17-5-market	17-go-PST	1a-child	by-itself

'To market went child him/herself' (Ind: the market is the place where the child went alone)

7.3.6.3 *Goal argument (without loc prefix) as subject*

(489) *#Zandu dyele mwana dyau mosi*

Ø-zandu	*di-y-ele*	*mw-ana*	***dy-au mosi***
5-market	5/AgrS-go-PST	1a-child	5-self

'Market went child by itself (Intd: the market is the place where the child went on his/her own)

7.3.7 *Again* phrase modification

Like the example sentences in (490) with the Agent argument as subject, the sentences with Goal/Locative argument with locative morphology in (491) and without locative morphology in (492) are all felicitous with an *again* phrase.

7.3.7.1 *Agent argument as subject*

(490) *Mwana wele dyaka kuzandu*

mu-ana	*w-ele*	***dyaka***	*ku-Ø-zandu*
1a-child	go-PST	again	17-5-market

'Child went to market again (Intd: the child went to the market again)

7.3.7.2 *Goal/Locative argument as subject*

(491) *Kuzandu kuwele dyaka mwana*

ku-Ø-zandu	*ku-w-ele*	***dyaka***	*mu-ana*
17-5-market	17-go-PST	again	1-child

'To market went again child' (Intd: the market is the place where the child went again)

7.3.7.3 *Goal/Locative argument (without loc prefix) as subject*

(492) *Zandu dyele dyaka mwana*

Ø-zandu	*di-y-ele*	***dyaka***	*mu-ana*
5-market	5/AgrS-go-PST	again	1a-child

'Market went again child' (Intd: the market is the place where the child went again)

In the example sentences in (491 and 492), the *again* phrase has two possible interpretations: it may have a repetitive or a restitutive meaning. In (490), the *again* phrase can presuppose the existence of a previous time at which the child went *again* to the market (repetitive) or can pressupose that there is a previous time at which the child went to the market, but not that there was a previous event (restitutive). These two interpretations are applicable to constructions in (491 and 492).

7.3.8 *Reason* phrase modification

As is the case with the example sentence in (493), with the Agent/Theme argument as subject, the Goal/Locative argument as subject with locative morphology in (494) or, without locative morphology in (495), is felicitous with a *reason* phrase modification.

7.3.8.1 *Agent/Theme argument as subject*

(493) *Mwana dikendele kuzandu ekuma kasumba kinkutu*

mu-ana	***di**-ka-end-ele*	*ku-Ø-zandu*	***ekuma***	*ka-sumba*	*ki-nkutu*
1a-child	Cp-1-go-PST	17-5-market	because	1-buy	7-shirt

Child went to market because s/he buys shirt (Intd: the child went to market because s/he buys a T-shirt)

7.3.8.2 *Goal/Locative/Source argument as subject*

(494) *Kuzandu dikuwendele mwana ekuma kasumba mbolo*

Ku-Ø-zandu	***di**-ku-wend-ele*	*mw-ana*	***ekuma***	*ka-sumba*	*Ø-mbolo*
17- 5-market	Cp-17-go-PST	1a-child	because	1-buy	9-bread

'To market went child because s/he buys bread' (Intd: the market is the place where the child went because s/he buys bread)

7.2.8.3 *Goal/Locative/Source (without loc prefix) argumnt as subject*

(495) *Zandu didyendele mwana ekuma kasumba mbolo*
Ø-zandu ***di****-di-end-ele* *mu-ana* ***ekuma*** *ka-sumba Ø-mbolo*
5-market Cp-5/AgrS-go-PST 1a-child because 1-buy 9-bread
'Market went child because s/he buys bread' (Intd: the market is the place where the child went because s/he buys bread)

The example sentences in (493) and (494 and 495) have similar interpretations: they mean that 'the reason why the child went to the market is to buy a t-shirt". This means, despite of the argument's relation changing, these sentences have a similar, but not identical interpretation, since the example sentences in (494 and 495) are used with an inchoative reading. These sentences are used in the context of speakers giving focus to the location and not to the figure which moves.

7.3.9 *Instrumental* phrase modification

As is the case with the other three sentences examined in this section, the example sentences with the verb *-kwenda* in (496) is felicitous with instrumental modification. The same holds for the example sentences in (497 and 498). However, for the sentence in (498b) speakers' judgements waver.

7.3.9.1 *Agent/Theme argument as subject*

(496) *Mwana/mwini wele kuzandu mukalu*
Mw-ana/# Ø-mwini *w-ele* *ku-Ø-zandu* ***mu-Ø-kalu***
1a-child/3-sunshine go-PST 17-5-market 18-5-car
Child/sunshine went to market by car (Intd: the child/sunshine went to the market by car)

7.3.9.2 *Goal/Locative argument as subject*

(497) *Kuzandu kuwele mwana mumakalu*
ku-Ø-zandu *ku-w-ele* *mw-ana* ***mu-ma-kalu***
17-5-market 17-go-PST 1a-child 18-6-car
'To market went child by car' (Intd: the market is the place where the child went by means of a car)

7.3.9.3 *Goal/Locative argument (without loc prefix) as subject*

(498) a. *Zandu dyele mwana mukalu*

Ø-zandu	*di-i-ele*	*mu-ana*	***mu- Ø-kalu***
5-market	5AgrS-go-PST	1a-child	18-5-car

Market went child in car (Intd: the market is the place where the child went by car)

b. **?***Suku dikotele mwana mumileta*

Ø-suku	*di-kot-ele*	*mu-ana*	***mu-mi-leta***
5-room	5/AgrS-enter-PST	1a-child	18-4-crutch

Room entered child in crutches (Intd: the bedroom is the place where the child entered with the help of crutches)

The example sentence in (496) with an Agent argument has the interpretation of "the child dislocates to the market through the help of a car". Also, the sentences in (497 and 498) with or without locative morphology on the subject argument, are used with the same interpretation. With regards to the context or preference, it was found that speakers use the sentences in (497 and 498) interchangeably; that is, there is no specific discourse context. The sole difference between these two constructions is that the sentence without locative prefix is used in its bear nominal form.

7.3.10 *Temporal* phrase modification

Two of the four sentences discussed in this section are infelicitous with a *durative* phrase and felicitous with a *time* frame adjunct, as shown in (499a), whereas the other two sentences with the verbs *-kota* and *-vaika* are felicitous with a *time* frame adjunct and infelicitous with a *durative* adjunct, as illustrated in (499b). Members of this semantic class denote an activity event in their basic category in that they have the interpretation of an atelic event. However, when a directional goal locative *ku-* combines with an activity verb, the resulting sentence shifts to a telic interpretation, but when a static goal locative combines with an activity verb, the resulting sentence remains with an atelic interpretation. VIDMs with the Goal/Loctive argument as subject are acceptable with both *durative* and *time* frame adjuncts, except the example sentences in (33b and 34b) on which the speakers' judgements waver.

7.3.10.1 *Agent argument as subject*

(499) a. *Mwana wele kuzandu (*kolo kya-)/(mu-)ngunga imosi*
Mw-ana w-ele ku-Ø-zandu (kolo kya-)/(mu-)ngunga imosi
1a-child go-PST 17-5-river for/in an hour
'Child went market for/in an hour (Intd: The child went to the market for/in an hour)

b. *Mwana wizidi kuvata (*kolo kya-)/(mu-)ngunga imosi*
Mw-ana u-iz-idi ku-Ø-vata (kolo kya-)/(mu-)ngunga imosi
1a-child 1/AgrS-come-PST 17-5-village for/in an hour
Child came village for/in an hour (Intd: the child came to the village for/in an hour)

7.3.10.2 *Goal/Source argument as subject*

(500) a. *Kuzandu kuwele mwana (kolo kya nda)/(mu-ngunga imosi)*
ku-Ø-zandu ku-w-ele mw-ana (kolo kya nda)/(mu-ngunga imosi)
17-5-market 17-go-PST 1a-child for/in an hour
To market went child for/in an hour' (Intd: the market is the place where the child went for/in an hour)

b. **?***Kuvata kuwizidi nkangu kolo kya-)/(mu-)ngunga imosi*
Ku-Ø-vata ku-wiz-idi Ø-nkangu (kolo kya-)/(mu-)ngunga imosi
17-5-village 17-come-PST 2-person for/in an hour
To village came people for/in an hour (Intd: the village is the place where the people came for/in an hour)

7.3.10.3 *Goal/Source argument (without loc prefix) as subject*

(501) a. *Zandu dyele mwana mw-ana (kolo kya-)/(mu-)ngunga imosi*
Ø-zandu di-y-ele mw-ana (kolo kya-)/(mu-)ngunga imosi
5-market 5/AgrS-go-PST 1a-child for/in an hour
Market went child for/in an hour' (Intd: the market is the place where the child went for/in an hour)

b. **?***Vata dizidi nkangu (kolo kya-)/(mu-)ngunga imosi*
Ø-Vata di-iz-idi Ø-nkangu (kolo kya-)/(mu-)ngunga imosi
5-village 5/AgrS-come-PST 2-person for/in an hour
Village come people for/in an hour (Intd: the village is the place where the people came for/in an hour)

The sentence with the *durative* phrase has the interpretation of "it has been an hour since people started going to the market", whereas the sentence with the *time* frame adjunct has the interpretation of "the event of going to the market occurred in an hour". The sole difference between (499) and (500 and 501) is that the latter have an inchoative reading and hence they are events seen as states. This explains that the example sentences in (500 and 501) are used in the context of presentational focus.

7.3.11 Applicative locative sentence

Applicative locative sentences are possible with some predicates examined in this section. Similar to the other three sentences with VIDMs examined in this section, the sentence with the verb *-kuwenda* in (502) is acceptable with the applicative verb. This construction has the interpretation of 'the child goes exclusively to the market by means of a car'. While the example sentences with Goal/Locative argument as subject with locative morphology are felicitous with the applicative verb. For the sentences with the verbs *-kota* and *-vaika* in (503b and 504) without locative morphology speakers' judgements waver.

7.3.11.1 *Agent/Theme argument as subject*

(502) *Mwana ukuwendelanga kuzandu mukalu*

Mw-ana	*u-ku-wend-el-ang-a*	*ku-Ø-zandu*	***mu-Ø-kalu***
1a-child	1/AgrS-15-go-APPL-HAB-FV	17-5-market	18-5-car

Child goes exclusively to market by in car (Intd: the child goes exclusively to the market by means of a car '

7.3.11.2 *Goal/Locative/Source argument as subject*

(503) a. *Kuzandu kukuwendelanga mwana mukalu*

ku-Ø-zandu	*ku-ku-wend-el-ang-a*	*mu-ana*	***mu-Ø-kalu***
17-5-market	17-15-go-APPL-HAB-FV	1a-child	18-5-car

'To market went for child in car' (Intd: the market is the exclusive place where the child goes by means of a car)

b. **?***Musuku mukotelanga mwana mumileta*

mu-Ø-suku	*mu-kot-el-ang-a*	*mu-ana*	***mu-mi-leta***.
18- 5-room	18/AgrS-enter-APPL-HAB-FV	1a-child	18-4-cratch

In room enter child for in crutches (Intd: the bedroom is the exclusive place where the child enters with help of crutches)

7.3.11.3 *Goal/Locative/Source argument (without loc prefix) as subject*

(504) **?***Zandu dikuwendelanga mwana mukalu*

Ø-zandu	*di-ku-wend-el-ang-a*	*mu-ana*	***mu-Ø-kalu***
5-market	5/Agrs-15-go-APPL-HAB-FV	1a-child	18-5-car

'Market went child by cars' (Intd: the market is the place where the child goes by means of car)

To sum up, the four sentences with VIDMs examined in this section occur in the locative-subject alternation. Two types of alternations were identified: one with subject argument having the locative morphology and the other without the locative morphology. However,

they both have the same thematic role and have similar, but not identical meanings. In terms of the discourse context, the alternants with the subjeft argument with or without locative morphology are used interchangeably. The sole difference between these two sentences is that the sentence with the subject argument without the locative prefix is used in its bear nominal form. With regards to the diagnostic tests with subjecthood properties, the Goal/Locative/Source argument as subject satisfies certain subjecthood tests, as discussed in sub-sections 7.3.2.1, 7.3.2.2, and 7.3.2.3. The Agent/Theme argument cannot co-ccur with object agreement. Unlike the Agent/Theme argument, the Goal/Locative/Source argument cannot be modified by a *purpose* clause and *by-self* phrase, as discussed in sections 7.3.4 and 7.3.6, but they can be modified by an *agent-oriented*, a *reason* and *instrumental* phrase, as discussed in sections 7.3.5, 7.3.8 and 7.3.9. The sentences with an a*gain* phrase modification are acceptable, but with two possible readings: depending on the context, the use of the *again* phrase in either Agent/Theme argument or Goal/Locative/Source argument may denote a repetitive or a restitutive activity. Two sentences with Agent/Theme argument with a directional goal locative are acceptable with a *durative* phrase modification, whereas the other two with a static goal locative are acceptable with a *time* frame adjunct, as discussed in section 7.3.10. With regard to the Goal/Location/Source as subject, both *durative* and *time* frame adjuncts are acceptable, but with different readings. Finally, two of the four sentences with an Agent/Theme argument are felicitous with an applicative locative, while for the other two the speakers' judgements waver. For example sentences with the subject argument without locative morphology speakers' judgements waver, as shown in section 7.3.11. Table 19 summarises the results of the diagnostic tests with the four verbs examined in this section.

Verbs	Locative alternation				Diagnostic tests with Goal/Location/Source argument as subject																											
					Properties of goal/loc/ theme Subject					Object prop. Agent/ theme		purpose clause		Agent orient. Adv.		By-phrase		Again phrase		Reason Mod.		Inst. Mod.		Temporal Mod.						Applic .locat.	
	Agent-subj	Theme-subj	DP_{Loc}-subj	$DP_{\_Loc}$-subj	S-V Agr	Occur subj	Passivization	Relativization	Expletive	AgrO prefix		DP_{Loc}-subj	DP_{-Loc}-subj	DP_{Loc}-subj	$DP_{\_Loc}$-subj	DP_{Loc}-subj	$DP_{\_Loc}$-subj	DP_{Loc}-subj	$DP_{\_Loc}$-subj	DP_{Loc}-subj	$DP_{\_Loc}$-subj	$DP_{\_Loc}$-subj	$DP_{\_Loc}$-subj	DPAg-subject		DP_{Loc}-subject		$DP_{\_Loc}$-subject		$DP_{\_Loc}$-Subj	$DP_{\_Loc}$- subj
																								F	I	F	I	F	I		
-kuwenda	√	#	√	√	√	√	#	√	#	#		#	#	√	√	#	#	√	√	√	√	√	√	#	√	√	√	√	√	√	?
-kwiza	√	#	√	√	√	√	#	√	#	#		#	#	√	√	#	#	√	√	√	?	√	√	#	√	?	?	?	?	√	?
-kota	√	√	√	√	√	√	√	√	#	#		#	#	√	√	#	#	√	√	√	√	√	?	√	#	√	√	√	√	?	?
-vaika	√	√	√	√	√	√	√	√	#	#		#	#	√	√	#	#	√	√	√	√	√	√	√	#	√	√	√	√	?	?

Table 19: Summary of diagnostic tests with ‘Verbs of Inherently Directed motion’ in *Kizombo*

7.4 MANNER-OF-MOTION VERBS

This section will give an account of Manner-of-motion verbs. According to Levin (1993, section 51.3), members of this semantic class describe motion that typically, although not necessarily, involve dislocation, but some of them specify an inherent direction as part of their encyclopaedic lexical semantics. Members of this class have meanings that include a notion of manner or means of intrinsic lexical motion. However, they differ from each other in terms of the specific manner or means. The class member examined include verbs *-zyeta* 'surround/circulate', *tyatika* 'run' and *-mata* 'climb'. The discussion below will center on the verb *-zyeta*.

The three sentences with manner-of-motion verbs examined in this section occur in the locative-subject alternation. As is the case with the VIDMs, two types of alternants were found: one with the subject argument having locative morphology (506) and another with the subject argument without locative morphology (507). Unlike the VIDMs discussed in section 7.3, manner-of-motion verbs do not accept Theme argument as subject, as shown in (505), see also appendix B, section 7.3.

7.4.1 *Agent/Theme argument as subject*

(505) *Masolai/mwisi (ma)uzyetele muvata*
ma-solai/#Ø-mwisi *ma-u-zyet-ele* *mu-Ø-vata*
6-soldier/3-smoke 6-3/AgrS-surround-PST 18-5-village
Soldiers surrounded in village (Intd: the soldiers surrounded the village)

7.4.1.1 *Goal/Locative argument as subject*

(506) *Muvata muzyetele masolai*
mu-Ø-vata *mu-zyet-ele* *ma-solai*
18-5-village 18/AgrS-surround-PST 6-soldier
In village surrounded soldiers (Intd: the village is the place which the soldiers surrounded)

7.4.1.2 *Goal/Locative argument (without loc prefix) as subject*

(507) *Vata dizyetele masolai*
Ø-vata *di-zyet-ele* *ma-solai*
5-village 5/AgrS-surround-PST 6-soldiers
Village surrounded soldiers (Intd: the village is the place which the soldiers surrounded)

In the example sentences in (505), the preverbal argument *masolai* 'soldiers', is in the subject, a position in which it is interpreted with the thematic role Agent, whereas the postverbal

argument *kuzandu*, is the complement, a position in which it is understood with the thematic role Goal in (506 and 507). In the sentence in (506), the verb agrees with the locative prefix, whereas in (507) the verb agrees with the nominal class prefix. However, as was pointed out in section 7.3, both alternants have a similar interpretation. The sole difference between them is that the example sentences in (506 and 507) are used in the presentational focus context; that is, the sentence with Locative subject argument is interpreted as a focused element, and the Agent argument gives new information. In terms of discourse, both sentences are used interchangeably.

7.4.2 Subjecthood properties of the Goal/Locative argument as subject

7.4.2.1 *Occurrence in subject position*

The three sentences with manner-of-motion verbs examined trigger subject-verb agreement with the Locative argument, as exemplified in (506) with the verb *-zyeta*. Like in the sentence with the Agent argument as subject, in the sentences with the Goal argument as subject this Goal can occur in the subject position of the matrix clause and agrees with the locative class prefix, as in (508).

(508) *Muvata nze mwau muzyetele masolai*

mu-Ø-vata	*nze*	*mu-au*	*mu-zyet-ele*	*ma-solai*
18-5-village	seems	18-there	18/AgrS-surround-PST	6-soldiers

'In village seem there (in the villge) surrounded soldiers (Intd: it seems that the soldiers surrounded in the village)'

7.4.2.2 *Passivization*

With regards to the passivization, like the two sentences discussed in sub-section 7.3.2.2, in sentences with the verb *-zyeta* as the Locative/Goal argument, the latter can occur as the subject of passive verb clause, as exemplified by the sentences in (509).

(509) a. *Muvata muzyetelwe kwa masolai*

mu-Ø-vata	*mu-zyet-el-w-e*	*kwa*	*ma-solai*
18-5-village	18-surround-APPL-PASS-PST	by	6-soldier

In village was surrounded by soldiers (Intd: the village is the place which the soldiers surrounded)

b. *Vata dizyetelwe kwa masolai*
Ø-vata *di-zyet-el-w-e* *kwa* *ma-solai*
5-village 5/AgrS-surround-APPL-PASS-PST by 6-soldiers
Village was surrounded by soldiers (Intd: the village is the place which the soldiers surrounded)

7.4.2.3 *Relativization*

As is the case with the passive sentences in (509), in the sentence with the Goal/Locative argument as subject, with or without morphology, this Goal can occur as relative clause antecedent, as shown in the example sentence in (510) with the verb-*zyeta*.

(510) a. *Kuvata ko kuzyetele masolai mwana uta ko dila*
ku-Ø-vata *ko ku-zyet-ele* *ma-solai* *mu-ana* *u-ta* *ko dila*
17-5-village 17/Rel 17-surround-PST 6-soldiers 1a-child 1a-be 17/there cry
To village where circulated soldiers person is crying (Intd: there is a person crying where the soldiers surrounded).

b. *Vata dyo dizyetele masolai mwana uta ko dila*
Ø-vata *dyo* *di-zyet-ele* *ma-solai* *mu-ana* *u-ta* *ko dila*
5-village 5/Rel 5-surround-PST 6-soldiers 1a-child 1a-be 17/there cry
Village where surround soldiers child is crying (Intd: there is a child crying in the village which the soldiers surrounded).

7.4.2.3 *Locative prefix as expletive*

The locative prefix specifies the semantic content of the class prefix that it belongs to, as shown by the example sentence in (511). This necessitates that any locative prefix appearing anywhere in the sentence conforms to the locative class that it belongs to.

(511) *Ko kuzyetele masolai muntu uta ko kaaza*
ko *ku-zyet-ele* *ma-solai* *mu-ntu* *u-ta* *ko* *kaaza*
17 17-surround-PST 6-soldier 1-person AgrS-be 17/there cry
There where surrounded soldiers person is crying (Intd: there is a person crying where the soldiers surrounded).

7.4.3 Object agreement with Agent/Theme argument

Sentences with the Agent argument as object cannot allow the object agreement prefix, as exemplified in (512) with verb -*zyeta*.

(512) *#Muvata mumzyetele masolai*
Mu-Ø-vata *mu-'m-zyet-ele* *ma-solai*
18-5-village 18-AgrO-surround-PST 6-soldiers
In village (them) surrounded the soldiers (Intd: the village is the place which the soldiers surrounded)

7.4.4 *Purpose* clause modification

The example sentence with Agent/Theme argument as subject in (513) is acceptable with a *purpose* clause. But the Goal/Locative argument with locative morphology in (514) and that without locative morphology in (515) are not acceptable. This means that the Goal/Locative argument cannot exert control into a *purpose* clause.

7.4.4.1 *Agent/Theme argument as subject*

(513) *Masolai dimazyetele muvata mpasi vo makengela mfumu*
ma-solai ***di****-ma-zyet-ele* *mu-vata* ***mpasi vo*** *ma-kengela mfumu*
6-soldier Cp-6/AgrS-surround-PST 18-Ø/5-village so that 6-protect chief
Soldiers surrounded in village so that they protect chief (Intd: the soldiers surrounded in the village so that they protect the chief)

7.4.4.2 *Goal/Locative argument as subject*

(514) *#Muvata dimuzyetele masolai mpasi vo mwa kengela mfumu*
mu-Ø-vata ***di****-mu-zyet-ele* *ma-solai* ***mapi vo*** *mwa kengela Ø-mfumu*
18-5-village Cp-18/AgrS-surround-PST 6-soldier so that there protect 1-chief
In village surrounded soldiers so that there protect chief (Intd: the village is the place which the soldiers surrounded so that they protect the chief)

7.4.4.3 *Goal/Locative argument (without loc prefix) as subject*

(515) *#Vata didizyetele masolai mpasi vo dya kengela mfumu*
Ø-vata ***di****-di-zyet-ele* *ma-solai* ***mpasi vo*** *dya kengela Ø-mfumu*
5-village Cp-5/AgrS-surround-PST 6-soldiers so that it protect 1-chief
Village surrounded soldiers so that there (the village) protect chief (Intd: the village is the place which the soldiers surrounded so that they protect the chief)

7.4.5 *Agent-oriented* phrase modification

Unlike the *purpose* clause discussed in section 7.4.4, and, as is the case with the other class members, (see appendix B), constructions with both Agent/Theme argument as subject and Goal/Locative argument as subject can be modified by an *agent-oriented* phrase, as shown in (516) and (517 and 518), respectively.

7.4.5.1 *Agent argument as subject*

(516) *Masolai mazyetele muvata munswalu*

ma-solai	*ma-zyet-ele*	*mu-Ø-vata*	***mu-nswalu***
6-soldier	6/AgrS-surround-PST	18-5-village	18-fast

Soldiers surround in village fast (Intd: the soldiers surrounded in the village)

7.4.5.2 *Goal/Locative argument as subject*

(517) *Muvata muzyetele masolai munswalu*

mu-Ø-vata	*mu-zyet-ele*	*ma-solai*	***mu-nswalu***
18-5-village	18/AgrS-surround-PST	6-soldier	18-fast

In village surrounded soldiers fast (Intd: the village is the place which the soldiers surrounded fast)

7.4.5.3 *Goal/Locative argument (without loc prefix) as subject*

(518) *Vata dizyetele masolai munswalu*

Ø-vata	*di-zyet-ele*	*ma-solai*	***mu-nswalu***
5-village	5/AgrS-surround-PST	6-soldiers	18-fast

Village surrounded soldiers fast (Intd: the village is the place which the soldiers surrounded fast)

In the example sentences in (516), the *agent-oriented* phrase modifies the Agent of the sentence, hence it responds to the question "how did soldiers perform their movement while circulating the village". In the example sentence in (517) with the subject argument with locative morphology, and in (518) without locative morphology, the *agent-oriented* phrase is also acceptable. As pointed out earlier, both sentences have similar, but not identical meanings. They only differ in the structural encoding of the information. For example, a speaker would prefer saying "*vata dizyetele masolai unu, indende kaisidi nlombo ko* or *muvata muzyetele masolai unu, indende kaisidi nlombo ko* (both sentences mean: in the village which the soldiers surrounded today, the boys are quiet)".

7.4.6 *By-self* phrase modification

In the example sentence in (519), the Agent/Theme argument as subject is felicitous with a *by-self* phrase, and has the interpretation of "someone did something without external help". However, the example sentences with the Goal/Locative argument as subject in (520 and 521) are infelicitous, because the Goal argument cannot act on its own.

7.4.6.1 *Agent argument as subject*

(519) *Masolai mazyetele muvata mau mosi*

ma-solai	*ma-zyet-ele*	*mu-Ø-vata*	***mau mosi***
6-soldier	6/AgrS-surround-PST	18-5-village	them selves

Soldiers surrounded in village by themselves (Intd: The soldiers surrounded in the village on their own)

7.4.6.2 *Goal/Locative argument as subject*

(520) *#Muvata muzyetele masolai mwau mosi*

Mu-Ø-vata	*mu-zyet-ele*	*ma-solai*	***mw-au mosi***
18-5-village	18/AgrS-circulate-PST	6-soldier	18-itself

In village surrounded soldiers by itself (Intd: the village is the place which the soldiers surrounded on their own)

7.4.6.3 *Goal/Locative argument (without loc prefix) as subject*

(521) *#Vata dizyetele masolai dyau mosi*

Ø-vata	*di-zyet-ele*	*ma-solai*	***dy-au mosi***
5-village	5/AgrS-surround-PST	6-soldiers	18-self

Village surrounded soldiers by itself (Intd: the village is the place which the soldiers surrounded on their own)

7.4.7 *Again* phrase modification

Similarly to the example sentence in (522) with the Agent/Theme argument as subject, the sentences with the Goal/Locative argument as subject with locative morphology (523), and without locative morphology in (524), are felicitous with *again* phrase modification.

7.4.7.1 *Agent/Theme argument as subject*

(522) *Masolai mazyetele dyaka muvata*

ma-solai	*ma-zyet-ele*	***dyaka***	*mu-Ø-vata*
6-soldier	6/AgrS-surround-PST	again	18-5-village

Soldiers surrounded again in village (Intd: the soldiers surrounded the village again)

7.4.7.2 *Goal/ Locative argument as subject*

(523) *Muvata muzyetele dyaka masolai*

mu-Ø-vata	*mu-zyet-ele*	***dyaka***	*ma-solai*
18-5-village	18-surrounded-PST	again	6-solai

In village surrounded again soldier (Intd: the village is the place which the soldiers surrounded again)

7.4.7.3 *Goal/Locative argument (without loc prefix) as subject*

(524) *Vata dizyetele dyaka masolai*
Ø-vata *di-zyet-ele* ***dyaka*** *ma-solai*
5-village 5/AgrS-surround-PST again 6-soldier
Village surrounded again soldier (Intd: the village is the place which the soldiers surrounded again)

As was said in sub-section 7.3.7, the *again* phrase, in *Kizombo*, always appears immediately after the verb and its use has ambiguous meaning: it may have repetitive or restitutive meaning. In (522), *the again* phrase can presuppose the existence of a previous time at which the soldiers circulated again in the village (repetitive) or can simply presupose that there is a previous time at which the soldiers had circulated in the village, but not that there was a previous event (restitutive). The same holds for the example sentences in (523 and 524).

7.4.8 *Reason* phrase modification

Like the example sentences with the other two verbs discussed in this sub-section, see appendix B, the example sentence with the verb *-zyeta* is acceptable with *reason* phrase modification with both Agent argument as subject (525) and Goal/Location argument as subject, with and without locative morphology as shown in (526 and 527).

7.4.8.1 *Agent argument as subject*

(525) *Masolai dimazyetele muvata ekuma makengela mfumu*
ma-solai ***di****-ma-zyet-ele* *mu-Ø-vata* ***ekuma*** *ma-kengela Ø-mfumu*
6-soldier Cp-6/AgrS-surround-PST 18-5-village because 6-secure 1-chief
Soldiers surrounded in village because they protect chief (Intd: the soldiers surrounded in the village because they protect the chief)

7.4.8.2 *Goal/Locative argument as subject*

(526) *Muvata dimuzyetele masolai ekuma makengela mfumu*
Mu-Ø-vata ***di****-mu-zyet-ele* *ma-solai* ***ekuma*** *ma-kengela Ø-mfumu*
18-5-illage Cp-18/AgrS-surround-PST 6-soldier because 6- protect 1-chief
In village surrounded soldiers because they protect chief (Intd: the village is the place which the soldiers surrounded because they protect the chief)

7.4.8.3 *Goal/Locative argument (without loc prefix) as subject*

(527) *Vata didizyetele masolai ekuma mfumu wa zunga vakalutila*
Ø-vata ***di****-di-zyet-ele* *ma-solai* ***ekuma*** *Ø-mfumu wa zunga vakalutila*
5-village Cp-5/AgrS-surround-PST 6-soldier because 1-chief of district pass by
Village surrounded soldiers because they protect chief (Intd: the village is the place which the soldiers surrounded because they protect the chief)

The example sentence in (525) has the interpretation of "the soldier surrounded in the village in order to grant security to the chief". This same interpretation holds for the example sentences in (526 and 527).

7.4.9 *Instrumental* phrase modification

The three examined sentences with manner-of-motion verbs are acceptable with *instrumental* phrase modification. In (529 and 530), the sentence with the Goal/Theme argument *-zandu,* is realized with locative morphology in (529), and without locative morphology in (530).

7.4.9.1 *Agent/Theme argument as subject*

(528) *Masolai mazyetele muvata mukalu*
ma-solai *ma-zyet-ele* *mu-Ø-vata* ***mu-Ø-kalu***
6-soldier 6/AgrS-surround-PST 18-5-village 18-5-car
Soldiers surrounded in village in car (Intd: the soldiers surrounded in the village by means of a car)

7.4.9.2 *Goal/Locative argument as subject*

(529) *Muvata muzyetele masolai mukalu*
mu-Ø-vata *mu-zyet-ele* *ma-solai* ***mu-Ø-kalu***
18-5-village 18-surround-PST 5-soldier 18-5-car
In village surrounded soldiers in car (Intd: the village is the place which the soldiers surrounded by means of a car)

7.4.9.3 *Goal/Locative argument (without locative prefix) as subject*

(530) *Vata dizyetele masolai mukalu*
Ø-vata *di-zyet-ele* *ma-solai* ***mu-Ø-kalu***
5-village 5/AgrS-surround-PST 6-solai 18-5-car
Village circulated soldiers in car (Intd: the village is the place which the soldiers surrounded by means of a car)

The sentence in (528) differs from those in (529 and 530) in the sense that in the former, the subject is understood with the thematic role Agent, whereas in the latter, the subject is understood with the thematic role Goal. However, they both have similar meanings.

7.4.10 *Temporal* phrase modification

The diagnostic test with *durative* and *time* frame adjuncts suggests that while the sentence (531a) is acceptable with a *time* frame phrase, (531b) is acceptable with a *durative* phrase. The reason for this is that for verbs which denote an activity, and then combine with a directional goal locative, the resultant sentence will have a telic interpretation. However, when they combine with a stative goal locative, the resultant sentence has an atelic interpretation, as illustrated in (531b). The example sentences with the Goal/Locative/Source argument as subject in (532 and 533) are felicitous with both *durative* and *time* frame adjuncts, but for the sentences (532b and 533b) with a *durative* adjunct are speakers' judgements waver.

7.4.10.1 *Agent/Theme argument as subject*

(531) a. *Masolai mazyetele muvata (kolo kya-/#mu-)ngunga imosi*
ma-solai ma-zyet-ele mu-Ø-vata (kolo kya-)/(mu-)ngunga imosi
6-soldier 6/AgrS-surround-PST 18-5-village for/in an hour
Soldiers surrounded in village for/in an hour (Intd: the soldiers surrounded in the village for/in an hour)

b. *Indemde ityatikidi kuzandu (#kolo kya-)/(mu-)ngunga imosi*
i-ndende i-tyatik-idi ku-Ø-zandu (kolo kya-)/(mu-)ngunga imosi
8-kids 8/AgrS-run-PST 17-5-market for/in an hour
kids ran to market for /in an hour (Intd: the boys ran to the market for/in an hour)

7.4.10.2 *Goal/Locative argument as subject*

(532) a. *Muvata muzyetele masolai (kolo kya-)/(mu-)ngunga imosi*
mu-Ø-vata mu-zyet-ele ma-solai (kolo kya-)/(mu-)nguga imosi
18-5-village 18-surround-PST 6-soldier for/in an hour
In village surrounded soldiers for/in an hour (Intd: the village is the place which the soldiers surrounded for/in an hour)

b. *Kun'ti kumete aana (**?**kolo kya-)/(mu-)ngunga imosi*
ku-Ø-n'ti ku-met-e a-na (kolo kya-)/(mu-)ngunga imosi
17-3-tree 17-climb-PST 2a-child for/in an hour
To tree climbed children for/in an hour (Intd: the tree is the place which the children climbed for/in an hour)

7.4.10.3 *Goal/Locative argument (without locative prefix) as subject*

(533) a. *Vata dizyetele masolai (kolo kya-)/(mu-)ngunga imosi*
Ø-vata di-zyet-ele ma-solai (kolo kya-)/(mu-)ngunga imosi
5-village 5/AgrS-surround-PST 6-soldier for/in an hour
Village surrounded soldiers for/in an hour (Intd: the village is the place which the soldiers surrounded for/in hour)

b. *N'ti umete aana (**?**kolo kya-)/(mu-)ngunga imos)*
Ø-n'ti u-met-e a-ana (kolo kya-)/(mu-)ngunga imos)
3-tree 3/AgrS-climb-PST 2a-child for/in an hour
Tree climbed children for/in an hour (Intd: the tree is the place where the children climbed for/in an hour)

The example sentences with the Goal/Locative argument as subject with the *durative* phrase have the interpretation of "it has been an hour now since the soldiers started surrounding in the village". On the other hand, the example sentences with a *time* frame phrase have the interpretation of "the event of surrounding the village occurred in an hour". In terms of information structure, the subject argument in the example sentences in (532 and 533) are presentationally focused.

7.4.11 Applicativised locative sentences

Sentences with applicative verb suffixation are also possible with the verbs discussed in this section. The sentence with the Agent/Theme argument as subject in (534) is acceptable with the applied verb. Likewise, the two sentences with Goal/Locative argument as subject with locative morphology (535), and without locative morphology in (536) are felicitous.

7.4.11.1 *Agent argument as subject*

(534) *Masolai mazyetelanga muvata mukalu*
ma-solai ma-zyet-el-ang-a mu-Ø-vata mu-Ø-kalu
6-soldier 6/AgrS-surround-APPL-HAB-FV 18-5-village 18-5-car
Soldiers surround exclusively in village in car (Intd: The soldiers surround in the village by means of a car)

7.4.11.2 *Goal/Locative argument as subject*

(535) *Muvata muzyetelanga masolai mukalu*
mu-Ø-vata mu-zyet-el-ang-a ma-solai mu-Ø-kalu
18-5-village 18-surround-APPL-HAB-FV 6-soldiers 18-5-car
In village surround for soldiesr in car (Intd: the village is the exclusive place which the soldiers surround by means of car)

7.4.11.3 *Goal/Locative argument (without locative prefix) as subject*

(536) *Vata dizyetelanga masolai mukalu*

Ø-vata	*di-zyet-el-ang-a*	*ma-solai*	*mu-Ø-kalu*
5-village	5/AgrS-surround-APPL-HAB-FV	4-soldier	18-5-car

Village surround soldiers in car (Intd: the village is the exclusive place which the soldiers surround by means of a car)

The inclusion of the applied suffix in (534) derives the meaning of exclusiveness and has the interpretation of "the village is the exclusive place that soldiers circulate by means of a car". A similar interpretation holds for the sentences in (535 and 536).

In summary, the three sentences with the manner-of-motion verbs examined occur in the locative-subject alternation. Two types of alternations were identified: one with the locative morphology and the other without the locative morphology. Nevertheless, both alternants have the same thematic role and convey similar meanings. They differ in that sentences with the Locative/Goal argument as subject are used with the presentational focus. The diference between the sentence with the subject argument with locative and those without locative morphology is that the latter is used in its bear form. The postverbal argument as subject satisfies a number of subjecthood tests, as discussed in sub-sections 7.4.2.1, 7.4.2.2 and 7.4.2.3. However, the Agent/Theme argument which occurs as postverbal argument in the anticausative alternants, as exemplified in (506 and 507) cannot be associated with object agreement, as examined in sub-section 7.4.2.1. The locative prefix does not receive the status of expletive since it denotes the semantic content of the locative class that it represents. Unlike the sentences with the Agent/Theme argument as subject, the sentences with the Goal/Locative argument as subject cannot be modified by a *purpose* clause and *by-self* phrase, as discussed in 7.4.4 and 7.4.6. However, they can be modified by an *agent-oriented*, a *reason* and an *instrumental* phrase, as examined in sections 7.4.5, 7.4.8 and 7.4.9. The sentences with the a*gain* phrase are acceptable, but with two possible interpretations. Two sentences with the Agent/Theme argument as subject are acceptable with a *durative* adjunct, whereas one is felicitous with a *time* frame adjunct. In the sentences with Goal/Locative argument, both *durative* and *time* frame adjuncts are acceptable, but with different readings as dicussed in section 7.4.10. Finally, the three sentences with manner-of-motion verbs with the Agent/Theme argument as subject and those with Goal/locative argument as subject, with/without locative morphology, are felicitous with applicative verb sentences. Table 20 summarises the application of the diagnostic tests in sentences with the locative-subject alternation of the verbs discussed in this section.

Verbs	Locative alternation				Diagnostic tests with Goal/Locative argument as subject																											
					Subjecthood properties of goal/loc/ theme Subject						Object propert		Purpose clause		Ag. Orient Adv		By-phrase		Again phrase		Reason Mod.		Inst. Mod.		Temporal Mod.						Loc-Appl.	
	DP_{Ag}-subjet	DP_{Th}-subj	DP_{Loc}-subj	$DP_{\_Loc}$-subj	S-V Agr	Occu in Subj		Passivization	Relativization	Expletive	AgrO prefix		DP_{Loc}-subj	$DP_{\_Loc}$-subj	DP_{Loc}-subj	$DP_{\_Loc}$-subj	DP_{Loc}-subj	$DP_{\_Loc}$-subj	DP_{Loc}-subj	$DP_{\_Loc}$-subj	DP_{Loc}-subj	$DP_{\_Loc}$-subj	DP_{Loc}-subj	$DP_{\_Loc}$-subj	DP_{Ag}-subj		DP_{Loc}-subj		$DP_{\_Loc}$-subj		DP_{Loc}-subj	$DP_{\_Loc}$-subj
																									F	I	F	I	F	I		
-zyeta	√	#	√	#	√	√		√	√	#	#		#	#	√	√	#	#	√	√	√	√	√	√	√	#	√	√	√	√	√	√
-tyatika	√	#	√	#	√	√		√	√	#	#		#	#	√	√	#	#	√	√	√	√	√	√	#	√	√	√	√	√	√	√
-‘mata	√	#	√	#	√	√		√	√	#	#		#	#	√	√	#	#	√	√	√	√	√	√	√	#	?	√	?	√	√	√

Table 20: Summary of diagnostic tests with Manner-of-motion verbs in *Kizombo*

7.5 VERBS OF EXISTENCE

This section will explore the locative-subject alternation constructions with verbs of existence. Levin (1993, section 47.1) characterizes verb of existence as verbs associated with the way of life of an entity at some location. Mulder & Wehrman (1989) define members of this semantic class as describing eventualities that involve two participants, albeit a theme - an entity whose existence is asserted in a location. For the purpose of this section, two verbs are examined, namely *-ziingila* 'to live (in)' and *-kala* 'to stay' while the discussion will center on the verb *-ziingila*.

The two sentences with the verb of existence examined in this section occur in the locative-subject alternation. As is the case with the other classes discussed so far, two types of alternants are identified: one with the subject argument with locative morphology (538) and another with the subject argument without locative morphology (539). However, both have similar interpretations. Unlike the manner-of-motion verbs examined in section 7.4, example (506), only the sentence with the verb *-kala* 'stay' can take the Theme argument as subject , as exemplified in (537b).

7.5.1 *Agent/theme argument as subject*

(537) a. *Luzolo/#tanzi ukiziingilanga munza ya 'nene*
Luzolo/Ø-tanzi *u-ki-ziingil-ang-a* *mu-Ø-nzo ya 'nene*
1-PN/7-machete 1-7/AgrS-live-HAB-FV 18-9-house of big
Luzolo/machete lives in house of big (Intd: Luzolo lives in a big house)

b. *Nuni/tanzi zikikalanga muzala/vakooko*
Ø-nuni/ Ø-tanzi *zi-ki-kal-ang-a* *mu-Ø-zala/va-kooko*
10-bird/7-machete 10-7/AgrS-stay-HAB-FV 18-5-nest/16-corner
Birds/machete stays in nest/corner (Intd: birds/machete stay in/at the corner)

7.5.1.2 *Locative argument as subject*

(538) a. *Munzo ya 'nene muziingilanga Luzolo/#tanzi*
mu-Ø-nzo ya 'nene *mu-ziing-il-ang-a* *Luzolo/Ø-tanzi*
18-9-house of big 18-live-APPL-HAB-FV 1-PN/7-machete
In house big live Luzolo/machete (Intd: the big house is the place where Luzolo/machete lives)

b. *Muzala/vakooko muvakalanga nuni/tanzi*
mu-Ø-zala/va-Ø-kooko *mu-va-kal-ang-a* *Ø-nuni/Ø-tanzi*
18-5-nest/16-7-corner 18-16/AgrS-stay-HAB-FV 10-bird/7-machete
In nest/corner stay birds/machete (Intd: the nest/corner is the place where birds/machete stays)

7.5.1.3 *Locative argument (without locative prefix) as subject*

(539) a. *Nzo ya 'nene iziilanga Luzolo/tanzi*

Ø-nzo ya 'nene	*i-ziing-il-ang-a*	*Luzolo/Ø-tanzi*
9-house of big	9/AgrS-live-APPL-HAB-FV	1-PN/7-machete

Big house lives Luzolo/machete (Intd: the big house is the place where Luzolo/machete lives)

b. *Zala/kooko dikikalanga nuni/tanzi*

Ø-zala/Ø-kooko	*di-ki-kal-ang-a*	*Ø-nuni/Ø-tanzi*
5-nest/7-corner	5-7/AgrS-stay-HAB-FV	10-birds/7-machete

Nest/corner stay bird/machete (Intd: the nest/corner is the place which birds/the machete stay(s))

In the example sentences in (537), the preverbal arguments *Luzolo/nuni*, are the subjects, a position in which they are interpreted with the thematic role Agent, whereas the postverbal arguments *nzo ya nene/vakooko/muzala*, are the complement arguments, a position in which they are understood with the thematic role Locative in (538 and 539). In (538), the verb agrees with the locative prefix, whereas in (539) the verb agrees with the nominal class prefix. However, both alternants have the same interpretation.

7.5.2 Subjecthood properties of the locative argument

The two sentences with the verbs examined in this section trigger subject-verb agreement with the Locative/Goal argument, as shown in (538). Like in the sentences with the Agent/Theme argument as subject, the sentences with the Locative argument as subject in (540) this argument can occur in the subject position of the matrix clause and agrees with the locative class prefix, as seen in (540).

7.5.2.1 *Occurrence in subject position*

(540) *Munzo nze mwau muziingilanga nkaka*

mu-Ø-nzo	*nze*	*mu-au*	*mu-ziing-il-ang-a*	*Ø-nkaka*
18-9-house	seem	18-there	18-live-APPL-HAB-FV	1-grandpa

In the house seem live grandpa (Intd: it seems that the house is the place where grandpa lives)

7.5.2.2 *Passivization*

The Locative argument of these verbs cannot occur as subject of passive clause, as exemplified in (541) with the verb *–ziinga*. However, they can occur as relative clause antecedent, as shown in (542).

(541) a. *#Munzo muziingilwanga kwa Luzolo*
mu-Ø-nzo *mu-ziing-il-w-ang-a* *kwa* *Luzolo*
18-9-house 18-live-APPL-PASS-HAB-FV by 1-PN
In house is being lived (Intd: the house is the place where Luzolo lives)

b. *#Nzo iziingilwanga kwa Luzolo*
Ø-nzo *i-ziing-il-w-ang-a* *kwa* *Luzolo*
9-house 9/AgrS-live-APPL-PASS-HAB-FV by 1-PN
House is being lived (Intd: the house is the place which Luzolo lives)

7.5.2.3 *Relativization*

(542) a. *Munzo mo muziingilanga nkaka nyoka una mo*
mu-Ø-nzo *mo* *mu-ziing-il-ang-a* *Ø-nkaka* *Ø-nyoka* *u-na* *mo*
18-9-house 18/Rel 18-live-APPL-HAB-FV 1-grand 9-snake 9-be 18/there
In house where (in the house) live grandpa there is a snake (Intd: there is a snake where the grandpa lives)

b. *Nzo yoyo iziingilanga nkaka nyoka una mo*
Ø-nzo *yoyo* *i-ziing-il-ang-a* *nkaka* *Ø-nyka* *u-na* *mo*
9-house 9/Rel 9-live-APPL-HAB-FV grand 9-snake 9-be 18/there
House where (the house) live grandpa there is a snake (Intd: there is a snake where the grandpa lives)

7.5.2.4 *Locative prefix as expletive*

As is the case with manner-of-motion verbs studied in sub-section 7.3.2.4, the locative prefix specifies the semantic content of the locative class prefix that it belongs to, as shown in (543).

(543) *Mo muziingilanga nkaka nyoka una mo*
mo-mu-ziing-il-ang-a *Ø-nkaka* *Ø-nyoka* *u-na* *mo*
18-18-live-APPL-HAB-FV 1-grand 9-snake 9-be 18/there
There (in some place) live grandpa there is a snake (Intd: there is a snake where the grandpa lives)

7.5.3 Object agreement with Agent/Theme argument

The Agent/Theme argument as object cannot be associated with an object agreement prefix, as exemplified in (544) with the verb *-ziinga*.

(544) *#Munzo munziingilanga nkaka*
mu-Ø-nzo *mu-n-ziing-il-ang-a* *Ø-nkaka*
18-9-river 17/AgrS-AgrO-live-APPL-HAB-FV 1-grandpa
In house (him) live grandpa (Intd: the grandpa lives in a big house)

7.5.4 *Purpose* clause modification

The example sentence with the Agent/Theme argument as subject in (545) is acceptable with a *purpose* clause. However, the example sentence with the Locative subject argument in (546) with locative morphology and, in (547) without locative morphology, are infelicitous. This means that the locative argument as subject cannot exert control in a purpose clause.

7.5.4.1 *Agent/theme argument as subject*

(545) *Luzolo dikaziingilanga munzo ya 'nene mpasi vo kasasa antu ayingi*
Luzolo ***di****-ka-ziing-il-ang-a* *mu-nzo ya 'nene* ***mpasi vo*** *ka-sasa antu*
1-PN Cp-1-live-APPL-HAB-FV 18-house of big so that 1-bring up many people
Luzolo lives in house big so that s/he bring up many people (Intd: Luzolo lives in the big house so that s/he brings up many people)

7.5.4.2 *Locative argument as subject*

(546) *#Munzo dimuziingilanga Luzolo mpasi vo mwa sasa antu ayingi*
mu-Ø-nzo ***di****-mu-ziing-il-ang-a* *Luzolo* ***mpasi vo*** *mwa sasa antu*
18-9-house Cp-18-live-APPL-HAB-FV 1-PN so that in house bring up many people
In house live Luzolo so that bring up many people (Intd: Luzolo lives in a big house so that s/he brings up many people)

7.5.4.3 *Locative argument (without loc prefix) as subject*

(547) *#Nzo diinziingilanga Luzolo mpasi vo ya sasa antu ayingi*
Ø-nzo ***di****-i-ziing-il-ang-a* *Luzolo* ***mpasi vo*** *ya sasa antu ayingi*
9-house Cp-9/AgrS-live-APPL-HAB-FV 1-PN so that in house bring up many people
Big house lives Luzolo so that bring many people (Intd: Luzolo lives in a big house so that s/he brings up many people

7.5.5 *Agent-oriented* phrase modification

The two sentences examined in this sub-section suggest that both the Agent argument as subject and the Locative argument as subject can be modified by an *Agent-oriented* phrase, as exemplified in (548) and (549 and 550), respectively.

7.5.5.1 *Agent argument as subject*

(548) *Luzolo uziingilanga munzo mukinsweki*

Luzolo	*u-ziing-il-ang-a*	*mu-Ø-nzo*	***mu-kinsweki***
1-PN	1/AgrS-live-APPL-HAB-FV	18-5-house	18-secretly

Luzolo lives in house secretly (Intd: Luzolo lives in the house secretly)

7.5.5.2 *Locative argument as subject*

(549) *Munzo muziingilanga Luzolo mukinsweki*

mu-Ø-nzo	*mu-ziing-il-ang-a*	*Luzolo*	***mu-kinsweki***
18-5-house	18-live-APPL-HAB-FV	1-PN	18-secretly

In house live Luzolo secretly (Intd: the house is the place where Luzolo lives secretly)

7.5.5.3 *Locative argument (without loc prefix) as subject*

(550) *Nzo iziingilanga Luzolo mukinsweki*

Ø-nzo	*i-ziing-il-ang-a*	*Luzolo*	***mu-kinsweki***
9-house	9/AgrS-live-APPL-HAB-FV	1-PN	18-secretly

House lives Luzolo secretly (Intd: the house is the place where Luzolo lives secretly)

The adverbial phrase in the example sentence in (548), modifies the Agent argument *Luzolo*. The sentences in (549) with the subject argument with locative morphology, and in (550) without locative morphology, the *agent-oriented* phrase modifies the entire predicate. Yet, both constructions have the same interpretation.

7.5.6 *By-self* phrase modification

The sentence in (551) with the Agent argument as subject is felicitous with a *by-self* phrase. It has the interpretation of "someone did something without external help". However, the example sentences with a Locative argument in (552 and 553) are infelicitous. This means that the locative argument as subject cannot act on its own.

7.5.6.1 *Agent argument as subject*

(551) *Luzolo uziingilanga munzo ya 'nene yani mosi*

Luzolo	*u-ziing-il-ang-a*	*mu-Ø-nzo ya 'nene*	***yani mosi***
1-PN	1/AgrS-live-APPL-HAB-FV	18-9-house of big	himself

Luzolo lives in house big alone (Intd: Luzolo lives in the big house alone)

7.5.6.2 *Locative argument as subject*

(552) *#Munzo muziingilanga Luzolo mwau mosi*

Mu-Ø-nzo	*mu-ziing-il-ang-a*	*Luzolo*	***mu-au mosi***
18-9-house	18-live-APPL-HAB-FV	1-PN	18-itself

In house live Luzolo in itself (Intd: the house is the place where Luzolo lives alone)

7.5.6.3 *Locative argument (without loc prefix) as subject*

(553) *#Nzo iziingilanga Luzolo mwau mosi*

Ø-nzo	*i-ziing-il-ang-a*	*Luzolo*	***mu-au mosi***
9-house	9/AgrS-live-APPL-HAB-FV	1-PN	18-ieself

Big house lives Luzolo in itself (Intd: the house is the place where Luzolo lives alone)

7.5.7 *Again* phrase modification

Comparable to the sentences in sub-sections 7.3.7 and 7.4.7, the *again* phrase with an Agent argument in (554) and a Locative argument with or without locative morphology in (555 and 556) are felicitous.

7.5.7.1 *Agent/theme argument as subject*

(554) *Luzolo uziingilanga dyaka munzo ya 'nene*

Luzolo	*u-ziing-il-ang-a*	***dyaka***	*mu-Ø-nzo ya 'nene*
1-PN	1/AgrS-live-APPL-HAB-FV	again	18-9-house of big

Luzolo live in again in house big (Intd: Luzolo lives in the big house again)

6.5.7.2 *Locative argument as subject*

(555) *Munzo muziingilanga dyaka Luzolo*

Mu-Ø-nzo	*mu-ziing-il-ang-a*	***dyaka***	*Luzolo*
18-9-house	18-live-APPL-HAB-FV	again	1-PN

In house live again Luzolo (Intd: the house is the place which Luzolo lives again)

7.5.7.3 *Locative argument (without loc prefix) as subject*

(556) *Nzo iziingilanga dyaka Luzolo dyaka Luzolo*

Ø-nzo	*i-ziing-il-ang-a*	***dyaka***	*Luzolo*
9-house	9/AgrS-live-APPL-HAB-FV	again	1-PN

House live again Luzolo (Intd: the house is the place which Luzolo lives again)

The *again* phrase in the sentences above has ambiguous interpretation: depending on the context, it may have a repetitive or a restitutive meaning. In (554) the *again* phrase can presuppose the existence of a previous time at which *Luzolo* lived in the big house (repetitive) or can only pressupose that there is a previous time at which Luzolo lived in the big house, but not that there was a previous event (restitutive). The same holds true for constructions in (555 and 556). The only difference is that the latter is used with presentational focus, yielding an inchoative reading.

7.5.8 *Reason* phrase modification

With regards to the reason modification, the two sentences with the verbs of existence can be modified by a reason phrase, as exemplified by the sentence in (557) and the sentences in (558 and 559).

7.5.8.1 *Agent argument as subject*

(557) *Luzolo dikaziingilanga munzo ya fyoti ekuma kakena ye nzimbu ko*
Luzolo ***di****-ka-ziing-il-ang-a* *mu-Ø-nzo ya 'fyoti* ***ekuma*** *ka-ke-na ye nzimbu ko*
1-PN Cp-1-live-APPL-HAB-FV 18-9-house of small because NEG[1]-1-be money NEG[2]
Luzolo live house small because s/he not have money (Intd: Luzolo lives in a small house because s/he does not have enough money to buy/build a big house)

7.5.8.2 *Locative argument as subject*

(558) *Munzo ya fyoti dimuziingilanga Luzolo ekoma kakena ye nzimbu ko*
mu-Ø-nzo ya fioti ***di****-mu-ziing-il-ang-a* *Luzolo* ***ekuma*** *ka-ka-na ye nzimbu ko*
18-9-house small Cp-18-live-APPL-HAB-FV 1-PN because NEG[1]-1-be money NEG[2]
In house small live Luzolo because s/he not have money (Intd: the small house is the place which Luzolo lives because s/he does not have enough money to buy/build a big house)

7.5.8.3 *Locative argument (without loc prefix) as subject*

(559) *Nzo ya fyoti diinziingilanga Luzolo ekuma kakena ye nzimbu ko*
Ø-nzo ya fioti ***di****-i-ziing-il-ang-a* *Luzolo* ***ekuma*** *ka-ka-na ye nzimbu ko*
9-house small Cp-9-live-APPL-HAB-FV 1-PN because NEG[1]-1-be money NEG[2]
House small live Luzolo because s/he not have money (Inted: the small house is the place which Luzolo lives because s/he does not have money to buy/build a big house)

The example sentence in (557) has the interpretation of "the reason why Luzolo lives in the small house is because s/he does not have enough money (possibly) to build or buy another house". This same interpretation holds for the example sentences in (558 and 559). In terms of discourse, the sentences in (557) and (558 and 559) convey the same information; they only differ in terms of structure. The difference between (557) and (558 and 559) is that in the latter the information is the presentational focus, which explains that the locative argument as subject is interpreted as a topic and the Agent/Theme argument as subject gives new information. The example (558) differs from (559) in that the subject argument of the (559) is used in its bear nominal form. However, in terms of discourse, both sentences are used interchangeably.

7.5.9 *Instrumental* phrase modification

With regards to the *instrumental* modification, the example sentence in (560a) with *Luzolo* as the Agent argument is acceptable with *instrumental* modification. However, the sentence with the verb -*kala* in (560b) is unacceptable. The same holds true for the sentences with the subject argument with/without locative morphology in (561 and 562).

