A SYNTACTIC ANALYSIS OF KINYARWANDA APPLICATIVES

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Declaration

I declare that ***A syntactic analysis of Kinyarwanda applicatives*** is my own work, that it has not been submitted before for any degree or examination in any university , and that all the sources I have used or quoted have been indicated and acknowledged as complete reference.

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Jean Paul Ngoboka

Dedication

This work is dedicated to my wife, Berthe, and our children.

Abstract

"A syntactic Analysis of Kinyarwanda applicatives" is a study of the syntax of Kinyarwanda which focuses on applicatives. Applicatives are constructions in which the object of a preposition becomes the direct object of the verb through a grammatical function changing process. In such constructions, the verb bears a morpheme referred to as the applicative morpheme which turns an intransitive verb into a transitive verb and a transitive verb into a ditransitive verb. The derived object may perform various thematic functions, including those of instrument, beneficiary, goal, manner, reason, purpose and motive.

The study provides a thorough description of different types of ditransitive applicatives in Kinyarwanda by examining the syntactic properties exhibited by both objects. In general Kinyarwanda may be classified as a 'symmetrical' language in which more than one object can exhibit direct object properties. This is true for instrumental, benefactive and manner applicatives. However, some applicatives in Kinyarwanda such as the locative applicatives are 'asymmetrical' in that only one object exhibits all the direct object properties.

In my research I analyse Kinyarwanda applicatives within the framework of Principles-and-Parameters (Chomsky 1981, 1986a, b and subsequent work), more specifically the Government and Binding theory (Chomsky 1981). I base the discussion on three analyses that have been proposed in the literature of applicatives: Baker's (1988) preposition incorporation theory, Larson's (1988) double object construction analysis and Nakamura's (1997) account of object extraction in applicative constructions, which is based on Chomsky's (1995) Minimalist Program. The study shows that the above analyses account for some aspects of applicatives, but that there are certain facts that are not accounted for, which require a different analysis.

Contents

Abbreviations

APPL: Applicative
ASP: Aspect
CAUS: Causative
DETR: Detransitive
FOC: Focus Marker
FV: Final Vowel
INF: Infinitive
OP: Object Prefix
PASS: Passive
PRES: Present Tense
PST: Past Tense
REC: Reciprocal
REFL: Reflexive
REL: Relative Pronoun
SP: Subject Prefix

Chapter 1: Introduction

This chapter provides a general introduction of the topic of my thesis. It is divided into five sections. Section 1.1. is a brief outline of the topic while Section 1.2. provides the reasons for choosing the topic. Section 1.3 presents the problems and issues investigated and the research questions to be answered and Section 1.4. presents the methodology and methods that will be used in the research. Finally, section 1.5. provides an overview of the study.

1.1. Outline of research topic

Many Bantu languages have a construction such as the one in (1b) below:

(1) a. Umubooyi y-a-menn-ye amaazi **ku** mwaana.
cook SP-PST-pour-ASP water on child
"The cook poured water on the child."

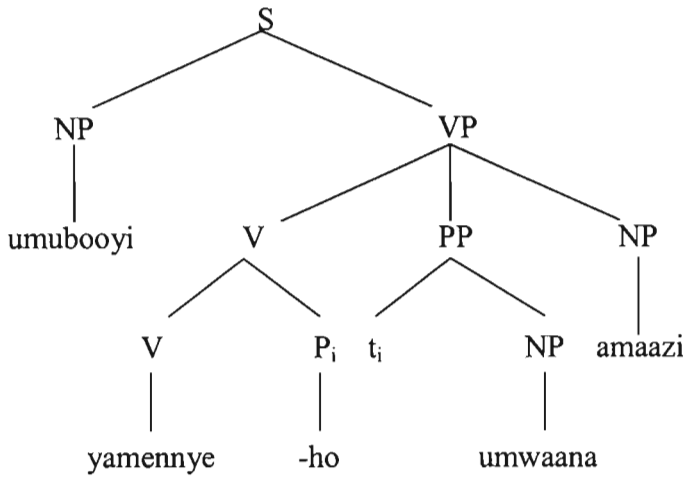
b. Umubooyi y-a-menn-ye-**ho** umwaana amaazi.
cook SP-PST-pour-ASP-APPL child water
"The cook poured water on the child." (Kinyarwanda)

The meaning of (1b) is the same as the meaning of (1a). However, whereas the verb in (1a) combines with a noun phrase (NP) and a prepositional phrase (PP), (1b) is a double object construction in which the first object corresponds to the object of the preposition in (1a). Furthermore, the verb in (1b) is marked with a special morpheme called the *applicative marker* (printed in bold in (1) and the examples that follow).

Applicative constructions have received much attention in formal linguistics (e.g. Kimenyi 1980, 1995, Marantz 1984, 1993, Baker 1988, Bresnan and Moshi 1990, Alsina and Mchombo 1993, Mchombo 1993a, Machobane (1993), Moshi 1998, Ngonyani 1998, Pylkkanen 2000, Gerdts and McGinnis 2003, etc.). According to Baker (1988), the applicative morpheme in examples such as (1b) is an incorporated preposition. In Baker's

theory, which will be discussed in some detail in this thesis, the underlying form of (1b) is similar to the structure of (1a), with the applicative suffix being the head of a PP. Head movement of this preposition and incorporation into the verb change the grammatical relations of the sentence, turning the former object of a preposition into the object of the verb. The derivation of (1b) is syntactically represented in the tree structure (2) below:

(2)



My thesis will be concerned with applicatives in Kinyarwanda, a Bantu language spoken in Rwanda and its neighbouring countries. My aim is to provide a detailed description of the morpho-syntactic properties of the various types of applicatives in Kinyarwanda, as well as a discussion of various syntactic analyses that have been proposed to account for this problem. For better understanding of those analyses, I will provide a discussion of major linguistic theories such as Principles-and-Parameters (Chomsky 1981, 1986a,b and 1995) and more specific theories, namely the theory of (preposition) incorporation as developed by Baker (1988) and the theory of double object constructions proposed in Larson (1988).

1.2. Reasons for choosing the topic

The choice of the topic was motivated by the following factors. First, the aim was to apply the syntactic models and analyses which are based on Chomsky's theory of Universal Grammar (Chomsky 1981) and which have successfully been applied to a

number of languages to the study of Kinyarwanda. According to Chomsky's theory of Universal Grammar (UG), certain fundamental linguistic principles are taken to be innate and are therefore predicted to determine the syntax of all natural languages. According to the Principles-and-Parameters theory (Chomsky 1981, 1986a,b and 1995 and subsequent work), the syntactic differences between individual languages are the result of different parameter settings associated with these innate universal principles. The main goal of the study of syntax is to explore the nature of these principles and parameters and to determine the elements of a possible grammar of a natural language. The syntactic models that have been developed on the basis of this approach have contributed significantly to the understanding of language in general and language acquisition in particular. Moreover, they have provided the linguist with scientific tools to describe individual languages adequately. Although this has been done with some success for a vast number of languages, Bantu languages are still underresearched from this theoretical perspective. In this study I will therefore try to test the predictions of the Principles-and-Parameters theory for Kinyarwanda.

Second, as a native speaker of the language under investigation, I will be able to provide a wide range of data on applicative constructions. This is relevant in so far as I have noticed that the researchers who attempt to explore Kinyarwanda applicatives base their analyses on very limited or insufficient data. These shortcomings have led to inadequate views and theoretical assumptions about the properties of Kinyarwanda, and about Bantu applicatives more generally. In this respect, this thesis will allow researchers who are interested in the grammar of Kinyarwanda to base their analysis on a wide and varied amount of data which in turn is likely to lead to more reliable conclusions about the syntax of Kinyarwanda.

1.3. Problems and issues to be investigated

The research will investigate various types of applicatives in Kinyarwanda. The focus will be mainly on the differences between the types of applicatives and applicative

morphemes and the properties of objects in applicative constructions. Consider the examples in (3):

(3) a. Umugabo y-a-gur-**i**-ye umwaana imyeenda.
man SP-PST- buy-APPL-ASP child clothes
"The man bought the clothes for the child."

b. Umukoobwa y-a-menn-ye-**ho** Mariya amavuta.
girl SP- PST -pour-ASP-APPL Mary oil
"The girl poured oil on Mary."

(3a) is a benefactive applicative derived from the use of the applicative morpheme *-ir-* while (3b) is a locative applicative derived from the use of the locative applicative morpheme *-ho*. An obvious difference between the applicative morphemes *-ir-* and *-ho* is that they combine with the verb in different ways. While the applicative suffix *-ir-* *precedes* other suffixes such as the aspect or the passive morpheme, the locative applicative morpheme *-ho* (or *-mo, -yo*) *follows* the aspect and passive morphemes as well as the final vowel in the present tense.