7.5.9.1 *Agent argument as subject*

(560) a. *Luzolo uziingilanga kunzo ya mawuku mulusadisu lwa mpangi zani*
Luzolo u-ziing-il-ang-a ku-Ø-nzo ya mawuku mu-lusadisu lwa mpangi zani
1-PN 1/AgrS-live-APPL-HAB-FV 17-9-house of heal 18-help11/of brother his
Luzolo live to hospital in the help of his/her brothers/sisters (Intd: Luzolo stays in the hospital with the help of his/her brothers)

b. *#Nuni zikalanga muzala mumavela*
Ø-nuni zi-kal-ang-a mu-Ø-zala **mu-ma-vela**
9-bird 10/AgrS-stay-HAB-FV 18-5-nest 18-6-wing
Birds stay in nest in wings (Intd: the nest is the place where birds stay with the help of wings)

7.5.9.2 *Locative argument as subject*

(561) a. *Kunzo ya mawuku kuziingilanga Luzolo mulusadisu lwa mapngi zani*
ku-Ø-nzo ya mawuku ku-ziing-il-ang-a Luzolo mu-lusadisu lwa mpani zani
17-9-house of health 17-live-APPL-HAB-FV 1-PN 18- help of brother his
In hospital live Luzolo in help of his/her brothers (Intd: the hospital is the place where Luzolo lives with the help of his brothers)

b. *#Muzala mukalanga nuni mumavela*
mu-Ø-zala *mu-kal-ang-a* *Ø-nuni* ***mu-ma-vela***
18-5-nest 18-stay-HAB-FV 10-birds 18-6-car
In nest stay birds in wings (Intd: the nest is the place where birds stay with the help of wings)

7.5.9.3 *Locative argument (without loc prefix) as subject*

(562) a. *Nzo ya mawuku iziingilanga Luzolo mulusadisu lwa mpangi zani*
Ø-nzo ya mawuku *i-ziing-il-ang-a* *Luzolo* *mu-lusadisu* *lwa* *mpani* *zani*
9-house heal 9/AgrS-live-APPL-HAB-FV 1-PN 18- help of brother his
Hospital lives Luzolo in help of his/her brothers (Intd: the hospital is the place where Luzolo lives with the help of his brothers)

b. *#Zala dikalanga nuni mumavela*
Ø-zala di-kal-ang-a *Ø-nuni* ***mu-ma-vela***
5-nest 5-stay-HAB-FV 10-bird 18-6-wing
Nest stays birds in wings (Intd: the nest is the place where birds stay with the help of wings)

Like in other semantic classes studied in sub-sections 7.3.9 and 7.4.9, the acceptable example sentences with the verb *-ziinga* in (560) and (561 and 562) have similar interpretations. In (560), the sentence has the interpretation of "Luzolo lives in hospital with the help of his/her brothers". The example sentences in (561 and 562) have the same interpretation. Therefore, the difference between the sentence with the Agent/Theme argument and the sentence with the Locative/Goal argument relates to the way speakers encode the message (information structure). The Locative/Goal argument is typically interpreted as topic, and the subject argument gives new information.

7.5.10 *Temporal* phrase modification

The diagnostic test with *durative* and *time* frame adjuncts modification with verbs of existence suggests that the example sentence with the Agent argument as subject is acceptable with a *durative* adjunct and infelicitous with a *time* frame adjunct in (563). However, in the example sentences with the Locative argument as subject with or without locative morphology in (564 and 565), both *durative* and *time* frame adjuncts are acceptable. The reason is that the two verbs considered, denote a stative situation type and any locative prefix

i.e., directional goal locative or static goal locative, combined with these constructions will be overridden by the verb constellation, as discussed in chapter 5, section 5.5.6.4.

7.5.10.1 *Agent as the subject*

(563) *Antu aziingilanga munzo (kolo kya-)/(#mu-) ngonde zizole*
a-ntu *a-ziing-il-ang-a* *mu-Ø-nzo* *(kolo kya-)/(mu-) ngonde zizole*
2-person AgrS/2-live-APPL-HAB-FV 18-9-house for/in two months
People live in house for/in months two (Intd: people live in the house for/in an hour)

7.5.10.2 *Locative argument as subject*

(564) *Munzo muziingilanga antu (kolo kya-)/(mu-)ngonde zisambanu)*
mu-Ø-nzo *mu-ziing-il-ang-a* *a-ntu* *(kolo kya-)/(mu-)ngonde zisambanu)*
18-9-house 18-live-APPL-HAB-FV 2-person for/in two months
In house live people for/in months two (Intd: the house is the place which people live for/in an hour)

7.5.10.3 *Locative argument (without loc prefix) as subject*

(565) *Nzo iziingilanga a-ntu (kolo kya-)/(mu-)ngonde zisambanu*
Ø-nzo *i-ziing-il-ang-a* *a-ntu (kolo kya-)/(mu-)ngonde zisambanu*
9-house 9/AgrS-live-APPL-HAB-FV 2-person for/in six months
House live people for/in month six (Intd: the house is the place which people live for/six months)

With regards to the meaning, the Locative argument as subject with a *durative* adjunct has the interpretation of "it has been six months now since people started living in the house", whereas the sentence with a *time* frame adjunct has the interpretation of "the event of living in the house occurred for six months". The choice of either sentence is made by the speakers in discourse context.

7.5.11 Applicative locative sentence

Applicative suffixation is not possible with the two verbs discussed in this section. The sentence with the Agent/Theme argument in (566a) is ungrammatical due to morpho-phonological constraints. The verb *-ziingila* contains an applicative, fossilized though, and the introduction of the second applicative suffix results in ungrammaticality[25]. The example sentence in (566b) is not acceptable. However, the Locative/Goal argument as subject

[25] Study in suffix ordering in Kikongo by Fernando (2010:145) suggests that a double applicative in this language is not felicitous

with/without locative morphology in (567 and 568) is regarded ungrammatical for the same reasons stated above.

7.5.11.1 *Agent/Theme argument as subject*

(566) a. **Luzolo uziingilanga munzo ya mawuku mulusadisu lwa mpangi zani*
Luzolo u-ziing-il-ang-a mu-Ø-nzo ya mawuku mu-lusad-is-u lwa mpangi zani
1-PN 1/AgrS-live-APPL-HAB-FV 18-9-house of heal 18-help of brothers
Luzolo lives for in hospital through the help of his/her brothers (Intd: Luzolo lives exclusively in the hospital with the help of his/her brothers)

b. **Nuni zikadilanga muzala mumavela*
Ø-nuni zi-kad-il-ang-a mu-Ø-zala mu-ma-vela
10-bird 10/AgrS-stay-APPL-HAB-FV 18-5-nest 18-6-wing
The birds stay for in the nest with the help of wings (Intd: the birds stay exclusively in the nest with the help of wings)

7.5.11.2 *Locative argument as subject*

(567) **Munzo ya mawuku muziingilanga Luzolo mulusadisu lwa mpangi zani*
Mu-nzo ya mawuku mu-ziing-il-ang-a Luzolo mu-lusadisu lwa mpangi zani
18-9-house of big 18-live-APPL-HAB-FV 1-PN 18-help brothers his
In the hospital live for Luzolo in the help of his brothers (Intd: the hospital is the exclusive place where Luzolo lives with the help of his brothers)

7.5.11.3 *Locative argument (without loc prefix) as subject*

(568) **Nzo ya mawuku iziingilanga Luzolo mulusadisu lwa mpangi zani*
Ø-nzo ya mawuku i-ziing-il-ang-a Luzolo mu-lusadisu lwa mpangi zani
9-house 9/AgrS-live-APPL-HAB-FV 1-PN 18-help of his brothers
Hospital live for Luzolo in help of brother his (Intd: the hospital is the exclusive place where Luzolo lives with the help of his brothers

In brief, the two verbs of existence analysed in this section occur in the locative-subject alternation. Two types of alternants were identified: one with the subject argument with the locative morphology and another without the subject argument having locative morphology. However, they both hold for the same thematic role and have the same interpretation, as shown in section 7.5. The difference between them is that in the one without the locative morphology, the noun appears in its canonical bear form and the agreement on the verb is of the usual noun class. The Locative argument as subject satisfies some subjecthood tests, as discussed in sub-section 7.5.2. The Agent/Theme argument as object cannot co-occur with

object agreement. Contrary to sentences with Agent/Theme argument, the sentences with the Locative argument as subject cannot be modified by a *purpose* clause or by a *by-self* phrase, as discussed in sub-sections 7.5.4 and 7.5.6. While the two sentences with existence verbs can be modified by an *agent-oriented* phrase, only the sentence with the verb *-ziinga* 'live in' can be modified by the *reason* and *instrumental* phrase, as discussed in sub-sections 7.5.5 and 7.5.9. Sentences with the *Again* phrase are acceptable, but with two different interpretations: depending on the context, the use of *again* in either the Agent argument as subject or Locative argument as the subject may denote a repetitive or a restitutive meaning. The two sentences with the Agent/Theme argument as subject are acceptable with a *durative* phrase, but not with a *time* frame phrase, as discussed in section 7.5.10. However, both *durative* and *time* frame phrases are acceptable, but with different readings. Finally, the two example sentences with applicative suffixation are ungrammatical, as discussed in sub-section 7.5.11. Table 21 aims to summarise the diagnostic tests with the locative-subject alternation of the verbs discussed in this section.

	Diagnostic tests with locative argument as subject																															
	Locative alternation				Subjecthood properties of goal/loc./ theme Subject					Object proper of agent/		Purpose clause		Ag. Orient. phrase		By-phrase		Again phrase		Reason Mod.		Inst. Mod.		Temporal Mod.						Loc-Appl.	
Verbs	DP_{Ag}-subj	DP_{Th}-subj	DP_{Loc}-subj	$DP_{\_Loc}$-subj	S-V Agr	Occu in Subj	Passivization	Relative	Expletive	AgrO prefix		DP_{Loc}-subj	$DP_{\_Loc}$-subj	DP_{Loc}-subj	$DP_{\_Loc}$.subjt	DP_{Loc}-subj	$DP_{\_Loc}$-subj	DP_{Loc}-subj	$DP_{\_Loc}$-subj	DP_{Loc}-subj	$DP_{\_Loc}$-subj	DP_{Loc}-subj	$DP_{\_Loc}$-subj	DP_{Ag}-subj		DP_{Loc}-subj		$DP_{\_Loc}$-subj		DP_{Loc}-subj	$DP_{\_Loc}$-subj
																								F	I	F	I	F	I		
-ziingila	√	#	√	√	√	√	#	√	#	#		#	#	√	√	#	#	√	√	√	√	√	√	√	#	√	√	√	√	*	*
-kala	√	√	√	√	√	√	#	√	#	#		#	#	√	√	#	#	√	√	√	√	#	#	√	#	√	√	√	√	*	*

Table 21: Summary of diagnostic tests with verbs of existence in *Kizombo*

7.6 VERBS OF MODES OF BEING INVOLVING MOTION

This section will give an account of verbs of Modes of being Involving Motion. Following Levin (1993, section 47.3), members of this semantic class are associated with the existence of an entity at a certan location. These verbs, like the verbs discussed in section 7.4, describe a state of existence. The two verbs examined are (*-fuluka* and *-kina,* and the discussion will center on the verb *-fuluka*.

The two sentences examined with these verbs occur in the locative-subject alternation. Like the verbs of existence discussed in section 7.5, two types of alternants were identified: one with the subject argument with locative morphology, as exemplified in (570) and another with the subject argument without the locative morphology, as instantiated in (571). Unlike the sentence with the verb *-kina* 'dance', the sentence with the verb *-fuluka* 'stir' can take a Theme as subject, as exemplified in (569a).

7.6.1 *Agent/Theme argument as subject*

(569) a. *Antu/zyelo (a)difulukidi mulula*
a-ntu/Ø-zyelo *a-di-fuluk-idi* *mu-Ø-lula*
2-person/5-send 2-5/AgrS-stir-PST 18-5-street
People/send stirred in street (Intd: people/send stirred in the street)

b. *Mwana/teke kikinini kun'kinzi*
mu-ana/#Ø-teke *ki-kin-ini* *ku-Ø-n'kinzi*
1a-child/7-toy 7/AgrS-dance-PST 18-3-party
Child danced to party (Intd: the child danced at the party)

7.6.1.1 *Goal/Locative argument as subject*

(570) a. *Mulula mufulukidi ye antu/zyelo*
mu-Ø-lula *mu-fuluk-idi* *ye antu/zyelo*
18-5-street 18/AgrS-stir-PST with people/sand
In street stirred with people/sand (Intd: the street is the place which people/send stirred at)

7.6.1.2 *Goal/Locative argument (without loc prefix) as subject*

(571) a. *Lula difulukidi ye antu/zyelo*
Ø-lula *di-fuluk-idi* *ye antu/zyelo*
5-street 5/AgrS-stir-PST with people/sand
Street stirred with people/send (Intd: the street is the place which people/send stirred at)

The example sentences in (569) have, the preverbal argument *masolai* as the subject, a position in which it is interpreted with the thematic role Agent, whereas the postverbal

argument *mulula* is the complement, a position in which it is understood with the thematic role Locative, as instantiated in (570 and 571). The sentences in (570 and 571) have similar interpretations. The sole difference between these two sentences is that the sentence in (571) is used in its bear nominal form.

7.6.2 Subjecthood properties of the Locative/Goal argument as subject

Sentences with the two verbs trigger subject-verb agreement with the locative prefix, as seen in (670). Like the sentences with the Agent/Theme argument as subject, in sentences with the Locative/Goal argument as subject this argument can occur in the subject position of the matrix clause, agreeing with locative prefix, as exemplified in (572) with the verb *-fuluka* 'stir'.

7.6.2.1 *Occurrence in subject position*

(572) *Mulula nze mwau mufulukidi ye antu/zyelo*
mu-Ø-lula *nze* *mw-au* *mu-fuluk-idi* *ye* *a-ntu/Ø-zyelo*
18-5-street seem 18-there 18-stir-PST with 2-person/5-send
In street seem stirred with people/send (Intd: It seems that people stirred in the street)

7.6.2.2 *Passivization*

The Locative/Goal argument cannot occur as subject argument of a passive clause, as shown in (573), but it can occur as relative clause antecedent, as shown in (574) with the verb *-fuluka*.

(573) a. *#Mulula mufulukilwe*
mu-Ø-lula *mu-fuluk-il-w-e*
18-5-market 18-stir-APPL-PASS-PST
In the street was stirred (Indt: the street is the place where people stirred).

b. *#Lula difulukilwe*
Ø-lula *di-fuluk-il-w-e*
5-market 5/AgrS-stir-APPL-PASS-PST
The street was stirred (Intd: the street is the place where people the stirred).

7.6.2.3 *Relativization*

(574) a. *Mulula mo mufulukidi antu dyambu dibwidi mo*
mu-Ø-lula *mo mu-fuluk-idi* *a-ntu* *dy-ambu* *di-bw-idi* *mo*
18-5-street 18/Rel-18-stir-PST 2-person 5-problem 5-happen-PST 17/there
In street where stirred people problem happened there (Intd: there (in the street) is a problem where people stirred)

b. *Lula dyo difulukidi antu dyambu dibwidi mo*
Ø-lula *dyo di-fuluk-idi* *a-ntu* *dy-ambu* *di-bw-idi* *mo*
5-street 5/Rel 5/AgrS-stir-PST 2-person 5-problem 5-happen-PST18/there
Street where stirred people problem happened there (Intd: there (in the street) is a problem where people stirred)

7.6.2.4 *Locative prefix as expletive*

As discussed for sentences with other semantic classes discussed in sub-sections 7.3.2.4, 7.4.2.4 and 7.5.2.4, the locative prefix specifies the semantic content of the class prefix that it belongs to, as demonstrated in (575). This means, any locative prefix appearing anywhere in the sentence conforms to the locative class that it belongs to.

(575) *Mo mufulukidi antu dyambu dibwidi mo*
mo mu-fuluk-idi *a-ntu* *di-ambu* *di-bw-idi* *mo*
17/Rel 17-stir-PST 2-person 5-problem 5-happen-PST 17/there
There (at some place) stirred people problem happened (Intd: there is a problem where people stirred)

7.6.3 Object agreement with the Agent/Theme argument as object

Similar to the example sentences examined in sub-section 7.5.3, sentences with the Agent/Theme argument as object cannot be associated with the object agreement prefix, as shown in (576).

(576) a. *#Mulula kumfulukidi antu*
mu-Ø-lula *ku-m-fuluk-idi* *(a-ntu)*
18-5-street 18/AgrS-AgrO-go-PST 2-person
In the street (them) stirred people (Intd: people stirred at the street)

7.6.4 *Purpose* clause modification

The example sentence with the Agent/Theme argument as subject in (577) is acceptable with a *purpose* clause. However, the sentences with a Locative/Goal argument as subject, with/without locative morphology, in (578 and 579) are not acceptable.

7.6.4.1 *Agent argument as subject*

(577) *Antu dyafulukidi mulula mpasi vo atala mfumu uta luta*
a-ntu ***di****-a-fuluk-idi* *mu-Ø-lula* ***mpasi vo*** *a-tala mfumu uta luta*
2-person Cp-2/AgrS-stir-PST 18-5-street so that 2-see chief passing
People stirred in street so that they see chief who is passing (Intd: People stirred at the street so that they see the chief who is passing)

7.6.4.2 *Goal/locative argument as subject*

(578) *#Mulula dimufulukidi ye antu mpasi vo mwa tala mfumu*
mu-Ø-lula ***di****-mu-fuluk-idi* *ye* *a-ntu* ***mpasi vo*** *mwa tala mfumu*
18-5-street Cp-18-stir-PST with 2-person 18-purpose there see chief
In street stirred with people so that they see chief (Intd: at the street is the place where people stirred so that they see the chief who is passing)

7.6.4.3 *Goal/locative argument (without loc prefix) as subject*

(579) *#Lula didifulukidi ye antu mpasi vo dya tala mfumu*
Ø-lula ***di****-di-fuluk-idi* *ye* *a-ntu* ***mpasi vo*** *dya tala Ø-mfumu*
5-street Cp-5/AgrS-stir-PST with 2-person so that there see 3-chief
Street stirred with people so that there see chief (Intd: at the street is the place where people stirred so that they see the chief who is passing)

7.6.5 *Agent-oriented* phrase modification

Contrary to what obtains with a *purpose* clause in sub-section 7.5.4, the verb *-fuluka*, as is the case with verb *-kina* (see appendix B, section 7.6.5), are felicitous with an *agent-oriented* phrase, shown below.

7.6.5.1 *Agent/Theme argument as subject*

(580) *Antu afulukidi mulula mubuka*
a-ntu *a-fuluk-idi* *mu-Ø-lula* ***mu-buka***
2-person 2/AgrS-stir-PST 18-5-street 18-number
People stirred in street in number (Intd: people stirred in the street in number)

7.6.5.2 *Locative/Goal argument as subject*

(581) *Mulula mufulukidi ye antu mubuka*

Mu-Ø-lula	*mu-fuluk-idi*	*ye*	*a-ntu*	***mu-buka***
18-5-street	18-stir-PST	with	2-person	18-number

In street stirred people in number (Intd: the street is the place where people stirred in number)

7.6.5.3 *Locative/Goal argument (without loc prefix) as subject*

(582) *Lula difulukidi ye antu mubuka*

Ø-lula	*di-fuluk-idi*	*ye*	*a-ntu*	***mu-buka***
5-street	5/AgrS-stir-PST	with	2-person	18-number

Street stirred with people in number (Intd: the street is the place which people stirred in number)

The adverbial 'in number' in (580), modifies the Agent/Theme argument and it responds to the question "how people stirred in the street". Similarly, the *agent-oriented* adverbial is acceptable with the sentence with a subject argument with/without locative morphology in (581 and 582). Both sentences in (581 and 582) have the same meaning.

7.6.6 *By-self* phrase modification

Like the example sentence with the *purpose* clause discussed in sub-section 7.5.4, the sentence in (583) with the Agent/Theme argument as subject is felicitous with a *by-self* phrase. The sentence with the *by- self* phrase has the interpretation of "the event occurred without external help". However, the example sentences with the Goal/Locative argument in (584 and 585) are infelicitous, because the Locative argument as subject cannot act on its own.

7.6.6.1 *Agent/theme argument as subject*

(583) *Antu afulukidi mulula au mosi*

a-ntu	*a-fuluk-idi*	*mu-Ø-lula*	***au mosi***
2-person	2/AgrS-stir-PST	18-5-street	themslves

People stirred in street themselves (Intd: people stirred with (in) at the street on their own)

7.6.6.2 *Goal/locative argument as subject*

(584) *#Mulula mufulukidi ye antu mwau mosi*
mu-Ø-lula *mu-fuluk-idi* *ye* *a-ntu* ***mu-au mosi***
18-5-street 18-stir-PST with 2-person 18-itself
In street stirred people by itself (Intd: at the street is the place where people stirred with on their own)

7.6.6.2 *Goal/locative argument (without loc prefix) as subject*

(585) *#Lula difulukidi ye antu mwau mosi*
Ø-lula *di-fuluk-idi* *ye* *a-ntu* ***mu-au mosi***
5-street 5/AgrS-stir-PST with 2-person 18-itself
Street stirred with people by itself (Intd: at the street is the place where people stirred on their own)

7.6.7 *Again* phrase modification

The sentence with the *again* phrase with Agent argument as subject in (554) and the Locative argument as subject, with/without locative morphology, in (555 and 556) are felicitous.

7.6.7.1 *Agent/Theme argument as subject*

(586) *Antu afulukidi dyaka mulula*
a-ntu *a-fuluk-idi* ***dyaka*** *mu-Ø-lula*
2-person 2-stir-PST again 18-5-street
People stirred again in street (Intd: the people stirred again in the street)

7.6.7.2 *Goal/Locative argument as subject*

(587) *Mulula mufulukidi dyaka ye antu/zyelo*
mu-Ø-lula *mu-fuluk-idi* ***dyaka*** *ye* *a-ntu/Ø-zyelo*
18-5-street 18-stir-PST again with 2-person/5-send
In street stirred again with people (Intd: at the street is the place where the people stirred again)

7.6.7.3 *Goal/Locative argument (without loc prefix) as subject*

(588) *Lula difulukidi dyaka ye antu*
Ø-lula *di-fuluk-idi* ***dyaka*** *ye* *a-ntu*
5-street 5/AgrS-stir-PST again with 2-person
Street stirred again with people (Intd: at the street is the place where the people stirred again)

The *again* phrase holds two possible meanings: in (586), it can presuppose the existence of a previous moment at which the people stirred again in the street (repetitive) or can just pressupose that there is a previous moment at which the people stirred in the street, but not that there was a previous event (restitutive). The same interpretation holds for the example sentences in (587 and 588).

7.6.8 *Reason* phrase modification

As is the case with verb *-kina* (see appendix B), the example sentence with *-fuluka* 'stir' is felicitous with *reason* modification, as instantiated by the sentences below.

7.6.8.1 *Agent/Theme argument as subject*

(589) *Antu dyafulukidi mulula ekuma atala mfumu*

a-ntu	***di**-a-fuluk-idi*	*mu-Ø-lula*	***ekuma***	*a-tala mfumu*
2-person	Cp-2/AgrS-stir-PST	18-5-street	because	2-see chief

People stirred in street because they see chief (Intd: people stirred in the street because they see the chief)

7.6.8.2 *Goal/Locative argument as subject*

(590) *Mulula dimufulukidi antu ekuma atala mfumu*

mu-Ø-lula	***di**-mu-fuluk-idi*	*a-ntu*	***ekuma*** *a-tala*	*Ø-mfumu*	
18-5-street	Cp-18-stir-PST	2-person	because 2-see	1-chief	

In street stirred with people because they see chief (Intd: at the street is the place where the people stirred with because they see the chief)

7.6.8.3 *Goal/Locative argument (without loc prefix) as subject*

(591) *Lula didifulukidi ye antu ekuma atala mfumu*

Ø-lula	***di**-di-fuluk-idi ye a-ntu*		***ekuma*** *a-tala*	*Ø-mfumu*
5-street	Cp-5-stir-PST with 2-person		because 2-see	1-chief

Street stirred with people because they see chief (Intd: at the street is the place which the people stirred with because they see the chief)

The example sentence in (589) with the Agent/Theme argument as subject has the interpretation of "the reason why people stirred in the street is to see the chief". This same interpretation applies to the example sentences in (590 and 591). It can be said that the difference between the two sentences is only a matter of syntactic structure. To put it differently, in terms of discourse, the sentences (589) and (590 and 591) convey the same information. They differ in the sense that the constructions in (590 and 591) represent presentational focus of the subject argument.

7.6.9 *Instrumental* phrase modification

Only the sentence with the verb *-fuluka* examined in this section is acceptable with an *instrumental* phrase, as in (592a). With regard to the sentence with the verb *-kina* 'dance' speakers' judgements waver, as exemplified in (592b). The same holds for the example sentences with the Goal/Locative argument as subject in (593b) and (594b).

7.6.9.1 *Agent/Theme argument as subject*

(592) a. *Antu afulukidi mulula mutukutuku*
a-ntu *a-fuluk-idi* *mu-Ø-lula* ***mu-Ø-tukutuku***
2-person 2-stir-PST 18-5-street 18-9-motor bike
The people stirred (in) at the street by means of motor bikes

b. **?***Mwana kinini kun'kinzi munsapatu za zangama*
mu-ana *kin-ini* *ku-Ø-n'kinzi* ***mu-Ø-nsapatu za zangama***
1a-child dance-PST 18-3-party 18-10-shoes of hill
The child danced at the party by means of high hill shoes

7.6.9.2 *Goal/Locative argument as subject*

(593) a. *Mulula mufulukidi ye antu mutukutu*
mu-Ø-lula *mu-fuluk-idi* *ye* *a-ntu* ***mu-Ø-tukutuku***
18-5-street 18-stir-PST with 2-person 18-8-motor bicycles
In street stirred people in motor bike (Intd: at the street is the place which the people stirred by means of motor bike)

b. **?***Kun'kinzi kunini mwana munsapatu za zangama*
ku-Ø-n'kinzi *ku-kin-ini* *mw-ana* ***mu-Ø-nsapatu za zangama***
17-3-party 17-dance-PST 1a-child 18-10-high hill shoe
To party danced child in high hill shoes (Intd: at the party is the place where the child danced by means of high hill shoes)

7.6.9.3 *Goal/Locative argument (without loc prefix) as subject*

(594) a. *Lula difulukidi ye antu mutukutu*
Ø-lula *di-fuluk-idi* *ye* *a-ntu* ***mu-Ø-tukutuku***
5-Street 5/AgrS-stir-PST with 2-person 18-9-motor bicycle
Street stirred with people in motor bike (Intd: at the street is the place where the people stirred by means of motor bikes)

b. **?***N'kinzi unkinini mwana ye nsapatu za zangama*
Ø-n'kinzi *u-kin-ini* *mu-ana* *ye* ***Ø-nsapatu za zangama***
3-party 3/AgrS-dance-PST 1a-child with 10-shoes of high hill
Party danced child in high hill shoes (Intd: at the party is the place where the girl danced by means of high hill shoes)

The example sentence in (592) has the interpretation of "the people stirred in the street through the help of a car". The same interpretation holds for example sentences in (593a and 594a). The difference between (592) and (593a) has to deal with the way the information is encoded. This entails that the Location/Goal argument is interpreted as topic and the Agent/Theme argument gives new information.

7.6.10 *Temporal* phrase modification

The diagnostic test with *durative* and *time* frame adjuncts suggests that the example sentences with the Agent/Theme argument as subject are acceptable with a *durative* adjunct and infelicitous with a *time* frame adjunct. The reason is that the two verbs examined denote a stative aspectual meaning, and when they combine with a static goal locative, the resultant sentence has a telic interpretation, as exemplified by the sentence in (595). However, the example sentences with the Locative/Goal argument as subject can be modified by both *durative* and *time* frame adjuncts, instantiated in (596 and 597).

7.6.7.1 *Agent/theme argument as subject*

(595) *Antu afulukidi mulula (kolo kya-)/(#mu-)ngunga zitatu*
a-ntu *a-fuluk-idi* *mu-Ø-lula* *(kolo kya-)/(mu-)ngunga zitatu*
2-person 2/AgrS/-stir-PST 18-5-street for/in three hours
People stirred in street for/in three hours (Intd: People stirred at the street for/in three hours)

7.6.10.2 *Goal/locative argument as subject*

(596) *Mulula mufulukidi antu (kolo kya-)/(mu-)ngunga zitatu*
mu-Ø-lula *mu-fuluk-idi* *a-ntu* *(kolo kya-)/(mu-)ngunga zitatu*
18-5-street 18/AgrS-stir-PST 2-person for/in three hours
In street stirred with people for/in three hours (Intd: at the street is the place where the people stirred for/in three hour)

7.6.10.3 *Goal/locative argument (without loc prefix) as subject*

(597) *Lula difulukidi antu (kolo kya-)/(mu-) ngunga imosi*
Ø-lula *di-fuluk-idi* *a-ntu* *(kolo kya-)/(mu-) ngunga imosi*
5-street 5/AgrS-stir-PST 2-person for/in an hour
Street stirred with people for/in an hour (Intd: at the street is the place where the people stirred for/in an hour)

With respect to the meaning, the Agent/Theme argument as subject with a *durative* adjunct has the interpretation of "it has been three hours now since people started stirring in the street". The same interpretation holds for the sentences with the Goal/Locative argument as subject. The choice of either sentence is made by the speakers in discourse context.

7.6.11 Applicative locative sentence

Applicative suffixation is possible with the verb *-fuluka* discussed in this sub-section. The example sentence with the Agent/Theme argument as subject in (598) is acceptable with the applicative verb. Likewise, the example sentences with the Locative/Goal argument as subject are felicitous, as instantiated in (599 and 600). The example sentences with the verb *-kina*, are the speakers' judgement waver. The inclusion of the applied suffix to the verb in (598) and (599 and 600) gives the meaning of exclusiveness.

7.6.11.1 *Agent/theme argument as subject*

(598) *Antu afulukidi mulula mumakalu*

a-ntu	*a-fuluk-il-ang-a*	*mu-Ø-lula*	***mu-ma-kalu***
2-person	2/AgrS-stir-APPL-HAB-FV	18-5-street	18- 6-car

People stirred for street in car (Intd: people stirred exclusively at the street by means of cars)

7.6.11.2 *Goal/locative argument as subject*

(599) *Mulula mufulukilanga antu mumalu*

mu-Ø-lula	*mu-fuluk-il-ang-a*	*a-ntu*	***mu-ma-kalu***
18-5-street	18/AgrS-stir-APPL-HAB-FV	2-person	18-6-car

In street stir for people in cars (Intd: at the street is the exclusive place which people stir by means of cars)

7.6.11.3 *Goal/locative argument (without location prefix) as subject*

(600) *Lula difulukilanga antu mumakalu*

Ø-lula	*di-fuluk-il-ang-a*	*a-ntu*	***mu-ma-kalu***
5-street	5/AgrS-stir-APPL-HAB-FV	2-person	18-6-car

Street stir for people in cars (Intd: the street is the exclusive place which the people stir by means of cars)

In summary, sentences with the two verbs examined in this section occur in the locative-subject alternation. Two kinds of alternants were identified: the first with the subject argument with the locative morphology and the second with the subject argument without

locative morphology. Despite the morphological difference, the arguments in the two constructions have the same thematic roles and denote similar, but not identical meanings. With regards to the diagnostic tests with subjecthood properties, the Locative/Goal argument as subject satisfies some subjecthood tests, as discussed in sub-section 7.6.2. However, the Agent/Theme argument as object cannot be associated with the object agreement prefix, seen in sub-section 7.6.3. The locative prefix does not receive the status of expletive since it gives the semantic content of the locative class that it represents. Unlike in the Agent/Theme argument, example sentences with the Goal/Locative argument as subject cannot be modified by a *purpose* clause and a *by-self* phrase, as discussed in sub-sections 7.5.4 and 7.5.6, but they can be modified by a *reason* phrase. Only the verb *-fuluka* is acceptable with an *instrumental* phrase, as discussed in sub-sections 7.6.8, and 7.6.9. The sentences with the a*gain* phrase are acceptable, but with two different interpretations: depending on the context, the use of *again* in either the Agent/Theme argument as subject or Goal/Locative argument as subject may denote a repetitive or a restitutive meaning, as discussed in sub-section 7.6.7. In the example sentences with the Goal/Locative argument as subject, both *durative* and *time* frame adjuncts are acceptable, but with different readings, as discussed in sub-section 7.6.10. Finally, only the sentence with the verb *-fuluka* is felicitous with applicativised locative. For the sentence with the verb *-kina* is speakers' judgements waver. Table 22 aims to summarise the diagnostic tests with the locative-subject alternation of the verbs discussed in this section.

	Diagnostic tests with Goal/Locative argument as subject																														
	Locative-subject alternation				Subjecthood properties of locative Subject					Object proper		Purpose clause		Ag. Orient. Adv.		By phrase		Again phrase		Reason Mod.		Inst. Mod.		Temporal Mod.						Appl. Loc.	
Verbs	DP_{Ag}-subj	DP_{Th}-subj	DP_{Loc}subj	DP_{-Loc}-subj	S-V Agr	Occu in subj	Passivization	Relative	Expletive	AgrO prefix		DP_{loc}-subj	$DP_{\_Loc}$-subj	DP_{loc}-subj	$DP_{\_Loc}$-subj	DP_{loc}-subj	$DP_{\_Loc}$-subj	DP_{Loc}-subj	$DP_{\_Loc}$-subj	DP_{Loc}-subj	$DP_{\_Loc}$-subj	DP_{Loc}-subj	$DP_{\_Loc}$-subj	DP_{Ag}-subj F	DP_{Ag}-subj I	DP_{Loc}-subj F	DP_{Loc}-subj I	$DP_{\_Loc}$-subj F	$DP_{\_Loc}$-subj I	DP_{Loc}-subj	$DP_{\_Loc}$-subj
-fuluka	√	√	√	√	√	√	#	√	#	#		#	#	√	√	#	#	√	√	√	√	√	√	√	#	√	√	√	√	√	√
-kina	√	#	√	√	√	√	#	√	#	#		#	#	√	√	#	#	√	√	√	?	?	?	√	#	√	√	√	√	?	?

Table 22: Summary of diagnostic tests with verbs of modes of being involving motion in *Kizombo*

7.7 VERBS OF SPATIAL CONFIGURATION

This section will examine verbs of Spatial Configuration. According to Levin (1993, section 47.6), members of this class denote spatial configuration of an entity with respect to some location. The class members examined in this section includes verbs *-kosoka* 'sit (down), *-dyembalala* 'hang' *-zongama* 'lean' and *-lambalala* 'lie down'. The discussion will revolve around the verb *-kosoka* "sit down". Details about other verbs are found in appendix B.

The four sentences examined in this section occur in the locative-subject alternation. As is the case with verbs from the other semantic classes examined in sections 7.3, 7.4, 7.5 and 7.6, two types of alternations were identified: the first with the subject argument with locative morphology (602) and the second with the subject argument without locative morphology (603), but both have similar interpretations. Unlike the sentences with the other three verbs, the sentence with the verb *-dyembalala* (601b) is the only one that can accept the Theme argument as subject.

7.7.1 *Agent/Theme argument as subject*

(601) a. *Aana/#kinkutu (a)kikosokele vakunda*

a-na/ki-nkutu	*a-ki-kosok-ele*	*va-Ø-kunda*
2a-child/7-shirt	2a-7/AgrS-sit-PST	16-7-chair

Children/shirt sat on chair (Intd: the children/t-shirt sat on the chair)

b. *Nkewa/kinkutu kidyembalale vakunda*

Ø-nkewa/ki-nkutu	*ki-dyembalal-e*	*va-Ø-n'ti*
3-monkey/7-shirt	7/AgrS-hang-PST	16-3-tree

(Monkey/shirt hanged on tree (Intd: the monkey/t-shirt hanged on a/the tree)

7.7.1.1 *Locative argument as subject*

(602) a. *Vakunda vadyemabalale aana/#kinkutu*

va-Ø-kunda	*va-kosok-ele*	*a-ana/ki-nkutu*
16-7-chair	16-sit-PST	2a-child/7-shirt

On chair sat children/shirt (Intd: the chair/t-shirt is the place which the child sat down)

b. *Van'ti vadyembalale nkewa/kinkutu*

va-Ø-n'ti	*va-dyembalal-e*	*Ø-nkewa/ki-nkutu*
16-3-tree	16-hang-PST	3-monkey/7-shirt

On tree hanged monkey/shirt (Intd: the tree is the place where the monkey/t-shirt hanged)

7.7.1.2 *Locative argument (without loc prefix) as subject*

(603) a. *Kunda kikosokele aana/#kinkutu*

Ø-kunda	*ki-kosok-ele*	*a-ana/#ki-nkutu*
7-chair	7/AgrS-sit-PST	2a-child/7-shirt

Chair sat children (Intd: the chair is the place where the children/t-shirt sat (down))

b. *N'ti udyembalale nkewa/kinkutu*

Ø-n'ti	*u-dyembalal-e*	*Ø-nkewa/Ø-kinkutu*
3-tree	3/AgrS-hang-PST	3-monkey/7-shirt

Tree hanged monkey/t-shirt (Intd: the tree is the place which the monkey/t-shirt hanged)

In the sentences in (601), the preverbal arguments *ana/nkewa/kinkutu* 'children/monkey/t-shirt', are the subjects, a position in which they are interpreted with the thematic role Agent, whereas the postverbal arguments *vakunda/van'ti* 'on the chair/tree', are complements, a position in which they are interpreted with the thematic role Location. In the example sentence in (602), the verb agrees with the locative prefix *ku-*, whereas in (603) the verb agrees with the nominal class prefix. Semantically, both alternations have a similar interpretation. The only difference between (602 and 603) is that they occur in different structures.

7.7.2 Subjecthood properties of the Locative argument as subject

As is the case with the other three verbs discussed in this section, the verb-*kosoka* triggers subject-verb agreement with the locative agreement prefix, as exemplified in (602). Like the Agent/Theme argument as subject, in the sentences with the Locative argument as subject, this argument can occur in the subject position of the matrix clause where agrees with the locative prefix, as in (604).

7.7.2.1 *Occurrence in subject position*

(604) *Vakunda nze vau vakosokele mwana*

Va-Ø-kunda	*nze*	*va-u*	*va-kosok-ele*	*mu-ana*
16-7-chair	seem	16-there	16-sit-PST	1a-child

On chair seem sat child (Intd: it seems that the child sat on the chair)

7.7.2.2 *Passivization*

With regard to the passivization, and contrary to the sentence with the verb *-kosoka* in (605a/b), for sentences with the other three verbs speakers' judgements waver, as exemplified in (605c/d) with the verb *-dyembalala*. However, the locative argument as subject can occur as relative clause antecedent with or without locative morphology, as exemplified in (606) with the verb *-kosoka*.

(605) a. *Vakunda vakosokelwe*
va-Ø-kunda *va-kosok-el-w-e*
16-7-chair 16/AgrS-sit-APPL-PASS-PST
On chair was sat (Intd: the child sat on the chair)

b. *Kunda kikosokelwe*
Ø-kunda *ki-kosok-el-w-e*
7-chair 7/AgrS-sit-APPL-PASS-PST
Chair was sat (Intd: the child sat on the chair)

c. **?***Van'ti vadyembalalwe*
va-Ø-n'ti *va-dyembalal-w-e*
16-3-tree 16/AgrS-hang-PASS-PST
On tree was hanged (Intd: the child hanged on the tree)

e. **?***N'ti udyembalalwe*
Ø-n'ti *u-dyembalal-w-e*
3-tree 3/AgrS-hang-PASS-PST
The tree was hanged (Intd: the child hanged on the tree)

7.7.2.3 *Relativization*

(606) a. *Vakunda vo vakosokele mwana yelele ina vo*
va-Ø-kunda *vo va-kosok-ele* *mu-ana* *i-elele* *i-na* *vo*
16-7-chair 16/Rel 16-sit-PST 1a-child 8-ants 8-be 16/there
There (at some place) sat child there are ants (Intd: there are ants where the child sat)

b. *Kunda kyo kikosokele mwana yelele ina vo*
Ø-kunda *kyo ki-kosok-ele* *mu-ana* *i-elele* *i-na* *vo*
7-chair 7/Rel 7/AgrS-sit-PST 1a-child 8-ants 8-be 16/there
There (at some place) sat child there are ants (Intd: there are ants where the child sat)

7.7.2.4 *Locative prefix as expletive*

The locative prefix specifies the semantic content of the class prefix that it belongs to, as instantiated in (607). This means, any locative prefix appearing anywhere in the sentence conforms to the locative class that it belongs to.

(607) *Vo vakosokele mwana yelele ina vo*

Vo va-kosok-ele	*mu-ana*	*i-elele*	*i-na*	*vo*
16 16-sit-PST	1a-child	8-ants	8-be	16/there

There (at some place) sat the child there are ants (Intd: 'there are ants where the child sat)

7.7.3 Object agreement with the Agent/Theme argument as subject

Similarly to the other three sentences examined the Agent/Theme argument as object cannot co-occur with the object agreement prefix, as illustrated in (608) with the verb -*kosoka*.

(608) #*Vakunda vakosokele mwana*

va-Ø-kunda	*va-n-kosok-ele*	*mu-ana*
16-7-chair	16/AgrS-AgrO-sit-PST	1a-child

On chair (him/her) sat children (Intd: the child sat on the char)

7.7.4 *Purpose* clause modification

The example sentence with the Agent/Theme argument as subject is acceptable with a *purpose* clause, as exemplified in (609). However, sentences with the Locative argument as subject with/without locative morphology are unacceptable, as illustrated in (610) and (611), respectively.

7.7.4.1 *Agent/Theme argument as subject*

(609) *Aana dyakosokele vakunda mpasi vo avunda*

a-na	***di**-a-kosok-ele*	*va- Ø-kunda*	***mpasi vo***	*a-vunda*
2a-child	Cp-2/AgrS-sit-PST	16-7-chair	so that	2-rest

Children sat on chair so that they rest

7.7.4.2 *Locative argument as subject*

(610) *#Vakunda divakosokele aana mpasi vo vavunda*

va-Ø-kunda	***di**-va-kosok-ele*	*a-ana*	***mpasi vo** va-vunda*
16-7-chair	16-sit-PST	2-child	so that 16-rest

On chair sat children so that they rest (Intd: the chair is the place where the children sat so that they rest)

7.7.4.3 *Locative argument (without loc prefix) as subject*

(611) *#Kunda dikikosokele aana mpasi vbo kya vunda*

Ø-kunda	***di**-ki-kosok-ele*	*a-ana*	***mpasi vo** kya vunda*
7-chair	Cp-7/AgrS-sit-PST	2-child	so that it rests

Chair sat children so that it (the chir) rest (Intd: the chair is the place where the children sit down so that they rest)

7.7.5 *Agent-oriented* phrase modification

Unlike what is obtains with the *purpose* clause in sub-section 7.7.4, an *agent-oriented* adverbial is acceptable in sentences with both the Agent/Theme and the locative argument as subject, as shown in (613), (614) and (612), respectively.

7.7.5.1 *Agent/theme argument as subject*

(612) *Aana akosokele vakunda mundwenga*

a-ana	*a-kosok-ele*	*va-Ø-kunda*	***mu-dwenga***
2a-child	2/AgrS-sit-PST	16-7-chair	18-caution

Children sat on chair cautiously (Intd: the children sat on the chair cautiously)

7.7.5.2 *Locative argument as subject*

(613) *Vakunda vakosokele aana mundwenga*

va-Ø-kunda	*va-kosok-ele*	*a-ana*	***mu-ndwenga***
16-7-chair	16/AgrS-sit-PST	2a-child	18-caution

On chair sat children caution (Intd: the chair is the place where the children sat cautiously)

7.7.5.3 *Locative argument (without loc prefix) as subject*

(614) *Kunda kikosokele aana mundwenga*

Ø-kunda	*ki-kosok-ele*	*a-ana*	***mu-ndwenga***
7-chair	7/AgrS-sit-PST	2a-child	18-caution

Chair sat children caution (Intd: the chair is the place where the children sat cautiously)

In the example sentence in (612), the adverbial modifies the Agent argument, hence it has the interpretation of "the way the children sat on the chair". Similarly, the example sentences in (613) with locative morphology and (614) without locative morphology, are acceptable with the *agent-oriented* adverbial.

7.7.6 *By-self* phrase modification

Unlike the example sentences with the *agent-oriented* phrase in section 7.7.5, the sentence with a *by-self* phrase is felicitous with the Agent/Theme argument as subject and infelicitous with the Locative argument, as shown in (615) and (616 and 617) with the verb *-kosoka* .

7.7.6.1 *Agent argument as subject*

(615) *Aana akosokele vakunda au mosi*

a-ana	*a-kosok-ele*	*va- Ø-kunda*	***a-u mosi***
2a-child	2/AgrS-sit-PST	16-7-chair	2-self

Children sat on chair themselves (Intd: the children sat on the chair on their own)

7.7.6.2 *Locative argument as subject*

(616) *#Vakunda vakosokele aana vau mosi*

Va-Ø-kunda	*va-kosok-ele*	*a-ana*	***vau mosi***
16-7-chair	16/AgrS-sit-PST	2a-child	18-itself

On chair sat children by itself (Intd: the chair is the place where the children sat on their own)

7.7.6.3 *Locative argument (without loc prefix) as subject*

(617) *#Kunda kikosokele aana kyau mosi*

Ø-kunda	*ki-kosok-ele*	*a-ana*	***ki-au mosi***
7-chair	7/AgrS-sit-PST	2a-child	18-itself

Chair sat children by itself (Intd: the chair is the place which the children on their own)

The sentence in (615) has the interpretation of "the event of sitting occurred without external help". However, the sentences with the Locative argument as subject in (616 and 617) are infelicitous, because these arguments cannot act on their own.

7.7.7 *Again* phrase modification

The four sentences with the spatial configuration verbs examined are felicitous with an *again* phrase modification, as exemplified by the sentences with the verb *-kosoka* below.

7.7.7.1 *Agent/Theme argument as subject*

(618) *Aana akosokele dyaka vakunda*

a-ana	*a-kosok-ele*	***dyaka***	*va-Ø-kunda*
2a-child	2/AgrS-sit-PST	again	16-7-chair

Children sat again on chair (Intd: the children sat on the chair again)

7.7.7.2 *Locative argument as subject*

(619) *Vakunda vakosokele dyaka aana*

va-Ø-kunda	*va-kosok-ele*	***dyaka***	*a-ana*
16-7-chair	16/AgrS-sit-PST	again	2a-child

On chair sat again children (Intd: the chair is the place where the children sat again)

7.7.7.3 *Locative argument (without loc prefix) as subject*

(620) *Kunda kikosokele dyaka aana*

Ø-kunda	*ki-kosok-ele*	***dyaka***	*a-ana*
7-chair	7/AgrS-sit-PST	again	2a-child

Chair sat again children (Intd: the chair is the place where children sat down again)

The *again* phrase always appears after a verb and immediately before a Theme or a Locative argument. An *again* adverbial holds two possible interpretations: it can presuppose the existence of a previous time at which the children sat again on the chair (repetitive) or can pressupose that there is a previous moment at which the children sat on the chair, but not that there was a previous event (restitutive).

7.7.8 *Reason* phrase modification

The sentences with the four verbs examined can be modified by a *reason* phrase both with the Agent argument as subject, as exemplified in (621) and with the Locative argument as subject, as illustrated in (622 and 623) with the verb *-kosoka*.

7.7.8.1 *Agent argument as subject*

(621) *Aana dyakosokele vakunda ekuma avunda*

a-ana	***di**-a-kosok-ele*	*va-Ø-kunda*	***ekuma***	*a-vunda*
2a-child	Cp-2/AgrS-sit-PST	16-7-chair	because	2a-rest

Children sat on chair because they rest (Intd: the children sat on the chair because they rest

7.7.8.2 *Locative argument as subject*

(622) *Vakunda divakosokele aana ekuma avunda*

va-Ø-kunda	***di**-va-kosok-ele*	*a-ana*	***ekuma***	*a-vunda*
16-7-chair	Cp-6-sit-PST	2a-child	because	2a-rest

On chair sat child because they rest (Intd: the chair is the place where the children sat down because they rest)

7.7.8.3 *Locative argument (without loc prefix) as subject*

(623) *Kunda dikikosokele aana ekuma avunda*

Ø-kunda	***di**-ki-kosok-ele*	*a-ana*	***ekuma***	*a-vunda*
7-chair	Cp-7/AgrS-sit-PST	2a-child	because	2a-rest

Chair sat the children because they rest (Intd: the chair is the place where the children sat down because they rest)

The example sentence in (621) with the Agent/Theme argument as subject has the interpretation of "the reason why children sat on the chair is to rest". The same interpretation holds for the example sentences (622 and 623). The difference between the two sentences is only a matter of syntactic structure. To put it differently, in terms of discourse, the sentences (621) and (622 and 623) convey the same information. They differ in the sense that the sentences in (622 and 623) represent presentational focus on the subject argument.

7.7.9 *Instrumental* phrase modification

Of the four sentences examined in this section, only the sentence with the verb *-kosoka* is acceptable with an *instrumental* phrase, as exemplified in (624a). The other three are unacceptable, as illustrated by the sentence (624b) with the verb *-dyembalala* 'hang'.

7.7.9.1 *Agent argument as subject*

(624) a. *Aana akosokele vakunda mumileta*

A-ana	*a-kosok-ele*	*va-Ø-kunda*	***mu-mi-leta***
2a-child	2/AgrS-sit-PST	16-7-chair	18-4-crutch

Children sat on chair in crutches (Intd: the children sat on the chair by means of crutches)

b. *#Nkewa dyembalale van'ti mun'singa*

Ø-nkewa	*dyembalal-e*	*va-Ø-n'ti*	***mu-Ø-n'singa***
3-monkey	hang-PST	16-3-tree	18-3-line

Monkey hanged on tree in line (Intd: the monkey hanged on the tree by means of line

7.7.9.2 *Locative argument as subject*

(625) a. *Vakunda vakosokele mwana mumileta*

va-Ø-kunda	*va-kosok-ele*	*mu-ana*	***mu-mi-leta***
16-7-chair	16-sit-PST	1a-child	18-4-crutches

On chair sat child by in crutches (Intd: the chair is the place where children sat (down) by means of crutches)

b. *#Van'ti vadyembalale nkewa mun'singa*

va-Ø-n'ti	*va-dyembalal-e*	*Ø-nkewa*	***mu-Ø-n'singa***
16-3-tree	16-hang-PST	3-monkey	18-3-line

Tree hanged monkey in line (Intd: the tree is the place where monkeys hanged by means of line)

7.7.9.3 *Locative argument (without loc prefix) as subject*

(626) a. *Kunda kikosokele mwana mumileta*

Ø-kunda	*ki-kosok-ele*	*mu-ana*	***mu-mi-leta***
7-chair	7/grS-sit-PST	1a-child	18-4-crutches

Chair sat the child in crutches (Intd: the chair is the place where the child sat by means of crutches)

b. *#N'ti udyembalale nkewa mun'singa*

Ø-n'ti	*u-dyembalal-e*	*Ø-nkewa*	***mu-Ø-nsinga***
3-tree	3/AgrS-hang-PST	3-monkey	18-3-line

Tree hanged monkeys in line (Intd: the tree is the place where monkeys hanged by means of line)

From the viewpoint of discourse, the example sentences in (624a) and (625a and 626a) present the same discourse information. The difference between them is that the subject argument has presentational focus, which means the Locative argument as subject is interpreted as a topic and the Agent/Theme argument gives new information. The difference

between (625a) and (626a) is that the example in (626), the Locative argument is in its bear nominal form. No particular preference was found among the speakers for either sentence in context.

7.7.10 *Temporal* phrase modification

The diagnostic test with *durative* and *time* frame adjuncts with spatial configuration verbs suggests the example sentence with Agent/Theme argument in (627) is acceptable with a *durative* adjunct and infelicitous with a *time* frame adjunct. The reason is that these verbs denote an activity in their basic category, and when they combine with a directional goal locative or a stative goal locative, the resulting sentence has an atelic interpretation, as exemplified in (627) with the verb *-kosoka*. However, in the example sentences with the Locative argument as subject in (628 and 629) are acceptable with both *durative* and *time* frame adjuncts.

7.7.10.1 *Agent/Theme argument as subject*

(627) *Aana akosokele vakunda (kolo kya-)/(#mu-)ngunga imosi*

A-ana	*a-kosok-ele*	*va-Ø-kunda*	*(kolo kya-)/(mu-)ngunga imosi*
2a-child	2/AgrS-sat-PST	16-7-chair	for/in an hour

Children sat on chair for/in an hour (Intd: the children sat on the chair for/in an hour)

7.7.10.2 *Goal/Locative argument as subject*

(628) *Vakunda vakosokele aana kolo kya-)/(mu-)ngunga imosi*

va-Ø-kunda	*va-kosok-ele*	*a-ana*	*(kolo kya-)/(mu-)ngunga imosi*
16-7-chair	16-sit-PST	2a-child	for/in an hour

On chair sit children for/in an hour (Intd: the chair is the place where the children sat down for/in an hour)

7.7.10.3 *Locative argument (without loc prefix) as subject*

(629) *Kunda kikosokele aana (kolo kya-)/(mu-)ngunga imosi*

Ø-kunda	*ki-kosok-ele*	*a-ana*	*(kolo kya-)/(mu-)ngunga imosi*
7-chair	7/AgrS-sit-PST	2a-child	for/in an hour

Chair sat the children for/in an hour (Intd: the chair is the place where the children sat for/in an hour)

Despite the acceptability of sentences with both adjuncts with the Locative argument as subject, sentences in (628 and 629) have different interpretations: the sentence with a *durative* adjunct has the interpretation of "it has been an hour now since the children sat on the chair",

whereas the sentence with a *time* frame adjunct has the interpretation of "the event of sitting down on the chair occurred in interval of an hour". These events are characterized as events seen as state in Smith's (1997) terms.

7.7.11 Applicative locative sentences

Applicative suffixation is also possible with verbs of spatial configuration discussed in this section. The example sentence with the Agent/Theme argument as subject in (630) and that with the Locative argument as subject with locative morphology in (631a) are acceptable. However, with regard to the example sentence with the verb -*lambalala* speakers' judgements waver, as shown in (631b and 632b). The affixation of the applied suffix to the verb in the above sentences gives the meaning of exclusiveness.

7.7.11.1 *Agent/Theme argument as subject*

(630) *Aana akosokelanga vakunda*

A-ana	*a-kosok-el-ang-a*	*va-Ø-kunda*
2a-child	2/AgrS-sit-APPL-HAB-FV	16-7-chair

Children sat exclusively on chair (Intd: the children sat exclusively on the chair)

7.7.11.2 *Locative argument as subject*

(631) a. *Vakunda vakosokelanga mwana*

va-Ø-kunda	*va-kosok-el-ang-a*	*mu-ana*
16-7-chair	16-sit-APPL-HAB-FV	1a-child

On chair sat for child (Intd: the chair is the exclusive place which the child sat)

b. ?*Vamfulu valambalalanga Ø-mbevo na kamona kisuka*

Va-Ø-mfulu	*va-lambalalang-a*	*Ø-mbevo*	*na kamona kisuka*
16-9-bed	16-lie-HAB-FV	1-sick person	if s/he feels tired

On bed lie down for sickperson if s/he is tired (Intd: the bed is the exclusive place where the sick person lies if s/he is tired)

7.7.11.3 *Locative argument (without loc prefix) as subject*

(632) a. *Kunda kikosokelanga mwana...*

Ø-kunda	*ki-kosok-el-ang-a*	*mw-ana...*
7-chair	7/AgrS-sit-APPL-HAB-FV	1a-child

Chair sit for child (Intd: the chair is the exclusive place where the child sits)

e. **?***Mfulu ilambalalanga mbelvo na kamona kisuka*

Ø-mfulu	*i-lambalalang-a*	*mbevo*	*na kamona kisuka*
9-bed	9/AgrS-lie-HAB-FV	sickperson	if s/he feels tired

Bed lies down for sickperson if s/he is tired (Intd: the bed is the exclusive place where the sick person lies if s/he is tired)

In summary, sentences with spatial configuration verbs examined in this section can alternate. Two types of alternants were identified: one with the subject argument with locative morphology and another with the subject argument without locative morphology. However, both constructions have the same thematic role and denote similar interpretations. In terms of discourse occurrence, the two alternants found to be used interchangeably. For example, in the presentational focus context, a speaker of *Kizombo* can say, "*vakunda tyakidi vo maaza or kunda tyakidi kyo maaza*", meaning you spilled water on the desk. As was pointed out, the sole difference is that the subject argument in the example sentence without locative morphology is used in bear nominal form. The Locative argument as subject satisfies some subjecthood tests, as discussed in sub-section 7.7.2. Unlike the Agent/Theme argument, the Goal/Locative argument as subject cannot be modified by a *purpose* clause and *by-self* phrase, as discussed in sub-sections 7.7.4 and 7.7.6. However, they can be modified by a *reason* phrase. Only the sentence with the verb *-kosoka* 'sit down' can be modified by an *instrumental* adverbial, as discussed in sub-section 7.7.9. The a*gain* phrase is acceptable, but with two possible interpretations. The four sentences with the Agent/Theme argument as subject are acceptable with a *durative* phrase and infelicitous with a *time* frame, as discussed in sub-section 7.7.10. However, the example sentences with the Locative argument as subject both with *durative* and *time* frame adjuncts are acceptable, but with different interpretations. Finally, three of the four sentences with the subject argument with or without locative morphology have verbal locative-applicative suffixation. However, for the sentence with the verb *-dyembalala* speakers' judgements waver.

	Diagnostic tests with Locative argument as subject																															
	Locative alternation				Subjecthood properties of locative as subject					Object propert		Purpose clause		Ag. Orient. Adv.		By-phrase		Again phrase		Reason Mod.		Inst. Mod.		Temporal Mod.						Loc-Appl.	
Verbs	DP_{Ag}-subject	DP_{Th}-subj	DP_{Loc}-subj	$DP_{\_Loc}$-subj	S-V Agr	Occur in Subj	Passivization	Relative	Expletive	AgrO prefix		DP_{Loc}-subj	$DP_{\_Loc}$-subj	DP_{Loc}-subj	$DP_{\_Loc}$-subj	DP_{Loc}-subj	$DP_{\_Loc}$-subj	DP_{Loc}-subj	$DP_{\_Loc}$-subj	DP_{Loc}-subj	$DP_{\_Loc}$-subj	DP_{Loc}-subj	$DP_{\_Loc}$-subj	DP_{Ag}-subj		DP_{Loc}-subj		$DP_{\_Loc}$-subj		DP_{Loc}-subj	$DP_{\_Loc}$-subj
																								F	I	F	I	F	I		
-kosoka	√	#	√	√	√	√	√	√	#	#		#	#	√	√	#	#	√	√	√	√	√	√	√	#	√	√	√	√	√	√
-dyembalala	√	#	√	√	√	√	?	√	#	#		#	#	√	√	#	#	√	√	√	√	#	#	√	#	√	√	√	√	√	√
-zongama	√	√	√	√	√	√	?	√	#	#		#	#	√	√	#	#	√	√	√	√	#	#	√	#	√	√	√	√	√	√
-lambalala	√	#	√	√	√	√	?	√	#	#		#	#	√	√	#	#	√	√	√	√	#	#	√	#	√	√	√	√	?	?