The examples in (3) show that the applicative morphemes *-ir-* and *-ho* can do a similar job in that both can add an applied object to the argument structure of the verb. However, the applicatives derived with these morphemes do not behave the same way in all respects. For instance, while the locative applicative morpheme *-ho* blocks the extraction of the theme argument in locative applicatives, this is not the case for the applicative morpheme *-ir-* in benefactive constructions, (4):

(4) a. imyeenda umugabo y-a-gur-**i**-ye umwaana
clothes man SP-PST-buy-APPL-ASP child
"the clothes the man bought for the child"

b. *amavuta umukoobwa y-a-menn-ye-**ho** Mariya
oil girl SP-PST-pour-ASP-APPL Mary
"the oil that the girl poured on Mary"

This thesis will explore constructions such as those in (3) and (4). A detailed description of various applicative constructions will be provided in Chapter 3 and they will be discussed in Chapter 4.

The dissertation will aim to answer the following research questions:

- What are the differences between various types of Kinyarwanda applicatives?
- How do objects in applicative constructions behave with regard to aspects such as passivisation, object-marking, extraction and word order?
- Which aspects of these properties are explained by preposition incorporation and which aspects of Kinyarwanda applicatives are not accounted for by this theory?
- Is there a derivational relation between applicatives and constructions with NP and PP, as is claimed by Baker (1988) and Larson (1988), for instance?
- In which ways does the Kinyarwanda applicative construction correspond to the analysis of the English double object construction proposed by Larson (1988)?

1.4. Research methodology and methods

Chomsky (1981, 1986b) and Baker (1988) distinguish between two ways of studying grammar. One may decide to study one particular language in great detail or to study many languages, compare their properties, and see which ones they share and where they are different. As previously stated, I focus on one particular language (Kinyarwanda) and I provide a detailed analysis of one particular grammatical phenomenon. My approach is therefore more strongly based on the first strategy. However, I also incorporate aspects of the second strategy, since I also refer from time to time to other related languages (for example, Bantu languages such as Swahili, Chichewa, Chimwini and Kichaga) in which applicative structures are used.

The empirical basis of this research will be primary data from Kinyarwanda, which will be provided by myself and other native speakers. Culicover (1997:16-17) notes that "it is generally accepted that the goal of a language description is to provide an account of the

linguistic knowledge possessed by native speakers of a language." From the point of view of the grammar of a particular language, the linguist treats all native speakers of that language as the same (although it is well-known that the concept of "the English language" or "the Zulu grammar" is an idealisation). Culicover (1997: 17) also argues that by abstracting away from individual differences, we may "discover something substantive and correct" about language that can enable us to make important generalisations.

1.5. Overview of the study

The thesis is divided into five chapters. Chapter 1 provides a general introduction of the research.

Chapter 2 presents the theoretical framework for the morpho-syntactic analysis of applicatives. Here, the major concepts and theories in formal linguistics such as Universal Grammar, the Principles-and-Parameters theory, Government and Binding theory, etc. as they are articulated in Chomsky (1981, 1986a,b, 1995) will be discussed. It is assumed that the architecture of all phrases including sentences is determined by the principles of X-bar theory. For any category X, there is a fixed hierarchy of phrases. The value of X includes the major lexical categories (nouns, verbs, adjectives and prepositions). Two further theories, namely Baker's (1988) incorporation and Larson's (1988) double object theory, will be discussed and used to discuss Kinyarwanda applicatives.

Chapter 3 is devoted to the description of Kinyarwanda applicatives. Various types of applicatives will be presented: those derived from transitive verbs as well as those derived from intransitive verbs. Different morphemes used to derive applicative constructions and the properties of objects will be discussed. How objects exhibit different behaviours with regard to passivisation, object extraction, object-marking, word order, will be shown. Kinyarwanda applicatives will also be compared to those in other Bantu languages.

Chapter 4 provides a theoretical discussion of Kinyarwanda applicatives. This discussion is specifically based on three analyses, namely the incorporation theory as developed by Baker (1988 and subsequent work), the theory of the double object construction proposed by Larson (1988), and Nakamura's (1997) analysis of object extraction in Bantu languages, which is based on Chomsky's (1995) Minimalist Program, especially the Minimal Link Condition. For each of the three analyses mentioned above, I offer a brief review of the analysis, followed by the application of the theory to Kinyarwanda, which highlights the issues that are not addressed. Finally, I will also make proposals to improve the analysis, where possible.