Table 23: Summary of diagnostic tests with verbs of spatial configuration in *Kizombo*

7.8 DISCUSSION

In chapters 3 and 4 it was pointed out that the study of argument relation changing plays a central role in linguistic research, since it can offer valuable information about the interface between the lexicon-semantic and the syntax. The goal of this chapter is to examine the *Kizombo* motion verbs that occur in the locative-subject alternation, i.e. to identify semantic properties that allow this class of verbs to occur in the causative and the anticausative alternation. The following sub-sections will discus the data presented above.

7.8.1 The defining criteria of *Kizombo* change of location/position verbs

The range of example sentences with change of motion verbs, including verbs of existence examined in sections 7.3, 7.4, 7.5, 7.6 and 7.7 occur in the locative-subject alternation. Two types of alternations were identified: alternants with a locative morphology argument as subject and those without a locative morphology argument as subject. In the first alternation, the verb triggers subject-verb agreement with the locative prefix. In the second alternation, the verb triggers agreement with the prefix of the referred bear noun class. Buell (2007:150) defines the second alternation as "(agreeing) semantic locative inversion", because the fronted expression does not appear with a locative prefix. Data demonstrated that these two alternations are productive in *Kizombo*, and that they have similar, but not identical interpretations. With regards to the context in which constructions with or without locative morphology on the subject argument occurs, it was found that *Kizombo* speakers use the two contructions interchangeably. In the context of presentational focus, a speaker of *Kizombo* can say "*vakunda tyakidi vo maaza or kunda tyakidi kyo mazza*" meaning 'you spilled out water on the desk'. The sole difference is that the example sentence without locative morphology is used in bear nominal form.

The flexibility with which the *Kizombo* motion verbs occur in the locative-subject alternation finds its explanation in the inherently lexical semantics of the verb root. This fact supports the Syntactic Decomposition approach (i.e. Alexiadou *et al* 2006), as discussed in chapter 3, section 3.3.3. Verbs are derived from a category of mental roots via the addition of verbalizing heads. They are related to the encyclopaedic or conceptual knowledge, which can restrict the syntactic frame which a root can enter. The *Kizombo* verb roots examined in sections 7.3, 7.4, 7.5, 7,6 and 7.7 are categorized together with the node vCAUS and this generalization explains the reason why all the verbs examined occur in the causative and

anticausative alternations. Verbs that cannot alternate are constrained by the root itself, otherwise there is morpho-phonological constraint, as shown with the case of the sentence with the verb -*syoloka* in chapter 6, sub-section 6.2.4.2.

7.8.2 The derivational direction of *Kizombo* change of location/position verbs

Contrary to the sentences with the *Kizombo* change of state verbs examined in chapter 6, sentences with change of location/position verbs examined in this chapter are morphologically unmarked. For an adequate analysis of these sentences, I invoke the Syntactic Decomposition approach, as discussed in chapter 3, section 3.3.3. In terms of this approach, alternations are base-generated, hence no alternation is derived from another. The example sentences in the causative and anticausative alternations examined in sections 7.3, 7.4, 7.5, 7.6 and 7.7 are all built up from a [√Root + Theme] complex which expresses a resultant state and an eventive verbal head CAUS which takes the resultant state as its complement. The CAUS represents *a causal relation* between a causing event and the resultant state. Building on this, there is no possibility of directionality between the two alternants, because both variants are based on the same verb root.

For example the sentence with the Agent argument as subject in section 7.3, example (473), reproduced in (633) for ease of reference, additionally has a Voice projection. This voice node explains the presence of the external argument *mwana* 'child' (see discussion in chapter 3, section 3.3.3 by Alexiadou et al 2006; Alexiadou and Anagnostopoulou 2007; Alexiadou 2010). Thus, the sentence with external argument in (633a) yields the structural representation, as in seen (633b).

(633) a. *Mwana wele kuzandu*

mu-ana	*w-ele*	*ku-Ø-zandu*
1a-child	go-PST	17-5-market

Child went to market (Intd: the child went to the market)

b. [*Mwana* [*Voice* [CAUS [*wele kuzandu*]]]

The event of the sentence in (633b) contains a *Voice* and a *vCAUS* component, which are the core structure for an Agent/Theme argument as subject sentence. The node vCAUS represents the bringing about of *a causal relation* between a causing event and the resultant state (i.e. a new location/position) denoted by the verb -*kwenda*. The *Voice* represents the external

argument *mwana* 'child'. Thus, the sentence in (633a) yields the abstract template in (634), as proposed by Alexiadou (2010:182) and represented in figure 22.

(634) [Voice (+ext. arg. +AG) [vCAUS [√Root]]]

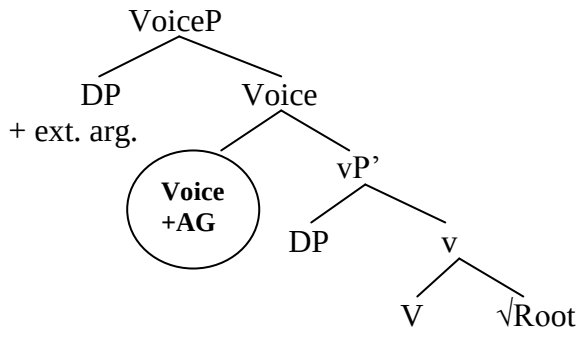


Figure 22: Decomposition of causative sentence with the verb *-kwenda* in *Kizombo*

The template in (634) illustrates that the node voice only establishes a relation between the Agent argument (*mwana*) and the event; hence the voice bears the semantic feature related to [+AG] since the external argument denotes agentive feature. In the analysis of the example sentences in sections 7.3, 7.4, 7.5, 7.6 and 7.7, it was pointed out that sentences with the Goal/Locative/Source argument as subject hold a stative reading. This means no external argument occurs, but the presence of vCAUS represents a relation between the causing event and the resultant event. This fact allows agentive verbs to alternate.

Thus, the Agent argument as subject of the sentence in (633) and the Locative argument as subject of the two sentences in (474 and 475), replicated in (635) for ease of reference, have the same event decomposition with a causative meaning component present even in the anticausative (see also discussion about change of state verbs in chapter 6, section 6.4.2). Considering that the anticausative constructions examined in this chapter are morphologically unmarked, following the proposal by Alexiadou (2010), the anticausative constructions receive the abstract decomposition structure in (635c), represented in figure 23.

(635) a. *Kuzandu kuwele mwana*
Ku-Ø-zandu *ku-w-ele* *mu-ana*
17-5-market 17/AgrS-go-PST 1a-child
To market went child (Intd: the market is the place which the child went)

b. *Zandu dyele mwana*
Ø-zandu *di-i-ele* *mu-ana*
5-market 5/AgrS-go-PST 1a-child
Market went child (Intd: the market is the place where the child went)

c. [vCAUS [Root]]

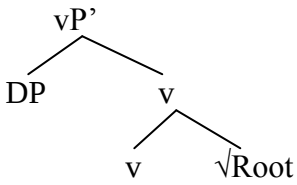


Figure 23: Decomposition of anticausative sentence with the the verb *-kwenda* in *Kizombo*

The anticausative sentence in (635), representing all anticausative sentences examined in this chapter, differ from the anticausatives with change of state verbs in that in the anticausative sentences with motion verbs, the nominal predicate complement is obligatory while in the anticausative with the change of state verbs the Agent argument of the causative variant is optional. That is, it can only be projected as implicit argument, as was dicussed in chapter 6 section 6.2. However, both constructions have the same underlying abstract structure.

The anticausative sentences with *Kizombo* motion verbs examined pose challenges to both the Intransitive and Transitive approaches, as discussed in chapter 3, sections 3.3.1 and 3.3.2. The Intransitive approach takes the causative variant as derived from the anticausative via causativization process, whereas the Transitive approach, takes the opposite view by advocating that the causative is the basic structure and that the operation of detransitivization deletes the CAUSE predicated from the lexical conceptual representation. In other words, the Intransitive approach takes anticausatives as morphologically marked, whereas the Transitive approach takes the causative as morphologically marked. Contrary to change of state verbs discussed in chapter 6, section 6.2, data with *Kizombo* motion verbs suggest that none of the variants is marked, which means none of the alternants can be assumed to derive from one another; hence they are base-generated.

7.8.3 Subjecthood properties of Goal/Locative/Source argument as subject

In chapter 3, section 3.3.3 it was discussed that a syntactic argument position can be realized by syntactic category which realizes different Thematic roles, i.e. Agent, Instrument, Causer (Alexiadou and Schafer 2006; Alexiadou and Anagnostopoulou 2007), one can also include the Goal/Locative/Source Thematic roles in this list. The diagnostic tests for subjecthood in sub-sections 7.3.2, 7.4.2, 7.5.2, 7.6.2 and 7.7.2 suggest that (i) the Goal/Locative/Source argument can be realized as the structural subject of the anticausative sentence, (ii) they can

occur as relative clause antecedent in the subject position (iii) the Goal/Locative/Source argument as subject can occur as subject of passive clauses i.e., see sub-sections, 7.3.2.2 and 7.4.2.2 and (iv) they can occur as relative clause antecedents, see sub-sections 7.3.2.3, 7.4.2.3, 7.5.2.3, 7.6.2.3 and 7.7.2.3. Contrary to *instrument*, and *natural force*, examined in chapter 6, sub-sections 6.2.1.1.2, 6.2.2.1.2, 6.2.3.1.2, 6.2.4.1.2 and 6.2.5.1.2, the Goal/Locative/Source argument DPs can all be realized in the position of the structural subject of anticautive sentences.

7.8.4 Anticausativity and the aspectual verb class

This section gives an account of aspectual verb properties that denote motion verbs containing directional/locational goal phrases in the anticausative variants, discussed in sections 7.3, 7.4, 7.5, 7.6 and 7.7. In chapter 5, section 5.5, and the subsequent sub-sections, research was reviewed which maintains that verbs can be divided into different aspectual classes on the basis of their relation to a time scale. The four aspectual classes discussed are Activity, State, Accomplishements and Achievements, and Semifaltives.

The range of the causative sentences with a *temporal* phrase modification examined in sub-sections 7.3.10, 7.4.10, 7.5.10, 7.6.10 and 7.7.10 suggest that when a verb that denotes an Activity combine with a directional goal locative, the resultant sentence has a telic interpretation, but when a verb combines with stative goal locative the resultant sentence has an atelic interpretation, as illustrated in the sentences in (499b), reproduced in (636) for ease of rerference.

(636) a. *Mwana wele (kolo kya-)/(#mu-)ngunga zizole*
mu-ana *w-ele* *(kolo kya-)/(mu-)ngunga zizole*
1a-child go-PST for/in two hours
'Child went for/in two hours (Intd: The child went for/in an hour)

b. *Mwana wele kuzandu (#kolo kya-)/(mu-)ngunga zizole*
mu-ana *u-w-ele* *ku-Ø-zandu* (*kolo kya-)/(mu-)ngunga zizole*
1a-child 1/AgrS-go-PST 17-5-market for/in two hours
'Child went market for/in two hours (Intd: the child went to the market for/in an hour)

However, the sentence with the verb *-kota* 'enter' in (637) is infelicitous with a *time* frame adjunct, but felicitous with a *durative* adjunct.

(637) *Mwana kotele musuku (kolo kya-)/(#mu-)ngunga imosi*

mu-ana	*kot-ele*	*mu-Ø-suku*	*(kolo kya-)/(mu-)ngunga imosi*
2a-child	enter-PST	18-5-room	for/in an hour

People entered the room for/in an hour (Intd: people entered room for/in an hour)

For an adequate analysis of temporal phrase modification with motion verbs in *Kizombo*, I invoke the compositional rule principle as proposed by Smith (1997:55) - see the discussion in chapter 5, section 5.5.6.4. Features of *Kizombo* locative prefixes such as *ku-*, *mu-*, and *va-* are informative with respect to telicity and atelicity. For instance, a verb with intrinsic features [-Telic] combines with the locative prefixes *ku-*/*mu-*, as is the case with (638a or 639a), such combination yields the following intrinsic features, as represented in (638b or 639b).

(638) a. *Mwana wele kuzandu mungunga imosi*

mu-ana	*w-ele*	*ku-Ø-zandu*	*mu-ngunga*	*imosi*
1a-child	go-PST	17-5-market	18-hour	one

Child went to market in hour (Intd: the child went to the market in an hour)

b. $_{DP}$[+Count] + $_{V}$[-Telic] + $_{LOC}$[DGL] →Vcon [+Telic]

(639) a. *Mwana kotele musuku kolo kya ngunga imosi*

mu-ana	*kot-ele*	*mu-Ø-suku*	*kolo kya ngunga imosi*
1a-child	enter-PST	18-5-market	for an hour one

Child entered bedroom for hour (Intd: the child entered the bedroom for an hour)

b. $_{DP}$[+Count] + $_{V}$[-Telic] - $_{LOC}$[SGL] →Vcon [-Telic]

The example sentence in (638a) bears -telic feature values and a +telic adverbial, whereas the one in (639a) bears -telic feature values and a -telic adverbial. When a -telic verb combines with a complement that bears a +telic interpretation, the verb constellation is -telic.

Similarly to the example sentences with the verbs that denote Activity, the example sentence with the verb that denotes State in (563), replicated in (640), has a similar verb constellation to that discussed in the sentence of (639). The example sentence in (640a) bears atelic feature values and have an atelic adverbial.

(640) a. *Antu aziingilanga munzo(kolo kya-)/(#mu-) ngonde zizole*
a-ntu a-ziing-il-ang-a mu-Ø-nzo (kolo kya-)/(#mu-) ngonde zizole
2-person 2/AgrS-live-APPL-HAB-FV 18-9-house for/in two months
People live in the house for/in two months

b. $_{DP}$[+Count] + $_{V}$[-Telic] - $_{LOC}$[SGL] →Vcon [-Telic]

The sentence in (640) demonstrates that when a -telic verb combines with complement that bears –telic, the verb constellation is -telic. This explains that aspectual values of the basic-level verb constellation are overridden by the complements.

Comparing the example sentences in (636a), and (637a), the sentence in (636a) denotes an unbounded time scale. Thus, the *time* frame adjunct is not acceptable. In (636b) after the inclusion of the directional goal locative *ku-*, the verb shifts from an Activity to an Accomplishment with an end goal; for that reason a *durative* phrase is unacceptable

Unlike the causative sentences examined in sections 7.3.10, 7.4.10, 7.5.10, 7.6.10, and 7.7.10, anticausative sentences, without exception, are felicitous with both *durative* and *time* frame adjuncts. This is demonstrated by the fact that the anticausative sentences examined with motion verbs are derived situation types which fall into the category of marked focus sentences see discussion by Smith (1997:51) in sub-section 5.5.6.3.4. The Events in this type of sentences are seen as state and therefore they denote single state.

As pointed out in sub-sections 7.3.10, 7.4.10, 7.5.10, 7.6.10 and 7.7.10, *Kizombo* speakers make the choice of emphasizing the event's internal stage as continuous or homogeneous, which means they can use the sentence with two possible interpretations: "it has been an hour now since an event occurred" or "the given event occurred in an hour". All the anticausative sentences examined denote a kind of stativity, as exemplified in the gloss in (641). The choice of either interpretation is made by the speakers in discourse context.

(641) *Kuzandu kuwele aana (kolo kya-/mu-)ngunga zizole*
ku-Ø-zandu ku-w-ele a-ana (kolo kya-/mu-)ngunga zizole
17-5-market 7/AgrS-go-PST 2a-child for/in an hour
To river went children for/in two hour' (Intd: the river is the place which the children went for/in two hours)

7.8.5 Anticausative and the notion of transitivity

In chapter 3, it was pointed out that sentences with change of state verbs, both with externally and internally caused verbs, denote a degree of causation. The example sentences in sub-section 6.2.1.1, replicated in (642) for ease of reference, differ in that the event of the verb -*gula* in (642a) is introduced by an Agent (*n'tungi wa nzo*), hence the sentence is in the transitive use whereas the event of the verb -*gula* in (642b) the agent of the event is not projected syntactically, therefore the verb illustrates an intransitive use. However, it is widely accepted that there is an understood instigator/causer, who caused such a change, may be an Agent, an Instrument or a Natural force.

(642) a. *N'tungi wa nzo uwdidi gyaka*
Ø-n'tungi wa nzo *uwd-idi* *Ø-gyaka*
1-builder of house break-PST 7-wall
Builder crashed wall. (Intd: the builder crashed the wall

b. *Gyaka kiuwdikidi*
Ø-gyaka *ki-uwd-**ik**-idi*
7-wall 7/AgrS-break-CI-PST
The wall crashed

In chapter 4, see discussion in section 4.4.2, it was pointed out that Beavers *et al* (2010:258) have observed that the argument DPs that denote result and goal represent a single category that contribute to the aspectual properties of the predicate. The correspondence between goal and result verbs derives from argument realization of such verbs. That is, Themes of change of state verbs examined in chapter 6, and Figures (Agent/Theme argument) of change of location/position verbs, as discussed in this chapter, tend to be realized syntactatically as direct internal arguments of the anticausative sentences of the *Kizombo* verbs. This explains that the *Kizombo* change of location/position verbs that realize locative-subject alternation are analogous to the manner of result constructions of change of state verbs discussed in chapter 6, hence that change of location/position realized in motion verbs are indeed similar to change of state verbs.

Syntactically, the anticausative sentences of change of state verbs display intransitive form whereby the sentence has only one argument, the subject DP. In locative-subject alternation, however, the Goal/Locative/Source argument as subject appears in front of the verb, a position in which they are regarded as the structural subject DP of the anticausative sentence. The Agent/Theme argument of the causative sentence appears in postverbal position in the

anticausative sentence, a position in which it is regarded as a predicative nominal complement of the sentence. Structurally, the causative variants of change of state verbs are intransitive constructions whereas those of change of state are transitive.

This fact calls into question the concept of transitivity/intransitivity, which has been associated with the concept of causative/anticausative as analogous phenomenon. The example sentences examined in this chapter suggest that while the sentences that exemplify the causative variant of change of state are used in the transitive form, the sentences that exemplify the causative variant of change of location/postion verbs are used in intransitive form. Thus, the concept of causative is related to cause and effect, and that there is not a one to one correspondence between causative and transitive or vice-versa.

7.8.6 Anticausativity and the agentivity diagnostic tests in *Kizombo*

Earlier research on anticausative alternation, as discussed in chapter 3, section 3.2 pointed out that anticausatives are restricted to some agentive adjunct phrases, and this fact was taken as one of the differences between anticausative and passive constructions. Although the example sentences examined in this chapter suggest that *Kikongo* (*Kizombo)* change of location/position verbs in their anticausative cannot be modified by a *purpose* clause, see sub-section 7.3.4, 7.4.4, 7.5.4, 7.6.4 and 7.7.4 and by a *by-self* phrase, in sub-section 7.3.6, 7.4.6, 7.5.6, 7.6.6, and 7.7.6, locative-subject alternation constructions are felicitous with an *agent-oriented* phrase, as discussed in sub-sections 7.3.5, 7.4.5, 7.5.5, 7.6.5, and 7.7.6, with a *reason* phrase, as discussed in sub-sections 7.3.8, 7.4.8, 7.5.8, 7.6.8 and 7.7.8, and with an *instrumental* phrase, discussed in sub-sections 7.3.9, 7.4.9, 7.5.9, 7.6.9, and 7.7.9. The acceptability of these adjuncts explains the presence of a causer.

Such a presence is accounted for in the Syntactic Decomposition by Alexiadou *et al*, (2006) since this approach acknowledge two different voices: R(caus) and R(agent), as discussed in section 3.3.3. The R(agent) represents events introduced by an agent and the R(caus) represents events introduced by a non-agent. This is to reinforce the idea that similar to causative alternants, anticausative forms may have a causer represented by instrument and natural force phrases, but not by a human being.

7.8.7 Categorical status of the *Kizombo* locative prefixes

Kizombo noun prefixes exhibit both inflectional and derivational properties. They mark nouns for number (i.e., plural), determining the agreement form with verbs, as discussed in sub-sections 7.3.2, 7.4.2, 7.5.2, 7.6.2 and 7.7.2. The inflectional property is simultaneously related to semantic properties such as plurality, as shown in (643). The inclusion of a locative prefix to a noun or a DP converts it into DP_{Loc}, as shown in (644). Hence prefixation of a given noun class marker simultaneously determines the syntactic agreement properties of the resulting form (inflectional) and change the class category of the stem. Furthermore, noun class prefixes form a phonological unit with the root/stem, as shown below.

(643)	a.	*di-nkondo* 5-banana banana	*ma-nkondo* 6-banana bananas
	b.	*mu-nsambu* 3-fish fish	*mi-nsambu* 4-fish fishes
(644)	a.	*Ø-nzó* 9-house House	*mú-Ø-nzó* 18-9-house in a/the house
	b.	*Ø-nzó* 9-house house	*kú-Ø-nzó* 17-9-house at home
	c.	*lú-pàngú* 11-enclosure enclosure	*kú-lú-pàngú* 17-11-enclosure at enclosure

The examples in (644) cannot be uttered separately or rather there is no interval in pronouncing these words. Further argument is that in writing, words with locative prefixes cannot be written separately. They are regarded as single morphological units. It is for that reason that the locative prefixes in *Kizombo* are morphologically characterized as bound prefixes and syntactically independent elements, i.e. instances of an X°-category, as in seen (645).

(645)	a.	*Ø-nzó* (DP) 9-house house	*mú-Ø-nzó* (DP_{Loc}) 18-9-house in the house

b.	*Ø-nzó* (DP)	*kú-Ø-nzó* (DP_{Loc})
	9-house	17-9-house
	house	at home
c.	*lú-pàngú* (DP)	*kú-lú-pàngú* (DP_{Loc})
	11-enclosure	17-11-enclosure
	enclosure	at enclosure

The phrases in (645) suggest that those on the left side are DPs and those on the right side, are derived DP_{Loc} by prefixing the locative, as illustrated in figure 24.

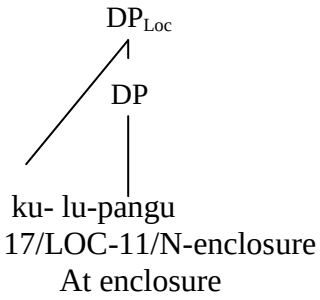


Figure 24: Structure of a locative phrase in *Kizombo*

Modifiers of locatives do not agree with them in the noun class they modify, as shown in (646). As it can be seen, the subject in the sentence in (646b) starts with a locative prefix of class 16 followed by the the nominal class prefix. However, it is the prefix of the nominal class, class 19,that agrees with the noun. In other words, the constriction *vamambu valongo tuna* is not acceptable, as shown in (646b).

(646) a. *Kufilupangu fya mwana kangyenda*

Ku-fi-lu-pangu	*fya*	*mu-ana*	*ka-ngy-end-a*
17-19-11-enclosure	19-of	2a-child	1-1-go-FV

To the enclosure of child I went (Intd: I went to my child´s enclosure)

b. *Vamambu malongo tuna*

va-ma-mbu	*ma-Ø-longo*	*tu-na*
16-6-problem	6-11-wedding	2-be

On problem of wedding we are (lit. We are at the wedding)

c. *Munzo zaatu kakuwendanga*

Mu-nzo	*za-atu*	*ka-kuwend-ang-a*
19-house	10-people	1-go-HAB-FV

In the house of people he goes (Intd: he goes to other people´s house)

Finally, similar to verbal affixes, as discussed in Fernando (2010), locative prefixes may acquire new meaning by means of a gradual lexicalization process, as shown in (647).

(647) a. *Mwini* > *ku-mwini* > *kumwini*
'sunshine' '-in the sunshine' person's name

b. *kanda* > *ku-kanda* > *kukanda*
'-rest' '-to tribe' 'person´s name'

c. *ntima* > *mu-ntima* > *muntima*
heart in heart person's name

d. *mpasi* > *mu-mpasi* > *mumpasi*
suffering in suffering person's name

The examples in (647), once the prefix *ku-* is attached to the noun *mwini* 'sun', it may acquire the meaning of a proper noun, in this case, a person's name.

7.8.8 Argument structure of motion verbs

The main goal of this study is to explore the applicability of the syntactic decomposition approach in the causative and anticausative alternation in *Kizombo*. In conducting this study two major verb classes were selected, namely verbs that denote change of state and those that denote change of location/position. Thus, other predicate types were deliberately excluded. The range of verbs examined in this chapter is found in the category of unaccusative predicates. However, a cursory look on other predicate types gives the following finding:

(648) *Transitive predicates*

a. *N'kento lembe madya mukikuku*
Ø-n'kento *lemb-e* *ma-dya* *mu-ki-kuku*
1-woman cook-PST 6-meal 18-7-kitchen
Woman cooked meal in kitchen (Intd: The woman cooked the meal in the kitchen)

b. *#Mukikuku mulembe n'kento madya*
Mu-ki-kuku *mu-lemb-e* *Ø-n'kento* *ma-dya*
18-7-kitchen 18-cook-PST 1-woman 6-meal
In kitchen cooked meal woman (Intd: the kitchen is the place where the woman cooked the meal)

(649) *Ditransitive predicates*

a. *N'kento veene mwana madya mukikuku*

Ø-n'kento	*veen-e*	*mw-ana*	*ma-dya*	*mu-ki-kuku*
1-woman	give-PST	1-child	6-meal	18-7-kitchen

Woman gave child meal in kitchen (Intd: the woman gave the child the meal in the kitchen

b. *#Mukikuku muveene n'kento mwana madya*

mu-ki-kuku	*mu-veen-e*	*Ø-n'kento*	*mu-ana*	*ma-dya*
18-7-kitchen	18/AgrS-give-PST	1-woman	1-child	6-meal

In kitchen gave woman child meal (Intd: in the kitchen is the place where the woman gave child the meal)

(650) *Passive predicates*

a. *Madya malembwe mukikuku*

ma-dya	*ma-lemb-w-e*	*mu-ki-kuku*
6-meal	6/AgrS-cook-PASS-PST	18-7-kitchen

Meal was cooked in kitchen (Intd: the meal was cooked in the kitchen)

b. *#Mukikuku mulembwe madya*

mu-ki-kuku	*mu-lemb-w-e*	*ma-dya*
18-7-kitchen	18/AgrS-cook-PASS-PST	6-meal

In kitchen was cooked meal (Intd: In the kitchen was cooked the meal)

(651) *Applicative predicates*

a. *Mukikuku mulambidi n'kento mwana madya*

mu-ki-kuku	*mu-lamb-il-i*	*Ø-nkento*	*mw-ana*	*ma-dya*
18-7-kitchen	AgrS-cook-APPL-PST	1-woman	1-child	6-meal

In kitchen cooked for the child meal (Intd: the kitchen is the place which the woman cooked the meal for the child)

(652) *Applicative passive predicates*

Mukikuku mulambilwe mwana madya

mu-ki-kuku	*mu-lamb-il-w-e*	*mu-ana*	*ma-dya*
18-7-kitchen	18/AgrS-cook-APPL-PASS-PST	1-child	6-meal

In kitchen was cooked for woman child meal (Intd: the kitchen is place which the meal has been cooked for the child)

Language	Predicate types	Morphosyntactic structure			Thematic structure
		Locative morphology	SM morphology	Grammatical function of AgrS	Thematic role
Kizombo	Unaccusative, applicative and applicative passive	16/17/18	16/17/18	locative	theme

Table 24: Predicate types that occur in locative-subject alternation in *Kizombo*,

Table 24 explains that *Kizombo* allows locative-subject alternation with unaccusative, applicative and applicative passive predicates. Active transitives and ditransitives, (i.e. argument structures containing both an agent and a theme), and passive predicates are not acceptable. However, further research is required in this regard.

7.8.9 Information structure (IS)

When speakers of a given language talk, they do so in a way to establish mutual understanding with the hearers about a given content that they talk about. In terms of discourse approach, the speaker keeps track of the development of mutual understanding, and uses his/her linguistic expressions in a manner that the content s/he conveys be associated with the information in the discourse as developed at that point.

Given the above comment, and as was discussed in various example in sections 7.3, 7.4, 7.5, among others, *Kizombo* speakers use sentences in which the Goal/Locative/Source argument as subject. However, it was also mentioned that in terms of discourse context, the locative-subject constructions are characterized as illustrating presentational focus because the new information is given without a special background or referent set in mind of the hearer. In other words, the anticausative constructions serve a particular function in discourse, in which the referent of the postverbal subject is introduced or reintroduced on the (part of the) scene referred to by the preposed locative" (Bresnan 1994:85). In terms of discourse-pragmatic properties the preverbal subject is topical, introducing new information whereas the postverbal subject is focal, presenting old information.

7.9 SUMMARY

This chapter explored the *Kizombo* sentences with motion verbs that occur in the causative and anticausative (locative-subject) alternation. In particular, the relationship between locative-subject alternation and properties exemplifying the causative and anticausative alternation were examined. A range of diagnostic tests relating to properties of anticausative and aspectual verb class properties associated with the anticausative were applied to constructions that exemplify the locative-subject alternation. These diagnostic tests included the acceptability of a *purpose* clause, an *agent-oriented* phrase, a *by-self* phrase, an *again* phrase, a *manner* phrase, *instrumental* phrase, and a *temporal* phrase, and a *reason* clause. In addition, this chapter addressed issues relating to the characterization of transitivity in *Kizombo* sentences.

The range of the sentences examined can alternate. Two types of alternations were identified: (i) one with the subject argument with locative morphology and (ii) another with the subject argument without locative morphology, as discussed in sub-sections 7.3.1.1 and 7.3.1.2, 7.4.1.1 and 7.4.1.2, 7.5.1.1 and 7.5.1.2, 7.6.1.1 and 7.6.1.2 and 7.7.1.1 and 7.7.1.2. Despite of the morphological difference, both alternants have the same thematic role and have a similar, but not indentical interpretation. The difference between causative and anticausative (locative-subject) variant is that the latter is typically interpreted as a topic, and the Agent/Theme argument gives new information. For that reason this construction is generally characterized as presentational focus. Additionally, although in terms of discourse both sentences with a subject Goal/Locative/source argument, with or without locative morphology of the subject, are used interchangeably. They differ in the sense that the subject argument in the sentence without locative is used in bear form.

Sentences with the Goal/Locative/Source argument as subject satisfies some subjecthood tests: some verbs within the same semantic class can be the subject of the passive, as discussed in sub-sections 7.3.2.2 and 7.4.2.2. All the sentences examined, irrespective of their semantic class can occur as relative clause antecedent. A sentence with the Agent/Theme argument as object cannot co-occur with an object agreement prefix, as examined in sub-sections 7.3.3, 7.4.3, 7.5.3, 7.6.3, and 7.7.3. Unlike the sentences with Agent/Theme argument, the example sentences with the Goal/Loactive/Source argument as subject cannot be modified by a *purpose* clause and by a *by-self* phrase, as discussed in sub-sections 7.3.4 and 7.3.6, 7.4.4 and 7.4.6, 7.5.4 and 7.5.6, 7.6.4 and 7.6.6 and 7.7.4, and 7.7.6, respectively. The acceptability of diagnostic tests presupposes the presence of causer in the anticausative

sentences. The example sentences with the *Again* phrase are acceptable, but with two possible interpretations: depending on the context, they may denote a repetitive or restitutive.

The sentences with the Agent/Theme argument as subject with *durative* and *time* frame adjuncts are constrained by properties of the locative prefix. When the directional goal locative *ku-* follows an Activity verb, the resulting sentence has a telic interpretation, as exemplified in section 7.3.10, but when the static goal locative *mu-* follows an Activity verb, the resulting sentence receives an atelic interpretation, as shown in sub-section 7.3.10, among many other exampples. However, the example sentences with the Goal/Loactive/Source argument as subject are acceptable with both *durative* and *time* frame adjuncts, as examined in sections 7.3.10, 7.4.10, 7.5.10, 7.6.10, and 7.7.10. The use of these two adjuncts has two different interpretations: the sentence with a *durative* adjunct has the interpretation of 'it has been x hours now since the event started', whereas the sentence with a *time* frame adjunct has the interpretation of 'the event occurred in x hours'.

There have been competing approaches with the derivational direction of causative and anticausative in many languages of the world. Given the data in *Kizombo*, it appears that the syntactic decomposition approach is the most appropriate to account for the example sentences in causative and anticausative alternation. The transitive approach could probably deal with the externally caused verbs, as discussed in chapter 6, but would face challenge relating to motion verbs, because none of the variants are morphologically marked. The analysis attested that the general theoretical endeavor which postulates that semantic representations of syntactic information is a relevant part of the lexical encoding of verbs. The causative and anticausative alternations have effect on the aspectual class of the verb since they shift from the situation types to the derived situation type.

CHAPTER 8
OVERVIEWS, MAJOR FINDINGS, CONCLUSIONS AND QUESTIONS FOR FURTHER RESEARCH

This chapter will give an overview and conclusion to the study. First, an overview on the major aspects discussed in chapters 2, 3, 4 and 5 is provided, and then the major findings of this study is summarised against the backdrop of the research questions posed in chapter 1, followed by the conclusions and further area of research in *Kizombo*.

8.1 OVERVIEW OF CHAPTERS TWO, THREE, FOUR AND FIVE

Chapter 2 gave an account of the phonological and morpho-syntactic features of *Kikongo* (*Kizombo*). It demonstrated that *Kizombo,* as is the case of other Bantu languages, makes extensive use of the noun class prefixes and that the three locative prefixes are very productive. On its phonological inventory, *Kizombo* has five vowels and vowel length is phonemic. A distinction is made between short and long vowels. Some verbs are inherently intransitives, but they may acquire transitive properties via the derivational process. Similarly, inherent transitive verbs may acquire intransitivity properties through the derivational process. This explains, transitivity and intransitivity in *Kizombo* can be an inherently property of the verb root or derived by attaching a verbal affix to a verb root. Certain verbs which are inherently intransitives in some languages such as English, are transitives in *Kizombo*, hence the notion of transitivity may vary across-languages.

Chapter 3 reviewed the scholarship on the causative and anticausative alternation and demonstrated that debate in regarding this issue revolves around two major concerns: the first concern deals with the similarities and dissimilarities between passives and anticausatives with regard to the presence of or absence of an implicit external argument and the second concern is related to modification and control. Concerning *modification* and *control*, the overview demonstrated that this is due to the presence vs. absence of an implicit external argument in passives and anticausatives. While passive verb constructions contain an implicit argument which can be assessed by *by-phrases* and *agent-oriented* adverbials, and which can project control in a purpose clause, anticausatives lack such an argument and, for that reason, modification and control cannot hold. With regard to the properties of meaning, the survey revealed that the causative alternation in earlier research is constrained to verbs of change of

state and non-agentive verbs of motion. There are anticausative verbs that lack causative counterparts in languages like English, but do have such counterparts in other languages, and verbs that denote causation that lack anticausative counterparts in English, but do alternate in other languages.

In addition, three competing approaches have been considered with respect to causative and anticausative alternation, namely Intransitive, Transitive and Syntactic Decomposition. The Intransitive approach is justified by languages that mark the causative variant, as discussed in section 3.3.1, whereas the Transitive approach is justified by languages that mark the anticausative variant, as discussed in section 3.3.2. Both approaches leave room for questions of the paradigm unanswered. For example, one would wonder how these approaches could handle with facts found in *Kizombo* that present verbs with both types of morphology. The Syntactic Decomposition approach, however, takes both processes causative marking variant and anticausative marking variant, as discussed in section 3.3.3. In this approach the causative and anticausative alternation involve similar event decomposition. They only differ in the presence or absence of Voice which introduces the agent external argument. Thus, this model invokes three nodes: Voice, vCAUS and Root.

The survey in chapter 4 gave an account of the typology of locative inversion in different Bantu languages, including English, and it pointed out the relation between function and the morphological inventory of locative subject markers. The survey demonstrated that in languages with only one locative subject marker, the subject marker is semantically faded and does not encode locative meaning independently. Variation exists as to the thematic restrictions imposed on locative inversion, and three different language types were identified: (i) *Chichewa* and *Kichaga* allow only unaccusative verbs, in (ii) *Setswana* and *Sesotho* the locative inversion is possible except with predicates with both an Agent and a Theme role. (iii) *Otjiherero* provides yet another type of language. In this language locative subject agreement supports a locative reading, although the class 16 agreement can also be used in expletive contexts, as discussed in sub-section 4.2.5. English is the only language in which the postverbal locative triggers agreement with the Theme, but the locative subject can occur in the subject position and can occur as relative clause antecedent, as discussed in section 4.2.6. Constructions with Goal/Locative and Source as subject are used in a presentationally focused context. Also this chapter surveyed the status of motion verbs and the notion of causativity in terms of change of state (change of location) and it demonstrated that this class has a

potentially causative interpretation since they may give rises to various degrees of causation. That is, motion verbs in causative and anticausative alternation are comparable to the manner of results of change of state, hence that change of location expressed in motion verbs are indeed similar to change of state.

Chapter 5 reviewed studies on A-structure, thematic roles and aspectual verb classes and it demonstrated that thematic role theories of argument realization are not taken as theoretical primitives. Instead, they are posited as emergent constructs defined by the semantic structures in which they are embedded. The highest argument in the sentence typically appears as the subject while the lowest argument the first one to compose with the verb appears as the direct object. This decompositional approach preserves many of the insights of thematic role lists, mainly because of the fixed correspondence between thematic roles and the arguments of primitive predicates. The survey also demonstrated that theories of thematic roles share two distinct properties: firstly, the different roles that participants play in a given event can be categorized into a limited number of them and, secondly, a set of rules that map such roles onto different syntactic functions are employed.

However, considering that the nature of human languages is enormously infinite, irregular and continually evolving, it proves difficult to establish a comprehensive list of thematic roles for the types of arguments that can satisfy every human language's predicates. In other words, the survey demonstrated that no universally accepted list of guidelines on defining the set of thematic roles and the properties each thematic role possesses is available. Different scholars give various interpretations of the types of participants involved in different events and their semantic properties.

With regard to the aspectual verb classes, it was pointed out that argument realization relates to temporal and mereological properties of the predicates that describe events; hence, aspectual properties such as telicity, measure, and incremental theme play a central role in selecting components of transitivity and, especially in the choice and expression of direct objects. Despite the radical differences, the scholarship reviewed, contributes greatly to the understanding of event structure. The core idea behind aspectual verb classes is that they are classified according to their internal properties and their classification is based on lexical aspect (Rappaport Hovav 2010:3). Language options determine which aspectual notions are grammaticalized, (Smith, 1997). These options, along with language differences in the syntactic status of argument DPs, give a typology of possible interactions between the

category of aspect and argument structure. The survey illustrated that some aspects relating to argument expression (i.e. the status of aspectual verb classes of the reversal sentences, and the degree of anticausativity) have received little attention in the study of African linguistics. A study of this nature in *Kizombo* has never been conducted hence this gap was filled by this dissertation. After giving a brief overview of chapters 2, 3, 4 and 5, the focus will shift to the major findings of the study.

8.2 MAJOR FINDINGS

This section gives account of the major findings of the study with the *Kizombo* change of state and change of location/position.

Verbs	Causative type of external argument and other diagnostic tests									Anticausative and other diagnostic tests									Passive and other diagnostic tests							Middles		
								Temp. modif		PPs							Temp. modif		PPs									
	Agent	Natural force	Instrument	Agent-orient	By-self modif	Again modif	Purpose modif	F	I	Agent	Natural force	Instument	Agent–oriented	By-self modif	Again modif	Purpose modif	F	I	Agent	Natural force	Instrument	Agent-oriented	By-self modif	Again modif	Purpose modif	Middle	Agent-oriented	By-self modif
Break verbs																												
-gula ‘break’	√	√	√	√	√	√	√	#	√	#	√	√	#	√	√	#	√	√	√	#	√	√	*	√	√	√	#	#
-tolola ‘break’	√	√	√	√	√	√	√	#	√	#	√	√	#	√	√	#	√	√	√	#	√	√	*	√	√	√	#	#
-nika ‘pound’	√	#	#	√	√	√	√	√	#	#	#	√	√	#	√	#	√	√	√	#	√	√	*	√	√	√	#	#
-tuuta ‘ground’	√	#	#	√	√	√	√	√	#	#	#	√	√	#	√	#	√	√	√	#	√	√	*	√	√	√	#	#
Cut verbs																												
-zenga ‘cut’	√	#	√	√	#	√	√	#	√	#	#	√	√	#	√	#	√	√	√	#	√	√	*	√	√	√	#	#
-vasa ‘cut’	√	#	√	√	√	√	√	√	#	#	#	√	**?**	√	√	#	√	√	√	#	√	√	*	√	√	**?**	#	#
-tyaza ‘tear’	√	√	√	√	√	√	√	#	√	#	√	√	#	√	√	#	√	√	√	#	√	√	*	√	√	#	#	#
-tabula ‘cut’	√	√	√	√	√	√	√	#	√	#	√	√	#	√	√	#	√	√	√	#	√	√	*	√	√	**?**	#	#
-nyanzuzuna ‘cut’	√	√	#	√	√	√	√	√	#	#	√	#	#	#	√	#	√	√	√	#	√	√	*	√	√	#	#	#
-fwela ‘chop’	√	#	#	√	√	√	√	√	#	**?**	**?**	**?**	**?**	**?**	√	#	**?**	**?**	√	#	√	√	*	**?**	**?**	**?**	#	#
Bend verbs																												
-fumbika ‘bend’	√	√	√	√	√	√	√	#	√	#	√	#	#	√	√	#	√	√	√	#	√	√	*	√	√	√	#	#
-koneneka ‘bend’	√	√	√	√	√	√	√	#	√	#	#	#	#	√	√	#	√	√	√	#	√	√	*	√	√	**?**	#	#

-*vweteka* ‘bend’	√	√	√	√	√	√	√	#	√	#	√	#	#	√	√	#	√	√	√	#	√	√	*	√	√	**?**	#	#
Cook verbs																												
-*lamba* ‘cook’	√	#	#	√	√	√	√	√	#	#	#	#	√	#	√	#	√	√	√	#	√	√	*	√	√	√	#	#
-*gyoka* ‘roast’	√	#	#	√	√	√	√	√	#	**?**	**?**	**?**	**?**	#	**?**	**?**	**?**	**?**	√	#	√	√	*	√	√	√	#	#
-*vuula* ‘boil’	√	#	#	√	√	√	√	√	#	#	#	#	√	#	√	#	√	√	√	#	#	√	*	√	√	√	#	#
-*kaanga* ‘toast’	√	#	#	√	√	√	√	√	#	**?**	**?**	**?**	**?**	#	?	**?**	**?**	**?**	√	#	#	√	*	√	√	√	#	#
-*syokesa* ‘fry’	√	#	#	√	√	√	√	√	#	#	#	#	#	#	#	#	#	#	√	#	#	√	*	#	#		#	#
Ingesting verbs																												
-*dya* ‘eat’	√	#	#	√	√	√	√	#	√	#	#	#	√	#	√	**?**	**?**	**?**	?	#	#	?	*	√	#	#	#	#
-*tafuna* ‘chew’	√	#	#	√	√	√	√	#	√	#	#	#	√	#	√	√	√	√	√	#	#	√	*	√	#	#	#	#
Build verbs																												
-*tuunga* ‘build’	√	#	#	√	√	√	√	#	√	#	#	#	√	#	√	#	√	√	√	√	√	√	*	√	√	√	#	#
-*kusa* ‘paint’	√	#	#	√	√	√	√	√	#	#									√	#	√	√	*	√	√	√	#	#
Parch verbs																												
-*gyuma* ‘parch’	#	#	#	#	#	#	#	#	#	#	√	#	#	#	√	#	√	√										
-*lekoka* ‘wilt’	√	√	#	√	√	√	√	√	#	#	√	#	#	#	√	#	√	√										
-*gola* ‘rot’	#	#	#	#	#	#	#	#	#	#	√	#	#	#	√	#	√	√										
-*mmena* ‘bloom’	#	#	#	#	#	#	#	#	#	#	√	#	#	#	√	#	√	√										
-*bwaka* ‘ripe’	#	#	#	#	#	#	#	#	#	#	√	#	#	#	√	#	√	√										
-*lomba* ‘ripe’	#	#	#	#	#	#	#	#	#	#	√	#	#	#	√	#	√	√										
-*vya* ‘tender’	#	#	#	#	#	#	#	#	#	#	√	#	#	#	√	#	√	√										

Table 25: General diagnostic tests with change of state verbs in *Kizombo*

Verbs	Locative alternation				Diagnostic tests with Goal/Location/Source argument as subject																										
					Properties of goal/loc/ theme Subject					Object prop. Agent/ theme		Purpose clause		Agent orient. Adv.		By-phrase		Again phrase		Reason Mod.		Inst. Mod.		Temporal Mod.						Applic .locat.	
	Agent-subj	Theme-subj	DP_{Loc}-subj	$DP_{\_Loc}$-subj	S-V Agr	Occur subj	Passivization	Relativization	Expletive	AgrO prefix		DP_{Loc}-subj	DP_{-Loc}s-ubj	DP_{Loc}-subj	$DP_{\_Loc}$-subj	DP_{Loc}-subj	$DP_{\_Loc}$-subj	DP_{Loc}-subj	$DP_{\_Loc}$-subj	DP_{Loc}-subj	$DP_{\_Loc}$-subj	$DP_{\_Loc}$-subj	$DP_{\_Loc}$-subj	DPAg-subject		DP_{Loc}-subject		$DP_{\_Loc}$-subject		$DP_{\_Loc}$-Subj	$DP_{\_Loc}$- subj
																								F	I	F	I	F	I		
VIDMs																															
-kwenda ‘go’	√	#	√	√	√	√	#	√	#	#		#	#	√	√	#	#	√	√	√	√	√	√	#	√	√	√	√	√	√	?
-kwiza ‘come’	√	#	√	√	√	√	#	√	#	#		#	#	√	√	#	#	√	√	√	?	√	√	#	√	?	?	?	?	√	?
-kota ‘enter’	√	√	√	√	√	√	√	√	#	#		#	#	√	√	#	#	√	√	√	√	√	?	√	#	√	√	√	√	?	?
-vaika ‘exit’	√	√	√	√	√	√	√	√	#	#		#	#	√	√	#	#	√	√	√	√	√	√	√	#	√	√	√	√	?	?
Manner-of-																															
-zyeta‘surround’	√	#	√	#	√	√	√	√	#	#		#	#	√	√	#	#	√	√	√	√	√	√	√	#	√	√	√	√	√	√
-tyatika ‘run’	√	#	√	#	√	√	√	√	#	#		#	#	√	√	#	#	√	√	√	√	√	√	#	√	#	√	√	√	√	√
-‘*mata* ‘climb’	√	#	√	#	√	√	√	√	#	#		#	#	√	√	#	#	√	√	√	√	√	√	√	#	?	√	?	√	√	√
Exist verbs																															
-ziingila‘live in’	√	#	√	√	√	√	#	√	#	#		#	#	√	√	#	#	√	√	√	√	√	√	√	#	√	√	√	√	*	*
-kala ‘stay’	√	√	√	√	√	√	#	√	#	#		#	#	√	√	#	#	√	√	√	√	#	#	√	#	√	√	√	√	*	*
Verbs of modes																															
-fuluka ‘stir’	√	√	√	√	√	√	#	√	#	#		#	#	√	√	#	#	√	√	√	√	√	√	√	#	√	√	√	√	√	√
-kina ‘dance’	√	#	√	√	√	√	#	√	#	#		#	#	√	√	#	#	√	√	√	?	?	?	√	#	√	√	√	√	?	?
Spat. Config.																															
-kosoka ‘sit’	√	#	√	√	√	√	√	√	#	#		#	#	√	√	#	#	√	√	√	√	√	√	√	#	√	√	√	√	√	√
-dyembalala ‘hang’	√	#	√	√	√	√	?	√	#	#		#	#	√	√	#	#	√	√	√	√	#	#	√	#	√	√	√	√	√	√
-zongama ‘lean’	√	√	√	√	√	√	?	√	#	#		#	#	√	√	#	#	√	√	√	√	#	#	√	#	√	√	√	√	√	√
-lambalala ‘lie’	√	#	√	√	√	√	?	√	#	#		#	#	√	√	#	#	√	√	√	√	#	#	√	#	√	√	√	√	?	?

Table 26: General diagnostic tests with change of location/position verbs in *Kizombo*

In chapter 1 it was said that in order to conduct this study, six research questions were posed. Thus, the summary of the findings is given based on each research question posed in chapter 1.

Research question 1: 'What element of meaning allow and disallow the occurrence of change of state and change of location/position in the causative and anticausative alternation? Research question 2: Which verb classes realize the causative and or anticausative alternation through covert or overt morphology? See also hypothesis 1.

Data demonstrated that there is a wide range of acceptability judgments associated with anticausative uses of *Kizombo* with externally and internally caused change of state and change of location/position verbs, as discussed in chapter 6, sections 6.2 and 6.3 and chapter 7, sub-sections 7.3, 7.4, 7.5, 7.6 and 7.7. The verb root is the element of meaning that allows verbs in *Kizombo* to alternate irrespective of their semantic classes. With regard to the second question, all the causative variants of externally caused verbs are morphologically unmarked, but all anticausative variants are morphologically marked with the morphemes **-ik-** and **-am-** regarded as the controller of intransitivity, as discussed in sub-sections 6.2.1.2, 6.2.2.2, and 6.2.3.2, among others. All internally caused change of state verbs are morphologically unmarked, as discussed in section 6.3. However, both causative and anticausative variants of change of location/position verbs are morphologically unmarked, as discussed in sub-sections 7.3, 7.4, 7.5, 7.6 and 7.7.

Research question 3: How do properties of instrument DPs differ from those of natural force DPs and what are structural realizations of other argument DPs in sentence realizing anticausative?

Data demonstrated that the acceptability of a sentence with *instrument* and *natural force* as causer, in causative variant is restricted by properties of verb: verbs whose events are human-driven activities do not allow both *instrument* and *natural force* as causer, as examined in sub-sections 6.2.1.1.2, example (292b), and sub-section 6.2.2.4.1.2, example (360). However, verbs whose events are non-human-driven activities can take *instrument* or *natural force* as causer, as discussed in sub-section 6.2.1.1.2, example (292a), among others. Data also demonstrated that both *instrument* and *natural force* can be a subject, but only the *natural force* DP exhibits properties of subject as agent since it can act on its own. The *Instrument* DP exhibits properties of subject as causer because its participation requires a presence of agent therefore they are regarded as auxiliary. With regards to the anticausative variant, it has been

found that sentences with *instrument* DPs are infelicitous with verbs which are human-driven activities and felicitous with verbs that are non-human-driven activities. Contrary to *instrument* DPs, *natural force* DPs are felicitous with verbs that are non-human-driven activity and infelicitous with verbs that are human-driven activity. Both *instrument* DPs and *natural force* DPs are regarded as implicit causers acting upon an event. Yet, the acceptability is constrained by properties of verbs.

With regards to the Goal/Locative/Source argument as subject, data demontrated that depending on the properties of the verb, these DPs can be realized as (i) the structural subject of the anticausative sentence, (ii) they can occur in subject position of matrix sentence, (iii) Goal/Locative/Source argument of these verbs can occur as subject of passive clause, as discussed sub-sections, 7.3.2.2 and 7.4.2.2 and (iv) they can occur as relative clause antecedents, see sub-sections 7.3.2.3, 7.4.2.3, 7.5.2.3, 7.6.2.3 and 7.7.2.3. Thus, Goal/Locative/Source argument DPs of the anticausative sentences with change of location/position display properties of structural subject DP. Unlike the Goal/Locative/Source argument as subject, the Agent/Theme argument as object cannot co-occur with object agreement prefix, as examined in sub-sections 7.3.3, 7.4.3, 7.5.3, 7.6.3, and 7.7.3. This fact rules out the possibility of considering this argument DP as structural object of the sentence.

<u>Research question 4</u>: Which lexical semantic and aspectual verb class properties determine the classification of verbs into verb root?

Data demonstrated that incremental theme is crucial in determining the aspectual verb class in *Kizombo*. As it was seen in chapter 6, sub-sections 6.2.1.1.7, 6.2.2.1.7, among others. In the causative variant, when a verb takes a singular count noun object, it can be felicitous with a *time* frame phrase, but when it takes a plural count noun or mass noun, sentences with these verbs can be felicitous with a *durative* phrase. With regard to the change of location/position verbs, properties of the locative prefix are crucial in determining the aspectual verb class of a verb. Data demontrated that when the directional goal locative *ku-* follows an activity verb, the resulting sentence has a telic interpretation, as discussed in sub-section 7.3.10, but when the static goal locative *mu-* follows an activity verb, the resulting sentence has an atelic interpretation, as discussed in sub-section 7.3.10.

With regard to the anticausative variant, data demonstrated that the example sentences with *Goal*/*Locative*/*Source* argument as subject are acceptable with both *durative* and *time* frame phrases, as examined in sections 6.2.1.2.5, 6.2.2.2.5, 6.2.3.2.5, 6.2.4.2.5 and 7.3.10, 7.4.10,

7.5.10, 7.6.10, and 7.7.10, respectively. However, the use of these two adjuncts have two distinct interpretations: the sentence with the *durative* phrase has the interpretation of 'it has been x hours now since the event started', whereas the sentence with the *time* frame phrase has the interpretation of 'the event occurred in x hour'.

Research question 5: What are the morphological differences between the anticausative variants and other transitivity alternations and how can transitivity be defined in *Kizombo* taking into account these different properties?

Data indicated that there are similarities and differences. The anticausative sentences with external change of state verbs and passive and middle sentences are all morphologically marked. However, anticausative of internally caused change of state verbs and both causative and anticausative of change of position/position are morphologically unmarked. They differ in the sense that while both anticausative and middle are marked by the same morpheme, passive is marked by the morpheme -w- with its allophones -iw-/ew- depending on the morphological conditions. In terms of diagnostic tests with agentivity, anticausative sentences can be modified by an *agentive-oriented* phrase, a *by-self* phrase and an *again* phrase, but cannot be modified by a *purpose* clause, whereas passive can be modified by a purpose clause, an *agent-oriented* phrase and an *again* phrase, but cannot be modified by a *by-self* phrase. Middle sentences cannot be modified by an *agent-oriented* or a *by-self* phrase.

Despite such differences, data in *Kizombo* demonstrated that both anticausatives and passives can license external causer through implicit argument. While the passive sentences can be modified by *by-agent*, *purpose* clause and *agent-oriented* phrases, the anticausative sentences can license *instrument*, *natural force*, *agent-oriented* and *by-self* phrases. The acceptability of these modifiers presupposes a presence of causer in both constructions.

With regard to the transitivity in *Kizombo*, data demonstrated that syntactically, the anticausative sentences of change of state verbs display an intransitive form whereby the sentence has only one argument, the causative display transitive properties whereby the sentence has two arguments, namely the subject DP and the Theme DP. In locative-subject alternation, however, the causative variant exhibit intransitive properties whereby the sentence has only one argument, the subject DP and an adjunct DP. In the anticausative variant, the Goal/Locative/Source argument as subject appears in the front position of the verb, a position in which they are regarded as the structural subject DP of the anticausative sentence. The Agent/Theme argument of the causative sentence appears in postverbal position

of verbs in the anticausative sentence, a position in which it is regarded as predicative nominal complement of the referred sentence.

This fact calls into question the characterization of transitivity/intransitivity, which has been associated with the concept of causativity/anticausativity as analogous phenomenon. However, the example sentences examined in this dissertation suggest that the causative form of change of location/position verbs is syntactically intransitive (i.e. in the locative-subject alternation), but its anticausative variant acquires transitive-like form. Thus, the concept of causative is related to cause and effect of the argument participating in the process, but also that there is not a correspondence between one and another.

Research question 6: What is the distribution of the PP-like thematic roles realising as external causer?

Data demonstrated that thematic roles realising PPs-like as external causer can be *instrument* and *natural force* theta-roles, as discussed in chapter 5, sub-section 5.3. However, the occurrence of these two thematic roles is constrained by properties of the verb. As it was said before, sentences with a verb whose event denotes human-driven activity can only be modified by *instrument*, as discussed in sub-section 6.2.2.1.2, example sentence (299b), sub-section 6.2.1.1.2, example sentence (322a). Sentences with a verb whose event denotes non-human-driven activity can be modified by both *instrument* and *natural force*, as discussed in 6.2.1.2.1, example sentence (299a), sub-section 6.2.2.2.1, example sentence (322c), among many. It is important to note that the acceptability of sentences with *instrument* as causer implies the existence of external causer.

8.3 CONCLUSIONS

This thesis explored the interaction between lexical-semantic and syntax. The analysis of verb classes and transitive alternations presented to form a fundamental field of research, because the identification of common syntactic properties belonging to verbs with similar semantic characteristics has supported the hypothesis that important generalizations are possible. The distinct behaviour that verbs exhibit is a complex issue whose explanation has been at the center of various decades of research on argument realization. Scholars believe that the lexicon of language display different entries for each alternating verb, and that for that reason the syntactic computation works with only one possible verb root entry.

There has been a long debate in the linguistic literature about the causative and anticausative alternation. Scholars have conflicting views regarding the way arguments are construed and about properties that argument changing exhibit. The diversity of a considerable amount of research in the field is a result of the complexity of inverstigation in the matter. It is important to point out, here, that discovery can drive to disagreements, and yet disagreements within the research field are regarded as healthy signs that research is on-going and that questions are being asked and responses are being sought. In two decades or so many theories of grammar have been built on the assumption that syntactic realization of arguments, their class categories and grammatical relations, are largely predictable from the meaning of their verbs.

Data examined in this dissertation demonstrated that each verb concept corresponds to a distinct lexical entry. That is to say, there is only a basic lexical entry for each verb concept. The different forms of the same entry found are the results of thematic arity operations. The starting assumption is that verb's lexicon determine the expression of their arguments and that of the possibility of transitive alternations, which are consequences of the morphological operation over the argument structure.

There are competing approaches as regards the derivational direction of causative and anticausative in many languages of the world. Given the data in *Kizombo*, it appears that Syntactic Decomposition approach is the most appropriate to account for the example sentences in the causative and anticausative constructions. Transitive approach could probably deal with the externally caused change of state verbs, as discussed in chapter 6, but would face challenge relating to the change of location/position verbs because none of the variants is morphologically marked.