Chapter 2: Theoretical background

2.1. Introduction

This chapter presents the theoretical framework for the morpho-syntactic analysis of applicatives. It introduces the concept of Universal Grammar (UG), and describes the core assumptions of the Principles-and-Parameters theory, as they are articulated in Chomsky's Government and Binding theory (Chomsky 1981) and in the Minimalist Program (Chomsky 1995). Finally, the specific theories of preposition incorporation (Baker 1988) and of double object constructions (Larson 1988) as well as related principles such as the Uniformity of Theta Assignment Hypothesis (UTAH) and the Empty Category Principle (ECP) will be discussed in this chapter. These theories will be mainly relevant to Chapter 4 in which I provide a discussion of Kinyarwanda applicatives.

2.2 Universal Grammar (UG)

This section briefly discusses the concept of Universal Grammar (UG) and its relevance for language acquisition and language study in general.

The idea of a Universal Grammar (UG) refers to "the system of principles, conditions and rules that are elements or properties of all human languages" (Chomsky 1972, cited in Cook 1988: 1). It is a theory of knowledge and is mainly concerned with the internal behaviour of the human mind. Such knowledge is inseparable from the way it is acquired. UG implies that an individual knows a set of principles that can be applied to all natural languages and a set of parameters which vary from one language to another. The acquisition of a particular language, then, implies learning how such principles and parameters can be applied to that language.

Concerning how languages are acquired, a child seems to be able to learn the language that he/she is exposed to effortlessly. It is worth pointing out that the principles of UG are principles of the initial state of language which Chomsky (1995: 14) considers as "uniform for species". For example, syntactic projection principles are built into the human mind so that all languages must obey them. On this point, Cook (1988) notes that the similarities between human languages reflect their common basis in principles of the mind.

Chomsky (1965) distinguishes two types of language knowledge; these are competence and performance. Competence on the one hand encompasses the knowledge that native speakers of a language have acquired, that is, grammar. It entails tacit knowledge of a language which is not necessarily reflected in the speech actually produced. It also encompasses the cognitive state of the mind including various aspects of form and meaning and the relation between them. Performance, on the other hand, is "the actual use of language in concrete situations" (Chomsky 1965: 4). It differs from competence in that given the human mind's capacity limitations, people are likely to make language mistakes, for instance when they are tired or drunk. This, however, does not suggest that they lack the knowledge of the language.

2.3. Principles and parameters

According to Chomsky (1981), the principles of UG apply to all languages of the world. They determine the very nature of the language faculty and govern the kind of grammatical operations which are and are not permitted in natural languages. To adopt Radford's (1997:13) example, in order to establish how yes/no questions are formed in English one may consider an example such as (1):

(1) Has$_i$ John t$_i$ received a prize?

One could speculate that the rule that derives sentences such as (1) is a rule of inversion, which changes the order of the first two words in a sentence. However, inversion does not take place between a noun and a preposition, between a verb and a noun or between a noun and a preposition as shown in the sentences below:

(2) a. *Of$_i$ memories t$_i$ happiness will fade away?
b. *Will$_i$ down t$_i$ come taxis?
c. *Received$_i$ John t$_i$ a prize? (Radford 1997: 13-14)

In (2) inversion consists of placing the preposition *of* before the noun *memories* in (2a), the modal verb *will* before the preposition *down* in (2b) and the verb *received* before the subject *John* in (2c). However, although inversion has taken place in all the sentences in (2), the resulting constructions are not well-formed. In order not to derive structures such as those in (2), there needs to be a theory which formulates rules on the basis of *syntactic structures*, in

other words, a theory according to which all grammatical operations are structure-dependent. For the specific case of the examples of inversion, in order for a sentence to be grammatical, inversion requires moving an auxiliary in front of a preceding noun phrase, and the latter must be the subject of the former, as in (3) below,

(3) Has$_i$ the man who wrote the book t_i received a prize?

or by moving a modal verb before the noun phrase which is the subject as in (4), etc.

(4) Can$_i$ a man who does not speak English t_i receive a prize?

The examples above constitute evidence of structure-dependency, which implies that some operations are applicable in certain grammatical structures and not in others. If structure-dependency holds for all natural languages, then it is a universal principle, and hence part of human biological endowment. Drawing on Chomsky, Radford (1997: 12) suggests that the structure dependency principle is incorporated into the language faculty and forms part of the child's blueprint for grammar. Therefore, this is a principle of UG. Radford (1997: 13) goes on to suggest that UG accounts for the rapidity of the child's grammatical development as it is built on the "principles which govern the kinds of grammatical operations which are (and are not) permitted in natural languages."