The analysis attested that the general theoretical endeavor which postulates semantic representations of syntactic information is a relevant part of the lexical encoding of verbs. Semantic and pragmatic properties - as opposed to syntactic properties - are responsible for the range of acceptability ratings found across anticausative uses with such diagnostic tests. Such factors combine to determine the argument expression options related to a particular verb and verb classes. These factors include controllability - the degree to which an event can be externally manipulated - causer-type whether it involves a human-driven or non-human-driven event, and subject-modification - whether the causer is in a modified or non-modified form.

The causative and anticausative alternation have effect on the aspect of the verb since they alter the situation type of verb. While the classification of externally vs internally caused verbs seems to be helpful in determining potential verb roots that alternate, certain verbs considered internally in some languages present similar behaviour of externally caused in *Kizombo*.

Furthermore, thematic relations express generalizations on the types of lexical functions that are established between the verb and its arguments in the predication. There is an agreement among researchers that the assignment of thematic roles to the arguments of the predicate imposes a classification on the verbs of the language. Since the type of thematic roles and their number are determined by the meaning of the verb, the lexical decomposition of verb meanings seems to be a prerequisite for semantic classification of verbs.

Finally, a remark for verb classes formed from syntactic behaviour (alternations), and verb classes based on semantic criteria such as thematic roles and elements of Lexical Conceptual Structure. The main objective of semantic verb class is to contribute to the structure of the lexicon and allow for a better organized or more homogeneous description of the meanings of verbs. From a more formal viewpoint, the major goals are the identification of meaning components forming the semantics of verbs, the specification of more subtle elements of meaning that differentiates closely related verbs and of course its application in the study of lexical-semantics and syntax interface. At this stand it may be said that such objectives have been achieved in the study of change of state and change of location/position verbs in *Kizombo*.

Nevertheless, the delimitation of the different forms of verb syntactic behaviour, each of these forms is described by one or more alternations (i.e. alternations describe passive forms, etc), verbs which belong to the same semantic class present variation with regard to the diagnostic tests used. An alternation, generally speaking, describes a change in the realization of the argument structure of a verb and the scope of an alternation is the proposition. It has been found that almost all externally caused change of state verbs and change of location/position verbs, irrespective of their semantic class alternate. This explains that every language has its own alternation system, and has a more or less significant number of alternations that may be acceptable or not depending on idiosyncrasy of the verb root.

There are, however, a number of aspects which may weaken the practical use of this approach, in spite of its evident elevated linguistic significance, from both theoretical and

practical perspectives. One of the aspects is that the semantic definition of certain verb classes is somewhat nebulous and does not really capture the semantics of the members it contains in *Kikongo* (*Kizombo)*. For example, the verb *-gula* 'break' includes the meaning of destroy, so these two verbs are found in two different semantic classes.

8.4 FURTHER AREAS OF RESEARCH

The main goal of this study is to explore the applicability of the Syntactic Decomposition approach in the causative and anticausative alternation in *Kikongo* (*Kizombo)*. Thus, the limited scope of this study could not allow studying all semantic verb classes pertaining to the acceptability of the diagnostic tests with types of admissible external arguments, and other modifications. The sentence with the only predicate exemplifying an ideophone in Kikongo (*Kizombo)* appears to be the only predicate that cannot occur in anticausative alternation. It is thus desirable that the analysis of the remaining classes and other predicates exemplifying ideophones be included in further studies on this language.

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APPENDIXES

APPENDIX A: EXAMPLE SENTENCES WITH CHANGE OF STATE VERBS

6.2 Externally caused change of state verbs

6.2.1 ***-gula*** 'break' verbs

6.2.1.1 ***Causative***

6.2.1.1.1 *Agent* as external causer

(1) a. *Ø-n'tungi wa nzo* *uwd-idi* *Ø-gyaka*
1-builder of house break-PST 7-wall
Builder broke wall (Intd: the builder broke the wall)

b. *Nzongo* *tolol-e* *lu-tai*
1-PN break-PST 11-branch
Nzongo broke branch with hands (Intd: Nzongo broke the branch with hands)

c. *Ø-n'kento* *nik-ini* *Ø-mwamba*
1-woman grind-PST 3-butter
Woman grinded the (peanut) butter (Intd: the woman grinded peanuts)

d. *Luzolo* *tuut-idi* *nsaki*
1-PN pound-PST cassava leaves
Luzolo pounded cassava leaves (Intd: Luzolo pounded cassava leaves)

6.2.1.1.2 *Instrument/natural force as* external causer

(2) a. *Ma-lutelo/Ø-tembo* *i-ki-uwd-idi* *Ø-gyaka*
6/AgrS-hammer/7-wind 8-7/AgrS-break-PST 7-wall
Hammer/wind broke wall (Intd: someone/the wind broke the wall by means of a hammer)

b. *Ø-Sengo/ Ø-tembo* *ki-tolol-e* *lu-tai*
7-iron/7-wind 7/AgrS-break-PST 11-branch
Iron bar/wind broke the branch (Intd: someone/the wind broke the branch)

c. *# Ø-n'tutu/#Ø-tembo* *u-ki-nik-ini* *Ø-mwamba*
3-botle/7-wind 3-7/AgrS-grind-PST 3-butter
Bottle/wind grinded peanut (Intd: someone grinded peanuts by means of a bottle)

d. *#Ø-mwisu/#Ø-tembo* *u-ki-tuut-idi* *nsaki*
3-wood/7-wind 3-7/AgrS-pound-PST cassava leave
Pounding wood/wind pounded cassava leaves (Intd: someone pounded cassava leaves by means of a pounding tree)

6.2.1.1.3 *Agent-oriented* phrase modification

(3) a. *Ø-n'tungi wa nzo* *uwd-idi* *Ø-gyaka* ***mu-ndwenga***
1-builder of house break-PST 7-wall 18-cautiously
Builder broke wall cautiously (Intd: the builder broke the wall cautiously)

b. *Nzongo* *tolol-e* *lu-tai/lu-nyanga* ***mu-ndwenga***
1-PN break-PST 11-branch/11-bush 18-cautiously
Nzongo broke branch/bush cautiously (Intd: Nzongo broke the branch/bush cautiously)

c. *Ø-n'kento* *nik-ini* *Ø-mwamba* ***mu-ndwenga***
1-woman grind-PST 3-butter 18-cautiously
Woman grinded the peanut cautiously (Intd: the woman grinded peanuts cautiously)

d. *Luzolo* *tuut-idi* *nsaki* ***mu-ndwenga***
1-PN pound-PST cassava leave 18-cautiously
Luzolo pounded cassava leaves cautiously (Intd: Luzolo pounded cassava leaves cautiously)

6.2.1.1.4 *By-self* phrase modification

(4) a. *Ø-n'tungi wa nzo* *uwd-idi* *Ø-gyaka* ***yani-mosi***
1-builder of house break-PST 7-wall him/her-self
Builder broke wall him/herself (Intd: the builder broke the wall without external help)

b. *Nzongo* *tolol-e* *lu-tai* ***yani-mosi***
1-PN break-PST 11-branch him/her-self
Nzongo broke branch him/herself (Intd: Nzongo broke the branch without an external help)

c. *Ø-n'kento* *nik-ini* *Ø-mwamba* ***yani-mosi***
1-woman grind-PST 3-butter her-self
Woman grinded (peanut) butter him/herself (Intd: the woman grinded peanuts without external help)

d. *Luzolo* *tuut-idi* *nsaki* ***yani-mosi***
1-PN pound-PST cassava leave him/her-self
Luzolo pounded cassava leaves him/herself (Intd: Luzolo pounded cassava leaves without external help)

6.2.1.1.5 *Again* phrase modification

(5) a. *Ø-n'tungi wa nzo* *uwd-idi* ***dyaka*** *Ø-gyaka*
1-builder of house break-PST again 7-wall
Builder broke again wall. (Intd: the builder broke the wall again)

b. *Nzongo* *tolol-e* ***dyaka*** *lu-tai*
1-PN break-PST again 11-branch
Nzongo broke again branch (Intd: Nzongo broke the branch again)

c. *Ø-n'kento* *nik-ini* ***dyaka*** *mwamba*
1-woman grind-PST again butter
Woman grinded again peanut (Intd: the woman grounded peanuts again)

d. *Luzolo* *tuut-idi* ***dyaka*** *nsaki*
1-PN pound-PST again cassava leave
Luzolo pounded again cassava leaves (Intd: Luzolo pounded cassava leaves again)

6.2.1.1.6 *Purpose* clause modification

(6) a. *Ø-n'tungi wa nzo* ***di****-ka-uwd-idi* *Ø-gyaka* ***mpasi vo*** *ka-tungulula kyo*
1-builder of house Cp-1-break-PST 7-wall so that 1-rebuit it
Builder crashed wall so that s/he rebuilds it. (Intd: the builder crashed the wall so that s/he rebuilds it.

b. *Nzongo* ***di****-ka-tolol-e* *lu-tayi* ***mpasi vo*** *ka-tungila lo* *nzo*
1-PN Cp-1-break-PST 11-branch so that 1-builds it house
Nzongo broke branch so that s/he uses it to build house (Intd: Nzongo broke the branch so that s/he uses it to build a house)

c. *Ø-n'kento* ***di****-ka-nik-ini* *mwamba* ***mpasi vo*** *ka-lambila lo nkovi*
1-woman Cp-1-grind-PST peanuts so that 1-cooks it with cabbage
Woman grinded peanuts so that she uses it to cook cabbage (Intd: the woman grinded peanuts so that she uses it to cook cabbage)

d. *Luzolo* ***di****-ka-tuut-idi* *nsaki* ***mpasi vo*** *ka-lambila yo nzena*
1-PN Cp-1-pound-PST cassava leaves so that 1-cooks for guest
Luzolo pounded cassava leaves so that she cooks for guest (Intd: Luzolo pounded cassava leaves so that she cooks it for the guest)

6.2.1.1.7 *Temporal* phrase modification

(7) a. *Ø-n'tungi wa nzo* *uwd-idi* *Ø-gyaka* *(#kolo kya-/mu-) ngunga imosi*
1-builder of house break-PST 7-wall for/in an hour
Builder broke wall for/in an hour (Intd: the builder broke the wall for/in an hour)

b. *Nzongo* *tolol-e* *lu-tai* *(#kolo kya-/mu-)ngunga imosi*
1-PN break-PST 11-branch for/in an hour
Nzongo broke branch for/in an hour (Intd: Nzongo broke the branch for/in an hour)

c. *Ø-n'kento* *nik-ini* *Ø-mwamba* *(kolo kya-/#mu-)ngunga imosi*
1-woman grind-PST 3-butter for/in an hour
Woman grinded peanuts for/in an hour (Intd: the woman grinded peanuts for/in an hour)

d. *Luzolo* *tuut-idinsaki* *(kolo kya-/#mu-) ngunga imosi*
1-PN pound-PST cassava leaves for/in an hour
Luzolo pounded the cassava leaves for/in an hour

6.2.1.2 ***Anticausative***

(8) a. *Ø-gyaka* *ki-uwd-**ik**-idi*
7-wall 7/AgrS-break-CI-PST
Wall broke (Intd: someone broke the wall)

b. *Lu-tayi* *lu-tol-**ok**-ele*
11-branch 11/AgrS-brak-CI-PST
Branch broke (Intd: someone broke the branch)

c. *Ø-mwamba* *u-nik-**uk**-ini*
3-butter 3/AgrS-grind-CI-PST
Peanuts grinded (Intd: someone grinded the butter)

d. *Ø-nsaki* *i-tuut-**uk**-idi*
9-cassava 9/AgrS-pound-CI-PST
Cassava leaves pounded (Intd: someone pounded cassava leaves)

6.2.1.2.1 ***PP-modification***

(9) a. *Ø-gyaka* *ki-uwd-**ik**-idi* *mu-Ø-malutelo/mu-Ø-tembo/#kwa nkento*
7-wall 7/AgrS-break-CI-PST 18-9-hammer /18-7-wind/by woman
Wall broke by means of hammer/from wind/by woman (Intd: someone broke the wall by means of hammer/the wall broke from the wind)

b. *Lu-tai* *lu-tol-**ok**-ele* *mu-Ø-sengo/mu- Ø-tembo/#kwa mvati*
11-branch 11/AgrS-break-CI-PST 18-7-iron/18- Ø/7-wind/by worker
Branch broke in iron bar/in wind/ by worker (Intd: someone broke the branch by means of iron bar/the branch broke from the wind)

c. *Ø-mwamba* *u-nik-**uk**-ini* *mu-Ø-n'tutu/#mu-Ø-tembo/#kwa n'kento*
3-butter 3/AgrS-grind-CI-PST 18-3-bottle/18-7-wind/by the woman
Peanuts grinded in bottle/in wind/by woman (Intd: someone grinded peanuts by means of bottle/ from the wind)

d. *Ø-nsaki* *i-tuut-**uk**-idi* *mu-Ø-mwisu/#mu-Ø-tembo/#kwa n'kento*
9-Cassava 9/AgrS-crack-CI-PST 18-3-wood/18-Ø/7-wind/by the woman
Cassava leaves pounded by means pound wood/from the wind/by woman (Inted: someone pounded cassava leaves by means of pounding wood)

6.2.1.2.2 *Agent-oriented* phrase modification

(10) a. # *Ø-gyaka* *ki-uwd-**ik**-idi* ***mu-ndwenga***
7-wall 7/AgrS-break-CI-PST 18-caustiously
Wall broke cautiously (Intd: someone broke the wall cautiously)

b. #*Lu-tai* *lu-tol-**ok**-ele* ***mu-ndwenga***
11-branch 11/AgrS-break-CI-PST 18-cautiously
Branch broke (Intd: someone broke the branch cautiously)

c. *Ø-mwamba* *u-nik-**uk**-ini* ***mu-ndwenga***
3-butter 3/AgrS-grind-CI-PST 18-cautiously
Peanuts grinded cautiously (Intd: someone grinded peanuts cautiously)

d. *Ø-nsaki* *i-tuut-**uk**-idi* ***mu-ndwenga***
9-cassava 9/AgrS-pound-CI-PST 18-cautiously
Cassava leaves pounded (Intd: someone pounded cassava leaves cautiously)

6.2.1.2.3 *By-self* phrase modification

(11) a. *Ø-gyaka* *ki-uwd-**ik**-idi* ***ky-au mosi***
7-wall 7/AgrS-break-CI-PST 7/AgrS- itself
Wall broke itself (Intd: the wall broke on its own)

b. *Lu-tai* *lu-tol-**ok**-ele* ***lw-au mosi***
11-branch 11/AgrS-brak-CI-PST 11/AgrS/itself
Branch broke itself (Intd: the branch broke on its own)

c. #*Ø-mwamba* *u-nik-**uk**-ini* ***u-au mosi***
3-butter 14/AgrS-grind-CI-PST 3/AgrS-itself
The peanuts grinded itself (Intd: peanuts grinded on its own)

d. #*Ø-nsaki* *i-tuut-**uk**-idi* ***y-au mosi***
9-cassava 9/AgrS-pound-CI-PST 9/AgrS/itself
Cassava leaves pounded itself (Intd: Cassava leaves pounded on its own)

6.2.1.2.4 *Again* phrase modification

(12) a. *Ø-gyaka* *ki-uwd-**ik**-idi* ***dyaka***
7-wall 7/AgrS-break-CI-PST again
Wall broke again (Intd: someone broke the wall again)

b. *Lu-tai* *lu-tol-**ok**-ele* ***dyaka***
11-branch 11/AgrS-brak-CI-PST again
Branch broke again (Intd: someone broke the branch again)

c. *Ø-mwamba* *u-nik-**uk**-ini* ***dyaka***
3-peanut 3/AgrS-grind-CI-PST again
Peanuts grinded again (Intd: someone grinded peanuts again)

d. *Ø-nsaki* *i-tuut-**uk**-idi* ***dyaka***
3-cassava 3/AgrS-pound-CI-PST again
Cassava leaves pounded again (Intd: someone pounded cassava leaves again)

6.2.1.2.5 *Purpuse* clause modification

(13) a. *#Ø-gyaka* ***di**-ki-ul-**uk**-idi* ***mpasi vo*** *kya* *tungululwa*
7-wall Cp-7/AgrS-break-CI-PST so that it it rebuilds
Wall broke so that it can be rebuilt (Intd: someone broke the wall so that it can be rebuilds)

b. *#Lu-tai* ***di**-lu-tol-**ok**-ele* ***mpasi vo*** *lwa vanga lo lukuni*
11-branch Cp-11/AgrS-brak-CI-PST so that it makes it firewood
Branch broke so that it makes it firewood (Intd: someone broke the branch so that s/he makes it firewood)

c. *# Ø-mwamba wau* ***di**-u-nik-**uk**-ini* ***mpasi vo*** *wa lambila wo nkovi*
3-peanut these Cp-3/AgrS- grind-CI-PST so that it uses it to cook cabbage
These peanuts grinded well so that it is used to cook cabbage (Intd: someone grinded these peanuts so that s/he uses it to cook cabbage)

d. *#Ø-nsaki* ***di**-i-tuut-**uk**-idi* ***mpasi vo*** *ya lambila yo nzenza*
9-Cassava Cp-9/AgrS-pounded-CI-PST so that it cooks it for guests
Cassava leave pounded so that it cooks it for the guests (Intd: someone pounded cassava leaves so that s/he cooks it for the guests)

6.2.1.2.6 *Temporal* phrase modification

(14) a. *Ø-gyaka* *ki-uwd-**ik**-idi* *(kolo kya-/mu-)ngunga imosi*
7-wall 7/AgrS-break-CI-PST for/in an hour
Wall broke for/in an hour (Intd: someone broke the wall for/in an hour)

b. *Lu-tai* *lu-tol-**ok**-ele* *(kolo kya-/mu-)ngunga imosi*
11-branch 11/AgrS-brak-CI-PST for/in an hour
Branch broke for/in an hour (Intd: someone broke the branch for/in an hour)

c. *Ø-nwamba* *u-nik-**uk**-ini* *(kolo kya-/mu-) ngunga imosi*
3-peanut 3/AgrS-grind-CI-PST for/in an hour
Peanuts grinded for/in an hour (Intd: someone grinded peanuts for/in an hour)

d. *Ø-nsaki* *i-tuut-**uk**-idi* *(kolo kya-/mu-)ngunga imosi*
9-cassava 9/AgrS-pound-CI-PST for/in an hour
Cassava leaves pounded for/in an hour (Intd: someone pounded cassava leaves for/in an hour)

6.2.1.3 *Passive and PP-modification*

(14) a. *Ø-gyaka ki-uwd-il-w-e mu-Ø-n'ti/#mu-Ø-tembo/kwa n'tungi wa nzo*
7-wall 7/AgrS-break-APPL-PASS-PST 18-3-tree/7-wind/by builder
Wall broke for was from tree/wood/by builder (Intd: the wall was broken from the/wood/ the wind/ the builder

b. *Lu-tai lwalu lu-tolol-w-e mu-Ø-sengo/#mu-Ø-tembo/kwa n'kento*
11-branch this 11/AgrS-break-PASS-PST 18-7-iron/18-7-wind/by woman
This branch was broken by means of an iron bar/from the wind/by the woman

c. *Ø-mwamba u-nikin-w-e mu-Ø-ntutu/#mu-Ø-tempo/ kwa n'kento*
3-butter 3/AgrS-grind-PASS-PST 18-3-bottle/18-7-wind/ by woman
Peanut was grinded in bottle/in wind/ by woman (Intd: Peanuts were grinded by means of bottle/from the wind/ by the/a woman)

d. *Ø-nsaki i-tuut-il-w-e mu-Ø-mwisu/#mu-Ø-tembo/kwa Luzolo*
9-cassava 9/AgrS-pound-PASS-FV 18- Ø/3-wood/ Ø/7-wind/by Luzolo
Cassava was pounded in grounding wood/in wind/by Luzolo (Intd: cassava leaves was pounded by means of the grounding/from the wind/by Luzolo)

6.2.1.3.1 *Agent-oriented* phrase modification

(15) a. *Ø-gyaka ki-uwd-il-w-e* ***mu-ndwenga***
7-wall 7/AgrS-break-APPL-PASS-PST 18-cautiously
Wall broke for was cautiously (Intd: the wall was broke cautiously)

b. *Lu-tai lwalu lu-tolol-ol-w-e* ***mu-ndwenga***
11-branch this 11/AgrS-break-PASS-PST 18-cautiously
This branch was broken cautiously

c. *Ø-mwamba u-nikin-w-e* ***mu-ndwenga***
3-bmtter 3/AgrS-grind-PASS-PST 18-cautiously
Peanut was grinded cautiously (Intd: the peanuts were grinded cautiously)

d. *Ø-nsaki i-tuut-il-w-e* ***mu-ndwenga***
9-Cassava 9/AgrS-pound-PASS-FV 18-cautiously
Cassava was pounded cautiously (Intd: cassava leaves was pounded cautiously)

6.2.1.3.2 *By-self* phrase modification

(16) a. **Ø-gyaka ki-uwd-il-w-e* ***ky-au mosi***
7-wall 7/AgrS-break-APPL-PASS-PST 7/AgrS- itself
Wall broke for was by itself (Intd: the wall broke without external help)

b. **Lu-tai* *lwalu* *lu-tolol-ol-w-e* ***lw-au mosi***
11-branch this 11/AgrS-break-PASS-PST 11/AgrS-itself
This branch was broken by itself (Intd: this wall was broken without external help)

c. **Ø-mwamba* *u-nikin-w-e* ***w-au mosi***
3-butter 3/AgrS-grind-PASS-PST 3/AgrS-itself
Peanuts was grinded by itself (Intd: the peanuts were grinded without external help)

d. ** Ø-nsaki* *i-tuut-il-w-e* ***y-au mosi***
9-Cassava 9/AgrS-pound-PASS-FV AgrS-itself
Cassava was pounded by itself (Intd: cassava leaves was pounded without external help)

6.2.1.3.3 *Again* prase modification

(17) a. *Ø-gyaka* *ki-uwd-il-w-e* ***dyaka***
7-wall 7/AgrS-break-APPL-PASS-PST again
Wall was broken again (Intd: the wall was broken again)

b. *Lu-tai* *lwalu* *lu-tolol-ol-w-e* ***dyaka***
11-branch this 11/AgrS-break-PASS-PST again
This branch was broken again

c. *Ø-mwamba* *u-nikin-w-e* ***dyaka***
3-butter 3/AgrS-grind-PASS-PST again
Peanut was grinded again (Intd: the peanut were grinded again)

d. *Ø-nsaki* *i-tuut-il-w-e* ***dyaka***
9-Cassava 9/AgrS-pound-PASS-FV again
Cassava leaves was pounded again (Intd: cassava leaves was pounded again)

6.2.1.3.4 *Purpose* clause modification

(18) a. *Ø-gyaka* *kyaki* ***di****-ki-ud-il-w-e* ***mpasi vo*** *atungulula kyo*
7-wall this Cp-7/AgrS- break-APPL-PASS- PST so that they rebuild it
This wall was broken by means of hammer so that they rebuilt it

b. *Lu-tai* *lwalu* ***di****-lu-tolol-ol-w-e* ***mpasi vo*** *a-vanga lo lukuni*
11-branch this Cp-11/AgrS-break-PASS-PST so that 2-make it firewood
This branch was broken so that they make it firewood

c. *Ø-nguba* *zazi* ***di****-zi-nikin-w-e* ***mpasi vo*** *alambila zo nkovi*
10-peanut this Cp-10/AgrS-grind-PASS-PST so that they can cook it with cabbage
These peanuts were grounded so that they cook it with cabbage

d. *Ø-nsaki* ***di****-i-tuut-il-w-e* ***mpasi vo*** *akalambila yo nzenza*
9-Cassava Cp-9/AgrS-pound-APPL-PASS-PST so that they can cook it for guests
This cassava leaves was pound so that they cook it for the guests

6.2.1.4 *Middle* construction

(19) a. *Ø-gyaka kya ntoto ki-tom-a uwd-**ik**-ang-a #mundwenga/#kyau mosi*
7-wall 7/AgrS-be good-FV break-CI-HAB-FV caustiouly/by itself
This wall crashes well caustiously/by itself

b. *Lu-tai lwa ntoko lu-tom-a tol-**ok**-ang-a #mundwenga/#lwau mosi*
11-branch fresh 11/AgrS-be good-FV break-CI-HAB-FV caustiouly/by itself
The fresh branch breaks easily caustiously/by itself

c. *Ø-nguba za nzewa zi-toma nik-**uk**-ang-a #mundwenga/#zau mosi*
10-fresh peanut 10/AgrS-be good-FV ground-CI-HAB-FV caustiouly/by itself
The fresh peanut grinds well caustiously/by itself

d. *Ø-nsaki ya ntoko i-tom-a tuut-**uk**-ang-a #mundwenga/#yau mosi*
9-fresh cassava 9/agrS-be good-FV ground-CI-HAB-FV caustiouly/by itself
The fresh cassava grinds well caustiously/by itself

6.2.2 ***-zenga*** "cut" verbs

6.2.2.1 *Causative*

6.2.2.1.1 *Agent* as external causer

(21) a. *Ø-n'kent/# Ø-nkombo zeng-ele Ø-n'ti*
1-woman/3-goat cut-PST 3-tree
Woman/goat cut tree (Intd: the woman/goat cut the tree)

b. *A-na/# Ø-nkombo a-vasun-i Ø-dyoko*
2-child/3-goat 2/-3/AgrS-cut-PST 5-manioc
Children/goat cut the manioc (Intd: the children/goat cut the manioc)

c. *Mw-ana/Ø-nkombo tyez-e Ø-m'bati*
1a-child/3-goat tear-PST 3-trousers
Child/goat tore the trousers (Intd: the child/goat tore the trousers)

d. *Ø-Luzolo/Ø-nkombo* *tabw-idi* *Ø-n'singa*
1-PN/3-goat cut-PST 3-wire
Luzolo/goat cut wire (Intd: Luzolo/goat cut the wire)

e. *Mw-ana/ Ø-nkombo* *nyanzuzun-i* *Ø-mbizi/lu-kaya*
1a-child/3-goat cut-PST 9-meat/11-leave
Child/goat cut meat/leaves (into) pieces (Intd: the child/goat cut the meat (into) pieces)

f. *Mw-ana/# Ø-goat* *fwel-ele* *nkovi*
1-child/3-goat chop-PST cabbage
Child/goat chopped cabbage (Intd: the child/goat chopped the cabbage)

6.2.2.1.2 *Instruments/natural force* as causer

(22) a. *Ø-tanzi/# Ø-tembo* *ki-zeng-ele* *Ø-n'ti/lu-tayi*
7-machete/7-wind 7/AgrS-cut-PST 3/tree/11-branch
The/machete/wind cut the the branch (Intd: the machete is the instrument by which someone cut the tree)

b. *Ø-mbele/# Ø-tembo* *i-ki-vasun-i* *Ø-dyoko*
9-knife/7-wind 9-7/AgrS-cut-PST 5-manioc
Knife/wind cut manioc (Intd: the knife is the instrument by which someone cut the manioc)

c. *Ø-mbele/ Ø-tembo* *i-ki-tyez-e* *Ø-m'bati*
9-knife/7-wind 9-7/AgrS-tear-PST 3-trousers
Knife/wind tore trousers (Intd: the knife is the instrument by which someone cut the trousers)

d. *Ø-mbele/ Ø-tembo* *i-ki-tabw-idi* *Ø-n'singa*
9-knife/7-wind 9-7/AgrS-cut-PST 3-wire
Knife/wind cut the wire (Intd: the knife is the instrument by which someone used to cut the wire)

e. *# Ø-mbele/ Ø-tembo* *i-ki-nyanzuzun-i* *Ø-mbizi /Ø-nlele*
9-knife/7-wind 9-7/AgrS-cut-PST 9-meat/3-clothe
Knife/wind cut (into pieces) meat/clothe (Intd: the knife/wind cut (into pieces) the meat/clothe)

f. *#Ø-mbele/Ø-tembo* *i-ki-fwel-ele* *Ø-nkovi*
9-knife/7-wind 9-7/AgrS-chop-PST 9-cabbage
Knife/wind chopped cabbage (Intd: someone used the knife to chop the cabbage)

6.2.2.1.3 *Agent-oriented* phrase modification

(23) a. *Ø-n'kento* *zeng-ele* *Ø-n'ti* ***mu-ndwenga***
1-woman cut-PST 3-tree 18-caution
Woman cut tree cautiously (Intd: the woman cut the tree cautiously)

b. *A-na* *a-vasun-i* *Ø-dyoko* ***mu-kinsweki***
2-child 2/AgrS-cut-PST 5-manioc 18-secret
Children/goat cut manioc secretly (Intd: the children/goat cut the manioc secretly)

c. *Mw-ana* *tyez-e* *Ø-m'bati* ***mu-makasi***
1a-child tear-PST 3-trousers 18-angry
Child tore trousers angrily (Intd: the child tore the trousers angrily)

d. *Luzolo* *tabw-idi* *Ø-n'singa* ***mu-kinsweki***
1-PN cut-PST 3-wire 18-secret
Luzolo cut wire secretly (Intd: Luzolo cut the wire secretly)

e. *Mw-ana* *nyanzuzun-i* *Ø-mbizi* ***mu-lukanu***
1a-child cut-PST 9-meat 18-purpose
Child cut meat (into) pieces on purpose (Intd: the child cut the meat (into) pieces on purpose)

f. *Mw-ana* *fwel-ele* *Ø-nkovi* ***mu-ndwenga***
1a-child chop-PST 9-cabbage 18-caution
Child chopped cabbage caustiously (Intd: the child chopped cabbage caustiously)

6.2.2.1.4 *By-self* phrase modification

(24) a. *Ø-n'kento* *zeng-ele* *Ø-n'ti* ***yani mosi***
1-woman cut-PST 3-tree herself
Woman cut tree herself (Intd: the woman cut the tree without external help)

b. *A-na* *a-vasun-i* *Ø-dyoko* ***yani mosi***
2a-child 2/AgrS-cut-PST 5-manioc him/herself
The children cut the manioc on their own

c. *Mw-ana* *tyez-e* *Ø-m'bati* ***yani mosi***
1a-child tear-PST 3-trousers him/herself
Child tore trousers him/herself (Intd: the child tore the trousers without external help)

d. *Luzolo* *tabw-idi* *Ø-n'singa* ***yani mosi***
1-PN cut-PST 3-wire his/herself
Luzolo cut wire him/herself (Intd: Luzolo cut the wire without external heplp)

e. *Mw-ana* *nyanzuzun-i* *Ø-mbizi* ***yani mosi***
1a-child cut-PST 9-meat him/herself
Child cut meat (into) pieces him/herself (Intd: the child cut the meat (into) pieces without external help)

f. *Mw-ana* *fwel-ele* *nkovi* ***yani mosi***
1a-child chop-PST cabbage him/herself
Child chopped cabbage him/herself (Intd: the child chopped the cabbage without external help)

6.2.2.1.5 *Again* phrase modification

(25) a. *Ø-n'kento* *zeng-ele* ***dyaka*** *Ø-n'ti*
1-woman cut-PST again 3-tree
Woman cut again tree (Intd: the woman cut the tree again)

b. *A-ana* *a-vasun-i* ***dyaka*** *Ø-dyoko*
2-child 2/AgrS-cut-PST again 5-manioc
Children cut again tree (Intd: the children cut the again)

c. *Mw-ana* *tyez-e* ***dyaka*** *Ø-m'bati*
1a-child tear-PST again 3-trousers
Child tore again trousers (Intd: the child tore the trousers again)

d. *Luzolo* *tabw-idi* ***dyaka*** *Ø-n'singa*
1-PN cut-PST again 3-wire
Luzolo cut again wire (Intd: Luzolo cut the wire again)

e. *Mw-ana* *nyanzuzun-i* ***dyaka*** *Ø-mbizi*
1a-child cut-PST again 9-meat
Child cut again meat (into) pieces (Intd: the child cut the meat (into) pieces again)

f. *Mw-ana* *fwel-ele* ***dyaka*** *nkovi*
1-child chop-PST again cabbage
Child chopped again cabbage (Intd: the child chopped the cabbage again)

6.2.2.1.6 *Purpose* clause modification

(26) a. *Ø-n'kento* ***di****-ka-zeng-ele* *Ø-n'ti* ***mpasi vo*** *ka-vanga wo lukuni*
1-woman Cp-1-cut-PST 3-tree so that 1-make it firewood
Woman cut tree so that she makes it firewood (Intd: the woman cut the tree so that she makes it firewood)

b. *A-na* ***di****-a-vasun-i* *Ø-dyoko* ***mpasi vo*** *a-vula dyo*
2a-child Cp-2/AgrS-cut-PST 5-manioc so that 2-boil it
Children cut manioc so that they boil it (Intd: the children cut the manioc so that they boil it

c. *Mw-ana* ***di****-ka-tyaz-idi* *Ø-m'bati* ***mpasi vo*** *ka-vanga wo kupa*
1a-child Cp-1-tear-PST 3-trousers so that 1-make it short
Child tore trousers so that s/he makes it short (Intd: the child tore the trousers so that s/he makes it a short)

d. *Luzolo* ***di****-ka-tabw-idi* *Ø-n'singa* ***mpasi vo*** *ka-tungila wo gyaka*
1-PN Cp-1-cut-PST 3-wire so that 1-build it wall
Luzolo cut wire so that s/he uses it build wall (Intd: Luzolo cut the wire so that s/he uses it to build the wall)

e. *Mw-ana* ***di****-ka-nyanzuzun-i* *Ø-mbizi* ***mpasi vo*** *ka-i-dye* *mu-ntu ko*
1a-child Cp-1-cut-PST 9-meat so that NG[1]-9-eat 1-person NG[2]
Child cut meat (into) pieces so that nobody eat it (Intd: the child cut the meat (into) pieces so that nobody eats it)

f. *Mw-ana* ***di****-ka-fwel-ele* *nkovi* ***mpasi vo*** *ka-lamba yo*
1-child Cp-1-chop-PST cabbage so that 1-cook it
Child chopped cabbage so that s/he cooks it (Intd: the child chopped the cabbage so that s/he cooks it)

6.2.2.1.7 *Temporal* phrase modification

(27) a. *Ø-n'kento* *zeng-ele* *Ø-n'ti* *(#kolo kya-/mu-)ngunga imosi*
1-woman cut-PST 3-tree for/in an hour
Woman cut tree in an hour (Intd: the woman cut the tree in an hour)

b. *A-na* *a-vasun-i* *Ø-dyoko* *(kolo kya-/#mu-)ngunga imosi*
2-child 2/AgrS-cut-PST 5-manioc for/in an hour
Children cut manioc for/in an hour (Intd: the children cut the manioc for/in an hour)

c. *Mw-ana* *tyez-e* *Ø-m'bati/* *(#kolo kya-/mu-)ngunga imosi*
1a-child tear-PST 3-trousers for/in an hour
Child tore trousers for/in an hour (Intd: the child tore the trousers for/in an hour)

d. *Luzolo* *tabw-idi* *Ø-n'singa* *(#kolo kya-/mu-)ngunga imosi*
1-PN cut-PST 3-wire for/in an hour
Luzolo cut wire for/in an hour (Intd: Luzolo cut the wire for/in an hour)

e. *Mw-ana* *nyanzuzun-i* *Ø-mbizi* *(kolo kya-/#mu-)ngunga imosi*
1a-child cut-PST 9-meat for/in an hour
Child cut meat (into) pieces for/in an hour (Intd: the child cut the meat (into) pieces for/in an hour)

f. *Mw-ana* *fwel-ele* *nkovi* *(kolo kya-/#mu-)ngunga imosi*
1-child chop-PST cabbage for/in an hour
Child chopped cabbage for/in an hour (Intd: the child chopped the cabbage for/in an hour)

6.2.2.2 *Anticausative*

(28) a. *Ø-n'ti* *u-zeng-**ok**-ele*
3-tree 3/AgrS-cut-CI-PST
Tree cut (Ind: someone cut the tree)

b. *Ø-dyoko* *di-vas-**uk**-ini*
5-manioc 5/AgrS-cut-CI-PST
Manioc cut (Intd: someone cut the manioc)

c. *Ø-m'bati* *u-tyaz-**uk**-idi*
3-trousers 3/AgrS-tear-CI-PST
Trousers tore (Intd: someone tore the trousers)

d. *Ø-n'singa* *u-tab-**uk**-idi*
3-wire 3/AgrS-cut-CI-PST
Wire cut (Intd: someone cut the wire)

e. *Ø-mbizi* *i-nyanzuzu-**ik**-ini*
9-meat 9/AgrS-cut-CI-PST
Meat cut into pieces (Intd: someone cut the meat into pieces)

f. **?** *Ø-nkovi* *i-fwel-**ok**-ele*
9-cabbage 9/AgrS-chop-CI-PST
Cabbage chopped (Intd: someone chopped the cabbage)

6.2.2.2.1 PP- modification

(29) a. *Ø-n'ti* *u-zeng-**ok**-ele* *mu- Ø-tanzi/#mu- Ø-tembo/#kwa nkento*
3-tree 3/AgrS-cut-CI-PST 18-7-machete/18-7-wind/by woman
Tree cut in machete/wind/by woman (Intd: someone cut the tree by means of machete)

b. *Ø-dyoko* *di-vas-**uk**-ini* *mu-Ø-mbele/#mu-Ø-tembo/#kwa nkento*
5-manioc 5/AgrS-cut-CI-PST 18-9-machete/18-7-wind/by woman
Manioc cut in knife/wind/by woman (Intd: someone cut the manioc by means of knife)

c. *Ø-m'bati* *u-tyaz-**uk**-idi* *mu-Ø-mbele/mu- Ø-tembo/#kwa mwana*
3-trousers 3/AgrS-tear-CI-PST 18-9-knife/18-7-wind/by the child
Trousers tore in knife/wind/by child (Intd: someone cut the trousers by means of knife)

d. *Ø-n'singa* *u-tab-**uk**-idi* *mu- Ø-mbele/mu- Ø-tembo/#kwa n'kento*
3-wire 3/AgrS-cut-CI-PST 18-9-knife/18-7-wind/by woman
Wire cut in knife/wind/by woman (Intd: someone cut the wire by means of knife/ the wire cut from the wind)

e. *Ma-kaya* *ma-nyanzuzu-**ik**-ini* *#mu-Ø-mbele/mu-Ø-tembo/#kwa n'kento*
6-leaf 6/AgrS-cut-CI-PST 18-9-knife/18-7-wind/by woman
Leaves cut (into pieces) in knife/wind/by woman (Intd: the leaves cut into pieces from the wind)

f. ***?**Ø-nkovi* *i-fwel-**ok**-ele* *mu-Ø-mbele*mu- Ø-tembo/*kwa mwana*
9-cabbage 9/AgrS-chop-CI-PST 18-9-knife/18-7-wind/by child
Cabbage chopped in knife/in wind/by child (Intd: someone chopped the cabbage by means of knife)

6.2.2.2.2 *Agent-oriented* phrase modification

(30) a. *Ø-n'ti* *u-zeng-**ok**-ele* ***mu-ndwenga***
3-tree 3/AgrS-cut-CI-PST 18-cautious
Tree cut cautiously (Intd: someone cut the tree cautiously)

b. **?***Ø-dyoko* *di-vas-**uk**-ini* ***mu-kinsweki***
5-manioc 5/AgrS-cut-CI-PST 18-secretly
Manioc cut secretly (Intd: someone cut the manioc secretly)

c. *#Ø-m'bati* *u-tyaz-**uk**-idi* ***mu-ndwenga***
3-trousers 3/AgrS-tear-CI-PST 18-cautious
Trousers tore cautiously (Intd: someone tore the trousers cautiously)

d. *Ø-n'singa* *u-tab-u**k**-idi* ***mu-kinsusumukina***
3-wire 3/AgrS-cut-CI-PST 18-suddenly
Wire cut suddenly (Intd: someone cut the wire suddenly)

e. *# Ø-mbizi* *i-nyanzuzu-**ik**-ini* ***mu-ndwenga***
9-leaf 9/AgrS-cut-CI-PST 18-cautious
Meat cut into pieces cautiously (Intd: someone cut the meat into piece cautiously)

f. **?***Ø-nkovi* *i-fwel-**ok**-ele* ***mu-ndwenga***
9-cabbage 9/AgrS-chop-CI-PST 18-cautious
Cabbage chopped cautiously (Intd: someone chopped the cabbage cautiously)

6.2.2.2.3 *By-self* phrase modification

(31) a. *# Ø-n'ti* *u-zeng-**ok**-ele* ***w-au mosi***
3-tree 3/AgrS-cut-CI-PST AgrS-itself
Tree cut itself (Intd: the tree cut on its own)

b. *Ø-dyoko* *di-vas-u**k**-ini* ***dy-au mosi***
5-manioc 5/AgrS-cut-CI-PST 5/AgrS-self
Manioc cut itself (Intd: the manioc cut on its own)

c. *Ø-m'bati* *u-tyaz-**uk**-idi* ***w-au mosi***
3-trousers 3/AgrS-tear-CI-PST AgrS-itself
Trousers tore itself (Intd: the trousers tore on its own)

d. *Ø-n'singa* *u-tab-**uk**-idi* ***w-au mosi***
3-wire 3/AgrS-cut-CI-PST 3/AgrS-itself
Wire cut itself (Intd: the wire cut on its own)

e. # *Ø-mbizi* *i-nyanzuzu-**ik**-ini* ***yau mosi***
9-leaf 9/AgrS-cut-CI-PST 6/AgrS-itself
Leaves cut into pieces itself (Intd: the meat cut into pieces on its own)

f. **?** *Ø-nkovi* *i-fwel-**ok**-ele* ***y-au mosi***
9-cabbage 9/AgrS-chop-CI-PST AgrS-itself
Cabbage chopped itself (Intd: the cabbage cut itself)

6.2.2.2.4 *Again* phrase modification

(32) a. *Ø-n'ti* *u-zeng-**ok**-ele* ***dyaka***
3-tree 3/AgrS-cut-CI-PST again
Tree cut again (Intd: someone cut the tree again)

b. *Ø-dyoko* *di-vas-**uk**-ini* ***dyaka***
5-manioc 5/AgrS-cut-CI-PST again
Manioc cut again (Intd: someone cut the manioc again)

c. *Ø-m'bati* *u-tyaz-**uk**-idi* ***dyaka***
3-trousers 3/AgrS-tear-CI-PST again
Trousers tore again (Intd: someone tore the trousers again)

d. *Ø-n'singa* *u-tab-**uk**-idi* ***dyaka***
3-wire 3/AgrS-cut-CI-PST again
Wire cut again (Intd: someone cut the wire again)

e. *Ma-kaya* *ma-nyanzuzu-**ik**-ini* ***dyaka***
6-leaf 6/AgrS-cut-CI-PST again
Leaves cut into pieces again (Intd: someone cut the leaves into pieces again)

f. ?*Ø-nkovi* *i-fwel-**ok**-ele* ***dyaka***
9-cabbage 9/AgrS-chop-CI-PST again
Cabbage chopped again (Intd: someone chopped the cabbage again)

6.2.2.2.5 *Purpose* clause modification

(33) a. #*Ø-n'ti* ***di**-mi-zeng-**ok**-ele* ***mpasi vo** wa tunga wo nzo*
3-Tree Cp-3/AgrS-cut-CI-PST so that it build it house
Trees cut so that it builds it house (Intd: someone cut the tree so that s/he can use it to build the house)

b. *#Ø-dyoko* ***di****-di-vas-****uk****-ini* ***mpasi vo*** *dya dya dyo*
5-manioc Cp-5/AgrS-cut-CI-PST so that it eats it
Knife cut manioc so that it eats it (Intd: someone cut the manioc so that s/he eats it)

c. *# Ø-mbati* ***di****-u-tyaz-****uk****-idi* ***mpasi vo*** *wa tunga wo kupa*
3-cloth Cp-3/AgrS-tear-CI-PST so that it makes it shirt
Trousers tore so that it makes it shirt (Intd: someone tore the trousers so that s/he makes it a short)

d. *# Ø-n'singa* ***di****-u-tab-****uk****-idi* ***mpasi vo*** *wa-tunga wo gyaka*
3-wire Cp-3/AgrS-cut-CI-PST so that it builds it wall
Wire cut so that it builds it wall (Intd: someone cut the wire so that s/he uses it build a wall)

e. *# Ø-mbizi* ***di****-i-nyanzuzu-****ik****-ini* ***mpasi vo*** *ya toma vya*
9-meat Cp-9/AgrS-cut-CI-PST so that it be good tender
Meat cut into piece so that it become well tendered (Intd: someone cut the meat into pieces so that it become well tendered)

f. *# Ø-nkovi* ***di****-i- tom-enefwel-****ok****-ela* ***mpasi vo*** *kayendi mwamba wa yingi ko*
9-cabbage Cp-9/AgrS-be good-PST chop-CI-FV so that it does not take much buuter
Cabbage chopped well so that it does not take much peanut butter (Intd: someone chopped cabbage well so that it does not take much butter)

6.2.2.2.6 *Temporal* phrase modification

(34) a. *Ø-n'ti u-zeng-****ok****-ele* *(kolo kya-/mu-)ngunga imosi*
3-tree 3/AgrS-cut-CI-PST for/in an hour
Tree cut for/in an hour (Ind: someone cut the tree for/in an hour)

b. *Ø-dyoko di-vas-****uk****-ini* *(kolo kya-/mu-)ngunga imosi*
5-manioc 5/AgrS-cut-CI-PST for/in an hour
Manioc cut for/in an hour (Intd: someone cut the manioc for/in an hour)

c. *Ø-m'bati u-tyaz-****uk****-idi* *(kolo kya-/mu-)ngunga imosi*
3-trousers 3/AgrS-tear-CI-PST for/in an hour
Trousers tore for/in an hour (Intd: someone tore the trousers for/in an hour)

d. *Ø-n'singa u-tab-****uk****-idi* *(kolo kya-/mu-)ngunga imosi*
3-wire 3/AgrS-cut-CI-PST for/in an hour
Wire cut for/in an hour (Intd: someone cut the wire for/in an hour)

e. *Ø-mbizi i-nyanzuzu-****ik****-ini* *(kolo kya-/mu-)ngunga imosi*
9-leaf 9/AgrS-cut-CI-PST for/in an hour
Leaves cut into pieces for/in an hour (Intd: someone cut the meat into pieces for/in an hour)

f. ?*Ø-Nkovi* *i-fwel-**ok**-ele* *(kolo kya-/mu-)ngunga imosi*
9-cabbage 9/AgrS-chop-CI-PST for/in an hour
Cabbage chopped for/in an hour (Intd: someone chopped the cabbage for/in an hour)

6.2.2.3 Passive and PP-modification

(35) a *Ø-n'ti* *u-zeng-il-w-e* *mu-Ø-tanzi/#mu-Ø-tembo/kwa n'kento*
3-tree 3/AgrS-cut-APPL-PASS-PST 18-7-machete/18-7-wind/by woman
The tree was cut in machete/wind/by woman. (Intd: the tree was cut by means of machete/from the wind/by the woman).

b. *Ø-dyoko* *di-vasun-w-e* *mu-Ø-mbele/#mu-Ø-tembo/kwa aana*
5-manioc 5/AgrS-cut-PASS-PST 18-9-knife/18-7-wind/by children
Manioc was cut in knife/wind/ by children (Intd: the manioc was cut by means of knife/from the wind/ by the children)

c. *Ø-m'bati* *u-tyez-w-e* *mu-Ø-mbele/#mu-Ø-tembo/kwa mwana*
3-trousers 3/AgrS-tear-PASS-PST 18-9-knife/18-7-wind/by child
Trousers was tore in knife/ wind/by child (Intd: the trousers was tore by means of the knife/from the wind/by the child)

d. *Ø-n'singa* *u-tabul-w-e* *mu-Ø-mbele/#mu-Ø-tembo/kwa Nzongo*
3-wire 3/AgrS-cut-PASS-PST 18-9-knife/18-7-wind/by Nzongo
Wire was cut in knife/wind/ by Nzongo (Intd: the wire was cut by means of the knife/from the wind/ by Nzongo)

e. *Ø-mbizi* *i-nyanzuzun-w-e* *mu-Ø-mbele/#mu-Ø-tembo kwa mwana*
9-meat 9/AgrS-cut-PASS-PST 18-9-knife/18-7-wind/by child
Meat was cut into pieces in knife/wind/by child (Intd: the meat was cut into pieces by means of knife/from the wind/by the child)

f. ?*Ø-nkovi* *i-fwed-il-w-e* *mu-Ø-mbele/kwa Mafuta*
9-cabbage 9/AgrS-chop-APPL-PASS-PST 18-9-knife/by Mafuta
Cabbage was chopped in knife/wind/by Mafuta (Intd: the cabbage was chopped by means of the knife knife/by Mafuta)

6.1.2.3.1 *Agent-oriented* phrase modification

(36) a *Ø-n'ti* *u-zeng-il-w-e* ***mu-ndwenga***
3-tree 3/AgrS-cut-APPL-PASS-PST 18-cautiously
Tree was cut cautiously. (Intd: the tree was cut cautiously)

b. *Ø-dyoko* *di-vasun-w-e* ***mu-ndwenga***
5-manioc 5/AgrS-cut-PASS-PST 18-cautiously
Manioc was cut cautiously (Intd: the manioc was cut cautiously)

c. *Ø-m'bati* *u-tyez-w-e* ***mu-ndwenga***
3-trousers 3/AgrS-tear-PASS-PST 18-cautiously
Trousers was tore cautiously (Intd: the trousers was tore cautiously)

d. *Ø-n'singa* *u-tabul-w-e* ***mu-ndwenga***
3-wire 3/AgrS-cut-PASS-PST 18-cautiously
Wire was cut cautiously (Intd: the wire was cut cautiously)

e. *Ø-mbizi* *i-nyanzuzun-w-e* ***mu-ndwenga***
9-meat 9/AgrS-cut-PASS-PST 18-cautiously
Meat was cut into pieces cautiously (Intd: the meat was cut into pieces cautiously

f. **?***Ø-nkovi* *i-fwed-il-w-e* ***mu-ndwenga***
9-cabbage 9/AgrS-chop-APPL-PASS-PST 18-cautiously
Cabbage was chopped cautiously (Intd: the cabbage was chopped cautiously)

6.2.2.3.2 *By-self* phrase modification

(37) a * *Ø-n'ti* *u-zeng-il-w-e* ***w-au mosi***
3-tree 3/AgrS-cut-APPL-PASS-PST 3/AgrS-itself
The tree was cut by itself

b. * *Ø-dyoko* *di-vasun-w-e* ***dy-au mosi***
5-manioc 5/AgrS-cut-PASS-PST 5/AgrS-itself
Manioc was cut by itself (Intd: the manioc was cut without external help)

c. * *Ø-m'bati* *u-tyez-w-e* ***w-au mosi***
3-trousers 3/AgrS-tear-PASS-PST 3/AgrS-itself
Trousers was tore by itself (Intd: someone tore the trousers without external help)

d. * *Ø*-n*'singa* *u-tabul-w-e* ***w-au mosi***
3-wire 3/AgrS-cut-PASS-PST 3/AgrS-itself
Wire was cut by itself (Intd: someone cut the wire without external help)

e. * *Ø-mbizi* *i-nyanzuzun-w-e* ***y-au mosi***
9-meat 9/AgrS-cut-PASS-PST 9/AgrS-itself
Meat was cut into pieces by itself (Intd: someone The meat was cut into pieces by itself

f. * *Ø-nkovi* *i-fwed-il-w-e* ***y-au mosi***
9-cabbage 9/AgrS-chop-APPL-PASS-PST 9/AgrS-itself
The cabbage was chopped by itself

6.2.2.3.3 *Again* phrase modification

(38) a. *Ø-n'ti* *u-zeng-il-w-e* ***dyaka***
3-tree 3/AgrS-cut-APPL-PASS-PST again
Tree was cut again (Intd: the/a tree was cut again)

b. *Ø-dyoko* *di-vasun-w-e* ***dyaka***
5-manioc 5/AgrS-cut-PASS-PST again
Manioc was cut again (Intd: the manioc was cut again)

c. *Ø-m'bati* *u-tyez-w-e* ***dyaka***
3-trousers 3/AgrS-tear-PASS-PST again
Trousers was tore again (Intd: the trousers was tore again)

d. *Ø-n'singa* *u-tabul-w-e* ***dyaka***
3-wire 3/AgrS-cut-PASS-PST again
Wire was cut again (Intd: the wire was cut again)

e. *Ø-mbizi* *i-nyanzunun-w-e* ***dyaka***
9-meat 9/AgrS-cut-PASS-PST again
Meat was cut into pieces again (Intd: the meat was cut into pieces again)

f. *?Ø-nkovi* *i-fwed-il-w-e* ***dyaka***
9-cabbage 9/AgrS-chop-APPL-PASS-PST again
Cabbage was chopped again (Intd: the cabbage was chopped again)

6.2.2.3.4 *Purpose* clause modification

(39) a. *Ø-n'ti* ***di****-u-zeng-el-w-e* ***mpasi vo*** *a-tungila wo nzo*
3-tree Cp-3/AgrS-cut-APPL-PASS-PST so that 2-build it house
Trees were cut so that they use them to build house (Intd: trees were cut so that they use them to build the house)

b. *Ø-dyoko* ***di****-di-vasunun-w-e* ***mpasi vo*** *a-ana a-dya dyo*
5-manioc Cp-5/AgrS-cut-PASS-PST so that 2-child 2-eat it
Manioc was cut so that children eat it (Intd: the manioc was cut so that the children eat it)

c. *Ø-n'lele* ***di****-u-tyaz-il-w-e* ***mpasi vo*** *a-tunga wo ki-nkutu*
3-clothe Cp-3AgrS-tear-PPL-PAS-PST so that 2-make it 7-shirt
Clothe was tore so that they make it shirt (Intd: the clothe was tore so that they make it a shirt)

d. *Ø-n'singa* ***di****-u-tabud-il-w-e* ***mpasi vo*** *a-tungila wo Ø-gyaka*
3-wire Cp-3AgrS-cut-APPL-PASS-PST so that 2-build it 7-wall
Wire cut so that they can build wall (Intd: the wire cut so that they can build the wall

e. ?*Ø-mbizi* ***di****-i-nyanzunun-w-e* ***mpasi vo*** *ka-yi-zingidi vya ko*
9-meat Cp-9/AgrS-cut-PASS-PST so that NEG[1]-AgrS-long tender NEG[2]
Meat was cut (into pieces) so that it does not long to get tender (Intd: the meat was cut (into pieces) so that it does not long to get tender)

f. ?*Ø-nkovi* *di-i-fwed-il-w-e* ***mpasi vo*** *a-lamba yo*
9-cabbage Cp-9/AgrS-chop-APPL-PASS-PST so that 2-cook it
Cabbage was chopped so that they cook it (Intd: the cabbage was chopped so that they cook it)

6.2.2.4 *Middle* formation

(40) a. *Ø-n'ti wa nzewa* *u-tom-a* *zeng-**ok**-ang-a #mu-ndwenga/#wau mosi*
3-tree fresh 3-be good-FV cut-CI-HAB-FV 18-cautiously/ by itself
This fresh tree cuts well cautiously/by itself

b. ? *Ø-dyoko* *di-tom-a* *vas-**uk**-ang-a #mundwenga/#dyau mosi*
5-manioc 5-be good-FV cut-CI-HAB-FV cautiously/ by itself
Manioc cuts well cautiously/by itself (Intd: the manioc cuts well cautiously/ by itself)

c. # *Ø-m'bati* *wau* *u-tom-a* *tyaz-**uk**-ang-a mu-ndwenga/wau mosi*
3-clothe this 3-be good-FV tear-CI-HAB-FV 18-cautiously/ by itself
This trousers tears well cautiously/by itself

d. ? *Ø-n'singa* *wau* *u-tom-a* *tab-**uk**-ang-a # mundwenga/#wau mosi*
3-wire this 3-be good-FV cut-CI-HAB-FV cautiously/ by itself
This wire cuts well cautiously/ by itself

e. * *Ø-mbizi* *yayi* *i-tom-a* *nyanzuz-u**k**-ang-a #mundwenga/#yau mosi*
9-meat this 9-be good-FV cut-CI-HAB-FV cautiously/ by itself
This machete cuts well cautiously/ by itself

f. ? *Ø-nkovi* *i-tom-a* *fwel-**ok**-ang-a #mundwenga/#yau mosi*
9-cabbage 9-be good-FV chop-CI-HAB-FV cautiously/ by itself
Cabbage chops well cautiously/by itself (Intd: the cabbage chops well cautiously/by itself)

6.2.3-*fumbika* 'bend' verbs

6.2.3.1 *Causative*

6.2.3.1.1 *Agent* as causer

(41) a. *Luzolo/Ø-nkombo* *fumbik-idi* *lu-tai*
1-PN/3-goat bend-PST 11-branch
Luzolo/goat bent branch (Intd: Luzolo/goat bent the branch)

b. *Mw-ana/ Ø-nkombo* *konenek-ene* *ku-oko*
1a-child/3-goat fold-PST 15-hand
Child/goat folded hand/tail (Intd: the child/goat folded the hand/tail)

c. *Mw-ana* *vwetek-ele* *lu-tai*
1a-child bend-PST 11-branch
Child/nkombo bent branch (Intd: the child/nkombo bent the branch)

6.2.3.1.2 *Iinstrument/natural causer* as causer

(42) a. *Ma-lutelo/ Ø-tembo* *i-ki-fumbik-idi* *lu-tai*
6-hammer/7-wind 9-7/AgrS-bend-PST 11-branch
Hammer/wind bent branch (Intd: the hammer was the instrument used to bend the branch or the wind bent the branch)

b. *Ma-lutelo/Ø-tembo* *i-ki-konenek-ene* *Ø-sengo*
6-hammer/7-wind 9-7/AgrS-bend-PST 7-iron
Hammer/wind bent iron bar (Intd: the hammer was the instrument used to bend the iron or the wind bent the iron-bar)

c. *Lu-singa/Ø-tembo* *lu/ki-vwetek-ele* *lu-tai*
11-iron/7-wind 11-7/AgrS-bend-PST 11-branch
Iron bar/wind bent branch (Intd: the iron-bar was the instrument used to bend the branch or the wind bent the branbch)

6.2.3.1.3 *Agent-oriented* phrase modification

(43) a. *Luzolo* *fumbik-idi* *lu-tai* ***mu-ndewnga***
1-PN bend-PST 11-branch 18-caution
Luzolo bent branch cautiously (Intd: Luzolo bent the branch cautiously)

b. *Mw-ana* *konenek-ene* *ku-oko* ***mu-malemba***
1a-child fold-PST 15-hand 18-slowly
Child folded hand slowly (Intd: the child folded the hand slowly)

c. *Mw-ana* *vwetek-ele* *lu-tai* ***mu-malembe***
1a-child bend-PST 11-branch 18-slowly
Child/nkombo bent branch slowly (Intd: The child/nkombo bent the branch slowly)

6.2.3.1.4 *By-self* phrase modification

(44) a. *Luzolo* *fumbik-idi* *lu-tai* **yani-mosi**
1-PN bend-PST 11-branch him/herself
Luzolo bent branch his/her own (Intd: Luzolo bent the branch on his/her own)

b. *Mw-ana* *konenek-ene* *ku-oko* ***yani mosi***
1a-child fold-PST 15-hand him/herself
Child folded hand on his/her own (Intd: the child folded the hand on his/her

c. *Mw-ana* *vwetek-ele* *lu-tai* ***yani mosi***
1a-child bend-PST 11-branch him/herself
Child bent branch his/her own (Intd: the child bent the branch on his/her own)

6.2.3.1.5 *Again* phrase modification

(45) a. *Luzolo* *fumbik-idi* ***dyaka*** *lu-tai*
1-PN bend-PST again 11-branch
Luzolo bent again branch (Intd: Luzolo bent the branch again)

b. *Mw-ana* *konenek-ene* ***dyaka*** *ku-oko*
1a-child fold-PST again 15-hand
Child folded again hand (Intd: the child folded the hand again)

c. *Mw-ana* *vwetek-ele* ***dyaka*** *lu-tai*
1a-child bend-PST again 11-branch
Child bent again branch (Intd: the child bent the branch again)

6.2.3.1.6 *Purpose* phrase modification

(46) a. *Luzolo* ***di****-ka-fumbik-idi* *lu-tai* ***mpasi vo*** *ka-tulula manga*
1-PN Cp-1-bend-PST 11-branch so that 1-fetch mango
Luzolo bent branch so that s/he fetch mong (Intd: Luzolo bent the branch so that s/he fetches mangoes)

b. *Mw-ana* ***di****-ka-konenek-ene* *ku-oko* ***mpasi vo*** *ka-katula luzala*
1a-child Cp-1-fold-PST 15-hand so that 1-cut nail
Child folded hand so that s/he cuts nails (Intd: the child folded the hand so that s/he cuts nails)

c. *Mw-ana* *di-ka-vwetek-ele* *lu-tai* *mpasi vo ka-tulula manga*
1a-child Cp-1-bend-PST 11-branch so that 1-fetch mango
Child bent branch so that s/he fetches mangoes (Intd: the child bent the branch so that s/he fetches mangoes)

6.2.3.1.7 *Temporal* phrase modification

(47) a. *Luzolo* *fumbik-idi* *lu-tai* *(#kolo kya-/mu-)ngunga imosi*
1-PN bend-PST 11-branch for/in an hour
Luzolo bent branch for/in an hour (Intd: Luzolo bent the branch for/in an hour)

b. *Mw-ana* *konenek-ene* *ku-oko (#kolo kya-/mu-)ngunga imosi*
1a-child fold-PST 15-hand for/in an hour
Child folded hand for/in an hour (Intd: the child folded the hand for/in an hour)

c. *Mw-ana* *vwetek-ele* *lu-tai* *(#kolo kya-/mu-)ngunga imosi*
1a-child bend-PST 11-branch for/in an hour
Child bent branch for/in an hour (Intd: the child bent the branch for/in an hour)

6.2.3.2 Anticausative

(48) a. *Lu-tai* *lu-fumb-**am**-ene*
11-branch 11/AgrS-bend-CI-PST
Branch bent (Intd: someone bent the branch)

b. *Ø-sengo* *ki-konan-**an**[26]-e*
7-iron 7/AgrS-bend-CI-PST
Iron bar bent (Intd: someone bent the iron-bar)

c. *Lu-tai* *lu-vwet-**am**-ene*
11-branch 11/AgrS-bend-CI-PST
Branch bent (Intd: someone bent the branch)

6.2.3.2.1 *PP-modification*

(49) a. *Lu-tai* *lu-fumb-**am**-ene* *#mu-Ø-malutelo/mu-Ø-tembo/#kwa n'kento*
11-branch 11/AgrS-bend-CI-PST 18-9-hammer/18-7-wind/by woman
Branch bent in hammer/wind/by woman (Intd: someone bent the branch by means of hammer)

b. *Ø-sengo* *ki-konan-**an**-e* *#mu- Ø-malutelo/#mu-Ø-tembo/#kwa n'kento*
7-iron 7/AgrS-bend-CI-PST 18-9-hammer/18-7-wind/by woman
The/an iron bar bent in hammer/wind/by woman

c. *Lu-tai* *lu-vwet-**am**-ene* *#mu-lu-singa/#mu-Ø-tembo/#kwa mwana*
11-branch 11/AgrS-bend-CI-PST 18-11-iron/18-Ø/7wind/by child
Branch bent in iron bar/wind/by child (Intd: the branch bent from the wind)

6.2.3.2.2 *Agent-oriented* phrase modification

(50) a. *#Lu-tai* *lu-fumb-**am**-ene* ***mu-ndwenga***
11-branch 11AgrS-bend-CI-PST 18-cautiously
Branch bent cautiously (Intd: someone bent the branch cautiously)

b. *# Ø-sengo* *ki-konan-**an**-e* ***mu-ndwenga***
7-iron 7/AgrS-bend-CI-PST 18-cautiously
Iron bar bent cautiously (Intd: someone bent the iron cautiously)

c. *#Lu-tai* *lu-vwet-**am**-ene* ***mu-ndwenga***
11-branch 11/AgrS-bend-CI-PST 18-cautiously
Branch bent cautiously (Intd: someone bent the branch cautiously)

[26] The morpheme -n- in verbs kon-a**n**-en-e is due to phonological conditions.

6.2.3.2.3 *By-self* phrase modification

(51) a. *Lu-tai* *lu-fumb-**am**-ene* ***lw-au mosi***
11-branch 11/AgrS-bend-CI-PST 11- itself
Branch bent itself (Intd: The branch bent by itself)

b. *Ø-sengo* *ki-konan-**an**-e* ***ky-au mosi***
7-iron 7/AgrS-bend-CI-PST 7-itself
Iron bar bent itself (Intd: the iron-bar bent by itself)

c. *Lu-tai* *lu-vwet-**am**-ene* ***lw-au mosi***
11-branch 11/AgrS-bend-CI-PST 11-itself
Branch bent itself (Intd: the branch bent by itself)

6.2.3.2.4 *Again* phrase modification

(52) a. *Lu-tai* *lu-fumb-**am**-ene* ***dyaka***
11-branch 11/AgrS-bend-CI-PST again
Branch bent again (Intd: the branch bent again)

b. *Ø-sengo* *ki-konan-**an**[27]-e* ***dyaka***
7-iron 7/AgrS-bend-CI-PST again
Iron-bar bent again (Intd: the iron bar bent again)

c. *Lu-tai* *lu-vwet-**am**-ene* ***dyaka***
11-branch 11/AgrS-bend-CI-PST again
Branch bent again (Intd: the branch bent again)

6.2.3.2.5 *Purpose* clause modification

(53) a. *#Lu-tai* ***di**-lu-fumb-**am**-ene* ***mpasi vo*** *lwa katula lo ma-kaya*
11-branch Cp-11-bend-CI-PST so that 11- fetch it 6-leaves
Branch bent so that it take it leaves (Intd: someone bent the branch so that s/he fetches the leaves)

b. *#Ø-Sengo* ***di**-ki-konan-**an**-e* ***mpasi vo*** *kya tungila kyo gyaka*
7-iron Cp-7-bend-CI-PST so that t 7- build for it wall
Iron-bar bent so that it use it to build wall (Intd: someone bent the iron-bar so that s/he uses when s/he build the wall)

c. *#Lu-tai* ***di**-lu-vwet-**am**-ene* ***mpasi vo*** *lwa baka ko manga*
11-branch Cp-11/AgrS-bend-CI-PST so that 11- fetch there mango
Branch bent so that it fetches there mangoes (Intd: someone bent the branch so that s/he fetches mangoes)

[27] The morpheme -n- in verbs kon-a**n**-en-e is due to phonological conditions.

6.2.3.2.6 *Temporal* phrase modification

(54) a. *Lu-tai* *lu-fumb-**am**-ene* *(kolo kya-/mu-)ngunga imosi*
11-branch 11/AgrS-bend-CI-PST for/in an hour
Branch bent for/in an hour (Intd: someone bent the branch for/in an hour)

b. *Ø-sengo* *ki-konan-**an**-e* *(kolo kya-/mu-)ngunga imosi*
7-iron 7/AgrS-bend-CI-PST for/in an hour
Iron-bar bent for/in an hour (Intd: someone bent the iron-bar for/in an hour)

c. *Lu-tai* *lu-vwet-**am**-ene* *(kolo kya-/mu-)ngunga imosi*
11-branch 11/AgrS-bend-CI-PST for/in an hour
Branch bent for/in an hour (Intd: someone bent the branch for/in an hour)

6.2.3.3 *Passive* and *PP-modification*

(55) *Lu-tai* *lu-fumbik-il-w-e* *mu-Ø-tanzi/*mu-Ø-tembo/kwa Luzolo*
11-branch 11/AgrS-bend-APPL-PASS-PT 18-7-machete/18-7-wind/by Luzolo
The branch was bent by means of machete/from the wind/by Luzolo

b. *Ø-sengo* *ki-koneneken-w-e* *mu- Ø-malutelo/*mu- Ø-tembo/kwa ntungi a nzo*
7-iron 7-bend-PASS-PST 18-9-hammer/18-7-wind/by builder
The iron bar was bent by means of hammer/from the wind/by the builder

c. *Lu-tai* *lu-vwetek-el-w-e* *mu-lu-singa/*mu-Ø-tembo/kwa Nzongo*
11-branch 11/AgrS-bend-APPL-PASS-PST 18-11-iron/18-7-wind/by Nzongo
The branch was bent by means of iron bar/from the wind/by Nzongo

6.2.3.3.1 *Agent-oriented* phrase modification

(56) *a.* *Lu-tai* *lu-fumbik-il-w-e* ***mu-ndwenga***
11-branch 11/AgrS-bend-APPL-PASS-PT 18-cautiously
Branch was bent cautiously (Intd: The branch was bent cautiously)

b. *Ø-sengo* *ki-koneneken-w-e* ***mu-ndwenga***
7-iron 7/AgrS-bend-PASS-PST 18-cautiously
Iron bar was bent cautiously (Intd: The inron-bar was bent cautiously)

c. *Lu-tai* *lu-vwetek-el-w-e* ***mu-ndwenga***
11-branch 11/AgrS-bend-APPL-PASS-PST 18-cautiously
Branch was bent cautiously (Intd: the branch was bent cautiously)

6.2.3.3.2 *By-self* phrase modification

(57) a. **Lu-tai* *lu-fumbik-il-w-e·* ***lw-au mosi***
11-branch 11/AgrS-bend-APPL-PASS-PT 11-itself
Branch was bent by itself (Intd: The branch was bent without external help)

b. **Ø-sengo* *ki-koneneken-w-e* ***ky-au mosi***
7-Iron 7/AgrS-bend-PASS-PST 7-itself
Iron bar was bent by itself (Intd: the iron-bor was bent without external help)

c. **Lu-tai* *lu-vwetek-el-w-e* ***lw-au mosi***
11-branch 11/AgrS-bend-APPL-PASS-PST 11-itself
Branch was bent by itself (Intd: the branch was bent without external help)

6.2.3.3.3 *Again* phrase modification

(58) *a.* *Lu-tai* *lu-fumbik-il-w-e* ***dyaka***
11-branch 11/AgrS-bend-APPL-PASS-PST again
Branch was bent again (Intd: the branch was bent again)

b. *Ø-sengo* *ki-koneneken-w-e* ***dyaka***
7-iron 7/AgrS-bend-PASS-PST again
Iron-bar was bent again (Intd: the iron-bar was bent again)

c. *Lu-tai* *lu-vwetek-el-w-e* ***dyaka***
11-branch 11/AgrS-bend-APPL-PASS-PST again
Branch was bent again (Intd: the branch was bent again)

6.2.3.3.4 *Purpose* clause modification

(59) a. *Lu-tai* ***di-*** *lu-fumbik-il-w-e* ***mpasi vo*** *a-tulula ko manga*
11-branch Cp-11/AgrS-bend-APPL-PASS-PST so that 2-take it mangos
Branch was bent so that they take it mangoes (Intd: The branch was bent so that people take it mangoes)

b. *Ø-sengo* ***di****-ki-koneneken-w-e* ***mpasi vo*** *a-tula kyo munzo*
7-iron Cp-7/AgrS-bend-PASS-PST so that 2-put it in house
Iron-bar was bent so that people use it to build house (Intd: The iron-bar was bent so that people use it to build a house)

c. *Lu-tai* ***di****-lu-vwetek-el-w-e* ***mpasi vo*** *a-baka lo manga*
11-branch Cp-11/AgrS-bend-APPL-PASS-PST so that 2-fetch it mangoes
Branch was bent so that they fetch there mangoes (Intd: the branch was bent so that people fetch it mangoes)

6.2.3.4 *Middle formation*

(60) a. *Lu-swaswa lu-tom-a fumb-**am**-ang-a #mundwenga/#lwau mosi*
11-branch 11/AgrS-be good-FV bend-CI-HAB-FV caustiouly/by itself
The branch bends well caustiouly/by itself

b. ?*Lu-singa lwalu lu-tom-a kon-**an**-ang-a #mundwenga/#lwau mosi*
11-iron-bar this 11/AgrS-be good-FV bend-CI-HAB-FV caustiouly/by itself
This iron-bar bends well caustiouly/by itself

c. *?Lu-tai lwalu lu-tom-a vwete-a**m**-ang-a # mundwenga/*lwau* mosi
11-branch this AgrS-be good-FV bend-CI-HAB-FV caustiouly/by itself
This branch bends well caustiouly/by itself

6.2.4 *-lamba* "cooking" verbs

6.2.4.1 *Causative*

6.2.4.1.1 *Agent* as causer

(61) a. *Luzolo/#Ø-nkombo lemb-e ma-dya*
1-PN/3-goat cook-PST 6-food
Luzolo/goat cooked food (Intd: Luzolo/goat cooked the food)

b. *Luzolo/#Ø-nkombo yok-ele mu-nsambu*
1-PN/3-goat roast-PST 3-fish
Luzolo/goat roasted dry fish (Intd: Luzolo/goat roasted the dry fish)

c. *Luzolo/#Ø-nkombo vuud-idi ma-dezo*
1-PN/3-goat boil-PST 6-bean
Luzolo/goat boiled beans (Intd: Luzolo/goat boiled the beans)

d. *Luzolo/#Ø-nkombo keeng-e nguba*
1-PN/3-goat toast-PST peanuts
Luzolo/goat toasted peanuts (Intd: Luzolo/goat toasted the peanuts)

e. *Ø-n'kento/# Ø-nkombo syokes-e Ø-dyaki*
1-woman/9-goat fry-PST 5-egg
Woman/goat fried the/an egg (Intd: the woman/goat fried the/an egg)

6.2.4.1.2 *Instrument/natural force* as causer

(62) a. *#Ø-nzungu/#Ø-tembo i-ki-lemb-e ma-dya*
9-pan/7-wind 9-7/AgrS-cook-PST 6-food
The pan/wind cooked the meal (Intd: someone cooked the meal in the pan)

b. *# Ø-ziku/#Ø-tembo di-ki-yok-ele mu-nsambu*
5-stove/7-wind 5-7/AgrS-roast-PST 4-fish
Stove/wind roasted the dry fish (Intd: someone roasted the dry fish in the stove)

c. *# Ø-nzungu/#Ø-tembo i-ki-vuud-idi ma-dezo*
9-pan/7-wind 8-7/AgrS-PST 6-bean
The pan/wind boiled beans (Intd: someone boiled the beans in the pan)

d. *#Ø-kaangu/# Ø-tembo ki-keeng-e Ø-nguba*
7-toaster/7-wind 7/AgrS-toast-PST 10-peanut
Toaster/wind toasted the peanuts (Intd: someone toasted the peanuts in the toaster)

e. *#Ø-mengo/# Ø-tembo ki-ki-syok-es-e Ø-dyaki*
7-frying pan/7-wind 7-7/AgrS-fry-CAUS-PST 5-egg
Frying pan/wind fried an egg (Intd: someone fired aggs in the frying pan)

6.2.4.1.3 *Agent-orientd* phrase modification

(63) a. *Luzolo lemb-e ma-dya* ***mu-nswalu***
1-NP cook-PST 6-food 18-fast
Luzolo cooked food fast (Intd: Luzolo cooked the food fast)

b. *Luzolo yok-ele mu-nsambu* ***mu-nswalu***
1-PN roast-PST 3-fish 18-fast
Luzolo/goat roasted dry fish fast (Intd: Luzolo/goat roasted the dry fish fast)

c. *Luzolo vuud-idi ma-dezo* ***mu-nswalu***
1-PN boil-PST 6-bean 18-fast
Luzolo boiled beans fast (Intd: Luzolo boiled the beans fast)

d. *Luzolo keeng-e Ø-nguba* ***mu-nswalu***
1-PN toast-PST 10-peanut 18-fast
Luzolo toasted peanuts fast (Intd: Luzolo toasted the peanuts fast)

e. *Ø-n'kento syok-es-e dy-aki* ***mu-nswalu***
1-woman fry-CAUS-PST 5-egg 18-fast
Woman/goat fried the/an egg fast (Intd: the woman/goat fried the/an egg fast)

6.2.4.1.4 *By-self* phrase modification

(64) a. *Luzolo* *lemb-e* *ma-dya* ***yani mosi***
1-PN cook-PST 6-food one self
Luzolo cooked food him/herself (Intd: Luzolo cooked the food him/herself)

b. *Luzolo* *yok-ele* *mu-nsambu* ***yani mosi***
1-PN roast-PST 4-fish one self
Luzolo roasted dry fish him/herself (Intd: Luzolo roasted the dry fish him/herself)

c. *Luzolo* *vuud-idi* *ma-dezo* ***yani mosi***
1-PN boil-PST 6-bean one self
Luzolo boiled beans (Intd: Luzolo boiled the beans)

d. *Luzolo* *keeng-e* *Ø-nguba* ***yani mosi***
1-PN toast-PST 10-peanuts one self
Luzolo toasted peanuts him/herself (Intd: Luzolo toasted the peanuts him/herself)

e. *Ø-n'kento* *syok-es-e* *dyaki* ***yani mosi***
1-woman fry-CAUS-PST egg 1-self
The woman fried egg herself (Intd: the woman fried the egg herself)

6.2.4.1.5 *Again* phrase modification

(65) a. *Luzolo* *lemb-e* ***dyaka*** *ma-dya*
1-PN cook-PST again 6-food
Luzolo cooked again food (Intd: Luzolo cooked the food again)

b. *Luzolo* *yok-ele* ***dyaka*** *mu-nsambu*
1-PN roast-PST again 4-fish
Luzolo roasted again dry fish (Intd: Luzolo roasted the dry fish again)

c. *Luzolo* *vuud-idi* ***dyaka*** *ma-dezo*
1-PN boil-PST again 6-bean
Luzolo boiled again beans (Intd: Luzolo boiled the beans again)

d. *Luzolo* *keeng-e* ***dyaka*** *Ø-nguba*
1-PN toast-PST again 10-peanuts
Luzolo toasted again peanuts (Intd: Luzolo toasted the peanuts again)

e. *Ø-n'kento* *syok-es-e* ***dyaka*** *dy-aki*
1-woman fry-CAUS-PST again 5-egg
Woman fried again egg (Intd: The woman fried the egg again)

6.2.4.1.6 *Purpose* clause modification

(66) a. *Luzolo* ***di****-ka-lamb-idi* *ma-dya* ***mpasi vo*** *ka-vana mo nzenza*
1-PN Cp-1-cook-PST 6-food so that 1-give it visits
Luzolo cooked the food so that s/he gives it to the guests

b. *Luzolo* ***di****-ka-yok-ele* *mu-nsambu* ***mpasi vo*** *ka-vana wo a-na*
1-PN Cp-1-roast-PST 3-fish so that 1-give it children
Luzolo roasted the dry fish so that s/he gives it to the children

c. *Luzolo* ***di****-ka-vuud-idi* *ma-dezo* ***mapsi vo*** *ka-lamb-il-a mo a-na*
1-PN Cp-1-boil-PST 6-bean so that 1-cook-APPL-FV them 2-child
Luzolo boiled the beans so that s/he cooks them for the children

d. *Luzolo* ***di****-ka-kaang-idi* *Ø-nguba* ***mpasi vo*** *ka-vana zo nzenza*
1-PN Cp-1-toast-PST 10/peanuts so that 1-give them visit
Luzolo toasted the peanuts so that s/he gives them to the children

e. *Ø-n'kento* *di-ka-syok-es-ele* *Ø-dyaki* *mpasi vo* *ka-vana dyo a-na*
1-woman Cp-1-fry-CAUS-PST 5-egg so that 1-give it children
The woman fried egg so that s/he gives it to children (Intd: the woman fried the egg so that s/he gives it to the children)

6.2.4.1.7 *Temporal* phrase modification

(67) a. *Luzolo* *lemb-e* *ma-dya* *(kolo kya-/#mu-)ngunga imosi*
1-PN cook-PST 6-food for/in an hour
Luzolo cooked food for/in an hour (Intd: Luzolo cooked the food for/in an hour)

b. *Luzolo* *yok-ele* *mu-nsambu* *(kolo kya-/#mu-)ngunga imosi*
1-PN roast-PST 3-fish for/in an hour
Luzolo roasted dry fish for/in an hour (Intd: Luzolo roasted the dry fish for/in an hour)

c. *Luzolo* *vuud-idi* *ma-dezo* *(kolo kya-/#mu-)ngunga imosi*
1-PN boil-PST 6-bean for/in an hour
Luzolo boiled beans for/in an hour (Intd: Luzolo boiled the beans for/in an hour)

d. *Luzolo* *keeng-e* *Ø-nguba* *(kolo kya-/#mu-)ngunga imosi*
1-PN toast-PST 10-peanuts for/in an hour
Luzolo toasted peanuts for/in an hour (Intd: Luzolo toasted the peanuts for/in an hour)

e. *Ø-n'kento* *syok-es-e* *dy-aki* *(kolo kya-/#mu-)ngunga imosi*
1-woman fry-CAUS-PST 5-egg for/in an hour
Woman fried the/an egg for/in an hour (Intd: the woman fried the/an egg for/in an hour)

6.2.4.2 Anticausative

(68) a. *Ma-dya* *ma-lamb-**uk**-idi*
6-food 6/AgrS-cook-CI-PST
Meal cooked (Intd: someone cooked the meal)

b. **?***Mu-nsambu* *u-yok-**ok**-ele*
3-fish 3/AgrS-roast-CI-PST
Fish roasted (Intd: someone roasted the fish)

c. *Ma-dezo* *ma-vul-**uk**-idi*
6-bean 6/AgrS-boil-CI-PST
Cabbage boiled (Intd: someone boiled the beans)

d. **?** *Ø-nguba* *zi-kaang-**uk**-idi*
10-peanut 10/AgrS-toast-CI-PST
Peanuts toasted (Intd: someone toasted peanuts)

e. **Ma-aki* *ma-syok-es-**ek**-ele*
6-egg 6/AgrS-fry-CAUS-CI-PST
Eggs fried (Intd: someone fried eggs)

6.2.4.2.1 *PP-modification*

(69) a. *Ma-dya* *ma-lamb-**uk**-idi* *#mu-Ø-nzungu/#mu-Ø-tembo/#kwa Luzolo*
6-food 6/AgrS-cook-CI-PST 18-9-pan/18-7-wind/by Luzolo
The meal cooked by means of pan/from the wind/by Luzolo

c. ?*Mu-nsambu* *u-yok-**ok**-ele* *#va-Ø-ziku#mu-Ø-tembo/#kwa Luzolo*
3-fish 3/AgrS-roast-CI-PST 16-5-fire/18-7-wind/by Luzolo
The fish roasted from the wind/in the fire/by Luzolo

b. *Ma-dezo* *ma-vul-**uk**-idi* *#mu-Ø-nzungu/#mu-Ø-tembo/#kwa Luzolo*
6-bean 6/AgrS-boil-CI-PST 18-9-pan/18-7-wind/by Luzolo
The cabbage boiled by means of pan/from the wind/by Luzolo

d. ? *Ø-nguba* *zi-kaang-**uk**-idi* *#mu-Ø-kaangu/#mu-Ø-tembo/#kwa Luzolo*
10-Peanut 10/AgrS-toast-CI-PST 18-7-toaster/18-7-wind/by Luzolo
The peanuts toasted by means of the toaster/from the wind/by Luzolo

e. *#Ma-aki* *ma-syok-es-**ek**-e* *mu-Ø-mengo/mu-Ø-tembo/kwa n'kento*
6-egg 6/AgrS-fry-CAUS-CI-PST 18-7-frying pan/18-7-wind/by woman
The eggs fried by means of frying pan/from the wind/by a woman

6.2.4.2.2 *Agent-oriented* phrase modification

(70) a. *Ma-dya* *ma-lamb-**uk**-idi* ***mu-ndwenga***
6-food 6/AgrS-cook-CI-PST 18-cautiously
Meal cooked cautiously (Intd: someone cooked the meal cautiously)

b. ?*Mu-nsambu* *u-yok-ok-ele* ***mu-ndwenga***
3-fish 3/AgrS-roast-CI-PST 18-cautiously
fish roasted cautiously (Intd: someone roasted fish cautiously)

c. *Ma-dezo* *ma-vul-**uk**-idi* ***mu-ngangu***
6-bean 6/AgrS-boil-CI-PST 18-intelligently
Bean boiled intelligent (Intd: someone boiled the beans intelligently)

d. ? *Ø-nguba* *zi-kaang-**uk**-idi* ***mu-ndwenga***
10-Peanut 10/AgrS-toast-CI-PST 18-cautiously
The peanuts toasted cautiously

e. #*Ma-aki* *ma-syokes-**ek**-ele* ***mu-ndwenga***
6-egg 6/AgrS-fry-CI-PST 18-cautiously
Eggs fried cautiously (Intd: someone fried the eggs cautiously)

6.2.4.2.2 *By-self* phrase modification

(71) a. #*Ma-dya* *ma-lamb-**uk**-idi* *m- au mosi*
6-food 6/AgrS-cook-CI-PST 6- iteslf
Meal cooked by itself (Intd: someone ooked the meal himself)

b. ?*Mu-nsambu* *u-yok-**ok**-ele* *w-au mosi*
3-fish 3/AgrS-roast-CI-PST AgrS-itself
Fish roasted by itself (Intd: someone roasted the fish himself)

c. #*Ma-dezo* *ma-vul-**uk**-idi* *m-au mosi*
6-bean 6/AgrS-boil-CI-PST 6-itself
Bean boiled by itself (Intd: someone boil the beans himself)

d. ? *Ø-nguba* *zi-kaang-**uk**-idi* *z-au mosi*
10-peanut 10/AgrS-toast-CI-PST 10-itself
Peanuts toasted by itself (Intd: someone toasted peanuts himself)

e. #*Ma-aki* *ma-syok-es-**ek**-ele* *m-au mosi*
6-egg 6/AgrS-fry-CAUS-CI-PST 6-itself
Eggs fried by itself (Intd: someone fried eggs himself)

6.2.4.2.4 *Again* phrase modification

(72) a. *Ma-dya* *ma-lamb-**uk**-idi* ***dyaka***
6-food 6/AgrS-cook-CI-PST again
Meal cooked again (Intd: someone cooked the meal again)

b. ?*Mu-nsambu* *u-yok-**ok**-ele* ***dyaka***
3-fish 3/AgrS-roast-CI-PST again
Dry fish roasted again (Intd: someone roasted the fish again)

c. *Ma-dezo* *ma-vul-**uk**-idi* ***dyaka***
6-bean 6/AgrS-boil-CI-PST again
The bean boiled again (Intd: someone boiled the beans again)

d. ?*Ø-nguba* *zi-kaang-**uk**-idi* ***dyaka***
10-peanut 10/AgrS-toast-CI-PST again
Peanuts toasted again (Intd: someone toasted peanuts again)

e. #*Ma-aki* *ma-syok-es-**ek**-ele* ***dyaka***
6-egg 6/AgrS-fry-CAUS-CI-PST again
Eggs fried again (Intd: someone fried eggs again)

6.2.4.2.5 *Purpose* clause modification

(73) a. #*Ma-dya* ***di**-ma-lamb-**uk**-idi* ***mpasi vo*** *ma-dya mo a-ntu*
6-food Cp-6/AgrS-cook-CI-APPL-PST so that 6-meal it 2-person
The meal cooked so that people can feed eat them (Intd: someone cooked the meal so that people eat it)

b. ?#*Mu-nsambu* ***di**-u-yok-**ok**-ele* ***mpasi vo*** *mu-diila wo luku*
3-fish Cp-3/AgrS-roast-CI-PST so that 3-eat it with funge
Fish roasted so that they eat it for funge (Intd: someone roasted the fish so that they eat with porridge)

c. #*Ma-dezo* ***di**-ma-vuul-uk-idi* ***mpasi vo*** *ma-lambila mo nzenza*
6-bean Cp-6/AgrS-boil-CI-PST so that 6-cook them for visitors
The cabbage boiled so that they (beans) cook them for the visitors

d. ?*Ø-nguba* ***di**-zi-kaang-uk-idi* ***mpasi vo*** *za-tula zo mu-nkovi*
10-Peanut Cp-10/AgrS-toast-CI-PST so that 10-put them18-cabbage
The peanuts toasted so that they use them when they cook cabbage

e. #*Ma-aki* ***di**-ma-syok-es-ek-e* ***mpasi vo*** *adiila mo dimpa*
6-egg Cp-6/AgrS-fry-CAUS-CI-PST so that they eat for them bread
The eggs fried so that they eat them with bread

6.2.4.2.5 *Temporal* phrase modification

(74) a. *Ma-dya* *ma-lamb-**uk**-idi* *(kolo kya-/mu-)ngunga imosi*
6-food 6/AgrS-cook-CI-PST for/in an hour
The meal cooked for/in an hour (Intd: someone cooked the meal for/in an hour)

b. **?***Mu-nsambu* *u-yok-**ok**-ele* *(kolo kya-/mu-)ngunga imosi*
3-fish 3/AgrS-roast-CI-PST for/in an hour
The dry fish roasted for/in an hour (Intd: someone roasted the fish for/in an hour)

c. *Ma-dezo* *ma-vul-**uk**-idi* *(kolo kya-/mu-)ngunga imosi*
6-bean 6/AgrS-boil-CI-PST for/in an hour
The cabbage boiled for/in an hour (Intd: someone boiled the meal for/in an hour)

d. ? *Ø-nguba* *zi-kaang-u**k**-idi* *(kolo kya-/mu-)ngunga imosi*
10-peanut 10/AgrS-toast-CI-PST for/in an hour
The peanuts toasted for/in an hour (Intd: someone toasted the peanut for/in an hour)

e. **Ma-aki* *ma-syok-es-e**k**-ele* *(kolo kya-/mu-)ngunga imosi*
6-egg 6/AgrS-fry-CAUS-CI-PST for/in an hour
The eggs fried for/in an hour (Intd: someone fried eggs for/in an hour)

6.2.4.3 *Passive and PP-modification*

(75) a. *Ma-dya* *ma-lamb-il-w-e* *mu-Ø-nzungu/#mu-Ø-tembo/kwa Luzolo*
6-food 6/AgrS-cook-APPL-PASS-PST 18-9-pan/18-7-wind/by Luzolo
The meal was cooked from the pan/wind/by Luzolo

b. *Ma-dezo* *ma-vuud-il-w-e* *mu-Ø-nzungu/#mu-Ø-tembo/kwa Luzolo*
6-bean 6/AgrS-boil-APPL-PASS-PST 18-9-pan/18-7-wind/by Luzolo
The cabbage was boiled from the pan/wind/by Luzolo

c. *Mu-nsambu* *u-yok-el-w-e* *#mu-Ø-kangu/#mu-Ø-tembo/kwa Luzolo*
3-fish 3/AgrS-roast-APPL-PASS-PST 18-7-toaster/18-7-wind/by Luzolo
The dry fish was roasted with toaster/from the wind/by Luzolo

d. *Ø-nguba* *zi-keenng-il-w-e* *#mu-Ø-kaangu/#mu-Ø-tembo/kwa mwana*
10-peanut 10/AgrS-toast-APPL-PASS-PST 18-7-toaster/18-7-wind/by child
The peanut was toasted from the toaster/wind/by the child

e. *Ma-aki* *ma-syok-es-w-e* *#mu-Ø-kangu/#mu-Ø-tembo/kwa n'kento*
6-egg 6/AgrS-fry-CAUS-PASS-PST 18-7-frying pan/18-7-wind/by woman
The eggs were fried in frying pan/the from wind/by the woman

6.2.4.3.1 *Agent-oriented* phrase modification

(76) a. *Ma-dya* *ma-lamb-il-w-e* ***mu-ntima wa mbote***
6-food 6/AgrS-cook-APPL-PASS-PST 18-good of heart
The meal was cooked happily

b. *Ma-dezo* *ma-vuud-il-w-e* ***mu-ndwenga***
6-bean 6/AgrS-boli-APPL-PASS-PST 18-cautiously
The cabbage was boiled cautiously

c. *Mu-nsambu* *u-yok-el-w-e* ***mu-ndwenga***
3-fish 3/AgrS-roast-APPL-PASS-PST 18-cautiously
The dry fish was roasted cautiously

d. *Ø-nguba* *zi-keenng-w-e* ***mu-ndwenga***
10-peanut 10/AgrS-toast-PASS-PST 18-cautiously
The peanut was toasted cautiously

e. *Ma-aki* *ma-syok-es-w-e* ***mu-ndwenga***
6-egg 6/AgrS-fry-CAUS-PASS-PST 18-cautiously
The eggs were fried cautiously

6.2.4.3.3 *By-self* phrase modification

(77) a. **Ma-dya* *ma-lemb-w-e* ***m-au mosi***
6-food 6/AgrS-cook-PASS-PST 6-itself
The meal was cooked by itself

b. **Ma-dezo* *ma-vuud-il-w-e* ***m-au mosi***
6-bean 6/AgrS-boli-APPL-PASS-PST 6-itself
The cabbage was boiled by itself

c. **Mu-nsambu* *u-yok-el-w-e* ***w-au mosi***
3-fish 3/AgrS-roast-APPL-PASS-PST 3-itself
The dry fish was roasted by itself

d. * *Ø-nguba* *zi-keenng-w-e* ***z-au mosi***
10-peanut 10/AgrS-toast-PASS-PST 10-itself
The peanut was toasted by itself

e. **Ma-aki* *ma-syok-es-w-e* ***m-au mosi***
6-egg 6/AgrS-fry-CAUS-PASS-PST 6-itself
The eggs were fried by itself

6.2.4.3.4 *Again* phrase modification

(78) a. *Ma-dya* *ma-lemb-w-e* ***dyaka***
6-food 6/AgrS-cook-PASS-PST again
The meal was cooked again

b. *Ma-dezo* *ma-vuud-il-w-e* ***dyaka***
6-bean 6/AgrS-boli-APPL-PASS-PST again
The cabbage was boiled again

c. *Mu-nsambu* *u-yok-el-w-e* ***dyaka***
3-fish 3/AgrS-roast-APPL-PASS-PST again
The dry fish was roasted again

d. *Ø-nguba* *zi-keenng-w-e* ***dyaka***
10-peanut 10/AgrS-toast-PASS-PST again
The peanuts were toasted again

e. **Ma-aki* *ma-syokes-w-e* ***dyaka***
6-egg 6/AgrS-fry-PASS-PST again
The eggs were fried again

6.2.4.3.4 *Purpose* clause modification

(79) a. *Ma-dya* ***di****-ma-lamb-il-w-e* ***mpasi vo*** *a-tu a-dya mo*
6-food Cp-6/AgrS-cook-APPL-PASS-PST so that 2-person 2-eat them
The meal was cooked so that people eat it

b. *Ma-dezo* ***di****-ma-vuud-il-w-e* ***mpasi vo*** *a-lambila mo Ø-nzenze*
6-bean Cp-6/AgrS-boil-APPL-PASS-PST so that 2-cook it for 9-guest
The cabbage was boiled so that they cook it for the guest

c. *Mu-nsambu* ***di****-u-yok-el-w-e* ***mpasi vo*** *a-di-il-a wo luku*
3-fish Cp-3/AgrS-roast-APPL-PASS-PST so that 2-eat-APPL-FV it
funge
The dry fish was roasted so that they eat it with fungi

d. *Ø-nguba* ***di****-zi-kang-il-w-e* ***mpasi vo*** *a-tula zo mu-nkovi*
10-peanut Cp-10/AgrS-toast-APPL-PASS-PST so that 2-put them in
cabbage
The peanut was toasted so that they use it when they cook cabbage

e. **Ma-aki* ***di****-ma-syok-es-el-w-e* ***mpasi vo*** *a-di-il-a mo mbolo*
6-egg Cp-AgrS-fry-CAUS-APPL-PASS-PST so that 2-eat-
APPL-FV for them bread
The eggs were fried so that they eat them with bread

6.2.4.3.5 Locative-applicative alternation

-lamba

(80) a. *Ø-n'kento* *lamb-id-i* *mw-ana* *ma-dya* *mu-Ø-nzungu*
1-woman cook-APPL-PST 1-child 6-food 18-9-pot
The woman cooked for child meal in pot (lit. 'The woman cooked the meal for the child in the pot)

b. *Ø-nzungu* *i-lamb-il-idi* *Ø-n'kento* *mw-ana* *ma-dya*
9-pot 9/AgrS-cook-APPL-PST 1-woman 1-child 6-food
The pot is the one exclusive place which the woman cooked the meal for child

-vuula

c. *Luzolo* *vuud-il-ang-a* *a-ana* *ma-dezo* *mu-Ø-nzungu*
1-PN boil-APPL-HAB-FV 2-child 6-bean 18-9-pot
Luzolo boils for the children the beans in the pot (Intd: Luzolo boils the beans for the children exclusively in a pot)

d. *Ø-nzungu yoyo* *i-vuud-il-ang-a* *Luzolo* *a-ana* *ma-dezo*
9-pot that 9/AgrS-boil-APPL-HAB-FV 1-PN 2-child 6-bean
That pot that Luzolo boils the beans for the children (Intd: that pot that Luzolo exclusively boils beans for the children)

-yoka

e. *Luzolo* *u-gyok-el-ang-a* *a-ana* *mu-nsambu* *va-Ø-ziku*
1-PN 1/AgrS-roast-APPL-HAB-FV 2-child 3-fish 16-5-fire
Luzolo roasts for children the fish at the fire (Intd: 'Luzolo roasts the fish for children exclusively at the fire')

f. *Ø-ziku* *di-gyok-el-ang-a* *Ø-Luzolo* *a-ana* *mu-nsambu*
5-stove 5/AgrS-roast-APPL-HAB-FV 1-PN 2-child 4-fish
The fire roasts woman childern the dry fish (Intd: the fire is the place which the woman exclusively roasts the fish for the children)

-kaanga

g. *Luzolo* *u-kaang-il-ang-a* *a-ana* *Ø-nguba* *va- Ø-kaangu*
1-PN 1/AgrS-toast-APPL-HAB-FV 2-child 10-peanut 16-7-toaster
Luzolo toasts for child peanuts on toaster (Intd: Luzolo toasts peanuts for the children exclusively on the toaster)

h. *Ø-kaangu* *ki-kaang-il-ang-a* *Ø-Luzolo* *a-ana* *Ø-nguba*
7-toaster 7/AgrS-toast-APPL-HAB-FV 1-PN 2-child 10-peanut
The toaster that Luzolo toasts the peanuts for children (Intd: the toatser is the exclusive which Luzolo toast peanuts for the children)

-syokesa

i. *Ø-n'kento u-syok-es-el-ang-a a-ana ma-aki va-Ø-mengo*
1-woman 1/AgrS-fry-CAUS-APPL-HAB-FV 2-child 6-egg 16-7-frying pan
Woman fries the eggs for children in the frying pan (Intd: the woman fries eggs for the children exclusively on the frying pan)

j. *Ø-'mengo ki-syok-es-el-ang-a Ø-n'kento a-ana ma-aki*
7-frying pan 7/AgrS-fry-CAUS-APPL-HAB-FV 1-woman 2-child 6-egg
The frying pan the woman fries aggs for the children (Intd: the frying pan is the exclusive place which the woman fries eggs for the children)

6.2.4.4 *Middle* formation

(81) a. *Ø-nsusu i-tom-a lamb-**uk**-ang-a #mundwenga/#yau mosi*
9-meat 9/AgrS-be good-FV cook-CI-HAB-FV caustiously/by itself
The chicken cooks well caustiously/by itself

b. *Mu-nsambu wa sala kyandeki u-tom-a gyok-**ok**-ang-a #mundwenga/#wau mosi*
3-cold fish 3-be good-FV roast-CI-HAB-FV caustiously/by itself
The cold fish roasts well caustiously/by itself

c. *Ma-dezo mazimbu ma-tom-a vuul-**uk**-ang-a #mundwenga/#mau mosi*
6-beans 6-be good-FV boil-CI-HAB-FV caustiously/by itself
The beans boil well caustiously/by itself

d. *Ø-nguba za nzewa zi-tom-a kaang-**uk**-ang-a #mundwenga/#zau mosi*
10/fresh peanut 10-be good-FV toast-CI-HAB-FV caustiously/by itself
The fresh peanuts toast well caustiously/by itself

e. **Ma-aki ma-ma ma-tom-a syok-es-ek-ang-a *mu-ndwenga/*mau mosi*
6-egg 6-these 6-be good-FV fry-CAUS-CI-HAB-FV caustiously/by itself
These eggs fry well caustiously/by itself

6.2.5 *-dya* "Ingesting" verbs"

6.2.5.1 *Causative*

6.2.5.1.1 *Agent as causer*

(82) a. *Nzumba/Ø-nkombo* *di-idi* *di-nkondo*
1-PN/3-goat eat-PST 5-banana
Nzumba/goat ate banana (Intd: Nzumba/the goat ate a banana)

b. *Nzumba/ Ø-nkombo* *tafun-i* *dy-oko*
1-PN/3-goat chew-PST 5-manioc
Nzumba/goat chewed manioc (Intd: Nzumba/the goat chew a manioc)

6.2.5.1.2 Instrument/natural force as external causer

(63) a. *#Ø-nsati yayi/# Ø-tembo* *i-ki-di-idi* *di-nkondo*
8-fork this/7-wind 8-7/AgrS-eat-PST 5-banana
This fork/wind ate banana (Intd: this fork/wind ate a banana)

b. *#Ø-mbele/#Ø-tembo* *i-ki-tafun-i* *dy-oko*
9-knife/7-wind 9-7/AgrS-chew-PST 5-manioc
The knife/wind chewed a manioc

6.2.5.1.3 *Agent-oriented* phrase modification

(62) a. *Nzumba* *di-idi* *di-nkondo* ***mu-kinsweki***
1-PN eat-PST 5-banana 18-secret
Nzumba ate banana secretly

b. *Nzumba* *tafun-i* *dy-oko* ***mu-nswalu***
1-PN chew-PST 5-manioc 18-fast
Nzumba chewed manioc fast

6.2.5.1.4 *By-self* phrase modification

(62) a. *Nzumba* *di-idi* *di-nkondo* ***yani mosi***
1-PN eat-PST 5-banana him/herself
Nzumba ate a banana him/herself

b. *Nzumba* *tafun-i* *dy-oko* ***yani mosi***
1-PN chew-PST 5-manioc him/herself
Nzumba chewed a manioc him/herself

6.2.5.1.5 *Again* phrase modification

(62) a. *Nzumba* *di-idi* ***dyaka*** *di-nkondo*
1-PN eat-PST again 5-banana
Nzumba ate a banana again

b. *Nzumba* *tafun-i* ***dyaka*** *dy-oko*
1-PN chew-PST again 5-manioc
Nzumba chewed a manioc again

6.2.5.1.6 *Purpose* clause modification

(62) a. *Nzumba* ***di****-ka-di-id-idi* *di-nkondo* ***mpasi vo*** *ka-nwina dyo maaza*
1-PN Cp-1-eat-PST 5-banana so tha 1-drink it water
Nzumba/goat ate banana so that s/he drinks water

b. *Nzumba* ***di****-ka-tafun-ini* *dy-oko* ***mpasi vo*** *ka-nwina dyo maaza*
1-PN Cp-1-chew-PST 5-manioc so that 1-drink it water
Nzumba chewed a manioc so that s/he drink a glass of water for it

6.2.5.1.7 *Temporal* phrase modification

62) a. *Nzumba* *di-idi* *di-nkondo (#kolo kya-/mu-)ngunga imosi*
1-PN eat-PST 5-banana for/in an hour
Nzumba ate a banana for/in an hour

b. *Nzumba* *tafun-i* *dy-oko(#kolo kya-/mu-)ngunga imosi*
1-PN chew-PST 5-manioc for/in an hour
Nzumba/goat chewed manioc for/in an hour

6.2.5.2 Anticausative

(62) a. *Di-nkondo* *di-di-****uk****-idi*
5-banana 5/AgrS-eat-CI-PST
The/a banana ate (Intd: someone ate a banana)

b. *Dy-oko* *di-taf-****uk****-ini*
5-manioc 5/AgrS-chew-CI-PST
The/a manioc chewed (Intd: someone chewed a manioc)

6.2.5.2.1 *PP-modification*

(63) a. *Di-nkondo* *di-di-****uk****-idi* *#mu-Ø-nsati/#mu-Ø-tembo/#kwa Luzolo*
5-banana 5/AgrS-eat-CI-PST 18-9-fork/18-7-tempo/by Luzolo
The banana ate in fork/from the wind/by Luzolo (Intd: someone ate a banana by means of fork)

b. *Dy-oko* *di-taf-****uk****-ini* *#mu-me-eno/#mu-Ø-tembo/#kwa Luzolo*
5-manioc 5/AgrS-chew-CI-PST 18-6-teeth/18-7-wind/by Luzolo
The manioc chewed in teeth/from the wind/by Luzolo (Intd: someone chewed a manioc by means of teeth)

6.2.5.2.2 *Agent-oriented* phrase modification

(63) a. *Di-nkondo* *di-di-****uk****-idi* ***ku-makasi***
5-banana 5/AgrS-eat-CI-PST 17-angrily
The banana ate angrily (Intd: someone ate a banana angrily)

b. *Dy-oko* *di-taf-**uk**-ini* ***ku-makasi***
5-manioc 5/AgrS-chew-CI-PST 17-angrily
The manioc chewed angrily (Intd: someone chewed a manioc angrily)

6.2.5.2.3 *By-self* phrase modification

(64) a. *#Di-nkondo* *di-**uk**-idi* ***dy-au mosi***
5-banana 5/AgrS-eat-CI-PST 5-itself
The banana ate by itself (Intd: someone ate a banana alone)

b. *#Dy-oko* *taf-**uk**-ini* ***dy-au mosi***
5-manioc 5/AgrS-chew-CI-PST 5-itself
The manioc chewed by itself (Intd: someone chewed amanioc alone)

6.2.5.2.4 *Again* phrase modification

(65) a. *Di-nkondo* *di-di-**uk**-idi* *dyaka*
5-banana 5/AgrS-eat-CI-PST again
Banana ate again (Intd: someone ate a banana again)

b. *Dy-oko* *di-taf-**uk**-ini* *dyaka*
5-manioc 5/AgrS-chew-CI-PST again
Manioc chewed again (Intd: someone chewed a manioc again)

6.1.5.2.5 *Purpose* clause modification

(66) a. ?*Di-nkondo* ***di**-di-di-**uk**-idi* ***mpasi vo** dyanwina dyo maaza*
5-banana Cp-5/AgrS-eat-CI-PST so that I drink it water
Banana ate so that I can drink water (Intd: someone ate a banana so that s/he drinks water for it)

b. ?*Dy-oko* ***di**-di-taf-**uk**-ini* ***mpasi vo** dyanwina dyo maaza*
5-manioc Cp-5/AgrS-chew-CI-PST so that we drink it water
Manioc chewed so that we can drink water with it (Intd: someone chewed a manioc so that s/he drinks water for it)

6.2.5.2.6 *Temporal* phrase modification

(66) a. ?[28]*Di-nkondo* *di-di-**uk**-idi* *(kolo kya-/mu-ngunga imosi*
5-banana 5/AgrS-eat-CI-PST for/in an hour
Banana ate for/in an hour (Intd: someone ate a banana for/in an hour)

b. *Dy-oko* *di-taf-**uk**-ini* *(kolo kya-/mu-ngunga imosi*
5-manioc 5/AgrS-chew-CI-PST for/in an hour
Manioc chewed for/in an hour (Intd: someone chewed a manioc for/in an hour)

[28] Although some speakers acknowledge this construction, some others say that such a construction sounds awkward due to phonological constraints. People would say '*dinkondo di-n-didi dyo mpasi vo ya nwa maaza*.'