Although the principles of UG can account for the basic properties of the structures of all languages, there are some aspects that are particular to each language and are accounted for by *parameters*. Parameters account for variations between the structural properties of languages. For instance, it is possible to drop a subject in Italian but not in English as it can be seen in (5) and (6):

(5) Parlo. (Italian)
speak 1Sg
"I speak."

(6) * Speak (English)

In contrast to (5) in Italian, (6) in English is not well-formed if it means "I speak".

Italian is said to be a null subject language whereas English is a non-null subject language, and the parameter which accounts for this difference is referred to as the null subject parameter.

Similarly, languages may differ with regard to word order. For example, English speakers have the head-left parameter and the Germans have the head-right parameter.

Consider the German example in (7):

(7) Weil John das Buch gelesen hat.
because John the book read has
"Because John has read the book."

As (7) shows, the phrase *das Buch gelesen* is headed by the verb *gelesen*, which appears on the right, while the corresponding English phrase *read the book* is headed by the verb *read* which is on the left. So, a learner of English must observe the head parameter. Furthermore, in some languages, a question is asked by moving the wh-phrase from its base position to the beginning of the sentence. The operation is called wh-movement and the parameter which accounts for this variation is called wh-parameter. This parameter determines whether or not a wh-word must be moved to the front of an interrogative sentence containing it. For example, in English and French, the question word is fronted. In contrast, languages such as Chinese and Kinyarwanda are wh-in situ languages. This is illustrated in the examples below:

(8) Umwaana y-a-rii-ye *iki*? (Kinyarwanda)
child SP-PST-eat-ASP what
"What did the child eat?"

(9) Ni xihuan s*hei?* (Chinese)
you like who?
"Who do you like?"

(10) *Où* es-tu? (French)
where be-you
"Where are you?"

(11) *Where* is NewYork? (English)

Consequently, language principles and parameters account for language creativity. Children do not only produce the sentences they have heard before by way of imitation; instead they can produce new sentences that are understood by other speakers although they are not similar to those that they are familiar with (Chomsky 1972 cited in Radford 1997: 10). Once the core grammar has been acquired, children will, in addition, acquire a wide range of vocabulary, discovering the characteristics of words they are exposed to in everyday interaction. For example, they will need to know that the verb *sleep* does not require an object, but that the verb *like* requires one. In a nutshell, acquiring grammar competence is about being able to observe universal principles and parameters and acquiring words.

In the next section, I discuss the theory of Government and Binding, a theory that makes explicit some of the universal syntactic principles which form part of UG.

2.4. Government and Binding (GB)

Until the early 1990s, GB-Theory was one of the most prominent and influential theories of grammar formulated within the framework of UG. It places emphasis on the clarification of the abstract universal principles of grammar. It is less concerned with the grammars of individual languages and "its proponents often maintain that there is no such thing as rules of grammar, only the principles and the parameters whose values can vary from language to language within specified limits" (Trask 1993: 120).

GB-Theory postulates four levels of syntactic representation, namely D-Structure, S-structure, Logical Form (LF), and Phonological Form (PF) (cf. Baker 1988:32 ff). D-Structure refers to the initial or base-generated level of the structure of a sentence while S-Structure is the syntactic representation which serves as an input for the phonological rules which spell out the words of the sentence to form PF. It derives from D-Structure by successive application of movement operations referred to as *Move* α, where α stands for any syntactic category. S-Structure also includes traces, which accounts for the presence of null elements left behind after some items have moved.

Consider (12) and (13) below:

(12) What$_i$ did you see t_i ?

(13) The book$_i$ was written t_i by Joseph.

In (12), *what* is the object of the verb and therefore located inside VP (verb phrase) at D-Structure, but must move to the beginning of the sentence in a wh-question. Similarly in (13) the NP (noun phrase) *the book* is the object of the verb *write (written)* at D-Structure but has moved to the subject position as a result of passivisation.

LF, which was initially defined as a semantic representation of a sentence, refers to "the interface between the language faculty and the conceptual faculty of the brain" (Baker 1988:32). Concerning Phonological Form (or Phonetic Form), it is "linked with an acoustic form" and is "the level of interface between the language faculty and the perceptual faculty" (ibid).