6.2.5.3 *Passive* and PP-modification

(67) a. ? *Ø-nguba* *zi-di-il-w-e* *mu-Ø-nsatu/#mu-Ø-tembo/kw Luzolo*
10-peanut 10/AgrS-eat-APPL-PASS-PST 18-9-fork/18-7-wind/by Luzolo
The peanuts were eaten with fork/from the wind/by Luzolo

b. *Ø-nguba* *zi-tafun-w-e* *mu-me-eno/#mu-Ø-tembo/kwa Luzolo*
10-peanut 10/AgrS-chew-PASS-PST 18-6-teeth/18-7-wind/by Luzolo
The peanut were chewed with teeth/from wind/by Luzolo

6.2.5.3.1 *Agent-oriented* phrase modification

(68) a. ? *Ø-nguba* *zi-di-il-w-e* ***ku-makasi***
10-peanut 10/AgrS-eat-APPL-PASS-PST 17-angrily
Peanuts were eaten angrily (Intd: the peanuts were eaten angrily)

b. *Ø-nguba* *zi-tafun-w-e* ***ku-makasi***
10-peanut 10/AgrS-chew-PASS-PST 17-angrily
Peanut were chewed angrily (Intd: the peanut were chewed angrily)

6.2.5.3.2 *By-self* phrase modification

(69) a. * *Ø-nguba* *zi-di-il-w-e* ***z-au mosi***
10-peanut 10/AgrS-eat-APPL-PASS-PST 10-itself
Peanuts were eaten by itself

b. * *Ø-nguba* *zi-tafun-w-e* ***z-au mosi***
10-peanut 10/AgrS-chew-PASS-PST angrily
The peanut were chewed angrily

6.2.5.3.3 *Again* phrase modification

(70) a. *Ø-nguba* *zi-di-il-w-e* ***dyaka***
10-peanut 10/AgrS-eat-APPL-PASS-PST again
The peanuts were eaten again

b. *Ø-nguba* *zi-tafun-w-e* ***dyaka***
10-eanut 10/AgrS-chew-PASS-PST again
The peanut were chewed again

6.1.5.3.4 *Purpose* clause modification

(71) a. # *Ø-nguba* ***di****-zi-di-il-w-e* ***mpasi vo*** *za-nwa maaza*
10-peanut Cp-10/AgrS-eat-APPL-PASS-PST so that 10-drink water
The peanuts were eaten so that they (peanut) can drink water (Intd: the people ate peanut so that they can drink water for it)

b. *#Ø-nguba* ***di****-zi-tafunun-w-e* ***mpasi vo*** *za-kuswa kun'tu wa mwana*
10-peanut Cp-10/AgrS-chew-PASS-PST so that 10-put them on the head of child.
The peanuts were chewed so that they put the on the head of the child)

6.2.5.3.5 Locative-applicative alternation

-dya

(72) a. *Nzumba* *u-di-il-ang-a* *ma-dya* *va-meza*
1-PN 1/AgrS-eat-APPL-HAB-FV 6-food 16-table
Nzumba ate the meal on the table (Intd: Nzumba eat the meal exclusively on the table)

b. *Ø-meza* *ma-di-il-ang-a* *Ø-Nzumba* *ma-dya*
6-table 6-eat-APPL-HAB-FV 1-PN 6-food
Table eat Nzumba meals (Intd: the table is the exclusive place which Nzumba have the meal)

6.2.5.4 Middle formation

(73) a. *# Ø-nguba zanzewa* *zi-tom-a* *di-uk-ang-a* *#mundwenga/#mau mosi*
10-peanut 10/AgrS-be good-FV eat-CI-HAB-FV caustiously/by itself
The fresh peanuts eat well caustiously/by itself

b. *# Ø-nguba zanzewa* *zi-tom-a* *tafuk-ang-a* *#mu-ndwenga/#mau mosi*
10-peanut fresh 10/AgrS-be good-FV chew-HAB-FV 10-caustious/by itself
These peanuts chew well caustiously/by itself

6.2.6 -*tuunga* "build" verbs"

6.2.6.1 *Causative*

6.2.6.1.1 *Agent as the external causer*

(74) a. *Ø-n'tungi wa nzo/nuni* *tuung-idi* *Ø-gyaka/Ø-zala*
1-builder of house/Ø/3-bird build-PST 7-wall/5-nest
The builder/bird builts a wall/nest

b. *Ø-doko/# Ø-nkombo* *di-kus-idi* *mpemba* *mu-Ø-nzo*
5-boy/9-goat 5/AgrS-paint-PST paint 18-9-house
The boy/goat painted the house with paint

6.2.6.1.2 Instrument/natural force as external causer

(75) a. *# Ø-mbele ya mason/# Ø-tembo* *i-tung-idi* *Ø-gyaka*
9-trowel/Ø-wind 9/AgrS-build-PST 7-wall
The trowel/wind builts the/a wall

b. *#Ø-sesa/# Ø-tembo* *kyaki* *ki-tom-ene* *kus-a* *mpemba*
7-brush/7-wind this 7/AgrS-be good-PST paint-FV paint
This brush/wind painted the house well

6.2.6.1.3 *Agent-oriented* phrase modification

(74) a. *Ø-n'tungi wa nzo* *tuung-idi* *Ø-gyaka* ***mu-ndwenga***
1-builder of house build-PST 7-wall 18-cautiously
The builder/bird built the wall cautiously

b. *Ø-toko* *di-kus-idi* *Ø-mpemba* ***mu-ndwenga***
5-boy 5/AgrS-paint-PST 9-paint 18-cautiously
The boy painted the house cautiously

6.2.6.1.4 *By-self* phrase modification

(74) a. *Ø-n'tungi wa nzo* *tuung-idi* *Ø-gyaka* ***yani mosi***
5-builder of house build-PST 7-wall by him/herself
The builder/bird built a wall by him/herself

b. *Ø-toko* *di-kus-idi* *Ø-mpemba* ***yani mosi***
5-boy 5/AgrS-paint-PST 9-paint by him/herself
The boy/goat painted the house by him/herself

6.2.6.1.5 *Again* phrase modification

(74) a. *Ø-n'tungi wa nzo* *tuung-idi* ***dyaka*** *Ø-gyaka*
1-builder of house build-PST again 7-wall
The builder built the wall again

b. *Ø-toko* *di-kus-idi* ***dyaka*** *Ø-mpemba* *mu-Ø-nzo*
5-boy 5/AgrS-paint-PST again 9-paint 18-9-house
The boy/goat painted the house with paint again

6.2.6.1.6 *Purpose* clause modification

(74) a. *Ø-n'tungi wa nzo* *di-ka-tuung-idi* *Ø-nzo* ***mpasi vo*** *ka-teka* *yo*
1-builder of house CP-1-build-PST 9-house so that 1-sell it
The builder built a house so that s/he sells it

b. *Ø-toko di-ka-kus-idi Ø-mpemba* ***mpasi vo*** *Ø-gyaka kya vyengelela*
5-boy Cp-1-paint-PST 9-paint so that 7-wall it clean
The boy painted the wall so that it become clean

6.2.6.1.7 *Temporal* phrase modification

(74) a. *Ø-n'tungi wa nzo tuung-idi Ø-gyaka (*kolo kya-/mu-) ngunga imosi*
1-builder of house build-PST 7-wall for/in an hour
The builder built a wall for/in an hour

b. *Ø-toko di-kus-idi Ø-mpemba (kolo kya-/*mu-) ngunga imosi*
5-boy 5/AgrS-paint-PST 9-paint for/in an hour
The boy/goat painted the house for/in an hour

6.2.6.2 *Anticausative*

(76) a. *Ø-gyaka ki-tung-**am**-ene*
7-wall 7/AgrS-CI-PST
The house built (Intd: someone built the wall)

b. *# Ø-nzo i-kus-**uk**-idi mpemba*
9-house 9/AgrS-paint-CI-PST paint
The house painted (Intd: someone painted the house)

6.2.6.2.3 *PP-modification*

(79) a. *Ø-gyaka ki-tung-**am**-ene mu-Ø-mbele/#mu-Ø-tembo/#kwa Luzolo*
7-wall 7/AgrS-built-CI-PST 18-9-trowel/18-7-wind/by Luzolo
House built by means of trowel/from the wind/by Luzolo (Intd: someone built the house with of trowel)

b. *# Ø-nzo i-kus-**uk**-idi Ø-mpemba #mu-Ø-sesa/#mu-Ø-tembo/#kwa Luzolo*
9-house 9/AgrS-paint-CI-PST 9-paint 18-7-brush/18-7-wind/by Luzolo
The house painted by means of brush/from the wind/by Luzolo (Intd: someone painted the house with the brush)

6.2.6.2.1 *Agent-oriented* phrase modification

(77) a. *Ø-gyaka ki-tung-**am**-ene mu-ndwenga*
7-wall 7/AgrS-CI-PST 18-cautiously
House built cautiously (Intd: someone built the house cautiously)

b. # *Ø-gyaka* *ki-kus-u**k**-idi* *Ø-mpemba* *mu-ngangu*[29]
7-wall 7/AgrS-paint-CI-PST 9-paint 18-intelligently
The wall painted intelligently (Intd: someone painted the wall intelligently)

6.2.6.2.2 *By-self* phrase modification

(78) a. # *Ø-gyaka* *ki-tung-**am**-ene* ***ky-au mosi***
7-wall 7/AgrS-CI-PST 7-itself
The house built by itself (Intd: someone built the wall by him/herself)

b. # *Ø-gyaka* *ki-kus-**uk**-idi* *mpemba* ***ky-au mosi***
7-wall 7/AgrS-paint-CI-PST paint 7-itself
The wall painted by itself (Intd: someone painted the house by him/herself)

6.2.6.2.4 *Again* phrase modification

(80) a. *Ø-gyaka* *ki-tung-**am**-ene* ***dyaka***
7-wall 7/AgrS-built-CI-PST again
The house buill again (Intd: someone build the wall again)

b. * *Ø-gyaka* *ki-kus-**uk**-idi* *Ø-mpemba* ***dyaka***
7-wall 7/AgrS-paint-CI-PST 9-paint again
The wall painted again (Intd: someone painted the wall again)

6.2.6.2.5 *Purpose* clause modification

(81) a. # *Ø-nzo* ***di**- i-tung-**am**-ene* ***mpasi vo** ya lenganga aana*
9-wall Cp-9/AgrS-built-CI-PST so that the children sleep in it
The house built so that the children sleep in it (Intd: someone built the house so that people can live in it)

b. # *Ø-nzo* ***di**-i-kus-u**k**-idi* *Ø-mpemba* ***mpasi vo** ya vyengela*
9-house Cp-9/AgrS-paint-CI-PST 9-paint so that it looks nice
The house painted so that it look nice (Intd: someone painted the wall so that it can look nice)

6.2.6.2.6 *Temporal* phrase modification

78) a. *Ø-gyaka* *ki-tung-**am**-ene* *(*kolo kya-/mu-)ngunga imosi*
7-wall 7/AgrS-CI-PST for/in an hour
The house built for/in an hour (Intd: someone built the wall for/in an hour)

b. # *Ø-gyaka* *ki-kus-**uk**-idi* *Ø-mpemba* *(kolo kya-/mu-)ngunga imosi*
7-wall 7/AgrS-paint-CI-PST 9-paint for/in an hour
The wall painted by itself (Intd: someone painted the house for/in an hour)

[29] Speakers would prefer using passive form (i.e., gyaka kikusilwe mpemba mundwenga)

6.2.6.3 Passive and PP-modification

(82) a. *Ø-gyaka kyaki ki-tung-il-w-e mu-Ø-mbele/#mu-Ø-tembo/kwa n'tungi wa nzo*
7-wall this 7/AgrS/build-APPL-PASS-PST 18-9-knife/18-Ø/7-wind/by builder
This wall was built by means of the knife/wind/the/a builder

b. *Ø-gyaka ki-kus-il-w-e Ø-mpemba mu-Ø-sesa/#mu- Ø-tembo/kwa Luzolo*
7-wall 7/AgrS-paint-APPL-PASS-PST 9-paint 18-7-brush/18-7-wind/by Luzolo
The house was painted by means of brush/from wind/by Luzolo

6.2.6.3.1 *Agent-oriented* phrase modfication

(83) a. *Ø-gyaka kyayi ki-tung-il-w-e* ***ku-makasi***
7-wall this 7/AgrS/build-APPL-PASS-PST 17-angrily
This wall was built angrily

b. *Ø-gyaka ki-kus-il-w-e Ø-mpemba* ***mu-ndwenga***
7-wall 7/AgrS-paint-APPL-PASS-PST 9-paint 18-cautiously
The wall was painted cautiously

6.2.6.3.2 *By-self* phrase modification

(84) a. * *Ø-gyaka kyaki ki-tung-il-w-e ky-au mosi*
7-wall this 7/AgrS/build-APPL-PASS-PST 7-itself
This wall was built by itself

b. * *Ø-gyaka ki-kus-il-w-e Ø-mpemba ky-au mosi*
7-wall 7/AgrS-paint-APPL-PASS-PST 9-paint 7-au mosi
The wall was painted by itself

6.2.6.3.3 *Again* phrase modification

(85) a. *Ø-gyaka kyayi ki-tung-il-w-e* ***dyaka***
7-wall this 7/AgrS-build-APPL-PASS-PST again
This wall was built again

b. *Ø-gyaka ki-kus-il-w-e Ø-mpemba* ***dyaka***
7-wall 7/AgrS-paint-APPL-PASS-PST 9-paint again
The wall was painted again

6.2.6.3.4 *Purpose* phrase modification

(86) a. *Ø-nzo yayi* ***di****-i-tung-il-w-e* ***mpasi vo*** *ya tekwa*
9-house this Cp-9/AgrS/build-APPL-PASS-PST so that it can be sold
This house was built so that it can be sold

b. *Ø-gyaka* ***di****-ki-kus-il-w-e* *Ø-mpemba* ***mpasi vo*** *kya lengoka*
7-wall Cp-7/AgrS-paint-APPL-PASS-PST 9-paint so that it looks nice
The house was painted so that it looks nice

6.2.6.4 Middle formation

(87) a. *Ø-nzo ya suku dimosi i-tom-a tung-****am****-ang-a #mundwenga/#yau mosi*
9-house of room one 9-be good-FV build-CI-HAB-FV caustiously/by itself
A bed-room house builds well caustiously/by itself

b. *Ø-gyaka kya lengwa sima ki-tom-a kus-****uk****-ang-a mpemba #mundwenga/#kyau mosi*
7-wall ciment 7/AgrS-be good-FV paint-CI-HAB-FV paint caustiously/by itself
The cimented wall paints well caustiously/by itself

6.3.1-*gyuma* "parch"

6.3.1.1*Causative*

6.3.1.1.1 *Agent* as causer

(88) a. *# Ø-m'vati yum-ini Ø-mvuma*
1-famer parch-PST 10-flowers
Farmer parched flowers (Intd: the flowers parched)

b. *Ø-n'kento lekok-ele Ø-nsaki*
1-flowers wilt-PST 9-cassava-leave
Woman wilted cassava-leave (Intd: the woman wilted the cassava-leaves)

c. *#Mw-ana wol-ele Ø-mpuku*
1a-child rot-PST 3-rat
Child rot rat (Intd: the rat rotted)

d. *#Mu-ntu mmen-ene Ø-mvuma*
1-person bloom-PST 10-flowers
Person bloomed flowers (Intd: the flowers bloomed)

e. *# Ø-nkaka bwek-e ma-nkondo*
1-grandpa ripen-PST 6-banana
Grandpa ripened bananas (Intd: the bananas ripened)

f. *# Ø-nkaka lomb-ele Ø-nsafu*
1-grandpa wrippen-PST 10-safu
Grandpa ripened safu (Intd: Safu ripened)

g. *# Ø-n'kento* *vi-idi* *Ø-mbizi*
1-woman tender-PST 9-meat
Woman tendered the meat (Intd: the meat tendered)

6.3.1.1.1.2 Instrument/natural natural as causer

(89) a. *# Ø-tanzi/# Ø-mwini* *ki-u-yum-ini* *Ø-mvuma*
7-machete/3-wind 7-3/AgrS-parch-PST 10-flowers
Machete/wind parched flowers (Intd: the flowers parched)

b. *#Mwisu/Ø-tuya* *tu-leko-ele* *Ø-nsaki*
3-pounding wood/14fire 3-14/AgrS-wilt-PST 9-cassava-leaves
Pounding/fire wilted cassava-leaves (Intd: the cassava-leaves wilted from the fire)

c. *#Ø-mbele/#Ø-wunga* *i/di-wol-ele* *Ø-mpuku*
9-knife/5-snow 9/AgrS-rot-PST 9-rat
The knife/snaw rotted rat (Intd: the rat rotted)

d. *#Mu-ntu/#Ø-wunga* *di-mmen-ene* *Ø-mvuma*
1-person/5-snaow 5/AgrS-bloom-PST 10-flowers
Person/snow bloomed flowers (Intd: the flowers bloomed)

e. *# Ø-nlongo/# Ø-kyungula* *mi/ki-bwek-e* *ma-nkondo*
4-fertilizer/7-warmth 3-7/AgrS-ripen-PST 6-banana
Medicine/warmth ripened bananas (Intd: the bananas ripened with the help of medicine)

f. *# Ø-nlongo/# Ø-kyungula* *ki-lomb-ele* *Ø-nsafu*
4-ferlizer/7-warmth 7/AgrS-ripen-PST 10-safu
Fertilizer/warmth wrippened safu (Intd: the safu ripened)

g. *# Ø-mbele /Ø-tuya* *tu-vi-idi* *Ø-mbizi*
9-knife/14-fire 14/AgrS-tender-PST 9-meat
Knife/fire tendered meat (Intd: the meant tenedered with the help of fire)

6.3.1.1.1.2 *Agent-oriented* phrase modification

(90) a. *# Ø-m'vati* *yum-ini* *Ø-mvuma* ***mu-ndwenga***
1-famer parch-PST 10-flowers 18-caution
Farmer parched flowers coutiously (Intd: the flowers parched cautiously)

b. *Ø-n'kento* *lekok-ele* *Ø-nsaki* ***mu-ndwenga***
1-flowers wilt-PST 9-cassava-leave 18-caution
Woman wilted cassava-leaves caution (Intd: the woman wilted the cassava-leaves cautiously)

c. *#Mw-ana* *wol-ele* *Ø-mpuku* ***mu-kizowa***
1a-child rot-PST 9-rat 18-foolish
Child rot rat foolish (Intd: the rat rotted foolishly)

d. *#Mu-ntu* *mmen-ene* *Ø-mvuma* ***mu-kinsweki***
1-person bloom-PST 10-flowers 18-secret
Person bloomed flowers secret (Intd: the flowers bloomed secretly)

e. *#Ø-nkaka* *bwek-e* *ma-nkondo* ***mu-swalu***
1-grandpa ripen-PST 6-banana 18-fast
Grandpa ripened bananas fast (Intd: the bananas ripened fast)

f. *#Ø-nkaka* *lomb-ele* *Ø-nsafu* ***mu-swalu***
1-grandpa wrippen-PST 9-safu 18-fast
Grandpa ripened safu fast (Intd: Safu ripened)

g. *#Ø-nkento* *vi-idi* *Ø-mbizi* ***mu-nswalu***
1-woman tender-PST 9-meat 10-fast
Woman tendered the meat fast (Intd: the meat tendered fast)

6.3.1.1.1.3 *By-self* phrase modification

(91) a. *# Ø-m'vati* *yum-ini* *Ø-mvuma* ***yani mosi***
1-famer parch-PST 10-flowers him/her self
Farmer parched flowers by itself (Intd: the flowers parched by themselves)

b. *Ø-n'kento* *lekok-ele* *Ø-nsaki* ***yani mosi***
1-flowers wilt-PST 9-cassava-leaves her self
Woman wilted cassava-leaves herself (Intd: the woman wilted the cassava-leaves without any help)

c. *#Mw-ana* *wol-ele* *Ø-mpuku* ***yani mosi***
1a-child rot-PST 9-rat him/her-self
Child rot rat him/herself (Intd: the rat rotted by itself)

d. *#Mu-ntu* *'men-ene* *Ø-mvuma* ***yani-mosi***
1-person bloom-PST 10-flowers him/herself
Person bloomed flowers him/herself (Intd: the flowers bloomed by themselves)

e. *#Ø-nkaka* *bwek-e* *ma-nkondo* ***yani mosi***
1-grandpa ripen-PST 6-banana him/herself
Grandpa ripened bananas him/herself (Intd: the bananas ripened by themselves)

f. *#Ø-nkaka* *lomb-ele* *Ø-nsafu* *yani mosi*
1-grandpa wrippen-PST 9-safu him/herself
Grandpa ripened safu him/herself (Intd: Safu ripened by itself)

g. *# Ø-n'kento* *vi-idi* *Ø-mbizi* ***yani mosi***
1-woman tender-PST 9-meat herself
Woman tendered the meat herself (Intd: the meat tendered by itself)

6.3.1.1.1.4 *Again* phrase modification

(92) a. # *Ø-m'vati* *yum-ini* ***dyaka*** *Ø-mvuma*
1-famer parch-PST again 10-flowers
Farmer parched again flowers (Intd: the flowers parched again)

b. *Ø-n'kento* *lekok-ele* ***dyaka*** *Ø-nsaki*
1-flowers wilt-PST again 9-cassava-leaves
Woman wilted again cassava-leaves (Intd: the woman wilted the cassava-leaves again)

c. #*Mw-ana* *wol-ele* ***dyaka*** *Ø-mpuku*
1a-child rot-PST again 3-rat
Child rot again rat (Intd: the rat rotted again)

d. #*Mu-ntu* *mmen-ene* ***dyaka*** *Ø-mvuma*
1-person bloom-PST again 10-flowers
Person bloomed again flowers (Intd: the flowers bloomed again)

e. # *Ø-nkaka* *bwek-e* ***dyaka*** *ma-nkondo*
1-grandpa ripen-PST again 6-banana
Grandpa ripened again bananas (Intd: the bananas ripened again)

f. # *Ø-nkaka* *lomb-ele* ***dyaka*** *Ø-nsafu*
1-grandpa wrippen-PST again 9-safu
Grandpa ripened again safu (Intd: the safu ripened again)

g. #*Ø-n'kento* *vi-idi* *dyaka* *Ø-mbizi*
1-woman tender-PST again 9-meat
Woman tendered again the meat (Intd: the meat tendered again)

6.2.1.1.1.5 *Purpose* clause modification

(93) a. # *Ø-m'vati* ***di****-ka-yum-ini* *Ø-mvuma* ***mpasi vo*** *ka...*
1-famer Cp-1-AgrS-parch-PST 10-flowers so that s/he..
Farmer parched flowers so that s/he (Intd: the flowers parched so that it..)

b. *Ø-n'kento* ***di****-ka-lekok-ele* *Ø-nsaki* ***mpasi vo*** *ka-lamba yo*
1-woman Cp-1-wilt-PST 9-cassava-leaves so that 1-cook it
Woman wilted cassava-leaves so that she cook it (Intd: the woman wilted the cassava-leaves so that she cooks it)

c. #*Mw-ana* ***di****-ka-wol-ele* *Ø-mpuku* ***mapsi vo*** *ka...*
1a-child Cp-1-rot-PST 3-rat so that s/he..
Child rot rat so that s/he.. (Intd: the rat rotted so that it…)

d. #*Mu-ntu* ***di****-ka-mmen-ene* *Ø-mvuma* ***mpasi vo*** *ka...*
1-person Cp-1-bloom-PST 10-flowers so that s/he..
Person bloomed flowers so that s/he.. (Intd: the flowers bloomed so that it …)

e. # *Ø-nkaka* ***di****-ka-bwek-e* *ma-nkondo* ***mpasi vo*** *ka...*
1-grandpa Cp-1-ripen-PST 6-banana so that s/he…
Grandpa ripened bananas so that s/he.. (Intd: the bananas ripened so that it…)

f. # *Ø-nkaka* *di-ka-lomb-ele* *Ø-nsafu* *mpasi vo ka...*
1-grandpa Cp-1-wrippen-PST 10-safu so that s/he …
Grandpa ripened safu so that s/he… (Intd: Safu ripened so that it…)

g. # *Ø-nkento* *di-ka-vi-idi* *Ø-mbizi* *mpasi vo ka...*
1-woman Cp-1-tender-PST 9-meat so that s/he…
Woman tendered the meat so that s/he.. (Intd: the meat tendered so that it..)

6.3.1.1.1.6 *Temporal* modification

(94) a. #*Ø-m'vati* *yum-ini* *Ø-mvuma* *(kolo kya-/mu) ngunga imosi*
9-famer parch-PST 9-flowers for/in an hour
Farmer parched flowers for/in an hour (Intd: the flowers parched for/in an hour)

b. *Ø-n'kento* *lekok-ele* *Ø-nsaki* *(kolo kya-/#mu) ngunga imosi*
1-woman wilt-PST 9-cassava-leave for/in an hour
Woman wilted cassava-leave for/in an hour (Intd: the woman wilted the cassava-leaves for/in an hour)

c. #*Mw-ana* *wol-ele* *Ø-mpuku* *(kolo kya-/mu) ngunga imosi*
1a-child rot-PST 3-rat for/in an hour
Child rot rat for/in an hour (Intd: the rat rotted for/in an hour)

d. #*Mu-ntu* *mmen-ene* *Ø-mvuma* *(kolo kya-/mu) ngunga imosi*
1-person bloom-PST 10-flowers for/in an hour
Person bloomed flowers for/in an hour (Intd: the flowers bloomed for/in an hour)

e. # *Ø-nkaka* *bwek-e* *ma-nkondo* *(kolo kya-/mu-) ngunga imosi*
1-grandpa ripen-PST 6-banana for/in an hour
Grandpa ripened bananas for/in an hour (Intd: the bananas ripened for/in an hour)

f. # *Ø-nkaka* *lomb-ele* *Ø-nsafu* *(kolo kya-/mu-) ngunga imosi*
1-grandpa wrippen-PST 10-safu for/in an hour
Grandpa ripened safu for/in an hour (Intd: Safu ripened for/in an hour)

g. # *Ø-nkento* *vi-idi* *Ø-mbizi* *(kolo kya-/mu-) ngunga imosi*
1-woman tender-PST 9-meat for/in an hour
Woman tendered the meat for/in an hour (Intd: the meat tendered for/in an hour)

6.3.1.1.2 Anticausative

(95) a. *Ø-mvuma* *zi-yum-ini*
10-flowers 10/AgrS-parch-PST
Flowers parched (Intd: the flowers parched)

b. *Ø-nsaki* *i-lek-**ok**-ele*
9-cassava-leaves 9/AgrS-wilt- CI-PST
Cassava-leaves wilted (Intd: the cassava-leaves wilted)

c. *Ø-mpuka* *u-ol-ele*
3-mouse 3/AgrS-rot-PST
Mouse rotted (Intd: the mouse rotted)

d. *Ø-mvuma* *zi-'men-ene*
10-flowers 10/AgrS-bloom-PST
Flowers bloomed (Intd: the flowers bloomed)

e. *Ma-nkondo* *ma-bwek-e*
6-banana 6/AgrS-ripen-PST
Bananas ripened (Intd: the bananas ripened)

f. *Ø-nsafu* *zi-lomb-ele*
10-safu 10/AgrS-ripen-PST
Safu ripened (Intd: the Safu ripened)

g. *Ø-mbizi* *i-vi-idi*
9-meat 9/AgrS-tender-PST
Meat tendered (Intd: the meat tendered)

6.3.1.1.2.1 *PP- modification*

(96) a. *Ø-mvuma* *zi-yum-ini* *mu- Ø-mwini/#mu- Ø-mbele/#kwa mvati*
10-flowers 10/AgrS-parch-PST 18-3-sunshine/18-9-knife/by farmer
Flowers parched in son/with knife/by farmer (Intd: the flowers parched fom the sunshine/with the knife/by the farmer)

b. *Ø-nsaki* *i-lek-**ok**-ele* *mu-Ø-mwini/#mu-Ø-mbele/#kwa mvati*
9-cassava-leaves 9/AgrS-wilt-CI-PST 18-1-sunshine/18-9-knife/by farmer
Cassava-leaves wilted in wind/in knife/by farmer (Intd: the cassava-leaves wilted fom the sunshine/with the knife/by the farmer)

c. *Ø-mpuku* *u-ol-ele* *mu-Ø-wunga/#mu-Ø-tanzi/#kwa mwana*
3-mouse 3/AgrS-rot-PST 18-5-snow/18-7-machete/by child
Mouse rotted in snow/in machete/by child (Intd: the mouse rotted by means of snow/with machete/by the child)

d. *Ø-mvuma* *zi-mmen-ene* *mu-Ø-wunga/#mu-Ø-nsego/#kwa mvati*
10-flowers 10/AgrS-bloom-PST 18-5-snow/18-7-hoe/by farmer
Flowers bloomed in wunga/ hoe/by farmer (Intd: the flowers bloomed from the wunga/the hoe/by the farmer)

e. *Ma-nkondo* *ma-bwak-idi* *mu-Ø-mwini/#mu-Ø-nlongo/#kwa mvati*
6-banana 6/AgrS-ripen-PST 18-3-sunshine/18-4-medicine/by farmer
Bananas ripened in wind/in hoe/by farmer (Intd: the bananas ripened from the wind/with the help of fertilizer/by the farmer)

f. *Ø-nsafu* *zi-lomb-ele* *mu-Ø-mwini/#mu- Ø-nlongo/#kwa mvati*
10-safu 10/AgrS-ripen-PST 18-3-sunshine/18-4-medicine/by farmer
Safu ripened from wind/with hoe/by farmer (Intd: the Safu ripened from the sunshine/with the help of fertilizer/by the farmer)

g. *Ø-mbizi* *i-vi-idi* *mu-Ø-kiwngula/#mu-Ø-nlongo/#kwa mvati*
9-meat 9/AgrS-tender-PST 18-7-warmth/18-4-medicine/by farmer
Meat tendered in warmth/with hoe/by farmer. (Intd: the meat tendered from warmth/with the help of fertilizer/by the farmer.)

6.3.1.1.2.2 *Agent-oriented* modification

(97) a. *Ø-mvuma* *zi-yum-ini* *#mu-ndwenga*
10-flowers 10/AgrS-parch-PST 18-cautiously
Flowers parched cautiously (Intd: the flowers parched cautiously)

b. *Ø-nsaki* *i-lek-**ok**-ele* *#mu-ndwenga*
9-cassava-leaves 9/AgrS-wilt-CI-PST 18-cautiously
Cassava-leaves wilted cautiously (Intd: the cassava-leaves wilted cautiously)

c. *Ø-mpuka* *u-ol-ele* *#mu-ndwenga*
3-mouse 3/AgrS-rot-PST 18-cautiously
Mouse rotted cautiously (Ind: the mouse rotted cautiously)

d. *Ø-mvuma* *zi-mmen-ene* *#mu-ndwenga*
10-flowers 10/AgrS-bloom-PST 18-cautiously
Flowers bloomed cautiously (Intd: the flowers bloomed cautiously)

e. *Ma-nkondo* *ma-bwek-e* *#mu-ndwenga*
6-banana 6/AgrS-ripen-PST 18-cautiously
Bananas ripened cautiously (Intd: the bananas ripened cautiously)

f. *Ø-nsafu* *zi-lomb-ele* *#mu-ndwenga*
10-safu 10/AgrS-ripen-PST 18-cautiously
Safu ripened cautiously (Intd: the safu ripened cautiously)

g. *Ø-mbizi* *i-vi-idi* *#mu-ndwenga*
9-meat 9/AgrS-tender-PST 18-cautiously
Meat tendered cautiously (Intd: the meat tendered cautiously)

6.3.1.1.2.3 *By-self* phrase modification

(98) a. # *Ø-mvuma* *zi-yum-ini* ***z-au mosi***
10-flowers 10/AgrS-parch-PST 10-itself
Flowers parched itself (Intd: the flowers parched without external help)

b. # *Ø-nsaki* *i-lek-**ok**-ele* ***y-au mosi***
9-cassava-leaves 9/AgrS-wilt-CI-PST 9-itself
Cassava-leaves wilted by itself (Intd: the cassava-leaves wilted without external help)

c. # *Ø-mpuka* *w-ol-ele* ***y-ani mosi***
9-mouse 3/AgrS-rot-PST 9-by itself
Mouse rotted by itself (Intd: the mouse rotted without external help)

d. # *Ø-mvuma* *zi-mmen-ene* ***z-au mosi***
10-flowers 10/AgrS-bloom-PST 10-itself
Flowers bloomed by themselves (Intd: the flowers bloomed without external help)

e. #*Ma-nkondo* *ma-bwek-e* ***m-au mosi***
6-banana 6/AgrS-ripen-PST 6-itself
Bananas ripened by themselves (Intd: the bananas ripened without external help)

f. # *Ø-nsafu* *zi-lomb-ele* ***z-au mosi***
10-safu 10/AgrS-ripen-PST 10-itself
Safu ripened by itself (Intd: the safu ripened without external help)

g. # *Ø-mbizi* *i-vi-idi* ***y-au mosi***
9-meat 9/AgrS-tender-PST 9-itself
Meat tendered by itself (Intd: the meat tendered without external help)

6.3.1.1.2.4 *Again* phrase modification

(99) a. *Ø-mvuma* *zi-yum-ini* ***dyaka***
10-flowers 10/AgrS-parch-PST again
Flowers parched again (Intd: the flowers parched again)

b. *Ø-nsaki* *i-lek-**ok**-ele* ***dyaka***
9-cassava-leaves 9/AgrS-wilt-CI-PST again
Cassava-leaves wilted again (Intd: the cassava-leaves wilted again)

c. *Ø-mpuka* *wol-ele* ***dyaka***
9-mouse rot-PST again
Mouse rotted again (Intd: the mouse rotted again)

d. *Ø-mvuma* *zi-mmen-ene* ***again***
10-flowers 10/AgrS-bloom-PST 10-itself
Flowers bloomed again (Intd: the flowers bloomed again)

e. *Ma-nkondo* *ma-bwek-e* ***again***
6-banana 6/AgrS-ripen-PST 6-itself
Bananas ripened again (Intd: the bananas ripened again)

f. *Ø-nsafu* *zi-lomb-ele* ***again***
10-safu 10/AgrS-ripen-PST 10-itself
Safu ripened by itself (Intd: the safu ripened without external help)

g. *Ø-mbizi* *i-vi-idi* ***y-au mosi***
9-meat 9/AgrS-tender-PST 9-itself
Meat tendered by itself (Intd: the meat tendered without external help)

6.3.1.1.3.5 *Purpose* clause modification

(100) a. # *Ø-mvuma* ***di****-zi-yum-ini* ***mpasi vo*** *za...*
10-flowers Cp-10/AgrS-parch-PST so that 10-they
Flowers parched so that they

b. # *Ø-nsaki* ***di****-i-lekok-ele* ***mpasi vo*** *ya lamba yo*
9-cassava-leaves CP-9/AgrS-wilt-PST so that it cook it
Cassava-leaves wilted so that it cook it

c. # *Ø-mpuku* ***di****-ka-w-ol-ele* ***mpasi vo*** *ka...*
3-mouse Cp-1-3/AgrS-rot-PST so that it (mouse)..
Mouse rotted so that it

d. *Ø-mvuma* ***di****-zi-mmen-ene* ***mpasi vo*** *za kuna zo mu-vya*
10-flowers Cp-10/AgrS-bloom-PST so that it seeds it in farm
Flowers bloomed so that it seed it

e. #*Ma-nkondo* ***di****-ma-bwak-idi* ***mpasi vo*** *ma-dya mo*
6-banana Cp-6/AgrS-ripen-PST so that 6-eat them
Bananas ripened so that they (bananas) eat them (bananas)

f. #*Ø-nsafu* *di-zi-lomb-ele* *mpasi vo za dya zo*
10-safu Cp-10/AgrS-ripen-PST so that 10-they eat 10-them
Safu ripened so that they eat them

g. # *Ø-mbizi* *di-i-vi-id-idi* *mpasi vo za dya yo*
9-meat Cp-9/AgrS-tender-APPL-PST so that 9-meat eat 9 it
Meat tendered so that it eat it

6.3.1.1.6 *Temporal* modification

(101) a. *Ø-mvuma* *zi-yum-ini* *(kolo kya-/mu-)ngunga imosi*
10-flowers 10/AgrS-parch-PST for/in an hour
Flowers parched for/in an hour (Intd: the flowers porched for/in an hour)

b. *Ø-Nsaki* *i-lekok-ele* *(kolo kya-/mu-)ngunga imosi*
9-cassava-leaves 9/AgrS-wilt-PST for/in an hour
Cassava-leaves wilted for/in an hour (Intd: the cassava-leaves wilted for/in an hour)

c. *Ø-mpuku* *u-ol-ele* *(kolo kya-/mu-)ngunga imosi*
3-mouse 3/AgrS-rot-PST for/in an hour
Mouse rotted for/in an hour (Intd: the mouse rotted for/in an hour)

d. *Ø-mvuma* *zi-mmen-ene* *(kolo kya-/mu-) ngunga imosi*
10-flowers 10/AgrS-bloom-PST for/in an hour
Flowers bloomed for/in an hour (Intd: the flowers bloomed for/in an hour)

e. *Ma-nkondo* *ma-bwak-idi* *kolo kya-/mu-)ngunga imosi*
6-banana 6/AgrS-ripen-PST for/in an hour
Bananas ripened for/in an hour (Intd: the bananas ripened for/in an hour)

f.	*Ø-msafu*	*zi-lomb-ele*	*kolo kya-/mu-)ngunga imosi*
	10-safu	10/AgrS-ripen-PST	for/in an hour

Safu ripened from for/in an hour (Intd: the Safu ripened for/in an hour)

g.	*Ø-mbizi*	*i-vi-idi*	*kolo kya-/mu-)ngunga imosi*
	9-meat	9/AgrS-tender-PST	for/in an hour

Meat tendered for/in an hour (Intd: the meat tendered for/in an hour)

APPENDIX B: SENTENCES WITH LOCATIVE-SUBJECT ALTERNATION IN *KIZOMBO*

7.3 Verbs of Inherently Directed Motion (VIDMs)

7.3.1 *Agent/theme argument as subject*

(101) a. Mw-ana/# Ø-mwini w-ele ku-Ø-zandu
1a-child/3-sunshine go-PST 17-5-market
'The child/sun went to the market'

b. *Mw-ana/# Ø-mwini u-iz-idi ku-Ø-vata*
1a-child/3-sunshine 1-3/AgrS-come-PST 17-5-village
The child/sun came to village

c. *Mw-ana/Ø-mwini u-kot-ele mu- Ø-suku*
1a-child/3-sunshine 1-3/AgrS-enter-PST 18-5-room
The child/sun entered (in) the room

d. *Mw-ana/mwisi u-vaik-idi mu-Ø-suku*
1a-child/smoke 1-3/AgrS-exit-PST 18-5-room
The child/smoke exited (in) from the bedroom

7.3.2 *Goal/locative/source argument as subject*

(102) a. *Ku-Ø-zandu ku-w-ele mw-ana*
17-5-river 17/AgrS-go-PST 1a-child
'To river went the child' (Intd: the market is the place which the child went)

b. *Ku-Ø-vata ku-wiz-idi mw-ana*
17-5-village 17/AgrS-come-PST 1a-child
To village came the child (Intd: the village is the place which the child came)

c. *Mu-Ø-suku mu-kot-ele mw-ana/ Ø-mwini*
18-5-room 18/AgrS-enter-PST 1a-child/3-sunshine
In room entered the child/sun (Intd: the bedroom is the place which the child/sunshine entered)

d. *Mu-Ø-suku mu-vaik-idi mw-ana/Ø-mwisi*
18-5-room 18/AgrS-exit-PST 1a-child/3-smoke
In room exited the child (Intd: the bedroom is the place which the child/smoke exited)

7.3.3 *Goal/locative/source (without locative prefix) argument as subject*

(103) a. *Ø-zandu di-i-ele mw-ana*
5-river 5/AgrS-go-PST 1a-child
'The market went child' (Intd: the market is the place which the child went)

b. *Ø-vata* *di-iz-idi* *n'kaangu*
5-village 5/AgrS-come-PST population
The village came people (Intd: the village is the plave which the people came)

c. *Ø-suku* *di-kot-ele* *mw-ana/ Ø-mwisi*
5-house 5/AgrS-enter-PST 1a-child/3-smoke
The room entered child (Intd: the bedroom is the place which the child/smoke entered)

d. *Ø-suku* *di-vaik-idi* *mw-ana/ Ø-mwisi*
5-room 5/AgrS-exit-PST 1a-child/3-smoke
The room exited the child/smoke (Intd: the bedroom is the place which the child/smoke exited)

7.3.2 Subjecthood properties of the goal/locative/source argument

7.3.2.1 *Occurrence in subject position*

(104) a. *Ku-Ø-zandu* *nze* *kw-au* *ku-w-ele* *mw-ana*
17-5-market seem 17-there 17/AgrS-go-PST 1a-child
To market it seems there went child (Intd: it seems that the child went to the market)

b. *Ku-Ø-vata* *nze* *kw-au* *ku-iz-idi* *mw-ana*
17- 5-village seems 17-there1 17/AgrS-come-PST 1a-child
To village seems there came the child (Intd: it seems that the child came to the village)

c. *Mu-Ø-suku* *nze* *mw-au* *mu-kot-ele* *mw-ana*
18-5-room seem 18-there 18/AgrS-enter-PST 1a-child
In bedroom seem there entered child (Intd: it seems that the child entered in the bedroom)

d. *Mu-Ø-suku* *nze* *mw-au* *mu-vaik-idi* *mw-ana*
18-5-room seem 18-there 18/AgrS-exit-PST 2-person
In bedroom seem that there exit child (Intd: it seems that the child exited from the bedroom).

7.3.2.2 *Passivization*

(105) a. *#Ku-Ø-zandu* *ku-w-el-w-e*
17-5-market 17-go-APPL-PASS-PST
To market have been (Intd: someone went to the market)

b. *# Ø-zandu* *dy-i-el-w-e*
5-market 5/AgrS-go-APPL-PASS-PST
The market has been (Intd: someone went to the market)

c. *#Ku-Ø-vata* *ku-iz-il-w-e*
17-5-village 17/AgrS-come-APPL-PASS-PST
To village have been come (Intd: someone came to the village)

d. *# Ø-vata* *di-iz-il-w-e*
5-village 5/AgrS-come-APPL-PASS-PST
To village have been come (Intd: some came to the village)

e. *Mu-Ø-suku* *mu-vaik-il-w-e* *mu-nswalu*
18-5-room 18/AgrS-enter-APPL-PASS-PST 18-fast
In bedroom was exited fast (Intd: someone exited from the bedroom fast)

f. *Ø-suku* *di-vaik-il-w-e* *mu-nswalu*
5-room 5/AgrS-enter-APPL-PASS-PST 18-fast
The bedroom was exited fast (Intd: someone exited from the bedroom fast)

g. *Mu-Ø-suku* *mu-kot-el-w-e* *kwa* *Ø-nyoka*
18-5-room 18/AgrS-enter-APPL-PASS-PST by 3-snake
In bedroom was entered by a snake (Intd: the snake entered the bedroom)

h. *Ø-suku* *di-kot-el-w-e* *kwa* *Ø-nyoka*
5-room 5/AgrS-enter-APPL-PASS-PST by 3-snake
In bedroom was entered by a snake (Intd: a snake entered in the bedroom)

7.3.2.3 *Relativization*

(106) a. *Ku-Ø-n'koko* *Ko ku-w-ele* *mw-ana* *Ø-mvula* *i-ta* *ko* *noka*
17-3-river 17 17-go-PST 1a-child 9- rain 9-be 17/there rain
To river there where went child fall rain' (Intd: there where the child went is raining)

b. *Ø-n'koko wowo* *u-w-ele* *mw-ana* *Ø-mvula* *i-ta* *ko* *noka*
3-river 13/Rel 3/AgrS-go-PST 1a-child 9-rain 9-be 17/there rain
To river there where went child fall rain' (Intd: the river where the child went is raining)

c. Ku-Ø-vata *ko ku-iz-idi* *mw-ana* *a-ntu* *e-ta* *ko dila*
17-5-village 17/Rel 17/AgrS-come-PST 1a-child 2-person 2-be 17/there cry
There where came child people are crying (Intd: people are crying where the child came)

d. *Ø-vata* *dyo di-iz-idi* *mw-ana* *a-ntu* *e-ta* *ko dila*
5-village dyo/Rel 5/AgrS-come-PST 1a-child 2-person 2-be 17/there cry
The village where came child people are crying (Intd: people are crying where the child came)

e. *Mu-Ø-nzo* mo*-mu-kot-ele* *mw-ana* *nyoka* *u-na mo*
18-9-house 18/Rel-18/AgrS-enter-PST 1a-child snake 1-be 18/there
In house where entered a child snake is there (Intd: there is a snake where the child entered)

f. *Ø-nzo* yo *i-kot-ele* *mw-ana* *nyoka* *u-na* *mo*
9-house 9/Rel 9/AgrS-enter-PST 1a-child snake 1-be 18/there
The house where entered child snake is there (Intd: there is a snake where the child entered)

g. *Mu-Ø-nzo* *mo* *mu-vaik-idi* *mw-ana* *y-elele* *i-na mo*
18-9-house 18/Rel 18/AgrS-exit-PST 1a-child 8-ant 8-be 18/there
In house where exited child ants are there (Intd: there are ants in the house where the child exited)

h. *Ø*-nzo *yo* *i-vaik-idi* *mw-ana* *y-elele* *i-na mo*
9-house 9/Rel 9/AgrS-exit-PST 1a-child 8-ant 8-be 18/there
The house where exited child ants are there (Intd: there are ants where the child exited from)

7.3.4 *Locative prefix as expletive*

(107) a. *Ko ku-w-ele* *mw-ana* *Ø-mvula i-ta* *ko* *noka*
17 17/AgrS-go-PST 1a-child 9-rain 9-be 17/there rain
There (to some place) went child rain is there rain
'There where went child fall rain' (lit: the place which the child went is raining)

b. *Ko ku-iz-idi* *mw-ana* *a-ntu* *e-ta* *ko dila*
17 17/AgrS-come-PST 1a-child 2-person 2-be 17/there cry
There where came the child people are crying (Intd: people are crying where the child came)

c. *Mo mu-kot-ele* *mw-ana* *Ø-nyoka* *u-na* *mo*
18 18/AgrS-enter-PST 1a-child 3-snake 1-be 18/there
There where entered a child snake is there (Intd: there is a snake where the child entered)

d. *Mo mu-vaik-idi* *mw-ana* *y-elele* *i-na* *mo*
18 18/AgrS-exit-PS 1a-child 8-ant 8-be 18/there
There where exited child ants are there (Intd: there are ants where the child exited from)

7.3.3 Objecthood properties with the preverbal subject

(108) a. *#Ku-Ø-zandu ku-m-w-ele (mw-ana)*
17-3-river 17/AgrS-1/AgrO-go-PST 1a-child
To market him/her went child (Intd: the child went to the market)

b. *#Ku-Ø-vata ku-n iz-idi (mw-ana)*
17-5-village 17/AgrS-AgrO-come-PST 1a-child
To village him/her came the child (Intd: the child came to the village)

c. *#Mu-Ø-suku mu-n-kot-ele (mw-ana)*
18-5-village 18/AgrS-OgrS-enter-PST 1a-child
To room him/her entered the child (Intd: the child entered the bedroom)

d. *#Mu-Ø-suku mu-m-vaik-idi (mw-ana)*
18-5-room 18/AgrS-AgrO-exit-PST 1a-child
In room him/her exited child (Intd: the child exited from the bedroom)

7.3.4 Purpose clause modification

7.3.4.1 *Agent/theme argument as subject*

(109) a. *Mw-ana/# Ø-mwini di-ka-end-ele/w-end-ele ku- Ø-zandu* mpasi vo *ka/wa sumba ki-nkutu*
1a-child/3-sunshine Cp-1a-ki/AgrS-go-PST/go-PST 17-5-market so that s/he it buys a 7-shirt
'The child/sunshine went to the market so that s/he/it buys a t-shirt'

b. *Mw-ana/# Ø-mwini* ***di****-ka-iz-idi/w-iz-idi ku-Ø-vata* ***mpasi vo*** *ka/wa tala nkaka*
1a-child/3-sunshine Cp-1/AgrS-come-PST17-5-village so that s/he/it visits grandpa
The child/sunshine came to the village so that s/he visits grandpa

c. *Mw-ana/# Ø-mwini* ***di****-ka-u-kot-ele mu-Ø-suku* ***mpasi vo*** *ka/wa-baka ki-nkutu*
1a-child/3-sunshine Cp-1-enter-PST/AgrS-enter-PST 18-5-room so that s/he/it fetches a/the t-shirt
The child/sun entered (in) the room so that s/he fetches the T-shirt

d. *Mw-ana/# Ø-mwisi di-ka-u-vaik-idi mu-suku mpasi vo ka/wa-tela Luzolo*
1a-child/3-smoke Cp-1-3-/-exit-PST 18-room so that s/he/it call Lozolo
The child/smoke exited (in) from the room so that s/he calls Luzolo

7.3.4.2 Goal/Locative/source argument as subject

(110) a. *#Ku-Ø-zandu* ***di****-ku-end-ele* *mw-ana* ***mpasi vo*** *kwa* *sumba kinkutu*
17-5-market Cp-17-go-PST 1a-child so tha to buy t-shirt
'To market went child so that there buys a t-shirt' (Intd: the market is the place which the child went so that s/he buys a T-shirt)

b. *#Ku- Ø-vata* ***di****-ku-iz-idi* *a-ntu* ***mpasi vo*** *kwa* *tala nkaka*
17-5-village Cp-17/AgrS-come-PST 2-person so that 18/Loc visit grandpa
To village come people so that there visit the grandpa (Intd: the village is the place which the people come so that they visit the grandpa)

c. *#Mu-Ø-suku* ***di****-mu-kot-ele* *mw-ana* ***mpasi vo*** *mwa* *baka* *ki-nkutu*
18-5-room Cp-18/AgrS-enter-PST 1a-child so that 10/Loc fetch 7-shirt
In room entered child so that there fetch the t-shirt (Intd: the bedroom is the place which the child entered so that s/he fetches t-shirt)

d. *#Mu-Ø-suku* ***di****-mu-vaik-idi* *mw-ana* ***mpasi vo*** *mwa* *tela* Luzolo
18-5-room **Cp**-18/AgrS-exit-PST 1a-child so that 18/Loc call PN
In room exited child so that there calls Luzolo (Intd: the bedroom is the place which the child exited so that s/he calls Luzolo)

7.3.4.3 *Goal/locative/source (without locative prefix) argument as subject*

(111) a. *#Ø-zandu* ***di****-dy-end-ele* *mw-ana* ***mpasi vo*** *ka-sumba kinkutu*
5-market Cp-5-go-PST 1a-child so tha 1-buy t-shirt
'The market went child so that there buy a t-shirt' (Intd: the market is the place which the child went so that s/he buys a t-shirt)

b. *# Ø-vata* ***di****-di-iz-idi* *a-ntu* ***mpasi vo*** *dya tala nkaka*
5-village Cp-5/AgrS-come-PST 2-person so that to visit grandpa
The village come people so that there visit the grandpa (Intd: the village is the place which the people come so that they visit the grandpa)

c. *# Ø-suku* ***di****-di-kot-ele* *mw-ana* ***mpasi vo*** *dya baka ki-nkutu*
5-room Cp-5/AgrS-enter-PST 1a-child so that 5/Loc fetch 7-shirt
The room entered child so that there fetches the t-shirt (Intd: the bedroom is the place which the child entered so that s/he fetches the t-shirt)

d. *#Ø-suku* ***di****-di-vaik-idi* *mw-ana* ***mpasi vo*** *dya tela Luzolo*
5-room Cp-5/AgrS-exit-PST 1a-child so that of call 1-PN
The room exited child so that there calls Luzolo (Intd: the bedroom is the place which the child exited so that s/he calls Luzolo)

7.3.5 Agent-oriented phrase modification

7.3.5.1 Agent argument as subject

(112) a. *Mw-ana* *w-ele* *ku-Ø-zandu* ***mu-nswalu***
1a-child go-PST 17-5-market 18-fast
'The child went to market fast'

b. *Mw-ana* *u-iz-idi* *ku-Ø-vata* ***mu-nswalu***
1a-child 1/AgrS-come-PST 17-5-village 18-fast
The child came to village fast

c. *Mw-ana/Ø-mwini* *u-kot-ele* *mu-Ø-suku* ***mu-nswalu***
1a-child/3-sunshine 1-3/AgrS--enter-PST 18-5-room 18-fast
The child/sunshine entered (in) the room fast

d. *Mw-ana/Ø-mwisi* *u-vaik-idi* *mu-Ø-suku* ***mu-nswalu***
1a-child/3-smoke 1-3/AgrS-exit-PST 18-5-room 18-fast
The child/smoke exited (in) the room fast

7.3.5.2 *Goal/locative/source argument as subject*

(113) a. *Ku-Ø-zandu* *ku-w-ele* *mw-ana* ***mu-nswalu***
17-5-market 17-go-PST 1a-child 18-fast
'To the market went child fast' (Intd: the market is the place which the child went fast)

b. *Ku-Ø-vata* *ku-iz-idi* *nkangu* ***mu-nswalu***
17-5-village 17/AgrS-come-PST people 18- fast
To the village come people fast (Intd: the village is the place which the people came fast)

c. *Mu-Ø-suku* *mu-kot-ele* *mw-ana* ***mu-nswalu***
18- 5-room 18/AgrS-enter-PST 1a-child 18- fast
In the room entered child fast (Intd: the bedroom is the place which the child entered fast)

d. *Mu-Ø-suku* *mu-vaik-idi* *mw-ana* ***mu-nswalu***
18-5-room 18/AgrS-exit-PST 1a-child 18- fast
In the room exited child (Intd: from the bedroom is the place which the child exited)

7.3.5.3 Goal/locative/source (without loc prefix) argument as subject

(114) a. *Ø-zandu* *di-y-ele* *mw-ana* ***mu-nswalu***
5-market 5/AgrS-go-PST 1a-child 18-fast
'The market went child fast (Intd: the market is the place which the child went)

b. *Ø-vata* *di-iz-idi* *mw-ana* ***mu-ndwenga***
5-village 5/AgrS-come-PST 1a-child 18-fast
The village came child (Intd: the village is the place which the child came fast)

c. *Ø-suku* *di-kot-ele* *mw-ana* ***mu-nswalu***
5-room 5/AgrS-enter-PST 1a-child 18-fast
The room entered child fast (Intd: the bedroom is the palce which the child entered fast)

d. *Ø-suku* *di-vaik-idi* *mw-ana* ***mu-nswalu***
5-room 5/AgrS-exit-PST 1a-child 18-fast
The house exited child fast (Intd: the bedroom is the place which the child exited fast)

7.3.6 By-phrase phrase modification

7.3.6.1 Agent/Theme argument as subject

(115) a. Mw-ana/# *Ø-mwini* *u-u-e-ele* *ku-Ø-zandu* **yani/wau/mosi**
1a-child/3-sunshine 1-3/AgrS-go-PST 17-5-market by him/her/it self
'The child/sun went to the market by him/her/it self' (Intd: on his/her/its own)

b. *Mw-ana/# Ø-mwini* *u-u-iz-idi* *ku-Ø-vata* ***yani/wau/mosi***
1a-child/3-sunshine 1-3/AgrS-come-PST 17-5-village by him/her/it self
The child/sun came to village by him/her/it self (Intd: *on his/her/its own*)

c. *Mw-ana/# Ø-mwini* *u-u-kot-ele* *mu- Ø-suku* ***yani/wau/mosi***
1a-child/3-sunshine 1-3/AgrS-enter-PST 18-5-room by him/her/it self
The child/sun entered (in) the room by him/her/it self (Intd: *on his/her/its own*)

d. *Mw-ana/#Ø-mwisi* *u-vaik-idi* *mu-Ø-suku* ***yani/wau/mosi***
1a-child/3-smoke 3/AgrS-exit-PST 18-5-room by him/her/it self
The child/smoke exited (in) room by him/her/it self (Intd: *on his/her/its own*)

7.3.6.2 Goal/Locative/source argument as subject

(116) a. *Ku-Ø-zandu* *ku-w-ele* *mw-ana* ***#kw-au-mosi***
17-5-market 17-go-PST 1a-child 18-itself
'To the market went child in itself' (Intd: the market is the place which the child went on his/her own)

b. *Ku-Ø-vata* *ku-iz-idi* *nkangu* ***#kw-au mosi***
17-5-village 17/AgrS-come-PST people 17- self
To the village come people to itself (Intd: the village is the place which the people came on their own)

c. *Mu-Ø-suku* *mu-kot-ele* *mw-ana* ***#mw-au mosi***
18-5-room 18/AgrS-enter-PST 1a-child 18- purpose
In the room entered child in itself (Intd: the bedroom is the place which the child entered on his/her own)

d. *Mu-Ø-suku* *mu-vaik-idi* *mw-ana* ***#mw-au mosi***
18-5- room 18/AgrS-exit-PST 1a-child 18- self
In the room exited child in itself (Intd: the bedroom is the plac which the child exited on his/her own)

7.3.6.3 *Goal/Locative/source (without loc prefix) argument as subject*

(117) a. *Ø-zandu* *di-i-ele* *mw-ana* ****dy-au mosi***
5-market 5/AgrS-go-PST 1a-child 5-self
'The market went child by itself (Intd: the market is the place which the child went on his/her own)

b. *Ø-vata* *di-iz-idi* *mw-ana* ****dy-au mosi***
5-village 5/AgrS-come-PST 2-child 5-self
The village came child by itself (Intd: the village is the place which the child went on his/her own)

c. *Ø-suku* *di-kot-ele* *mw-ana* ****dy-au mosi***
5-room 5/AgrS-enter-PST 1a-child 5-it self
The room entered child by itself (Intd: the bedroom is the place which the went on his/her own)

d. *Ø-suku* *di-vaik-idi* *mw-ana* ****dy-au mosi***
5-room 5/AgrS-exit-PST 1a-child 5-itself
The house exited child by itself (Intd: from the bedroom is the place where the child exited on his/her own)

7.3.7 Again phrase modification

7.3.7.1 *Agent/Theme argument as subject*

(118) a. *Mw-ana/# Ø-mwini* *u-u-w-ele* ***dyaka*** *ku-Ø-zandu*
1a-child/3-sunshine 1-3/AgrS-go-PST again 17-5-market
'The child/sun went to the market again'

b. *Mw-ana/# Ø-mwini* *u-u--iz-idi* ***dyaka*** *ku-Ø-vata*
1a-child/3-sunshine 1-3/AgrS-come-PST again 17-5-village
The child/sun came to the village again

c. *Mw-ana/# Ø-mwini* *u-u-kot-ele* ***dyaka*** *mu-Ø-suku*
1a-child/3-sunshine 1-3/AgrS-enter-PST again 18-5-room
The child/sun entered (in) the room again

d. *Mw-ana/# Ø-mwisi* *u-vaik-idi* ***dyaka*** *mu-Ø-suku*
1a-child/3-smoke 3/AgrS-exit-PST again 18-5-room
The child/smoke exited (in) from the room again

7.3.7.2 *Goal/locative/source argument as subject*

(24) a. *Ku-Ø-zandu* *ku-w-ele* ***dyaka*** *mw-ana*
17-5-market 17/AgrS-go-PST again 1a-child
'To market went child again' (Intd: the river is the place where the child went again)

b. *Ku-Ø-vata* *ku-iz-idi* ***dyaka*** *mw-ana*
17-5-village 17/AgrS-come-PST again 1a-child
To house came child again (Intd: the village is the place which the child came again)

c. *Mu-Ø-suku* *mu-kot-ele* ***dyaka*** *mw-ana*
18-5-room 18/AgrS-enter-PST again 1a-child
In room entered child again (Intd: the bedroom is the place where the child entered again)

d. *Mu- Ø-suku* *mu-vaik-idi* ***dyaka*** *mw-ana*
18-5-room 18/AgrS-come-PST again 1a-child
In room exited child again (Intd: the bedroom is the place which the child exited again)

7.3.7.3 *Goal/locative/source argument (without locative prefix) as subject*

(119) a. *Ø-zandu* *di-i-ele* ***dyaka*** *mw-ana*
5-market 5/AgrS-go-PST again 1-child
'The market went again child' (Intd: the market is the place where the child went again)

b. *Ø-vata* *di-iz-idi* ***dyaka*** *mw-ana*
5-village 5/AgrS-come-PST again 1a-child
The house came again child (Intd: the village is the place which the child came again)

c. *Ø-suku* *di-kot-ele* ***dyaka*** *mw-ana*
5-room 5/AgrS-enter-PST again 1a-child
The room entered again child (Intd: the bedroom is the place which the child entered again)

d. *Ø-suku* *di-vaik-idi* ***dyaka*** *mw-ana*
5-room 5/AgrS-come-PST again 1a-child
The room exited child again (Intd: the bedroom is the place which the child exited again)

7.3.8 Reason phrase modification

7.3.8.1 *Agent/theme argument as subject*

(120) a. *Mw-ana/# Ø-mwini* ***di****-ka-u-end-ele* *ku-Ø-zandu ekuma ka/wa sumba ki- nkutu*
1a-child/3-sunshine Cp-1-3/AgrS-go-PST 17-5-market because 1/14 buy 7-shirt
'The child/sunshine went to the market because s/he/it buys a T-shirt'

b. *Mw-ana/# Ø-mwini* ***di****-ka-u-iz-idi* *ku-Ø-vata ekuma ka/wa yuvula mfumu wa vata*
1a-child/3-sunshine Cp-1-3/AgrS-come-PST 17-5-village because s/he/it ask chief
The child/sunshine came to the village because s/he/it asks the chief of village

c. *Mw-ana/#Ø-mwini* ***di****-ka-u-kot-ele* *mu-Ø-suku ekuma ka/wa zima tuya*
1a-child/3-sunshine Cp-1-3/AgrS-enter-PST 18-5-room because s/he/it extinguish fire
The child/sunshine entered (in) the room because s/he/it extinguishes the fire

d. *Mw-ana/# Ø-mwisi* ***di****-ka-u-vaik-idi* *mu-Ø-suku ekuma ka/wa baka mupepe*
1a-child/3-smoke Cp-1-3/AgrS-14-exit-PST 18-5-room because s/h/it get fresh air
The child/smoke exited (in) from the bedroom because s/he gets fresh air

7.3.8.2 *Goal/locative/source arguemt as subject*

(121) a. *Ku-Ø-zandu di-ku-end-ele mw-ana ekuma ka-sumba mbolo*
17-5-market Cp-17/AgrS-go-PST 1a-child because 1-buy bread
'To the market went child because s/he buys bread' (Intd: the market is the place which the child went because s/he buys bread)

b. *Ku-Ø-vata* ***di****-ku-iz-idi* *mw-ana* ***ekuma*** *ka-yuvula mfumu wa Ø -vata*
17-5-village Cp-17/AgrS-come-PST 1a-child because 1-ask chief of 5-village
To the village came child because s/he asks the chief of the village (Intd: the village is the place which the child come in order to ask the chief of village)

c. *Mu-Ø-suku* ***di****-mu-kot-ele* *mw-ana* ***ekuma*** *ka-zima ntuya*
18-5-room Cp-18/AgrS-enter 1a-child because 3Sg-extinguish fire
In the room entered child because s/he extinguishes fire (Inted: the bedroom is the place which the child entered because s/he extinguishes the fire)

d. *Mu-Ø-suku* ***di****-mu-vaik-idi* *mw-ana* ***ekuma*** *ka-baka mupepe*
18-5-room Cp-18AgrS-exit-PST 1a-child because 1-get air
In room exited child because s/he get fresh air (Intd: the bedroom is the place which the child exited because s/he gets fresh air)

7.3.8.3 ***Goal/Locative/Source (without locative prefix) arguemnt as subject***

(122) a. *Ø-zandu* *di-di-end-ele* *mw-ana* *ekuma* *ka-sumba Ø-mbolo*
5-market Cp-5/AgrS-go-PST 1a-child because 1a-buy 9-bread
'The market went child because s/he buys bread' (Intd: the market is the place which the child went because s/he buys bread)

b. **?***Ø-vata* ***di****-di-iz-idi* *nkangu* ***ekuma*** *wa yuvula mfumu wa vata*
5-village Cp-5/AgrS-come-PST people because they ask chief village
The village came people because they ask chief of village (Intd: the village is the place which the people came because they ask the chief of village)

c. *Ø-suku* ***di****-di-kot-ele* *mw-ana* ***ekuma*** *ka-langidilanga yo*
5-room Cp-5/AgrS-enter-PST 1a-child because 3Sg-lokks affter it
The room entered the child because s/he looks after it (Intd: the bedroom is the place which the child entered because s/he looks after it)

d. *Ø-suku* ***di****-i-vaik-idi* *mw-ana* ***ekuma*** *matebo madila mo mumpipa*
5-room Cp-9/AgrS-exit-PST 1a-child because ghost cry there night
The room exited child because ghost cry there over the night (Intd: the bedroom is the place which the child exited because s/he heard ghost crying over the night)

7.3.9 Instrumental phrase modification

7.3.9.1 ***Agent/Theme argument as subject***

(123) a. *Mw-ana/#Ø-mwini* *u-w-ele* *ku-Ø-zandu* *mu-Ø-kalu*
1a-child/3-sunshine 1-3/AgrS-go-PST 17-5-market 18-5-car
'The child/sunshine went to the market by means of the car'

b. *Mw-ana/*Ø-mwini* *u-iz-idi* *ku-Ø-vata* ***mu-Ø-kalu***
1a-child/3-sunshine 1/3AgrS-come-PST 17-5-village 18-5-car
The child/sunshine came to village by means of the car

c. *Mw-ana/# Ø-mwini* *u-kot-ele* *mu-Ø-suku* ***mu-Ø-tukutuku***
1a-child/3-sunshine 3/AgrS-enter-PST 18-5-room 18-7-motor
The child/sun entered the room by means of the motor bike

d. *Mw-ana/# Ø-mwisi* *u-vaik-idi* *mu-Ø-suku* ***mu- Ø-sikada***
1a-child/3-smoke 3/AgrS-exit-PST 18-5-room 18-9-ladder
The child/smoke exited (in) from the room with the help of ladder