GB-Theory comprises seven sub-theories (or modules), namely X-bar theory, Theta-theory, Control theory, Government theory, Case theory, Bounding theory and Binding theory. They will be referred to in the analysis of applicatives, so are briefly discussed in the sections below.

2.4.1. X-bar theory

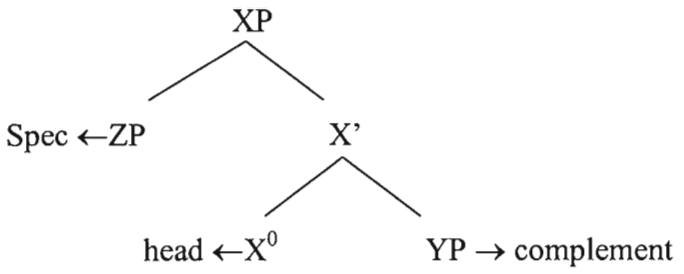
The aim of X-bar theory is to express generalisations about the phrase structure of all human languages. The core of this theory is "the recognition that syntactic categories are projected from lexical items which are their lexical heads" (Trask 1993: 306). The theory imposes conditions on the hierarchical organisation of categories and requires that a phrasal category has a head. For example, an NP must contain a noun and a VP must contain a verb. Heads belong to the major word classes, namely nouns, verbs, adjectives and prepositions. The position of the head with respect to other categories within its phrase is specified by the parameters of every individual language.
The rules of X-bar theory, which account for all syntactic structures, are stated as follows:

(14) i. $XP \rightarrow (ZP)\ X'$

ii. $X' \rightarrow X^0\ (YP)$

and the general phrase structure looks like (15) below:

(15)



The arrow in (14) means "consists of." The brackets show that a phrase may or may not have a specifier (14i) and that the complement of a head is optional, (14ii). X-bar or XP stands for any maximal projection such as NP, VP, PP, AP. The structure in (15) shows that YP combines with the head X^0 to form X' and X' combines with its specifier ZP to yield the maximal projection XP.

More concretely, consider how (14) accounts for the structure of the NP in (16):

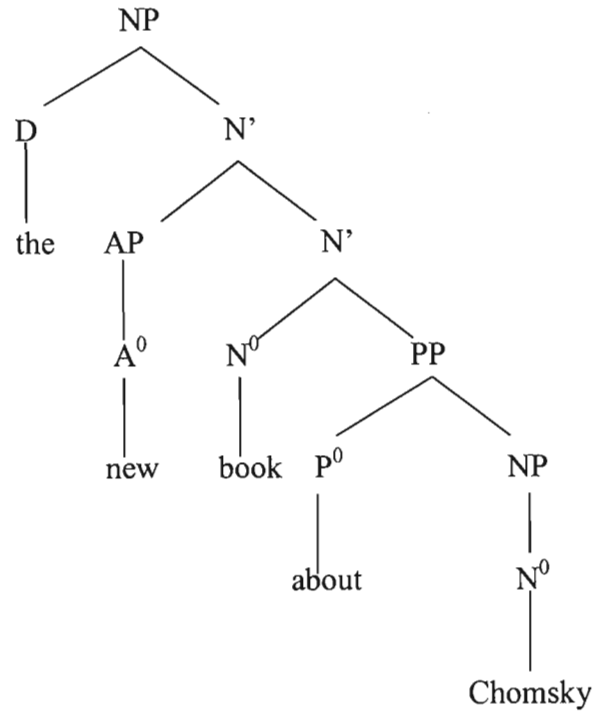
(16) the new book about Chomsky

The X-bar rules that generate (16) are formulated as follows:

(17) NP → D N'
N'→ AP N'
N'→ N^0 PP

and the representation of the tree structure looks like the one in (18):

(18)



Similarly, the VP in the sentence

(19) She [cut a tree with an axe].

is generated by the rules

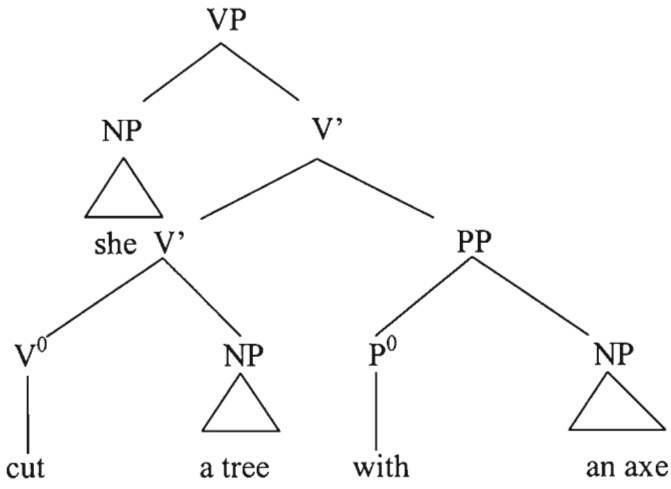
(20) i. $VP \rightarrow V'$

ii. $V' \rightarrow V'\ PP$

iii. $V' \rightarrow V^0\ NP$

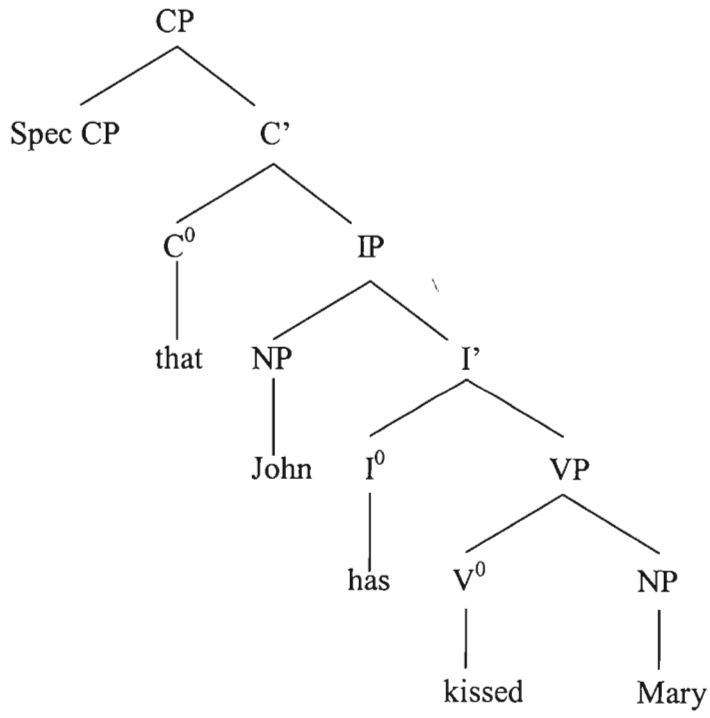
and the VP *cut a tree with an axe* can be represented in a tree structure as follows:

(21)



The principles of X-bar theory also determine the projections of functional categories, such as auxiliaries, pronouns and complementisers. According to Chomsky (1986b), sentences are maximal projections of the complementiser position, hence CPs. The C-head combines with the maximal projection IP of inflectional elements like auxiliaries, which are I-heads. As an example, the subordinate sentence in (*You think*) *that John has kissed Mary* is represented by the tree structure in (22):

(22)

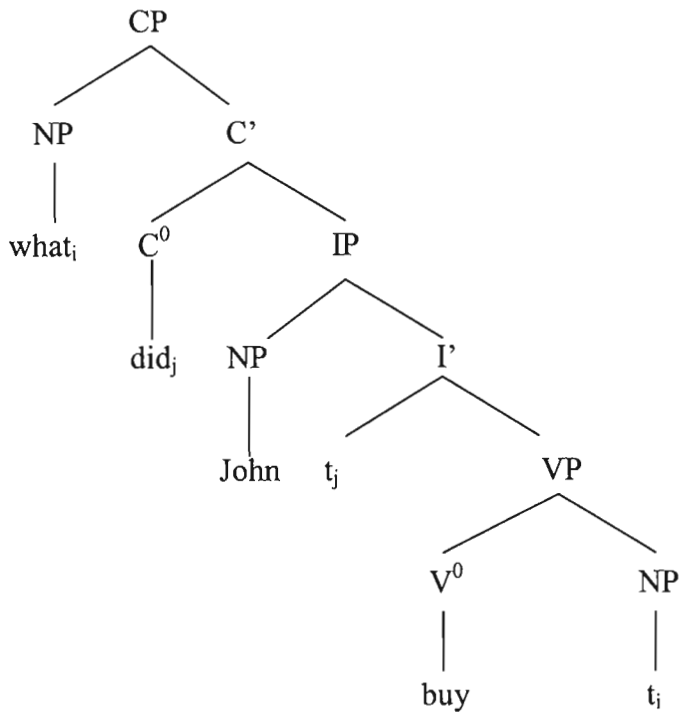


Infl (I^0) stands for non-lexical categories such as Tense and Agreement. SpecCP is a landing site for wh-phrases while SpecIP is the canonical position for subjects.