7.3.9.2 ***Goal/locative/source argument as subject***

(124) a. *Ku-Ø-zandu* *ku-w-ele* *mw-ana* ***mu-ma-kalu***
17-5-market 17/AgrS-go-PST 1a-child 18-6-car
'To market went child by car' (Indt: the market is the place which the child went by means of the car)

b. *Ku-Ø-vata* *ku-iz-idi* *nkangu* ***mu-ma-kalu***
17-5-village 17/AgrS-come-PST people 18- 6-car
To village come people by means of car (Intd: the village is the place which the people came by means of the car)

c. *Mu-Ø-suku* *mu-kot-ele* *mw-ana* ***mu-Ø-tukutuku***
18-5-room 18/AgrS-enter-PST 1a-child 18-7-bicycle
In room entered child by means of motor bike (Intd: the bedroom is the place which the child entered by means of motor bike)

d. *Mu-Ø-suku* *mu-vaik-idi* *mw-ana* ***mu-Ø-sikada***
18-5-room 18/AgrS-exit-PST 1a-child 18-9-ladder
In room exited child by means of ladder (Intd: the bedroom is the place which the child exited by means of ladder)

7.3.9.2 *Goal/locative/source argument (without locative prefis) as subject*

(125) a. *Ø-zandu* *di-y-ele* *mw-ana* ***mu-Ø-kalu***
5-market 5-go-PST 1a-child 18-5-car
'The market went child by car'(Intd: the market is the place which the child went by means of a car)

b. *Ø-vata* *di-iz-idi* *mw-ana* ***mu-Ø-kalu***
5-village 5/AgrS-come-PST 1a-child 18-5-car
The village came child by car (Intd: the market is the place which the child came by means of a car)

c. **?***Ø-suku* *di-kot-ele* *mw-ana* ***mu-mi-leta***
5-room 5/AgrS-enter-PST 1a-child 18-4-crutch
Room entered child through the help crutches (Intd: the bedroom is the place which the child entered with the help of crutches)

d. *Ø-suku* *di-vaik-idi* *mw-ana* ***mu-Ø-sikada***
5-room 5/AgrS-exit-PST 1a-child 18-9-ladder
The room exited child through the help of ladder (Intd: from the bedroom is the place which the child exited with the help of ladder)

7.3.10 Temporal phrase modification

7.3.10.1 *Agent argument as subject*

(126) a. *Mw-ana u-w-ele ku-Ø-zandu (*kolo kya-)/(mu-)ngunga imosi*
1a-child 1/AgrS-go-PST 17-5-market for/in an hour
'The child went to the market for/in an hour

b. *Mw-ana u-iz-idi ku-Ø-vata (*kolo kya-)/(mu-)ngunga imosi*
1a-child 1/AgrS-come-PST 17-5-village for/in an hour
The child came to the village for/in an hour

c. *Mw-ana kot-ele mu-Ø-suku (kolo kya-)/(*mu-)ngunga imosi*
1a-child enter-PST 18-5-room for/in an hour
The child entered in the bedroom for/in an hour

d. *Mw-ana vaik-idi mu-Ø-suku (kolo kya-)/(*mu-)ngunga imosi*
1a-child exit-PST 18-5-room for /in an hour
The child exited the room for/in an hour

7.3.10.2 *Goal/locative/source argument as subject*

(127) a. *Ku- Ø-zandu ku-w-ele mw-ana (kolo kya/(mu-ngunga imosi)*
17-5-market 17/AgrS-go-PST 1a-child for/in an hour
To market went child for/in an hour' (Intd: the market is the place which the child went for/in an hour)

b. **?***Ku-Ø-vata ku-iz-idi nkangu (kolo kya-)/(mu-)ngunga imosi*
17-5-village 17/AgrS-come-PST people for/in an hour
To village came people for/in an hour (Intd: the village is the place which the people came for/in an hour)

c. *Mu-Ø-suku mu-kot-ele mw-ana (kolo kya-)/(mu-)ngunga zizole*
18-5-room 18/AgrS-enter-PST 1a-child for two hours/in two hours
In room entered child for/in two hours (Intd: the bedroom is the place which the child entered for/ in an hour)

d. *Mu-Ø-suku mu-vaik-idi mw-ana (kolo kya-)/(mu-)ngunga imosi*
18-5-room 18/AgrS-exit-PST 1a-child for/in an hour
In room exited child for/in an hour (Intd: the bedroom is the place which the child exited for/in an hour)

7.3.7.3 *Goal/locative/source argument (without locative prefix) as subject*

(128) a. *Ø-zandu di-y-ele mw-ana (kolo kya-)/(mu-)ngunga imosi*
5-market 5/AgrS-go-PST 1a-child for/in an hour
Market went child for/in an hour' (Intd: the market is the place which the child went for/in an hour)

b. ***?*** *Ø-vata di-iz-idi nkangu (kolo kya-)/(mu-)ngunga imosi*
5-village 5/AgrS-come-PST people for/in an hour
The village come people for/in an hour (Intd: the village is the place which the people came for/in an hour)

c. *Ø-suku di-kot-ele mw-ana (kolo kya-)/(mu-)ngunga zizole*
5-room 5/AgrS-enter-PST 1a-child for/in two hours
The room entered child for/in two hours (Intd: the bedroom is the place which the child entered for/in an hour)

d. *Ø-suku di-vaik-idi a-ana (kolo kya-)/(mu-)ngunga imosi*
5-house 5/AgrS-exit-PST 2a-child for/in an hour
The house exited the children for/in an hour (Intd: the bedroom is the place which the children exited for/in an hour)

7.3.11 Locative-appplicative alternation

7.3.11.1 *Agent/Theme argument as subject*

(129) a. *Mw-ana/# Ø-mwini u-kwend-el-ang-a ku-Ø-zandu mu-Ø-kalu*
1a-child/3-sunshine 3/AgrS-go-APPL-HAB-FV 17-5-market 18-5-car
'The child/sunshine goes exclusively to the market by means of car '

b. *Mw-ana/# Ø-mwini u-kwiz-il-ang-a ku-Ø-vata* ***mu-Ø-kalu***
1a-child/3-sunshine 1/3/AgrS-come-APPL-HAB-FV 17-5-village 18-7-car
The child/sunshine comes exclusively to village through the help of the car

c. *Mw-ana/# Ø-mwini u-kot-el-ang-a mu-Ø-suku* ***mu- mi-leta***
1a-child/3-sunshine 1/3/AgrS-enter-APPL-HAB-FV 18-5-room 18-5-crutch
A/the child/sunshine entered exclusively (in) the room with the help of crutches

d. *Mw-ana/ Ø-mwisi u-vaik-il-ang-a mu-Ø-suku* ***mu-Ø-sikada***
1a-child/3-smoke 3/AgrS-exit-APPL-HAB-FV 18-5-room 18-9-ladder
A/the child/smoke exited (in) exclusively from room with the help of ladder

7.3.11.2 *Goal/locative/source argument as subject*

(130) a. *Ku-Ø*-zandu ku-kwend-el-ang-a mw-ana **mu-*Ø-kalu***
17-5-market 17/AgrS-go-APPL-HAB-FV 1a-child 18-5-car
'To market where child goes by car' (Intd: the market is the exclusive place which the/a child goes by means of a car)

b. *Ku-Ø-vata ku-kwiz-il-ang-a nkangu* ***mu-Ø-kalu***
17-5-village 17/AgrS-come-APPL-HAB-FV people 18-5-car
To village came people by cars (Intd: the village is the exclusive palce which people come by means of a car)

c. ?*Mu-Ø-suku* *mu-kot-el-ang-a* *mw-ana* ***mu-mi-leta***.
18-5-room 18/AgrS-enter-APPL-HAB-FV 1a-child 18-4-cratch
In room enter child through crutches (Intd: the house is the exclusive palce where the child enter with the help of crutches)

d. ?*Mu-Ø-suku* *mu-vaik-il-ang-a* *mw-ana* *mu-sikada...*
18-5-room 18/AgrS-come-APPL-HAB-FV 1a-child 18-ladder
In room exited child through the help of ladder (Intd: from the bedroom is the place where the child exited with the help of ladder)

7.3.11.3 ***Goal/locative/source argument (without locative prefix) as subject***

(131) a. *? Ø-zandu* *di-kwend-el-ang-a* *mw-ana* *mu-Ø-kalu*
5-market 5/AgrS-go-APPL-HAB-FV 1a-child 18-5-car
'The market went child by car' (Intd: the market is the exclusive place which the child went by means of a car)

b. *?Ø-vata* *di-kwiz-il-ang-a* *nkangu* *mu-Ø-kalu*
Ø/5-village 5/AgrS-return-APPL-HABFV people 18-5-car
The village come people by car (Intd: the village is the exclusive place which people came by means of a car)

b. *?Ø-suku* *di-kot-el-ang-a* *mw-ana* *mu-mi-leta*
5-room 5/AgrS-enter-APPL-HAB-FV 1a-child 18-4-crutch
The room entered child by means of crutches (Intd: the bedroom is the exclusive place which the child came with the help of crutches)

d. *?Ø-suku* *di-vaik-il-ang-a* *mw-ana* *mu-mi-leta*
5-room 5/AgrS-come-APPL-HAB-FV 1a-child 18-4-crutch
The house exited child through the help of crashes (Intd: the bedroom is the exclusive place which the child exited with the help of crutches)

7.4 Manner-of-motion Verbs

7.4.1 ***Agent/theme argument as subject***

(132) a. *Ma-solai/# Ø-mwisi* *ma-u-zyet-ele* *mu- Ø-vata*
6-soldier/3-smoke 6-3AgrS-circulate-PST 18-5-village
The soldiers circulated in the village

b. *I-ndende/#lu-tai* *i-lu-tyatik-idi* *ku- Ø-zandu*
8-kids/ 11-branch 8-11-/AgrS-run-PST 17-5-market
The kids/branch ran to the market

c. *Mw-ana/# Ø-sengo* *ki-met-e* *ku-Ø-n'ti*
1a-child/iron 7/AgrS-11-climb-PST 17-3-tree
A/the child/iron climbed onto the tree

7.4.1.2 *Goal/locative argument as subject*

(133) a. *Mu- Ø-vata* *mu-zyet-ele* *ma-solai*
18-5-village 18/AgrS-circulate-PST 6-soldier
In village circulated soldiers (Intd: the village is the place which the soldiers circulated)

b. *Ku-Ø-zandu* *ku-tyatik-idi* *i-ndende*
17-5-market 17/AgrS-run-PST 8-kids
To market ran kids (Intd: the market is the place which the kids ran)

c. *Ku- Ø-n'ti* *ku-met-e* *mw-ana*
17-3-tree 17/AgrS-climb-PST 1a-child
To tree climbed a/the child (Intd: the tree is the place which the child climbed)

7.3.1.3 *Goal/locative argument (without locative prefix) as subject*

(134) a. *Ø-vata* *di-zyet-ele* *ma-solai*
5-village 5/AgrS-surround-PST 6-soldiers
The village surrounded soldiers (Intd: the village is the place which the soldiers surrounded)

b. *Ø-zandu* *di-tyatik-idi* *i-ndende*
5-market 5/AgrS-run-PST 8-kids
The market ran kids (Intd: the market is the place which the kids run)

c. *Ø-n'ti* *u-met-e* *mw-ana*
5-tree 3/AgrS-climb-PST 1a-child
The tree climbed child (Intd: the tree is the place which the child climbed)

7.4.2 Subjecthood properties of the goal/locative argument

7.4.2.1 *Occurrence in subject position*

(135) a. *Mu-Ø-vata* *nze* *mw-au* *mu-zyet-ele* *ma-solai*
18-5-village seems 18-there 18/AgrS-circulate-PST 6-soldiers
'In village seem there circulated soldiers (Intd: it seems that the soldiers surounded in the village)'

b. *Ku-Ø-zandu* *nze* *kw-au* *-ku-tyatik-idi* *i-ndende*
17-5-market seem 17-there 17-run-PST 8-kids
To market seem there ran the children (Intd: it seems that the kids ran to market)

d. *Ku-Ø-n'ti* *nze* *kw-au* *ku-met-e* *mw-ana*
17-3-tree seem 17-there 17-climb-PST 1a-child
To tree seem there climbed child (Intd: it seems that the child climbed onto the tree)

7.4.2.2 *Passivization*

(136) a. *Mu-Ø-vata* *mu-zyet-el-w-e* *kwa* *ma-solai*
18-5-village 18/AgrS-surrouned-APPL-PASS-PST by 6-soldiers
In village was circulated by soldiers (Intd: the village was circulated by the soldiers)

b. *Ø-vata* *di-zyet-el-w-e* *kwa* *ma-solai*
5-village 5/AgrS-surround-APPL-PASS-PST by 6-soldiers
The village was surrounded by soldiers (Intd: the village was circulated by soldiers)

c. *Ku-Ø-zandu* *ku-tyatik-il-w-e* *kwa* *i-ndende*
17-5-market 17/AgrS-run-APPL-PASS-PST by kids
To market was run by kids (Intd: the kids ran to the market)

d. *Ø-zandu* *di-tyatik-il-w-e* *kwa* *i-ndende*
5-market 5/AgrS-run-APPL-PASS-PST by kids
Market was run by kids (Intd: the kids ran to the market)

e. *Ku-Ø-n'ti* *ku-met-w-e* *kwa* *Luzolo*
17-3-tree 17-climb-PASS-PST by 1-PN
To the tree was climbed by Luzolo (Intd: the tree is the place which Luzolo climbed)

f. *Ø-n'ti* *u-met-w-e* *kwa* *Luzolo*
3-tree 3/AgrS-climb-PASS-PST by 1-PN
The tree was climbed by Luzolo (Intd: the tree is the place which Luzolo climbed)

7.4.2.3 *Relativization*

(137) a. *Ku-Ø-vata* *ko ku-zyet-ele* *ma-solai* *mw-ana* *u-ta* *ko dila*
17-5-village 17/Rel 17-surroud-PST 6-soldiers 1a-child 1a-be 17/there cry
To village where surrouned soldiers a child is crying (Intd: there is a child crying where the soldiers surrounded).

b. *Ø-vata* *dyo di-zyet-ele* *ma-solai* *mw-ana* *u-ta* *ko dila*
5-village 5/Rel 5-circulate-PST 6-soldiers 1a-child 1a-be 17/there cry
The village where surrounded soldiers person is crying (Intd: there is a child crying where the soldiers surrounded).

b. *Ku-Ø-zandu* *ko ku-tyatik-idi* *i-ndende* *nkindu i-na* *ko*
17-5-market 17/Rel 17/AgrS-run-PST 8-kids fight 9-be 17/there
In village where ran kids there is a fight (Intd: there is a fight where the kids ran)

b. **?** *Ø-zandu* *dyo* *di-tyatik-idi* *i-ndende* *nkindu i-na* *ko*
5-market 5/Rel 5/AgrS-run-PST 8-kids fight 9-be 17/there
The village where ran kids there is a fight (Intd: there is a fight where the kids ran)

c. *Ku-Ø-n'ti* ko *ku-met-e* *mw-ana* *i-elele* *i-na* *ko*
17-3-tree 17/Rel 17/AgrS-climb-PST 1a-child 8-ant 9-be 17/there
In tree where climbed the child there are ants (Intd: the ants are on tree where the child climed)

d. *Ø-n'ti* wo *u-met-e* *mw-ana* *y-elele* *i-na ko*
17-3-tree 3/Rel 3/AgrS-climb-PST 1a-child 8-ant 9-be 17/there
The tree where climbed the child there are ants (Intd: the ants are on tree where the child climbd)

7.4.2.4 *The status of locative prefix as expletive*

(138) a. *Ko- ku-zyet-ele* *ma-solai* *mu-ntu* *u-ta* *ko* *kaza*
17-17/AgrS-circulate-PST 6-soldier 1-person AgrS-be 17/there cry
There where circulated soldiers person is crying there (Indt: there is someone crying where the soldiers circulated

b. *Ko-ku-tyatik-idi* *i-ndende* *nkindu i-na ko*
17-17/AgrS-river 8-kids fight 9-be 17/there
There (some place) where ran kids there is a fight (Intd: there is fight where the kids ran)

c. *Ko-ko-met-e* *mw-ana* *y-elele* *i-na* *ko*
17-17/AgrS-climb-PST 1a-child 8-ant 8-be 17/there
There where climbed child there are ants (Intd: there are ants where the child climbed)

7.4.3 Object agreement with preverbal argument

(139) a. *#Mu-Ø-vata* *mw-'a-zyet-ele* *ma-solai*
18-5-village 18/AgrS- 2/AgrO-circulate-PST 6-soldiers
In the village (them) circulated the soldiers (Intd: the village is the place which the soldiers circulated)

b. *#Ku-Ø-zandu* *ku-'n-tyatik-idi* *i-ndende*
17-5-market 17/AgrS-1/AgrO-run-PST 8-kids
To the market (them) ran kids (Intd: the kids ran to the market)

c. *#Ku-Ø-n'ti* *ku-'m-met-e* *mw-ana*
17-3-tree 17/AgrS-1/AgrO-climb-PST 1a-child
To the tree him/her climbed child (Intd: the child climbed onto the tree)

7.4.4 Purpose phrase modification

7.4.4.1 *Agent/theme argument as subject*

(140) a. *Ma-solai/# Ø-mwisi* ***di****-ma-u-zyet-ele* *mu-Ø-vata* ***mpasi vo*** *ma-kengela mfumu*
6-soldier/3-smoke Cp-6-3/AgrS-circulate-PST 18-5-village so that they secure chief
The soldiers circulated in the village so that they protect the chief

b. *I-ndende/#lu-tai* ***di****-i-lu-tyatik-idi* *ku-Ø-zandu* ***mpasi v****o ya sumba mbolo*
8-kids/11-branch Cp-8-11/AgrS-run-PST 17-5-market so that they buy bread
The kids/branch ran to the market so that they buy bread

c. *Mw-ana/#Ø-lusinga* ***di****-ka-lu-mat-in-i* *ku-Ø-n'ti* ***mpasi vo*** *ka/lwa tulula 'manga*
1a-child/11-iron Cp-1-11-climb- APPL-PST 17-3-tree so that s/he/it fetch mangoes
The child/iron climbed onto the tree so that s/he/it fetches mangoes

7.4.4.2 *Goal/locative argument as subject*

(141). a. *#Mu-Ø-vata* ***di****-mu-zyet-ele* *ma-solai* ***mapi vo*** *mwa kengela mfumu*
18-5-village Cp-18/AgrS-circulated-PST 6-soldier so that there protect chief
In village circulated soldiers so that there (the village) protect chief (Intd: the village is the place which the soldiers circulated so that they protect the chief)

b. *#Ku-Ø-zandu* ***di****-ku-tyatik-idi* *i-ndende* ***mpasi vo*** *kwa sumba mbolo*
17-5-market Cp-17/AgrS-run-PST 8-kids so that there buy bread
To market ran kids so that there (at market) buy bread (Intd: the market is the place which the kids ran so that they buy bread)

c. *#Ku-Ø-n'ti* ***di****-ku-mat-in-i* *mw-ana* ***mpasi vo*** *kwa tulula 'manga*
17-3-tree Cp-17/AgrS-climb-APPL-PST 1a-child so that there fetch mango
To tree climbed child there (onto tree) fetch mango (Intd: the tree is the place which the child climbed so that s/he fetches mangoes)

7.4.4.3 *Goal/locative argument (without locative prefix) as subject*

(142) a. *# Ø-vata di-di-zyet-ele ma-solai* ***mpasi vo*** *dya kengele mfumu*
5-village Cp-5/AgrS-circulate-PST 6-soldiers so that it protect chief
The village circulated soldiers so that there (village) protect chief (Intd: the village is place which the soldiers circulated so that they protect the chief)

b. # *Ø-zandu* ***di****-di-tyatik-idi* *i-ndende* ***mpasi vo*** *dya sumba mbola*
5-market Cp-AgrS/5-run-PST 8-kids so that it buy bread
The market ran kids so that there (at market) buys bread (Intd: the market ran the kids so that they buy bread)

c. # *Ø-n'ti* ***di****-u-mat-in-i* *mw-ana mapsi vo wa tuluka 'manga*
3-tree Cp-3AgrS-climb-APPL-PST 1a-child so that tree fetch a mango
The tree climbed child so that there (onto tree) fetches mango (Intd: the tree is the place which the child climbed so that s/he fetches mangoes)

7.4.5 Agent-oriented phrase modification

7.4.5.1 *Agent/theme argument as subject*

(143) a. *Ma-solai/# Ø-mwisi* *ma-u-zyet-ele* *mu-Ø-vata* ***mu-nswalu***
6-soldier/3-smoke 6-3/AgrS-circulate-PST 18-5-village 18-fast
The soldiers circulated in the village fast

b. *I-ndende/#lu-tai* *i-lu-tyatik-idi* *ku-Ø-zandu* ***mu-kinsweki***
8-kids/11-branch 8-11-/AgrS-run-PST 17-5-market 18-secret
The kids/branch ran to the market secretly

c. *Mw-ana/#lu-singa* *lu-met-e* *ku-Ø-n'ti* ***mu-kinsweki***
1a-child/11-iron 11/AgrS-climb-PST 17-3-tree 18-secret
The child/iron climbed onto the tree secretly

7.4.5.1 *Goal/locative argument as subject*

(144) a. *Mu-Ø-vata* *mu-zyet-ele* *ma-solai* ***mu-nswalu***
18-5-village 18/AgrS-circulate-PST 6-soldier 18-fast
In village circulated soldiers fast (Intd: the village is the place which the soldiers circulated fast)

b. *Ku-Ø-zandu* *ku-tyatik-idi* *i-ndende* ***mu-kinsweki***
17-5-market 17/AgrS-run-PST 8-kids 18-secret
To market ran kids secretly (Intd: the market is the place which the kids ran secretly)

c. *Ku-Ø-n'ti* *ku-met-e* *mw-ana* ***mu-kinsweki***
17-3-tree 17/AgrS-climb-PST 1a-child 18-secret
To tree climbed child secretly (Intd: the tree is the place which the child climbed secretly)

7.4.5.2 *Goal/locative argument (without locative prefix) as subject*

(145) a. *Ø-vata* *di-zyet-ele* *ma-solai* ***mu-nswalu***
5-village 5/AgrS/-circulate-PST 6-soldiers 18-fast
The village circulated soldiers fast (Intd: the village is the place which the soldiers circulated fast)

b. *Ø-vandu* *di-tyatik-idi* *i-ndende* ***mu-kinsweki***
5-market 5/AgrS-run-PST 8-kids 18-secret
The market ran kids intelligently (Intd: the market is the palce which the kids went secretly)

c. *Ø-n'ti* *u-met-e* *mw-ana* ***mu-kinsweki***
3-tree 3/AgrS-climb-PST 1a-child 18-secret
Tree climbed child secret (Intd: the tree is the place which the child climbed secretly)

7.4.6 By-self phrase modification

7.4.6.1 *Agent/theme argument as subject*

(146) a. *Ma-solai/# Ø-mwisi* *ma-u-zyet-ele* *mu-Ø-vata* ***mau-wau mosi***
6-soldier/3-smoke 6-3/AgrS-circulate-PST 18-5-village them selves/it self
The soldiers circulated in the village on their own.

b. *I-ndende/#lu-tai* *i-lu-tyatik-idi* *ku-Ø-zandu* ***yau/lwau mosi***
8-kids/11-branch 8-11-/AgrS-run-PST 17-5-market themselves/itself
The kids/branch ran to the market on their own

c. *Mw-ana/#lu-singa* *lu-met-e* *ku-Ø-n'ti* ***yani/lwau mosi***
1a-child/11-iron 11/AgrS-climb-PST 17-3-tree him/herself/itself
The child/iron climbed onto the tree on him/her /its own

7.4.6.2 Goal/locative argument as subject

(147) a. *#Mu-Ø-vata* *mu-zyet-ele* *ma-solai* ***mw-au mosi***
18-5-village 18/AgrS-circulate-PST 6-soldier 18-itself
In village circulated the soldiers by itself (Intd: the village is the place which the soldiers circulated on their own)

b. *#Ku-Ø-zandu* *ku-tyatik-idi* *i-ndende* ***mw-au mosi***
17-5-market 17/AgrS-run-PST 8-kids 18-itself
To market ran the kids by itself (Intd: the market is the place which the kids ran on their own)

c. *#Ku-Ø-n'ti* *ku-met-e* *mw-ana* ***mw-au mosi***
17-3-tree 17/AgrS-climb-PST 1a-child 18-itself
To tree climbed child by itself (Intd: the tree is the place which the child climbed on his/her own)

7.4.6.3 *Goal/locative argument (without locative prefix) as subject*

(148) a. *# Ø-vata* *di-zyet-ele* *ma-solai* ***dy-au mosi***
5-village 5/AgrS-circulate-PST 6-soldiers 18-self
The village circulated soldiers by itself (Intd: the village is the place which soldiers circulated on their own)

b. *# Ø-zandu* *di-tyatik-idi* *i-ndende* ***dy-au mosi***
5-market 5/AgrS-run-PST 8-kids 18-self
The market ran kids by itself (Intd: market is the place which the kids ran on their own)

c. *# Ø-n'ti* *u-met-e* *mw-ana* ***dy-au mosi***
3-tree 3/AgrS-climb-PST 1a-child 18-self
The tree climbed child by itself (Intd: the tree is place which the child climbed his/her own)

7.4.7 Again phrase modification

7.4.7.1 *Agent/theme argument as subject*

(149) a. *Ma-solai/# Ø-mwisi* *ma-u-zyet-ele* ***dyaka*** *mu-Ø-vata*
6-soldier/3-smoke 6-3/AgrS-circulate-PST again 18-5-village
The soldiers circulated in the village again

b. *I-ndende/#lu-tai* *i-lu-tyatik-idi* ***dyaka*** *ku-Ø-zandu*
8-kids/11-branch 8-11-/AgrS-run-PST again 17-5-market
The kids/branch ran to the market again

c. *Mw-ana/#lu-singa* *lu-met-e* ***dyaka*** *ku-Ø-n'ti*
1a-child/11-iron 11-climb-PST again 17-3-tree
The child/iron climbed onto the tree again

7.4.7.2 *Goal/locative argument as subject*

(150) a. *Mu- Ø-vata* *mu-zyet-ele* ***dyaka*** *ma-solai*
18-5-village 18/AgrS-circulate-PST again 6-solai
In village circulated again soldier (Intd: the village is the place which the soldiers circulated again)

b. *Ku-Ø-zandu* *ku-tyatik-idi* ***dyaka*** *i-ndende*
17-5-market 17/AgrS-run-PST again 8-kids
To market ran again kids (Intd: the market is the place which the kids ran again)

c. *Ku-Ø-n'ti* *ku-met-e* ***dyaka*** *a-na*
17-3-tree 17-climb-PST again 2-child
To tree climbed again children (Intd: the tree is the place which the child climbed again)

7.4.7.3 *Goal/locative argument (without locative prefix) as subject*

(150) a. *Ø-vata* *di-zyet-ele* ***dyaka*** *ma-solai*
5-village 5/AgrS-circulate-PST again 6-soldier
The village circulated again soldier (Intd: the village is the place which the soldiers circulated again)

b. *Ø-zandu* *di-tyatik-idi* ***dyaka*** *i-ndende*
5-river 5/AgrS-run-PST again 8-kids
The market ran again kids (Intd: the market is place which the kids ran again)

c. *Ø-n'ti* *u-met-e* ***dyaka*** *mw-ana*
3-tree 3/AgrS-climb-PST again 1a-child
The tree climbed again child (Intd: the tree is the place which the child climbed again)

7.4.8 Reason phrase modification

7.4.8.1 *Agent/theme argument as subject*

(151) a. *Ma-solai/# Ø-mwisi* ***di****-ma-u-zyet-ele* *mu-Ø-vata* ***ekuma*** *makengila mfumu*
6-soldier/3-smoke Cp-6-3/AgrS-circulate-PST 18-5-village because they secure chief
The soldiers circulated in the village because they protect the chief

b. *I-ndende/#lu-tai* ***di****-i-lu-tyatik-idi* *ku- Ø-zandu* ***ekuma*** *ya sumba mbolo*
8-kids/#11-branch Cp-8-11/AgrS-run-PST 17-5-market because they buy bread
The kids/branch ran to the market because they buy bread

c. *Mw-ana/#lu-singa* ***di****-ka-lu-mat-in-i* *ku- Ø-n'ti* ***ekuma*** *ka-lwa-tulula 'manga*
1a-child/3-iron Cp-3Sg-11/AgrS-climb-PST 17-3-tree becaue 1-fetch mango
The child/iron climbed onto the tree because s/he fetches mangoes

7.4.8.2 *Goal/locative argument as subject*

(152) a. *Mu-Ø-vata* ***di****-mu-zyet-ele* *ma-solai* ***ekuma*** *a-kengila mfumu*
18-5-Village Cp-18-AgrS-circulate-PST 6-soldier because 2-invigilate chief
In village circulated soldiers because they protect the chief (Intd: the village is the place which the soldiers circulated in order they protect the chief)

c. *Ku- Ø-zandu* ***di****-ku-tyatik-idi* *i-ndende* ***ekuma*** *ya sumba mbolo*
17-5-market Cp-17-run-PST 8-kids because they buy bread
To market ran kids because they buy bread (Intd: the market is the place which kids ran in order they buy bread)

d. *Ku-Ø-n'ti* ***di****-ku-mat-in-i* *mw-ana* ***ekuma*** *ka-tulula 'manga*
17-3-tree Cp-17-climb-APPL-PST 1a-child because 1a-fetch mango
To tree climbed children because they fetch mangoes (Intd: the tree is the place which the child climbed because s/he fetches mangoes)

7.4.8.3 ***Goal/locative argument (without locative prefix) as subject***

(153) a. *Ø-vata* ***di****-di-zyet-ele* *ma-solai* ***ekuma*** *mfumu wa zunga vakalutila*
5-Village Cp-5/AgrS-circulate-PST 6-soldier because chief of district pass by
The village circulated soldiers because the chief will pass by (Intd: the village is the place which the soldiers circulated because they protect the chief who will pass by)

b. *Ø-zandu* ***di****-di-tyatik-idi* *i-ndende* ***ekuma*** *ya sumba* *mbolo*
5-market Cp-5/AgrS-run-PST 8-kids because they buy bread
The market ran the kids because they buy bread (Intd: the market is the place which the kids ran because they buy bread)

c. *Ø-n'ti* ***di****-u-mat-in-i* *mw-ana* ***ekuma*** *ka-tulula manga*
5-tree Cp-3/AgrS-climb-APPL-PST 1a-child because 3Sg-fetch mango
The tree climbed the child because s/he fetches mangoes (Intd: the tree is the place which the climbed because s/he fetches mangoes)

7.4.9 Instrumental modification

7.4.9.1 ***Agent/theme argument as subject***

(154) a. *Ma-solai/# Ø-mwisi* *ma-u-zyet-ele* *mu-Ø-vata* ***mu-Ø-kalu***
6-soldier/3-smoke 6-3/AgrS-circulate-PST 18-5-village 18-5-car
The soldiers circulated in the village by means of car

b. *I-ndende/#lu-tai* *i-lu-tyatik-idi* *ku-Ø-zandu* ***mu-mi-leta***
8-kids/11-branch 8-11/AgrS-run-PST 17-5-market 18-4-crutches
The kids/branch ran to the market with the help of crutches

c. *Mw-ana/#lu-singa* *lu-met-e* *ku- Ø-n'ti* *mu-lu-kamba*
1a-child/11-iron 11/AgrS-climb-PST 17-3-tree 18-11-line
The child/iron climbed onto the tree through the help of a climbing line

7.4.9.2 ***Goal/locative argument as subject***

(155) a. *Mu-Ø-vata* *mu-zyet-ele* *ma-solai* ***mu-Ø-kalu***
18-5-village 18/AgrS-circulate-PST 5-soldier 18-5-car
In village circulated soldiers by car (Intd: the village is the place which the soldiers circulated by means of a car)

b. *Ku-Ø-zandu* *ku-tyatik-idi* *i-ndende* ***mu-mi-leta***
17-5-market 17/AgrS-run-PST 8-kids 18-4-crutch
To market ran the children by means of crutches (Intd: the market is the place which the kids ran through the help of crutches)

c. *Ku-Ø-n'ti* *ku-met-e* *a-na* ***mu-lu-kamba***
17-3-tree 17AgrS/-climb-PST 2-child 18-11-climbing line
To tree climbed children by means of a climbing line (Intd: the tree is the place which the children climbed with the help of a climbing line)

7.4.9.2 ***Goal/locative argument (without locative prefix) as subject***

(156) a. *Ø-vata* *di-zyet-ele* *ma-solai* ***mu-Ø-kalu***
5-village 5/Agrs-circulate-PST 6-solai 18-5-car
The village circulated soldiers by car (Intd: the village is the place which the soldiers circulated by means of a car)

b. *Ø-zandu* *di-tyatik-idi* *i-ndende* ***mu-mi-leta***
5-market 5/AgrS-run-PST 8-kids 18-4-crutch
The market ran kids through the help of the crutches (Intd: the market is the place which the kids climbed with the help of crutches)

c. *Ø-n'ti* *u-met-e* *mw-ana* ***mu-lu-kamba***
3-tree 3/AgrS-climb-PST 1a-child 18-11-climbing line
The tree climbed child through the help of climbing line (Intd: the tree is the place which the child climbed with the help of a climbing line)

7.4.10 Temporal phrase modification

7.4.10.1 ***Agent argument as subject***

(157) a. *Ma-solai* *ma-zyet-ele* *mu-Ø-vata (kolo kya-)/(#mu-)ngunga imosi*
6-soldier AgrS/6-circulate-PST 18-5-village for/in an hour
The soldiers circulated in the village for/in an hour

b. *I-ndende* *i-tyatik-idi* *ku-Ø-zandu (#kolo kya-)/(mu-)ngunga imosi*
8-kids 8/AgrS-run-PST 17-5-market for/in an hour
The kids ran to the market for /in an hour

c. *Mw-ana* *met-e* *ku-Ø-n'ti (kolo kya-)/(#mu-)ngunga imosi*
1a-child climb-PST 17-3-tree for/in an hour
The child climbed onto the tree for/in an hour

7.4.10.2 *Goal/locative argument as subject*

(158) a. *Mu-Ø-vata mu-zyet-ele ma-solai (kolo kya-)/(mu-)nguga imosi*
18-5-village 18/AgrS-circulate-PST 6-soldier for/in an hour
In village circulated soldiers for/in an hour (Intd: the village is the place which the soldiers circulated for/in an hour)

b. *Ku-Ø-zandu ku-tyatik-idi ki-ndende (kolo kya-)/(mu-)ngunga imosi*
17-5-market 17/AgrS-run-PST 7-kid for/in an hour
To market ran kid for one hour/in an hour (Intd: the market is the place which the kid went for/in hour)

d. *Ku-Ø-n'ti ku-met-e a-na (?kolo kya-)/(mu-)ngunga imosi*
17-3-tree 17/AgrS-climb-PST 2a-child for/in an hour
To tree climbed children for/in an hour (Intd: the tree is the place which the children climbed for/in an hour)

7.4.10.3 *Goal/locative argument (without locative prefix) as subject*

(159) a. *Ø-vata di-zyet-ele ma-solai (kolo kya-)/(mu-)ngunga imosi*
5-village 5/AgrS-circulate-PST 4-soldier for/in an hour
The village circulated soldiers for/in an hour (Intd: the village is the place which the soldiers circulated for/in hour)

c. *Ø-zandu di-tyatik-idi i-ndende (kolo kya-)/(mu-)ngunga imosi*
5-market 5/AgrS-run-PST 8-kid for/in an hour
Market ran the kids for/in an hour (Intd: the market is the place which the kids ran for/in an hour)

d. *Ø-n'ti u-met-e a-na (?kolo kya-)/(mu-)ngunga imos)*
3-tree 3/AgrS-climb-PST 2-child for/in an hour
Tree climbed children for/in an hour (Intd: the tree is the place which the children climbed for/in an hour)

7.4.11 Locative-applicative alternation

7.4.11.1 *Agent/theme argument as subject*

(160) a. *Ma-solai/# Ø-mwisi ma-zyet-el-ang-a mu-Ø-vata mu-Ø-kalu*
6-soldier/3smoke 6/AgrS-circulate-APPL-HAB-FV 18-5-village 18-5-car
The soldiers circulate exclusively in the village by the car

b. *I-ndende/#lu-tai i-lu-tyatik-il-ang-a ku-Ø-zandu mu- Ø-tukutuku*
8-kids/11-branch 8-11/AgrS-run-APPL-HAB-FV 17-5-market 18-7-motor bike
The kids/branch run exlucively to the market by motor bike

c. *Mw-ana/#lu-singa u-lu-mat-in-ang-a ku-Ø-n'ti mu-lu-kamba*
1a-child/ 11-iron 1-11AgrS-climb-APPL-HAB-FV 17-3-tree 18-11-climb line
The child/iron climbes exclusively onto the tree through the help of climbing line

7.4.11.2 *Goal/Locative argument as subject*

(161) a. *Mu-Ø-vata mu-zyet-el-ang-a ma-solai mu-Ø-kalu*
18-5-village 18/AgrS-circulate-APPL-HAB-FV 6-soldiers 18-5-car
In village soldiers circulates (Intd: the village is the exclusive place where the soldiers circulate by car)

b. *Ku-Ø-yanzala kya somba ku-tyatik-il-ang-a i-ndende mu-Ø-tukutuku*
17-7-stadium 17/AgsR-run-APPL-HAB-FV 8-kids 18-7-motor bike
To stadium run for kids by means of motor bike (Intd: the stadium is the exclusive place which the kids run by means of motor bike)

d. *Ku-Ø-ba ku-mat-in-ang-a mw-ana mu-lu-kamba*
17-5-tree 17/AgrS-climb-APPL-HAB-FV 1a-child 18-11-climb line
To palm tree climb the child by means of climbing line (Intd: the palm tree is the exclusive place which the child climbs with the help of climbing line)

7.4.11.3 *Goal/Locative argument (without locative prefix) as subject*

(162) a. *Ø-vata di-zyet-el-ang-a ma-solai mu-ma-kumbi*
5-village 5/AgrS-circulate-APPL-HAB-FV 4-soldier 18-6-cars
The village circulates soldiers by means of cars (Intd: the village is the exclusive place which the soldiers circulate by means of car)

c. *Ø-yanzala kya somba ki-tyatik-il-ang-a i-ndende mu-Ø-tukutuku*
7-stadium 7/AgrS-run-APPL-HAB-FV 8-kid 18-7-motor bike
The stadium kids run for by means of motor bike (Intd: the stadium is the exclusive place which kids run with the help of motor bike)

d. *Ø-ba di-mat-in-ang-a mw-ana mu-lu-kamba*
5-palm 5/AgrS-climb-APPL-HAB-FV 1a-child 18-11-climbing line
The palm tree climbs child for by means of climb line (Intd: the plam tree is the exclusive place which the child climbs with the help of climbing line)

7.5 Verbs of existence

7.5.1 *Agent/theme argument as subject*

(163) a. *Luzolo/#Ø-tanzi u-ki-ziingil-ang-a mu-Ø-nzo ya 'nene*
1-PN/7-machte 1-7/AgrS-live-HAB-FV 18-9-house of big
Luzolo/machete lives in a big house

b. *Ø-nuni/Ø-tanzi* *zi-ki-kal-ang-a* *mu-Ø-zala/va-Ø-koko*
10-bird/7-machete 10/-7-AgrS-stay-HAB-FV 18-5-nest/16-7-corner
The birds stay in the nest/machete stays in the corner

7.5.1.2 *Locative argument as subject*

(164) a. *Mu-Ø-nzo ya 'nene* *mu-ziingil-ang-a* *Luzolo*
18-9-house of big 18-live-HAB-FV 1-PN
In big house live luzolo (Intd: the big house is the place which Luzolo lives)

b. *Mu-Ø-zala/va-Ø-koko* *mu-va-kal-ang-a* *Ø-nuni/ Ø-tanzi*
18-5/16-7-nest 18-16-stay-HAB-FV 10-bird/7-machete
In nest/in corner stay birds/machete (Intd: the nest/corner is the place which birds/machete stays)

7.5.1.3 *Goal/locative argument (without locative prefix) as subject*

(165) a. *Ø-nzo ya 'nene* *i-ziing-il-ang-a* *Luzolo...*
9-house of big 9/AgrS-live-APPL-HAB-FV 1-PN
The big house lives Luzolo (Intd: the big house is the place which Luzolo lives)

b. *Ø-zala* *di-ki-kal-ang-a* *Ø-nuni*
5-nest 5-7-/AgrS-stay-HAB-FV 10-birds
The nest stays birds (Intd: the nest is the place which the birds stays)

7.5.2 Subjecthood properties of the locative argument

7.5.2.1 *Occurrence in subject position*

(166) a. *Mu-Ø-nzo* *nze* *mw-au* *mu-ziing-il-ang-a* *Ø-nkaka*
18-9-house seem 18-there 18-live-APPL-HAB-FV 1-grandpa
In house seem live grandpa (Intd: it seems that the house is the palce which the grandpa lives)

b. *Mu-Ø-zala* *nze* *mw-au* *mu-kal-ang-a* *Ø-nuni*
18-5-room seem 18-there 18-stay-HAB-FV 10-bird
In nest seem there stay birds (Intd: it seems that the nest is the place which birds stay)

7.5.2.2 *Passivization*

(167) a. *#Mu-Ø-nzo* *mu-ziing-il-w-ang-a* *kwa Luzolo*
18-9-house 18-live-APPL-PASS-HAB-FV by 1-PN
In house is being lived (Intd: the house is the place which Luzolo lives)

b. # *Ø-nzo* *i-ziing-il-w-ang-a* *kwa* *Luzolo*
9-house 9/AgrS-live-APPL-PASS-HAB-FV by 1-PN
The house is being lived (Intd: the house is the place which Luzolo lives)

c. #*Mu-Ø-zala* *mu-kal-w-ang-a* *kwa* *Ø-nuni*
18-5-room 18-stay-PASS-HAB-FV by 10-bird
In nest is stayed by birds (Intd: the nest is the place which the birds stay)

d. #*Ø-zala* *di-kal-w-ang-a* *kwa* *Ø-nuni*
5-room 5/AgrS-stay-PASS-HAB-FV by 10-bird
The nest is stayed by birds (Intd: the nest is the place which the birds stay)

7.5.2.3 *Relativization*

(168) a. *Mu-Ø-nzo* *mo-mu-ziing-il-ang-a* *Ø-nkaka* *Ø-nyoka* *u-na* *mo*
18-9-house 18/Rel-18-live-APPL-HAB-FV 1-grand 9- snake 9-be 18/there
In house where (in the house) live grandpa there is snake (Intd: there is a snke where the grandpa lives)

b. *Ø-nzo* *yo-i-ziing-il-ang-a* *Ø-nkaka* *Ø-nyoka* *u-na* *mo*
9-house 9/Rel 9-live-APPL-HAB-FV 1-grand 9-snake 9-be 18/there
The house where (the house) live grandpa there is a snake (Intd: there is a snake where the grandpa lives)

b. *Ku-Ø-n'ti* *ko* *ku-kal-ang-a* *Ø-nuni* *a-ntu* *e-ta* *ko* mata
17-3-tree 17/Rel 17/AgrS-come-PST 10-bird 2-person 2-be 17/there climb
There (to some place) stay birds people are climbing there (Intd: people climbi the tree which the birds stay)

b. *Ø-n'ti* *wo* *u-kal-ang-a* *Ø-nuni* *a-ntu* *e-ta* *ko* *mata*
3-tree 3/Rel 3/AgrS-come-PST 10-bird 2-person 2-be 17/there climb
The tree where stay birds people are climbing there (Intd: people climb the tree which the birds stay)

7.5.2.4 *Locative prefix as expletive*

(169) a. *Mo-mu-ziing-il-ang-a* *Ø-nkaka* *Ø-nyoka* *u-na* *mo*
18-18-live-HAB-FV 1-grand 9- snake 9-be 18/there
There (in some place) live grandpa there is a snake (Intd: there is a snake where the grandpa lives)

b. *Ko-ku-kal-ang-a* *Ø-nuni* *a-ntu* *e-ta* *ko* *mata*
17-17-come-PST 10-grandpa 2-person 2-be 17/there climb
There (to some place) stay birds people are climbing there (Intd: there are people climbing where the birds stay)

7.5.3 Objecthood properties with agent/theme argument

(170) a. *#Mu-Ø-nzo* *mu-n-ziing-il-ang-a* *Ø-nkaka*
18-9-house 17/AgrS-AgrO-live-HAB-FV 1-grandpa
In house (him) live children (Intd: the house is the place which the grandpa lives)

b. *#Mu- Ø-zala* *mu-n-kal-ang-a* *Ø-nuni*
18-5-nest 18/AgrS-AgrO-stay-FV 10-birds
In nest (them) stay birds (Intd: the nest is the place which the birds live)

7.5.4 Purpose clause modification

7.5.4.1 *Agent/theme argument as subject*

(171) a. *#Luzolo* ***di****-ka-ziingid-il-ang-a* *mu-Ø-nzo ya 'nene* ***mpasi vo*** *ka-sasa antu ayingi*
1-PN Cp-1-live-APPL-HAB-FV 18-9-house of big so that 1-bring up many people
Luzolo lives in a big house so that s/he brings up more people

b. *Ø-nuni* ***di****-zi-kad-il-ang-a* *mu-Ø-zala* ***mpasi vo*** *za loza maaki*
10-bird Cp-10/AgrS-stay-APPL-HAB-FV 18-5-nest so that they lay eggs
The birds stay in the nest so that they lay eggs

7.5.4.2 *Locative argument as subject*

(172) a. *#Mu-Ø-nzo* ***di****-mu-ziing-il-ang-a* *a-ntu* ***mpasi vo*** *mwa sasa antu ayingi*
18-9-house Cp-18-live-APPL-HAB-FV 2-person so that there bring many people
In house live people so that there so that there bring up many people (Intd: the house is the place which Luzolo lives so that s/he brings up many people)

b. *#Mu-Ø-zala* ***di****-mu-kal-ang-a* *nuni* ***mpasi vo*** *mwa loza ma-aki*
18-5-nest Cp-18-stay-HAB-FV bird so that there lay 6-egg
In village stay people so that there lay eggs (Ind: the nest is the place which birds stay so that they lay eggs)

7.5.4.3 *Locative argument (without locative prefix) as subject*

(173) a. *# Ø-nzo* ***di****-i-ziing-il-ang-a* *a-ntu* ***mpasi vo*** *ya...*
9-house Cp-9/AgrS-live-APPL-HAB-FV 2-person so that there...
The big house live people so that there …. (Intd: the house is the place which Luzolo lives so that s/he brings up many people)

b. *#Ø-zala* ***di****-di-kal-ang-a* *Ø-nuni* ***mpasi vo*** *dya...*
5-nest Cp-5/AgrS-stay-HAB-FV 10-bird so that there...
The nest stays birds so that they lay eggs (Ind: the nest is the place which birds stay so that they lay eggs)

7.5.5 Agent-oriented modification

7.5.5.1 *Agent argument as subject*

(174) a. *Luzolo u-ziing-il-ang-a* *mu-Ø-nzo ya 'nene* ***mu-kinsweki***
1-PN 1/AgrS-live-APPL-HAB-FV 18-9-house of big 18-secretly
Luzolo lives in a big house secretly

b. *Ø-nuni* *zi-kal-ang-a* *mu-Ø-zala* ***mu-ndwenga***
10-bird 10/AgrS-stay-HAB-FV 18-5-nest 18-caution
The birds stay in the/a nest cautiously

7.5.5.2 *Locative argument as subject*

(175) a. *Mu-Ø-nzo* *mu-ziing-il-ang-a* *a-ntu* ***mu-kinsweki***
18-9-house 18/AgrS-live-APPL-HAB-FV 2-person 18-secretly
In house live people secretly (Intd: the house is the place which people live secretly)

b. *Mu-Ø-zala* *mu-kal-ang-a* *Ø-nuni* ***mu-ndwenga***
18-5-nest 18/AgrS-stay-HAB-FV 10-bird 18-caution
In nest stay birds caution (Intd: the nest is the place which birds stay cautiously)

7.5.5.3 *Locative argument (without locative prefix) as subject*

(176) a. *Ø-nzo* *i-ziing-il-ang-a* *a-ntu* ***mu-kinsweki***
9-house 9/AgrS-live-APPL-HAB-FV 2-person 18-secretly
The big house live people secretly (Intd: the house is the place which people stay secretly)

b. *Ø-zala* *di-kal-ang-a* *Ø-nuni* ***mu-ndwenga***
5-nest 5/AgrS-stay-HAB-FV 10-birds 18-caution
The nest stays birds caution (lit:, nest is the place which birds stay cautiously)

7.5.6 By-phrase phrase modification

7.5.6.1 Agent argument as subject

(177) a. *Luzolo* *u-ziingil-ang-a* *mu-Ø-nzo ya 'nene* ***yani mosi***
1-PN 1/AgrS-live-HAB-FV 18-9-house of big himself
Luzolo lives in a big house himself (*understood alone*)

b. *Ø-nuni zi-kal-ang-a* *mu-Ø-zala* ***zau mosi***
10-bird 10/AgrS-stay-HAB-FV 18-5-nest themslves
The birds stay in the nest themselves (*understood on their own*)

7.5.6.2 *Locative argument as subject*

(178) a. *#Mu-Ø-nzo* *mu-ziingil-ang-a* *a-ntu* ***mw-au mosi***
18-9-house 18/AgrS-live-HAB-FV 2-person 18-itself
In house live people by itself (Intd: the house is the place which people live on their own)

b. *#Mu-Ø-zala* *mu-kal-ang-a* *Ø-nuni* ***mw-au mosi***
18-5-nest 18-stay-HAB-FV 10-bird 18-itself
In nest stay birds by itself (Intd: the nest is the place which birds stay on their own)

7.5.6.3 *Locative argument (without locative prefix) as subject*

(179) a. *# Ø-nzo* *i-ziin-gil-ang-a* *a-ntu* ***mw-au mosi***
9-house 9/AgrS-live-APPL-HAB-FV 2-person 18-itself
The big house live people by itself (Intd: house is the place which people live on their own)

b. *# Ø-zala* *di-kal-ang-a* *Ø-nuni* ***mw-au mosi***
5-nest 5/AgrS-stay-HAB-FV 10-birds 18-itself
The nest stays birds by itself (Intd: the nest is the place which birds live)

7.5.7 Again phrase modification

7.5.7.1 *Agent/theme argument as subject*

(180) a. *Luzolo u-ziingil-ang-a* ***dyaka*** *mu-Ø-nzo ya 'nene*
1-PN 1/AgrS-live-HAB-FV again 18-9-house of big
Luzolo lives in a big house again

b. *Ø-nuni* *zi-kal-ang-a* ***dyaka*** *mu-Ø-zala*
10-bird 10/AgrS-stay-HAB-FV again 18-5-nest
The birds stay in the nest again

7.5.7.2 Locative argument as subject

(181) a. *Mu-Ø-nzo* *mu-ziing-il-ang-a* ***dyaka*** *a-ntu*
18-9-house 18/Agrs-live-APPL-HAB-FV again 2-person
In house live again people (Intd: the house is the place which people live again)

b. *Mu-Ø-zala* *mu-kal-ang-a* ***dyaka*** *Ø-nuni*
18-5-nest 18/AgrS-stay-HAB-FV again 3-bird
In nest stay again nest (Intd: the nest is the place which birds stay again)

7.5.7.3 *Locative argument (without locative prefix) as subject*

(182) a. *Ø-nzo* *i-ziingil-ang-a* ***dyaka*** *a-ntu*
9-house 9/AgrS-live-HAB-FV again 2-person
The big house live again people (Intd: the big house is the place which the people live again)

b. *Ø-zala* *di-kal-ang-a* ***dyaka*** *Ø-nuni*
5-nest 5/AgrS-stay-HAB-FV again 10-bird
The nest stay again birds (Intd: the nest is the place which the birds stay again)

7.5.8 Reason phrase modification

7.5.8.1 *Agent argument as subject*

(183) a. *Luzolo* ***di****-ka-ziing-il-ang-a* *mu-Ø-nzo ya 'fyoti* ***ekuma*** *yani kaka kena*
1-PN Cp-1-live-APPL-HAB-FV 18-9-house of small because s/he is alone
Luzolo lives in a small house because s/he lives alone

b. *Ø-nuni* ***di****-zi-kad-il-ang-a* *mu-Ø-zala* ***ekuma*** *za loza maaki*
10-bird Cp-10/AgrS-stay-APPL-HAB-FV 18-5-nest because they lay eggs
The birds stay in the nest in order they lay eggs

7.5.8.2 *Locative argument as subject*

(184) a. *Mu-Ø-nzo ya fioti* ***di****-mu-ziing-il-ang-a* *Luzolo* ***ekuma*** *k'ena ye nzimbu ko*
18-9-house small Cp-18-live-APPL-HAB-FV 1-PN because 1a-be NEG[1] money NEG[2]
In small house live Luzolo because he does not have money (Intd: Luzolo lives in a small house because he does not have money)

b. *Mu-Ø-zala* ***di****-mu-kad-il-ang-a* *Ø-nuni* ***ekuma*** *za-loza maaki*
18-5-nest Cp-18/AgrS-stay-APPL-HAB-FV 3-bird because they lay eggs
In nest stay birds because they lay eggs (Intd: the nest is the place which birds stay in order they lay eggs)

7.5.8.3 *Locative argument (without locative prefix) as subject*

(185) a. *Ø-nzo ya fioti* ***di****-i-ziing-il-ang-a* *Luzolo* ***ekuma*** *k'ena ye nzimbu ko*
9-house small Cp-9/AgrS-live-APPL-HAB-FV 1-PN because 1a-be NEG[1] money NEG[2]
The small house live Luzolo because he does not have money (Intd: Luzolo lives in a small house because he does not have money

b. *Ø-zala* ***di****-di-kad-il-ang-a* *Ø-nuni* ***ekuma*** *mu-zi-loz-il-ang-a maaki*
5-nest Cp-5-stay-APPL-HAB-FV 10-bird because 18-9-lay-APPL-HAB-FV eggs
The nest stay birds because they lay eggs there (Intd: the nest is the place which birds stay because they lay eggs)

7.5.9 Instrumental phrase modification

7.5.9.1 Agent argument as subject

(186) a. *Luzolo u-ziing-il-ang-a* *mu-lu-pitalu* *mu-lusadisu lwa mpani zani*
1-PN 1/AgrS-live-APPL-HAB-FV 18-11-house of heal 18-help11/of brother his
Luzolo lives in the hospital through the help of his/her brothers/sisters

b. *# Ø-nuni* *zi-kal-ang-a* *mu-Ø-zala* **mu-ma-vela**
10-bird 10/AgrS-stay-HAB-FV 18-5-nest 18-6-wing
The birds stay in the nest by means of wings

7.5.9.2 *Locative argument as subject*

(187) a. *Mu-Ø-nzo ya mawuku mu-ziing-il-ang-a* *Luzolo* *mu-lusadisu lwa mpani zani*
18-9-house heal 18-live-APPL-HAB-FV 1-PN 18- help 11/of brother his
In hospital live Luzolo through the help of his/her brothers (Intd: the hospital is the place which Luzolo lives through the help of his brothers)

b. *#Mu-Ø-zala* *mu-kal-ang-a* *Ø-nuni* ***mu-ma-kaalu***
18-5-nest 18/AgrS-stay-HAB-FV 10-birds 18-6-car
In village live people through wings (Intd: the nest is the place which birds stay through the help of wings)

7.5.9.3 *Locative argument (without locative prefix) as subject*

(188) a. *Ø-nzo ya mawuku i-ziing-il-ang-a Luzolo mu-lusadisu lwa mpani zani*
9-house heal 9/AgrS-live-APPL-HAB-FV 1-PN 18- help11/of brother his
The hospital live Luzolo through the help of his/her brothers (Intd: the hospital is the place which Luzolo lives with the help of his brothers)

b. *# Ø-zala di-kal-ang-a Ø-nuni* ***mu-ma-vela***
5-nest 5/AgrS-stay-HAB-FV 10-bird 18-6-wing
The nest stays bird by means of wings (Intd: the nest is the place which the birds stay with the help of wings)

7.5.10 Temporal phrase modification

7.5.10.1 *Agent as subject*

(189) a. *A-ntu a-ziing-il-ang-a mu-Ø-nzo (kolo kya-)/(#mu-) ngonde zizole*
2-person 2/AgrS-live-APPL-HAB-FV 18-9-house for/in two months
People live in the house for/in two months

b. *Ø-nuni zi-kal-ang-a mu-Ø-zala (kolo kya)-/(#mu-) mingu zizole*
10-bird 10/AgrS-stay-HAB-FV 18-5-nest for/in two weeks
The birds stay in nest for/in two weeks

7.5.10.2 Locative argument as subject

(190) a. *Mu-Ø-nzo mu-ziing-il-ang-a a-ntu (kolo kya-)/(mu-)ngonde zisambanu)*
18-9-house 18/AgrS-live-APLL-HAB-FV 2-person for/in two months
In house live people for/in two months

b. *Mu- Ø-zala mu-kal-ang-a Ø-nuni (kolo kya-)/(mu)mbingu zizole*
18-5-nest 18-stay-HAB-FV 9-bird for two months/in two weeks
In nest stay birds for two months/in two weeks

7.5.10.3 *Locative argument (without locative prefix) as subject*

(191) a. *Ø-nzo i-ziing-il-ang-a a-ntu (kolo kya-)/(mu-)ngonde zisambanu*
9-house 9/AgrS-live-APPL-HAB-FV 2-person fo/in six months
The house lives people for/in six months (Intd: the house is the place which people live for/in six months)

b. *Ø-zala di-kal-ang-a Ø-nuni (kolo kya-)/(mu-)ngonde zizole*
5-village 5/AgrS F-stay-FV 10-bird for /in two months
The nest stays birds for/in two months (Intd: the nest is the place which the birds stay for/in two months)

7.5.11 Locative – Applicative alternation

7.5.11.1 Agent/theme argument as subject

(192) a. **Luzolo u-ziing-id-il-ang-a mu-Ø-nzo ya mawuku mu-lusadisu lwa mpangi zani*
1-PN 1/AgrS-live-APPL-APPL-HAB-FV 18-9- house of heal 18-help of brothers
Luzolo lives for in hospital through the help of his/her brothers (Intd: Luzolo lives exclusive in the hospital with the help of his/her brothers)

b. *#Ø-Nuni zi-kad-il-ang-a mu-Ø-zala mu-ma-vela*
10-bird 10/AgrS-stay-APPL-HAB-FV 18-5-nest 18-6-wing
The birds stay in the nest through the help of wings

7.5.11.2 Locative argument as subject

(193) a. **Mu-Ø-nzo ya mawuku mu-ziing-id-il-ang-a Luzolo mu-lusadisu lwa mpangi zani*
18-9-house of big 18-live-APPL-APPL-HAB-FV 1-PN 18-help brothers his
In hospital live for Luzolo in the help of his brothers (Intd: the hospital is the exclusive place which Luzolo lives through the help of his brothers)

b. *#Mu-Ø-zala mu-kad-il-ang-a Ø-nuni mu-mbangala*
18-5-nest 18-live-APPL-HAB-FV 10-birds 18-dry season
In nest is the exclusive place where birds stay in dry season (Intd: the nest is the exclusive place which birds stay in dry season)

7.5.11.3 *Locative argument (without locative prefix) as subject*

(194) a. ** Ø-nzo ya mawuku i-ziing-id-il-ang-a Luzolo mu-lusadisu lwa mpangi zani*
9-house 9/AgrS-live-APPL-APPL-HAB-FV 1-PN 18-help of his brothers
The hospital live for Luzolo in the help of his brothers (Intd: the hospital is the exclusive place which Luzolo lives through the help of his brothers)

b. *# Ø-zala di-kad-il-ang-a Ø-nuni mu-mbangala*
5-nest 5/AgrS-live-APPL-HAB-FV 10- bird 18-dry season
The nest stay birds in dry season (Intd: the nest is the exclusive place which birds stay in the dry season)

7.6 Verbs of Modes of being Involving Motion

7.6.1 *Agent/theme argument as subject*

(195) a. *A-ntu/Ø-zyelo* *a-di-fuluk-idi* *mu-Ø-lula*
2-person/5-send 2-5-stir-PST 18-5-street
People/send stirred at the street

b. *Mw-ana/# Ø-teke* *kin-ini* *ku-Ø-n'kinzi*
1a-child/7-toy dance-PST 18-3-party
The child/toy danced (to) at the party

7.6.2 Goal/locative argument as subject

(196) a. *Mu-Ø-lula* *mu-fuluk-idi* *ye antu*
18-5-street 18-stir-PST with 2-person
In street stirred with people (Intd: the street is the place which the people stirred)

b. *Ku-Ø-n'kinzi* *ku-kin-ini* *Ø-nkaka*
17-3-party 18-dance-PST 1-grandpa
To party danced grandpa (Intd: at the party is the place which the grandpa danced)

7.6.3 Goal/locative argument (without locative prefix) as subject

(197) a. *Ø-lula* *di-fuluk-idi* *ye a-ntu*
5-street 5/AgrS-stir-PST with 2-person
The street stirred with people (Intd: at the street is the place which the people stirred)

b. [30] *Ø-n'kinzi* *u-kin-ini* *Ø-nkaka*
3-party 3/AgrS-dance-PST` 1-grandpa
The party danced the grandpa (Intd: at the party is the place which the grandpa danced)

7.6.2 Subjecthood properties of the Goal/Locative argument

7.6.2.1 Occurrence in subject position

(198) a. *Mu-Ø-lula* *nze* *mw-au* *mu-fuluk-idi* *ye a-ntu/Ø-zyelo*
18-5-street seem 18-there 18-stir-PST with 2-person/5-send
In street seem to stirred with people/send (Intd: It seems that people stirred with at the street)

[30] This construction is used in a context in which someone rarely dances. But for special reason s/he dances and as way of expressing admiration, one may say ' …nkinzi ukin-ini nkaka, diambu dya kyesse dikeleko'

b. *Ku-Ø-n'kinzi nze kw-au ku-kin-ini Ø-nkaka*
17-3-party seem 17-there 17-dance-PST 1-grandpa
In party seem there danced the grandpa (Intd: it seems that the grandpa danced at the party)

7.6.2.3 Passivization

(199) a. *#Mu-Ø-lula mu-fuluk-il-w-e*
18-5-market 18-stir-APPL-PASS-PST
In the street was stirred (Indt: the street is the place which peopleat the stirred with).

b. *# Ø-lula di-fuluk-il-w-e*
5-market 5/AgrS-stir-APPL-PASS-PST
The street was stirred (the street is the place which people at the stirred with).

c. *#Ku-Ø-n'kinzi ku-kinin-w-e*
17-3-party 17-dance-APPL-PASS-PST
To party was danced (Intd: at the party is the place which people danced)

d. *#Ku-Ø-n'kinzi ku-kinin-w-e*
17-3 party 17-dance-APPL-PASS-PST
To party was danced (Intd: at the party is the place which people danced)

7.6.2.3 Relativization

(200) a. *Mu-Ø-lula mo mu-fuluk-idi a-ntu dy-ambu di-bw-idi mo*
18-5-street 18/Rel 18-stir-PST 2-person 5-problem 5-happen-PST 17/there
In street where (at some place) stirred people problem happened there (Intd: there (in the street) is a problem where people stirred)

b. *Ø-lula dyo-di-fuluk-idi a-ntu di-ambu di-bw-idi mo*
5-street 5/Rel 5AgrS-stir-PST2-person 5-problem 5-happen-PST 18/there
The street where (at some place) stirred people problem happened there (Intd: there (in the street) is a problem where people stirred)

c. *Ku-Ø-n'kinzi ko ku-kin-ini Ø-nkanka dy-ambu dya mbote di-kele ko*
17-3-party 17/Rel 17-dance-PST 1-grandpa 5-problem of good 5-be 17/there
There (to some place) danced grandpa good thing was there (Intd: there was good thing where the grandpa danced

d. *Ø-n'kinzi wo u-kin-ini nkanka dy-ambu dya mbote di-kele ko*
3-party 3/Rel 3/AgrS-dance-PST grandpa 5-problem of good 5-be 17/there
There (to some place) danced grandpa good thing was there (Intd: there was good thing where the grandpa danced)

7.6.2.4 Locative prefix as expletive

(201) a. *Mo-mu-fuluk-idi a-ntu dy-ambu di-bw-idi mo*
17/Rel-17-stir-PST 2-person 5-problem 5-happen-PST 17/there
There (at some place) stirred people problem happened (Intd: there is a problem where people stirred)

b. *Ko-ku-kin-ini Ø-nkanka dy-ambu dya mbote di-kele ko*
17/Rel-17-dance-PST 1-grandpa 5-problem of good 5-be 17/there
There (to some place) danced grandpa good thing was there (Intd: there was good thing where the grandpa danced)

7.6.3 Object agreement with the preverbal argument

(202) a. *#Mu-Ø-lula ku-m-fuluk-idi (a-ntu)*
18-5-street 18/AgrS-2/AgrO-go-PST 2-person
In the street (them) stirred people (Intd: people stirred with at the street)

b. *#Ku- Ø-n'kinzi kw-n-kin-ini Ø-nkaka*
17-3-party 17/AgrS-1/AgrO-dance-PST 1-grandpa
To the party (him) dance grandpa (Inted: the grandpa danced at the party)

7.6.4 Purpose clause modification

7.6.4.1 Agent argument as subject

(203) a. *A-ntu* ***dy****-a-fuluk-idi mu-Ø-lula* ***mpasi vo*** *a-tala mfumu uta luta*
2-person Cp-2-stir-PST 18-5-street so that 2-see chief passing by
People stirred in the street so that they see the chief who is passing by

b. *Mw-ana* ***di****-ka-kin-ini ku-Ø-n'kinzi* ***mpasi vo*** *ka-yangidika nitu*
1a-child Cp-1-dance-PST 18-3-party so that s/he has fun
The child danced at the party so that s/he has fun

7.6.4.2 Goal/locative argument as subject

(204) a. *#Mu-Ø-lula* ***di****-mu-fuluk-idi ye a-ntu* ***mpasi vo*** *mwa tala mfumu*
18-5-street Cp-18/AgrS-stir-PST with 2-person so that there see chief
In street stirred people so that they see chief (Intd: the street is the place which the people stirred so that they see the chief)

b. *#Ku-Ø-n'kinzi* ***di****-ku-kin-ini Ø-nkaka* ***mpasi vo*** *kwa yangidika nitu*
17-3-party Cp-17/AgrS-dance-PST 3-grandpa so that there have fun
To party danced the grandpa so that there have fun (Intd: the party is the place which the grandpa danced so that s/he has fun)

7.5.4.3 Goal/locative argument (without locative prefix) as subject

(205) a. *#Ø-lula* ***di****-di-fuluk-idi* *ye a-ntu* ***mpasi vo*** *dya tala mfumu*
5-street Cp-5/AgrS-stir-PST with 2-person so that there see chief
The street stirred with people so that there see chief (Intd: the street is the place which the people stirred so that they see the chief)

b. *# Ø-n'kinzi* ***di****-u-kin-ini* *Ø-nkaka* ***mpasi vo*** *wa yangidika nitu*
3-party Cp-3/AgrS-dance-PST 1-grandpa so that there have fun
The party danced grandpa so that there have fun (Inted: at the party is the place which the grandpa danced so that s/he has fun)

7.6.5 Agent-oriented modification

7.6.5.1 Agent/theme argument as subject

(206) a. *A-ntu* *a-fuluk-idi* *mu-Ø-lula* ***mu-buka***
2-person 2-stir-PST 18-5-street 18-number
People stirred (in) at the street in number

b. *Mw-ana* *kin-ini* *ku-Ø-n'kinzi* ***mu-kyese kya yingi***
1a-child dance-PST 18-3-party 18-with happiness
The child danced at the party with happily

7.6.5.2 *Locative/g*oal argument as subject

(207) a. *Mu-Ø-lula* *mu-fuluk-idi* *ye* *a-ntu* ***mu-buka***
18-5-street 18/AgrS-stir-PST with 2-person 18-number
In street stirred people in number (Intd: the street is the place which the people stirred in number)

b. *Ku- Ø-n'kinzi* *ku-kin-ini* *Ø-nkaka* ***mu-kyese kya yingi***
17-3-party 17-dance-PST 1-grandpa 18-with happiness
To party danced grandpa with happiness (Intd: at the party is the place which the grandpa danced happily)

7.6.5.3 *Locative/goal argument (without locative prefix) as subject*

(208) a. *Ø-lula* *di-fuluk-idi* *ye a-ntu* ***mu-buka***
5-street 5/AgrS-stir-PST with 2-person 18-in number
The street stirred with people in number (Intd: the street is the place which the people stirred in number)

b. *Ø-n'kinzi* *u-kin-ini* *Ø-nkaka* ***mu-kyese kya yingi***
3-party 3/AgrS-dance-PST 1-grandpa 18-with happiness
The party danced grandpa happily (Intd: the party is the place which the grandpa danced happily)

7.6.6 By-phrase modification

7.6.6.1 Agent/theme argument as subject

(209) a. *A-ntu* *a-fuluk-idi* *mu-Ø-lula* ***au mosi***
2-person 2/AgrS-stir-PST 18-5-street themslves
The people stirred in the street on their own

b. *Mw-ana* *kin-ini* *ku-Ø-n'kinzi* *yani mosi*
1a-child dance-PST 18-5-party him/her self
The child danced at the party on his/her own (*understood* on his/her own)

7.6.6.2 Goal/locative argument as subject

(210) a. *#Mu-Ø-lula* *mu-fuluk-idi* *ye* *a-ntu* ***mw-au mosi***
18-5-street 18/AgrS-stir-PST with 2-person 18-itself
In street stirred people by itself (Intd: the street is the place which the people stirred on their own)

b. *#Ku-Ø-n'kinzi* *ku-kin-ini* *Ø-nkaka* ***mw-au mosi***
17-3-party 17/AgrS-dance-PST 1-grandpa 18-itself
To party danced grandpa by itself (Intd: the party is the place which the grandpa danced on own)

7.6.6.2 Goal/locative argument (without locative prefix) as subject

(211) a. *# Ø-lula* *di-fuluk-idi* *ye* *a-ntu* ***mw-au mosi***
5-street 5/AgrS-stir-PST with 2-person 18-itself
The street stirred with people by itself (Intd: the street is the place which the people stirred on their own)

b. *#Ø-n'kinzi* *u-kin-ini* *Ø-nkaka* ***mw-au mosi***
3-party 3/AgrS-dance-PST 1-grandpa 18-itself
The party danced grandpa by itself (Intd: the party is the place which the granfpa danced on his own)

7.6.7 Again phrase modification

7.6.7.1 Agent/theme argument as subject

(212) a. *A-ntu* *a-fuluk-idi* *dyaka* *mu-Ø-lula*
2-person 2-stir-PST again 18-5-street
The people stirred in the street again

b. *Mw-ana* *kin-ini* *ku-Ø-n'kinzi*
1a-child dance-PST 18-3-party
The child danced at the party again

7.6.7.2 Goal/locative argument as subject

(213) a. *Mu-Ø-lula* *mu-fuluk-idi* ***dyaka*** *ye* *a-ntu/Ø-zyelo*
18-5-street 18/Agrs-stir-PST again with 2-person/5-send
In street stirred again with peopl (Intd: street is the place which people stirred again)

b. *Ku-Ø-n'kinzi* *ku-kin-ini* ***dyaka*** *Ø-nkaka*
17-3-party 17/AgrS-dance-PST again 1-grandpa
To party danced again the grandpa (Intd: the party is the place which the grandpa danced again)

7.6.7.3 Goal/locative argument (without locative prefix) as subject

(214) a. *Ø-lula* *di-fuluk-idi* ***dyaka*** *ye* *a-ntu*
5-street 5/AgrS-stir-PST again with 2-person
The street stirred again with people (Intd: the street is the place which the people stirred again)

b. *Ø-n'kinzi* *u-kin-ini* ***dyaka*** *Ø-nkaka*
3-party 3/AgrS-dance-PST again 1-grandpa
The party danced again grandpa (Intd: the party is the place which grandpa danced again)

7.6.8 Reason modification

7.6.8.1 Agent/theme argument as subject

(215) a. *A-ntu* ***di****-a-fuluk-idi* *mu-Ø-lula* ***ekuma*** *a-tala mfumu*
2-person Cp-2/AgrS-stir-PST 18-5-street because 2-see chief
The people stirred in the street because they see the chief

b. *Mw-ana* ***di****-ka-kin-ini* *ku-Ø-n'kinzi* ***ekuma*** *ka yangidi nitu*
1a-child Cp-1/AgrS-dance-PST 18-party because s/he has fun
The child danced at the party because s/he has fun

7.6.8.2 *Goal/locative argument as subject*

(216) a. *Mu-Ø-lula* ***di****-mu-fuluk-idi* *a-ntu* ***ekuma*** *a-tala mfumu*
18-5-street di-18/AgrS-stir-PST 2-person because 2-see chief
In street stirred with people because they see the chief (Intd: at the street is the place which the people stirred with because they see the chief)

b. *Ku-Ø-n'kinzi* ***di****-ku-kin-ini* *Ø-nkaka* ***ekuma*** *ka-yangidika nitu*
17-5-party di-17/AgrS-dance-PST 1-grandpa because 1a-has fun
To party danced grandpa because has fun (Indt: at the party is the place where the grandpa danced because he has fun)

7.6.8.3 *Goal/locative argument (without locative prefix) as subject*

(217) a. *Ø-lula* ***di****-di-fuluk-idi* *ye a-ntu* ***ekuma*** *a-tala mfumu*
5-street Cp-5/AgrS-stir-PST with 2-person because 2-see chief
The street stirred with people because see chief (Intd: at the street is the place which the people stirred with because they see chief)

b. ***?****Ø-n'kinzi* ***di****-u-kin-ini* *Ø-nkaka* ***ekuma*** *ka-yangidika nitu*
3-party Cp-3/AgrS-dance-PST 1-grandpa because 3Sg-have fun
The party dance grandpa because s/he has fun (Intd: at the party is the place where the grandpa danced because s/he has fun)

7.6.9 Instrumental phrase modification

7.6.9.1 *Agent/theme argument as subject*

(218) a. *A-ntu* *a-fuluk-idi* *mu-Ø-lula* ***mu-Ø-tutuku***
2-person 2/AgrS-stir-PST 18-5-street 18-7-motor
The people stirred in the street by means of motor bike

b. ?*Mw-ana* *kin-ini* *ku-Ø-n'kinzi* ***mu-nsapatu za zangama***
1a-child dance-PST 18-3-party 18-shoes of hill
The child danced at the party by means of high hill shoes

7.6.9.2 *Goal/locative argument as subject*

(219) a. *Mu-Ø-lula* *mu-fuluk-idi* *ye* *a-ntu* ***mu-Ø-tukutuku***
18-5-street 18/AgrS-stir-PST with 2-person 18-8-motor
In street stirred people by motor bicycle (Intd: at the street is the place where the people stirred by means of motor bike)

b. ***?****Ku-Ø-n'kinzi* *ku-kin-ini* *mw-ana* ***mu-Ø-nsapatu za zangama***
17-3-party 17/AgrS-dance-PST 1a-child 18-10-high hill shoe
To party danced child by means of high hill shoes (Intd: at the party is the place where the child danced by means of high hill shoes)

7.5.9.3 *Goal/locative argument (without locative prefix) as subject*

(220) a. *Ø-lula* *di-fuluk-idi* *ye* *a-ntu* ***mu-Ø-tukutuku***
5-Street 5/AgrS-stir-PST with 2-person 18-8-motor bicycle
The street stirred people by motor bicycle (Intd: the street is the place which the people stirred by means of motor bike)

b. ***?*** *Ø-n'kinzi* *u-kin-ini* *mw-ana* *ye* ***nsapatu za zangama***
3-party 3/AgrS-dance-PST 1-child with shoes of high hill
The party danced child with high hill shoes (Intd: the party is the place which the child danced by means of high hill shoes)

7.6.10 *Temporal* phrase modification

7.6.10.1 *Agent/Theme argument as subject*

(221) a. *A-ntu* *a-fuluk-idi* *mu-Ø-lula (kolo kya-)/(#mu-)ngunga zitatu*
2-people 2/AgrS-stir-PST 18-5-street for/in three hours
The people stirred the street for/in three hours

b. *Ø-nkaka* *kin-ini* *ku-Ø-n'kinzi* *(kolo kya-)/(#mu-)ngunga imosi*
1-grandpa dance-PST 17-5-party for/in an hour
The grandpa danced at a/the party for/in an hour

7.6.10.2 *Goal/locative argument as subject*

(223) a. *Mu-Ø-lula* *mu-fuluk-idi* *ye a-ntu (kolo kya-)/(mu-)ngunga zitatu*
18-5-street 18/AgrS-stir-PST with 2-person for/in three hours
In street stirred with people for/in three hours (Intd: the street is the place which the people stirred for/in three hour)

b. *Ku-Ø-n'kinzi* *ku-kin-ini* *mw-ana (kolo kya-)/(mu-)ngunga* imosi
17-3-party 17/AgrS-dance-PST 1a-child for/in an hour
To party danced child for/in a hour (Intd: the party is the place which the child danced for/in an hour)

7.6.10.3 Goal/locative argument (without locative prefix) as subject

(224) a. *Ø-lula* *di-fuluk-idi ye* *ye a-ntu* *(kolo kya-)/(mu-) ngunga imosi*
5-street 5/AgrS-stir-PST with 2-person for/in an hour
Street stirred with people for/in an hour (Intd: the street is the place which the people stirred for/in an hour)

b. *Ø-n'kinzi* *u-kin-ini* *Ø-nkaka* *(kolo kya-/(mu-)ngunga imosi*
3-party 3/AgrS-dance-PST 1-grandpa for/in an hour
The party danced grandpa for/in a hour (Intd: the street is the place which the grandpa danced for/in an hour)

7.6.11 Locative–Applicative alternation

7.6.11.1 *Agent/theme argument as subject*

(225) a. *A-ntu* *a-fuluk-il-ang-a* *mu-Ø-lula* ***mu-Ø-kalu***
2-person 2-stir-APPL-HAB-FV 18-5-street 18-5-car
People stirred exclusively at the street by means of a car

b. **?***Mw-ana* *u-kin-in-ang-a* *ku-Ø-n'kinzi* ***nsapatu za zangama***
1a-child 1/AgrS-dance-APPL-HAB-FV 18-3-party high hill shoes
The child danced exclusively at the party by means of high hill shoes

7.5.11.2 *Goal/locative argument as subject*

(226) a. *Mu-Ø-lula* *mu-fuluk-il-ang-a* *a-ntu* ***mu-Ø-kalu***
18-5-street 18/AgrS-stir-APPL-HAB-FV 2-person 18-5-car
In street stir people in car (Intd: at the street is the exclusive place where the people stir by means of a car)

b. **?***Ku-Ø-n'kinzi ku-kin-in-ang-a* *mw-ana* ***mu-nsapatu za zangama***
17-3-party 18-dance-APPL-HAB-FV 1a-child 18-shoes hill
To party dance the child with high hill shoes (Intd: at the party is the exclusive place where the child dances with high hill shoes)

7.5.11.3 *Goal/locative argument (without locative prefix) as subject*

(227) a. *Ø-lula* *di-fuluk-il-ang-a* *ye a-ntu* ***mu-Ø-kalu***
5-street 5/AgrS-stir-APPL-HAB-FV with 2-person 18-5-car
The street stir people by means of car (Intd: the street is the exclusive place which the people stir by means of a car)

b. ***?*** *Ø-n'kinzi* *u-kin-in-ang-a* *mw-ana* ***mu- nsapatu za zangama***
3-party 3/AgrS-dance-APPL-HAB-FV 1a-child 18-shoes hill
The party dances child with high hill shoes (Intd: the party is the exclusive place which the child dances by means of high hill shoes)

7.7 Verbs of Spatial Configuration

7.7.1 Agent/Theme argument as subject

(228) a. *A-na* *a-kosok-ele* *va-Ø-kunda*
2a-child 2a/AgrS-sit-PST 16-7-chair
The children sat on the chair

b. *Ø-nkewa/ki-nkutu* *ki-dyembalal-e* *va- Ø-n'ti*
3-monkey/7-shirt 7/AgrS-hang-PST 16-3-tree
The monkey/t-shirt hanged on the tree

c. *A-na* *a-zongam-ene* *va-lu-tai*
2a-child 2/AgrS-lean-PST 16-11-brach of tree
The children leaned in the branch of tree

d. *Ø-mbevo* *lambalal-e* *va-Ø-mfulu*
1-sickperson lie-PST 16-9-bed
The sickperson lied (down) in bed

7.7.2 *Locative argument as subject*

(229) a. *Va-Ø-kunda* *va-kosok-ele* *mw-ana*
16-7-chair 16/AgrS-sit-PST 1a-child
On chair sat children (Intd: the chair is the place which the child sat down)

b. *Va-Ø-n'ti/ki-nkutu* *va-ki-dyembalal-e* *Ø-nkewa*
16-3-tree/7-shirt 16-7/AgrS-hang-PST 3-monkey
On tree hanged monkey (Intd: the tree is the place which the monkey hanged)

c. *Va-lu-tai* *va-zongam-ene* *mw-ana*
16-11-branch 16/AgrS-lean-PST 1a-child
On branch leaned child (Intd: the branch is the place which the child leaned)

d. *Va-Ø-mfulu* *va-lambalal-e* *Ø-mbevo*
16-5-bed 16/AgrS-lie-PST 1-sick person
In bed lied (down) sick person (Intd: the bed is the place which the sickperson lied down)

7.7.1.2 *Locative argument (without locative prefix) as subject*

(230) a. *Ø-kunda/#ki-nkutu* *ki-kosok-ele* *mw-na*
7-chair/7-shirt 7/AgrS-sit-PST 1a-child
Chair sat children (Intd: the chair is the place which the child sat down)

b. *Ø-n'ti/ki-nkutu* *u-ki-dyembalal-e* *Ø-nkewa*
3-tree/7-shirt 3-7/AgrS-hang-PST 3-monkey
The tree hanged monkey (Intd: the tree is the place which the monkey hanged)

c. Lu-tai *lu-nzongam-ene* *mw-ana*
11-branch 11/AgrS-hang-PST 1a-child
The branch of tree leaned child (Intd: the branch is the place which the leaned)

d. *Ø-mfulu* *i-lambalal-e* *Ø-mbevo*
9-bed 9/AgrS-lie-PST 1-sickperson
The bed lied (down) sick person (Intd: the bed is the place which the sickperson lied)

7.7.2 Subjecthood properties of the postverbal subject

7.7.2.1 Occurrence in subject position

(231) a. *Va- Ø-kunda* *nze* *va-u* *va-kosok-ele* *mw-ana*
16-7-chair seem 16-there 16-sit-PST 1a-child
On chair seem that sat child (Intd: it seems that the child sat on the chair)

b. *Va-Ø-n'ti* *nze* *va-u* *va-dyemabalal-e* *Ø-nkewa*
16-3-tree seem 16-there 16-hang-PST 3-monkey
On tree seem that hang monkey (Intd: it seems that the monkey hanged on the tree)

c. *Va-lu-tai* *nze* *va-u* *va-zongam-ene* *Ø-nkewa*
16-11-branch seem 16-there 16-lean-PST 3-monkey
On branch seem that leaned monkey (Intd: it seems that the monkey leaned on the branch)

d. *Ø-va-mfulu* *nze* *va-u* *va-lambalal-e* *Ø-mbevo*
16-9-bed seem16-there 16-lie-PST 1-sick person
On bed seem that lied sick person (Intd: it seems that the sickperson lied down on bed).

7.7.2.3 *Passivization*

(232) a. *Va-Ø-kunda* *va-kosok-el-w-e*
16-7-chair 16-sit-APPL-PASS-PST
On the chair was sat (Intd: the child sat on the chair)

b. *Ø-kunda* *va-kosok-el-w-e*
7-chair 7/AgrS-sit-APPL-PASS-PST
The chair was sat (Intd: the child sat on the chair)

c. **?***Va-Ø-n'ti* *va-dyembalal-w-e*
16-3-tree 16-hang-PASS-PST
On the tree was hanged (Intd: the child hanged on the tree)

d. **?** *Ø-n'ti* *u-dyembalal-w-e*
16-3-tree 3/AgrS-hang-PASS-PST
The tree was hanged (Intd: the child hanged on the tree)

c. **?***Va-lu-tai* *va-zongamen-w-e*
16-11-branch 16/AgrS-lean-PASS-PST
On the branch was leaned (Intd: the children leaned on the branch)

d. **?***Lu-tai* *lu-zongamen-w-e*
11-branch 11/AgrS-lean-PASS-PST
The branch was leaned (Intd: the children leaned on the branch)

e. **?***Va- Ø-mfulu* *va-lambalal-w-e*
16-9-bed 16/AgrS-lie-PASSPST
On the bed was lied (down) (Intd: the sickperson lied on bed)

f. **?** *Ø-mfulu* *i-lambalal-w-e*
9-bed 9/AgrS-lie-PASSPST
The bed was lied (down) (Intd: the sickperson lied on bed)

7.7.2.3 *Relativization*

(233) a. *Va- Ø-kunda* *vo-va-kosok-ele* *mw-ana* *i-elele* *i-na* *vo*
16-7-chair 16/Rel-16/AgrS-sit-PST 1a-child 8-ants 8-be 16/there
On chair sat child there are ants (Intd: there are ants where the child sat)

b. *Ø-kunda kyo-ki-kosok-ele mw-ana i-elele i-na vo*
7-chair 7/Rel-7/AgrS-sit-PST 1a-child 8-ants 8-be 16/there
The chair sat child there are ants (Intd: there are ants where the child sat)

c. *Va-Ø-n'ti vo-va-/-ki-dyembalal-e Ø-nkewa Ø-nyoka zi-kal-ang-a* vo
16-3-tree 16/Rel-16/AgrS-hang-PST 3-monkey 10-snake 10-stay-HAB-FV 16/there
On tree hanged monkey (Intd: there are habitually snakes where the monkeys hanged)

d. *Ø-n'ti wo- u-ki-dyembalal-e Ø-nkewa Ø-nyoka zi-kal*-ang-a *vo*
3-tree 3/Rel-3/AgrS-hang-PST 3-monkey 10-snake 10-stay-HAB-FV 16/there
Tree hanged monkey (Intd: there are habitually snakes where the monkeys hanged)

e. *Va-lu-tai vo-va-zongam-ene Ø-nkewa Ø-nyoka zi-kal-ang-a vo*
16-11-branch 16Rel-16/AgrS-lean-PST 3-monkey 10-snake 10-stay-HAB-FV 16/there
On branch whre leaned monkey are snakes (Intd: there are habitually snakes where the monkeys leaned)

f. *Lu-tai lo lu-zongam-ene Ø-nkewa Ø-nyoka zi-kal-ang-a vo*
11-branch 16 16-lean-PST 3-monkey 10-snake 10-stay-HAB-FV 16/there
The branch leaned monkey are snakes (Intd: there are habitually snakes where the monkeys leaned)

h. *Va-Ø-mfulu vo va-lambalal-e mbevo i-elele i-na vo.*
16-9-bed 16/Rel 16/AgrS-lied-PST sickperson 8-ant 8-be 16/there
The bed lied down sickperson are ants (Intd: the ants are in the bed where the sickperson lied down)

i. *Ø-mfulu yo i-lambalal-e mbevo i-elele i-na vo.*
9-bed 9/Rel 9/AgrS-lied-PST sickperson 8-ant 8-be 16/there
The bed lied down sickperson are ants (Intd: the ants are in the bed where the sickperson lied down)

7.7.3.4 *Locative prefix as expletive*

(234) a. *Vo-va-kosok-ele mw-ana i-elele ina vo*
16-16-sit-PST 1a-child 8-ants 8-be 16/there
There (at some place) sat the child there are ants (Intd: 'the ants are in the place where the child sat)

b. *Vo-va-dyembalal-e* *Ø-nkewa* *Ø-manga* *mi-na* *vo*
16-16-hang-PST 3-monkey 4-mango 4-be 16/there
There (to some place) hanged the monkey are mangoes (Indt: the mangoes are in the place where the monkeys hanged)

c. *Vo-va-zongam-ene* *Ø-nkewa* *Ø-nyoka* *zi-kal-ang-a* *vo*
16-16-lean-PST 3-monkey 10-snake 10-stay-HAB-FV 16/there
There (at some place) leaned monkey are snakes (Indt: the mongoes are in the place where mangoes monkeys leaned)

d. *Vo-va-lambalal-e* *Ø-mbevo* *i-elele* *i-na* *vo.*
16-16-lied-PST 1-sick person 8-ant 8-be 16/there
There (at some place) lied sickperson are ants (Indt: the ants are in the place where sickperson lied down)

7.6.3 Object agreement with the preverbal argument

(235) a. *#Va-Ø-kunda* *va-n-kosok-ele* *mwa-na*
16-7-chair 16/AgrS-AgrO-sit-PST 1a-child
On chair (him/her) sat children (Intd: on the chair is the place where the child sat)

b. *#Va-Ø-n'ti* *va-m-dyembalal-e* *Ø-nkewa*
16-3-tree 16/AgrS-AgrO-hang-PST 3-monkey
On tree (it) monkey hanged (Intd: on the tree is the place where monkey hanged)

c. *#Va-lu-tai* *va-n-nzongam-ene* *Ø-nkewa*
16-11-branch 16/AgrS-AgrO-lean-PST 3-monkey
On branch (him) leaned monkey (Intd: the brranch is the place which the monkey leaned)

d. *#Va-Ø-mfulu* *va-m-lambalal-e* *Ø-mbevo*
16-9-bed 16/AgrS-AgrO-lie-PST 1-sick person
On bed (him) lied (down) sickperson (Intd: the bed is the place which the sickperson lied down)

7.7.4 Purpose clause modification

7.7.4.1 Agent/theme argument as subject

(236) a. *A-na* ***di****-a-kosok-ele* *va-Ø-kunda* ***mpasi vo*** *a-vunda*
2a-child Cp-2a/AgrS-sit-PST 16-7-chair so that 2-rest
The children sat on the chair so that they rest

b. *Ø-nkewa* ***di****-zi-dyembalal-e* *va-Ø-n'ti* ***mpasi vo*** *za-dya* *manga*
10-monkey Cp-10/AgrS/-ang-PST 16-3-tree so that 10-eat mango
The monkey hanged on the tree so that they eat mangoes

c. *A-na* ***di****- a-zongam-ene* *va-lu-tai* ***mpasi vo*** *a-swama mwini*
2a-child Cp-2/AgrS-lean-PST 16-11-brach so that 2-escape sunshine
The children leaned in the branch of tree so that they escape from the sun

d. *Ø-mbevo* ***di****-ka-lambalal-e* *va-Ø-mfulu* ***mapai vo*** *ka-vunda*
1-sick person Cp-1-lie-PST 16-9-bed so that 1-rest
The sick person lied (down) on bed so that s/he rests

7.7.4.2 Locative argument as subject

(237) a. *#Va-Ø-kunda* ***di****-va-kosok-ele* *a-ana* **mpasi vo** va-vunda
16-7-chair Cp-16-sit-PST 2-child so that 16-rest
On chair sat children so that there rest (Intd: the chair is the place which the children sat so that they rest)

b. *#Va-Ø-n'ti* ***di****-va-dyembalal-e* *Ø-nkewa* ***mpasi vo*** *va-dya manga*
16-3-tree Cp-16/AgrS-hang-PST 3-monkey so that 16-eat mangoes
On tree hanged monkey so that there eat manoges (Intd: the tree is the place which the monkey hanged so that it eats mangoes)

c. *#Va-lu-tai* *di-va-zongam-ene* *mw-ana* ***mpasi vo*** *va-swama Ø-mwini*
16-11-branch Cp-16/AgrS-lean-PST 1a-child so that 16-escape 3-sunshine
On branch leaned child so that there escape sun (Intd: the branch is the place which the child leaned so that s/he escapes from the sunshine)

d. *#Va-Ø-mfulu* *di-va-lambalal-e* *Ø-mbevo* *mpasi vo* *va-vunda*
16-9-bed Cp-16/AgrS-lie-PST 1-sickperson so that 16-rest
On bed lied (down) sickperson so that there rest (Indt: the bed is the place which the sick person lied down so that s/he rests)

7.7.4.3 Locative argument (without locative prefix) as subject

(238) a. *# Ø-kunda* ***di****-ki-kosok-ele* *a-ana* ***mpasi vo*** *kya vunda*
7-chair Cp-7/AgrS-sit-PST 2a-child so that it rests
Chair sat children so that there rest (Intd: the chair is the place which the children sat down so that they rest)

b. *# Ø-n'ti* ***di****-u-dyembalal-e* *Ø-nkewa* ***mpasi vo*** *lwa dya manga*
3-tree Cp-3/AgrS-hang-PST 3-monkey so that it eat manoes
Tree hanged monkeys so that there escape sun (Intd: the tree is the place which the monkey hanged so that they eat mangoes)

c. *#Lu-tai* ***di****-lu-zongam-ene* *mw-ana* ***mpasi vo*** *lwa swama mwini*
11-tree Cp-AgrS/11-lean-PST 1a- child so that it escape sunshine
Branch leaned child so that s/he escape sun (Intd: the branch is the place which the child leaned so that s/he escapes from the sun)

d. *# Ø-mfulu* *di-i-lambalal-e* *Ø-mbevo* ***mpasi vo*** *ya vunda*
9-bed Cp-9/AgrS-lie-PST 1-sickperson so that rest
The bed lied sickperson so that there rest (Intd: the bed is the palce which the sickperson lie down so that s/he rests)

7.7.5 Agent-oriented modification

7.7.51 Agent/theme argument as subject

(239) a. *A-na a-kosok-ele va-kunda* ***mu-dwenga***
2a-child 2a-sit-PST 16-chair 18-caustion
The children sat on the chair caustiously

b. *Ø-nkewa dyembalal-e va- Ø-n'ti* ***mu-kinsweki***
3-monkey hang-PST 16-3-tree 18-secretly
The monkey hanged on the tree secretly

c. *A-na a-zongam-ene va-lu-tai* ***mu-kinsweki***
2a-child 2/AgrS-lean-PST 16-11-brach 18-secretly
The children leaned in the branch of tree secretly

d. *Ø-mbevo lambalal-e va-Ø-mfulu* ***mu-nkenda***
1-sick person lie-PST 16-9-bed 18-sadly
The sick person lied (down) in the bed sadly

7.7.5.2 Locative argument as subject

(240) a. *Va-Ø-kunda va-kosok-ele a-ana* ***mu-ndwenga***
16-7-chair 16/AgrS-sit-PST 2-child 18-caution
On the chair sat children caution (Intd: the chair is the place which the children sat cautiously)

b. *Va- Ø-n'ti va-dyembalal-e Ø-nkewa* ***mu-kinsweki***
16-3-tree 16/AgrS-hang-PST 3-monkey 18-secret
On tree hanged monkey secret (Intd: the tree is the place which the monkey hanged secretly)

c. *Va-lu-tai va-zongam-ene mw-ana* ***mu-kinsweki***
16-11-branch 16/AgrS-lean-PST 1a-child 18-secret
On branch leaned child secret (Indt: the branch is the place which the child leaned secretly)

d. *Va-Ø-mfulu va-lambalal-e Ø-mbevo* ***mu-nkenda***
16-9-bed 16/AgrS-lie-PST 1-sick person 18-sadly
On bed lied (down) sickperson sadly (Intd: the bed is the place which the sickperson lied down sadly)

7.7.5.3 Locative argument (without locative prefix) as subject

(241) a. *Ø-kunda ki-kosok-ele a-ana* ***mu-ndwenga***
7-chair 7/AgrS-sit-PST 2-child 18-caution
The chair sat children caution (Intd: the chair is the place which the children sat cautiously)

b. *Ø-n'ti* *u-dyembalal-e* *Ø-nkewa* ***mu-kinsweki***
9-tree 9/AgrS-hang-PST 3-monkey 18-secret
The tree hanged monkey secret (Intd: the tree is the place which the monkey hanged secretly)

c. *Lu-tai* *lu-zongam-ene* *mw-ana* ***mu-kinsweki***
11-tree 11/AgrS-lean-PST 1a-child 18-intelligent
The branch leaned child secret (Intd: the branch is the place which the child leaned secretly)

d. *Ø-mfulu* *i-lambalal-e* *Ø-mbevo* ***mu-nkenda***
9-bed 9/AgrS-lie-PST 1-sick 18-sadly
The bed lied sickperson sad (Intd: the bed is the place which the sickperson lied down sadly)

7.7.6 By-phrase modification

7.7.1 Agent argument as subject

(242) a. *A-na* *a-kosok-ele* *va-Ø-kunda* ***au mosi***
2a-child 2/AgrS-sit-PST 16-7-chair 2-self
The children sat on the chair on their own

b. *Ø-nkewa* *dyembalal-e* *va-Ø-n'ti* ***yani mosi***
3-monkey hang-PST 16-3-tree it self
The monkey hanged on the tree itself *(understood on it own*)

c. *A-na* *a-zongam-ene* *va-lu-tai* ***au mosi***
2a-child 2/AgrS-lean-PST 16-11-brach of tree themselves
The children leaned in the branch of tree on their own

d. *Ø-mbevo* *lambalal-e* *va-Ø-mfulu* ***yani mosi***
1-sick lie-PST 16-3-bed him/herself
The sick person lied (down) in bed on his/her own

7.7.6.1 Locative/source argument as subject

(243) a. *#Va-Ø-kunda* *va-kosok-ele* *a-ana* ***mw-au mosi***
16-7-chair 16/AgrS-sit-PST 2-child 18-itself
On chair sat children by itself (Intd: the chair is the place where the children sat on their own)

b. *#Va-Ø-n'ti* *va-dyembalal-e* *Ø-nkewa* ***mw-au mosi***
16-3-tree 16/AgrS-hang-PST 3-monkey 18-itself
On tree hanged monkey itself (Intd: the tree is the place which the monkey hanged on their own)

c. *#Va-lu-tai* *va-zongam-ene* *a-na* ***mw-au mosi***
16-11-branch 16/AgrS-lean-PST 2-child 18-itself
On branch leaned children by itself (Intd: the branch is the place which the children leaned on their own)

d. *#Va- Ø-mfulu* *va-lambalal-e* *Ø-mbevo* ***mw-au mosi***
16-3-bed 16/AgrS-lie-PST 1-sick 18-itself
On bed lied (down) sick person by itself (Intd: the bed is the place which the sickperson lied down on his/her own)

7.7.6.2 Locative argument (without locative prefix) as subject

(244) a. *# Ø-kunda* *ki-kosok-ele* *a-ana* ***mw-au mosi***
7-chair 7/AgrS-sit-PST 2-child 18-itself
The chair sat children by itself (Intd: the chair is the place which the children sat on their own)

b. *#Ø-n'ti* *u-dyembalal-e* *Ø-nkewa* ***mw-au mosi***
3-tree 3/AgrS-hang-PST 3-monkey 18-itself
The tree hanged monkeys by itself (Intd: the tree is the place which the monkey hanged on it own)

c. *#Lu-tai* *lu-zongam-ene* *mwana* ***mw-au mosi***
11-branch 11/AgrS-lean-PST child 18-itself
Branch leaned child by itself (Intd: the branch is the place which the child leaned on his/her own)

d. *#Ø-mfulu* *i-lambalal-e* *Ø-mbevo* ***mw-au mosi***
9-bed 9/AgrS-lie-PST 1-sick 18-itself
Bed lied down sickperson by itself (Intd: the bed is the place which the sickperson lied down on his/her own)

7.7 Again phrase modification

7.7.1 Agent/theme argument as subject

(245) a. *A-na* *a-kosok-ele* ***dyaka*** *va- Ø-kunda*
2a-child 2/AgrS-sit-PST again 16-7-chair
The children sat on the chair again

b. *Ø-nkewa* *dyembalal-e* ***dyaka*** *va-Ø-n'ti*
3-monkey hang-PST again 16-3-tree
The monkey hanged on the tree again

c. *A-na* *a-zongam-ene* ***dyaka*** *va-lu-tai*
2a-child AgrS-lean-PST again 16-11-brach
The children leaned in the branch of tree again

d. *Ø-mbevo* *lambalal-e* ***dyaka*** *va-Ø-mfulu*
1-sick lie-PST again 16-3-bed
The sick person lied (down) in bed again

7.7.1 Locative argument as subject

(246) a. *Va-Ø-kunda* *va-kosok-ele* ***dyaka*** *a-ana*
16-7-chair 16/AgrS-sit-PST again 2-child
On chair sat again children (Intd: the chair is the place which the children sat again)

b. Va-*Ø-n'ti* *va-dyembalal-e* ***dyaka*** *Ø-nkewa*
16-3-tree 16/AgrS-hang-PST again 3-monkey
On tree hanged again monkey (Intd: the tree is the place which the monkey hanged again)

c. *Va-lu-tai* *va-zongam-ene* ***dyaka*** *a-ana*
16-11-branch 16/AgrS-lean-PST again 2-child
On the branch leaned again children (Intd: the branch is the palce which the children leaned again)

d. *Va-Ø-mfulu* *va-lambalal-e* ***dyaka*** *Ø-mbevo*
16-9-bed 16/AgrS-lie-PST again 1-sick
On bed lied (down) again sick person (Intd: the bed is the place which the sickperson lied down again)

7.6.7.2 Locative argument (without locative prefix) as subject

(247) a. *Ø-kunda* *ki-kosok-ele* ***dyaka*** *a-ana*
7-chair 7/AgrS-sit-PST again 2-child
The chair sat again children (Intd: the chair is the place which the children sat down again)

b. *Ø-n'ti* *u-dyembalal-e* ***dyaka*** *nkewa*
3-tree 3/AgrS-hang-PST again monkey
The tree hanged again monkeys (Intd: the tree is the place which the monkey hanged again)

c. *Lu-tai* *lu-zongam-ene* ***dyaka*** *Ø-nkewa*
11-branch 11/AgrS-lean-PST again 3-monkey
The branch leaned again monkey (Intd: the branch is the place which the monkeys leaned again)

d. *Ø-mfulu* *i-lambalal-e* ***dyaka*** *Ø-mbevo*
9-bed 9/AgrS-lie-PST again 1-sick
The bed lied (down) again sickperson (Intd: the bed is the place which the sickperson lied down again)

7.7.8 Reason modification

7.7.1 Agent argument as subject

(248) a. *A-na* ***dy****-a-kosok-ele* *va- Ø-kunda* ***ekuma*** *a-vunda*
2a-child Cp-2/AgrS-sit-PST 16-7-chair because 2a-rest
The children sat on the chair because they rest

b. *Ø-nkewa* ***di****-zi-dyembalal-e* *va- Ø-n'ti* ***ekuma*** *za-dya manga*
10-monkey Cp-10-hang-PST 16-3-tree because 10-eat mango
The monkeys hanged on the tree because they eat mangoes

c. *A-na* ***dy****-a-zongam-ene* *va-lu-tai* ***ekuma*** *a-tala kudimba*
2a-child Cp-2AgrS-lean-PST 16-11-branch because 2a-look down
The children leaned in the branch of tree because they look down

d. *Ø-mbevo* ***di****-ka- lambalal-e* *va- Ø-mfulu* ***ekuma*** *ka-vunda*
1-sick Cp-1-lie-PST 16-9-bed because 3Sg-rest
The sickperson lied (down) in bed because s/he rests

7.7.8.1 Locative argument as subject

(249) a. *Va-Ø-kunda* ***di****-va-kosok-ele* *a-na* ***ekuma*** *a-vunda*
16-7-chair Cp-16/AgrS-sit-PST 2a-child because 2a-rest
On chair sat children because they rest (Intd: the chair is the place which the children sat down because they rest)

b. *Va-Ø-n'ti* ***di****-va-dyembalal-e* *nkewa* ***ekuma*** *za-dya manga*
16-3-tree Cp-16/AgrS-hang-PST monkey because 10-eat mango
On tree hanged monkeys because they eat mangoes (Intd: on the tree is the place where the monkeys hanged because they eat mangoes)

c. *Va-lu-tai* ***di****-va-zongam-ene* *a-na* ***ekuma*** *a-tala kudimba.*
16-11-branch Cp-16/AgrS-lean-PST 2-child because 2a-look down
On branch leaned children because they look down (Intd: the branch is the place which the children leaned because they look down)

d. *Va-Ø-mfulu* ***di****-va-lambalal-e* *Ø-mbevo* ***ekuma*** *ka-vunda*
16-7-bed Cp-16/AgrS-lie-PST 1-sick because 1- rest
On bed lied (down) sickperson because s/he rests (Intd: on the bed is the place where the sickperson lies down because s/he rests)

7.7.8.2 Locative argument (without loc prefix) as subject

(250) a. *Ø-kunda* ***di****-ki-kosok-ele* *a-na* ***ekuma*** *a-vunda*
7-chair Cp-7/AgrS-sit-PST 2a-child because 2a-rest
The chair sat children because they rest (Intd: the chair is the place which the children sat down because they rest)

b. *Ø-n'ti* ***di****-u-dyembalal-e* *Ø-nkewa* ***ekuma*** *za-dya manga*
3-tree Cp-3/AgrS-hang-PST 10-monkey because 10-eat mango
The tree hanged monkeys because they eat mangoes (Intd: the tree is the place which monkeys hanged because they eat mangoes)

c. *Lu-tai* ***di****-lu-zongam-ene* *a-na* ***ekuma*** *a-tala kun'dimba.*
11-branch Cp-11/AgrS-lean-PST 2-child because 2a-look down
The branch leaned children because they look down (Intd: the branch is the place which the children leaned because they look down)

d. *Ø-mfulu* ***di****-i-lambalal-e* *Ø-mbevo* ***ekuma*** *ka-vunda*
9-bed Cp-9/AgrS-lie-PST 1-sick because 1- rest
The bed lied sickperson because s/he rests (Intd: the bed is the place which the sickperson lies down because s/he rests)

7.7.9 Instrumental phrase modification

7.7.9.1 Agent argument as subject

(251) a. *A-na* *a-kosok-ele* *va-Ø-kunda* ***mu-mi-leta***
2a-child 2/AgrS-sit-PST 16-7-chair 18-4-crutch
The children sat on the chair by means of crutches

b. *# Ø-nkewa* *dyembalal-e* *va-Ø-n'ti* ***mu-nsinga***
3-monkey hang-PST 16-7-tree 18-line
The monkey hanged on the tree by means of line

c. *#A-na* *a-zongam-ene* *va-lu-tai* ***mu-nsinga***
2a-child 2/AgrS-lean-PST 16- 11-brach 18-line
The children leaned in the branch of tree by means of line

d. *# Ø-mbevo* *lambalal-e* *va- Ø-mfulu* ***mu-mooko***
1-sick person lie-PST 16-9-bed 18- hands
The sick person lied (down) in bed with the help of hands

7.7.9.1 Locative argument as subject

(252) a. *Va-Ø-kunda* *va-kosok-ele* *mw-ana* ***mu-mi-leta***
16-7-chair 16/AgrS-sit-PST 1a-child 18-4-crutches
On chair sat child by means of crutches (Intd: the chair is the place which the children sat (down) by means of crutches)

b. *#Va-Ø-n'ti* *va-dyembalal-e* *Ø-nkewa* ***mu-nsinga***
16-3-tree 16/AgrS-hang-PST 3-monkey 18- line
On the tree hanged monkey by means of line (Intd: the tree is the place which the monkeys hanged by means of line)

c. *#Va-lu-tai* *va-zongam-ene* *a-an* ***mu-nsinga***
16-11-valley 16/AgrS-lean-PST 2-child 18-line
On branch leaned children by means of big stone (Intd: the banch is the place where the children leaned with the help of line)

d. *#Va-Ø-mfulu* *va-lambalal-e* *Ø-mbevo* ***mu-mo-oko***
16-3-bed 16/AgrS-lie-PST 1-sick 18- 6-hands
On bed lied down sickperson by means of hands (Intd: the bed is the place where the sickperson lied down by means of hands)

7.7.9.2 Locative argument (without locative prefix) as subject

(253) a. *Ø-kunda* *ki-kosok-ele* *mw-ana* ***mu-mi-leta***
7-chair 7/AgrS-sit-PST 1a-child 18-4-crutches
The chair sat child by means of crutches (Intd: the chair is the place which the children sat with the help of crutches)

b. *#Ø-n'ti* *u-dyembalal-e* *Ø-nkewa* ***mu-nsinga***
3-tree 3-hang-PST 3-monkey 18- line
The tree hanged monkeys by means of the line (Intd: the tree is the place which the monkeys hanged by means of line)

c. *#Lu-tai* *lu-zongam-ene* *a-ana* ***mu-nsinga***
16-valley 11/AgrS-lean-PST 2-child 18-line
The branch leaned children by means line (Intd: the banch is the place which the children leaned by means of line)

d. *# Ø-mfulu* *i-lambalal-e* *Ø-mbevo* ***mu-mo-oko***
9-bed 9/AgrS-lie-PST 1-sick 18-6-hands
The bed lied down sickperson by means of hands (Intd: the bed is the place which the sickperson lied down by means of hands)

7.7.10 Temporal phrase modification

7.7.10.1 *Agent/theme argument as subject*

(254) a. *Mw-ana* *kosok-ele* *va-Ø-kunda* *(kolo kya-)/(#mu-)ngunga imosi*
1a-child sat-PST 16-7-chair for/in an hour
The child sat on the chair for/in an hour

b. *Ø-Nkewa* *dyembalal-e* *va-Ø-n'ti* *(kolo kya-)/(#mu-)ngunga imosi*
3-monkey hang-PST 16-3-tree for/in an hour
The monkey hanged on the tree for/in an hour

c. *A-ana* *zongam-ene* *va-lu-tai* (*kolo kya-)/(#mu-)ngunga imosi*
2-child lean-PST 16-11-branch for/in an hour
The Children leaned on the branch for/in an hour

d. *Ø-mbevo* *lambalal-e* *va-Ø-mfulu* *(kolo kya-)/(#mu-)ngunga imosi*
1-sick lie-PST 16-9-bed for/in an hour
The sick person lied down on the bed for/in an hour

7.6.10.2 Goal/locative/source argument as subject

(255) a. *Va-Ø-kunda* *va-kosok-ele* *a-na* *(kolo kya-)/(mu-)ngunga imosi*
16-7-chair 16/AgrS-sit-PST 2-child for/in an hour
On chair sits children for/in an hour (Intd: the chair is the place where the children sat down for/in an hour)

b. *Va- Ø-n'ti va-dyembalal-e Ø-nkewa (kolo kya-)/(mu-)ngunga imosi*
16-3-three 16/AgrS-hang-PST 10-monkey for/in an hour
On tree hanged monkeys for/in an hour (Intd: the tree is the place where the monkeys hanged for/in an hour)

c. *Va-lu-tai va-zongam-ene a-na (kolo kya-)/(mu-)ngunga imosi)*
16-11-banch 16/AgrS-lean-PST 2a-child for/in an hour
On branch leaned children for/in an hour (Intd: the branch is the place where the children leand for in an hour)

d. *Va-Ø-mfulu va-lambalal-e Ø-mbevo (kolo kya-)/(mu-)ngunga imosi*
16-9-bed 16/AgrS-lie-PST 3-sick for/in an hour
On bed lied down sickperson for/in an hour (Intd: the bed is the place where the sickperson lied down for/in an hour)

7.6.10.3 Locative argument (without locative prefix) as subject

(256) a. *Ø-kunda ki-kosok-ele mw-ana (kolo kya-)/(mu-)ngunga imosi*
7-chair 7/AgrS-sit-PST 1a-child for/in an hour
The chair sat child for/in an hour (Intd: the chair is the place which the child sat for/in an hour)

b. *Ø-n'ti u-dyembalal-e Ø-nkewa (kolo kya-)/(mu-)ngunga imosi*
3-tree 3/AgrS-hang-PST 3-monkey for/in an hour
The tree hanged monkey for/in an hour (Intd: the tree is the place which the monkeys hanged for/in an hour)

c. *Lu-tai lu-zongam-ene a-ana (kolo kya-)/(mu-)ngunga imosi*
11-branch 11/AgrS-lean-PST 2-child for/in an hour
The branch leaned monkey for/in an hour (Intd: the branch is the place which the children leaned for/in an hour)

d. *Ø-mfulu i-lambalal-e Ø-mbevo (kolo kya-)/(mu-)ngunga imosi*
9-bed 9/AgrS-lie-PST 1-sick person for/in an hour
The bed lied down sickperson for/in an hour (Intd: the bed is the place which the sick person lies for/in an hour)

7.7.11 Locaive - Applicative alternation

7.7.1 Agent/theme argument as subject

(257) a. *A-na a-kosok-el-ang-a va-Ø-kunda*
2a-child 2/AgrS-sit-APPL-HAB-FV 16-7-chair
The children sit exclusively on the chair

b. *Ø-nkewa zi-dyembalal-el-ang-a va- Ø-n'ti*
10-monkey 10-hang-APPL-HAB-FV 16-3-tree
The monkeys hang exclusively on the tree

c. *A-na* *a-zongam-en-ang-a* *va-lu-tai*
2a-child 2/AgrS-lean-APPL-HAB-FV 16-11-brach of tree
The children lean exclusively on the branch of tree

d. *Ø-mbevo* *u- lambalal-el-ang-a* *va- Ø-mfulu*
1-sick person 1-lie-APPL-HAB-FV 16-9-bed
The sick person lies (down) exclusively in bed

7.7.11.1 Locative argument as subject

(258) a. *Va- Ø-kunda* *va-kosok-el-ang-a* *mw-ana...*
16-7-chair 16/AgrS-sit-APPL-HAB-FV 1a-child
On the chair sits child (Intd: the chair is the exclusive place which the child sits)

b. *Va-Ø-n'ti* *va-dyembalal-el-ang-a* *Ø-nkewa* *mu-n'siuka*
16-3-tree 16/AgrS-hang-APPL-HAB-FV 3-monkey 18-morning
On tree hang monkeys (Intd: the tree is the exclusive place which monkeys hang in the morning)

c. *Va-lu-tai* *va-zongam-en-ang-a* *a-na* *mu-nkokela*
16-11-branch 16/AgrS-hang-APPL-HAB-FV 2-child 18-afternoon
On branch leans children in the afternoon (Intd: the branch is the exclusive palce which the children lean in the afternoon)

d. **?***Va-Ø-mfulu* *va-lambalal-el-ang-a* *Ø-mbevo* *na kamona kisuka*
16-3-bed 16/AgrS-lay-APPL-HAB-FV 1-sick person if s/he feels tired
On bed lie sickperson if s/he is tired (Intd: the bed is the exclusive place which the sickperson lies if s/he is tired)

7.7.11.2 Locative argument (without locative prefix) as subject

(259) a. *Ø-kunda* *ki-kosok-el-ang-a* *mw-ana...*
7-chair 7-sit-APPL-HAB-FV 1-child
The chair sits child (Intd: the chair is the exclusive place which the child sits)

b. *Ø*-n*'ti* *u-dyembalal-el-ang-a* *Ø-nkewa* *mu-n'siuka*
3-tree 3/AgrS-hang-APPL-HAB-FV 3-monkey 18-morning
The tree hangs monkeys (Intd: the tree is the exclusive place which the monkeys hang in the morning)

c. *lu-tai* *lu-zongam-en-ang-a* *a-na* *mu-nkokela*
11-branch 11/AgrS-hang-APPL-HAB-FV 2-child 18-afternoon
The branch leans children in the afternoon (Intd: the branch is the exclusive palce which the children lean in the afternoon)

d. **?***Ø-mfulu* *i-lambalal-el-ang-a* *Ø-mbevo* *na kamona kisuka*
9-bed 9/AgrS-lay-APPL-HAB-FV 1-sick person if s/he feels tired
Bed lies sickperson if s/he is tired (Intd: the bed is the exclusive place which the sickperson lies if s/he is tired)