Consider for instance the example below in which the wh-phrase has moved to SpecCP:

(23) a. What did John buy?

b.



X-bar theory has the following consequences:

(i) every phrase has exactly one head (head principle);
(ii) the head is peripheral;
(iii) a head can only combine with a phrase (phrase principle);
(iv) the level of complexity of XP is higher than that of X', the level of complexity of X' is higher than that of X^0 (level principle).

2.4.2. Theta-theory

Theta-theory is concerned with how semantic/thematic dependencies are represented in grammar. It divides possible semantic dependencies into classes. These classes are referred to as theta-roles. Agent, patient, experiencer, goal and instrument, are examples of theta-roles. Consider the following examples:

(24) a. Mary bought *the dog* the food.
b. *The dog* ate the food
c. The boy kicked *the dog*.

The phrase *the dog* is associated with different thematic roles. It is a beneficiary in (24a), an agent in (24b) and a patient in (24c).

Noun phrases thematically related to the verb such as *the dog* in (24) are *arguments* of the verb. Arguments are associated with subjects and objects and the functions they perform such as agent or patient. The number of arguments and theta-roles varies depending on verbs. While some verbs have only one argument, others may take up to three arguments. The main principle of theta-theory is the *theta-criterion*:

(25) ***Theta criterion*** (Chomsky 1981: 36)
Each argument bears one and only one theta-role, and each theta-role is assigned to one and only one argument.

While the thematic role of an internal argument (i.e. complement of the verb) is determined by the thematic properties of the verb, the mechanisms by which subjects are assigned theta-roles are complex. Chomsky (1981 :59-60) and Marantz (1984: 23 ff) are of the opinion that, although verbs directly assign theta-roles to their internal argument, it is not the verb but the whole V-bar constituent, that is, the verb and its complements, which determines the theta-role assigned to the external argument (i.e. in SpecIP). This is because, according to Marantz (1984: 23), "the choice of arguments to fill PA [Predicate Argument] slots will affect the semantic role assigned to the (logical) subject."

2.4.3. Control theory

Control theory is concerned with the phenomenon by which a clause with no overt subject is interpreted semantically as having an unexpressed NP as subject. According to Bresnan (1982: 372), control refers to "the referential dependency between an unexpressed subject (the controlled element) and an expressed or unexpressed constituent (the controller)." This non-overt NP is conventionally represented by an empty category called PRO. Sometimes PRO is controlled by the subject and sometimes by the object of the matrix clause as is shown in the examples below:

(26) a. John promised Mary [PRO to go]

b. John persuaded Mary [PRO to go]

In (26a) PRO is controlled by the NP *John* and this phenomenon is referred to as subject control. In (26b) PRO is controlled by the NP *Mary*, and this is referred to as object control.

It is important to distinguish between PRO and 'little' *pro*. A discussed in Carnie (2002), *pro* stands for a non-overt subject NP such as in Italian as in the example below:

(27) *pro* parli.
you speak 2Sg
"You speak." (Carnie 2002: 273)

As (27) shows, the verb *parli* seems not to have a subject. In Italian, verbs are inflected with an ending in such a way that the listener/reader knows who the subject is. Therefore, sentences such as (27) are not ambiguous despite the apparent lack of the subject.

The notion of *pro* is also extended to omission /deletion of objects referred to as object 'pro drop'.

2.4.4. Government

Before discussing government, it is worth looking first at *c-command* and *m-command*, two concepts that are essential in determining syntactic relationships between constituents.

(28) ***c-command*** (Haegeman 1991: 122)
A c-commands B if and only if
(i) A does not dominate B and B does not dominate A
(ii) the first branching node that dominates A also dominates B

(29) ***m-command*** (Chomsky 1986b: 8)
A m-commands B if and only if
(i) A does not dominate B and B does not dominate A
(i) the first maximal projection that dominates A also dominates B

Government refers to locality relations between two items. It is defined as follows:

(30) ***Government*** (Baker 1988: 39)

A governs B iff A c-commands B and there is no category C such that C is a barrier between A and B.

Barrier is defined as follows:

(31) ***Barrier*** (Baker 1988: 56)

Let D be the smallest maximal projection containing A. Then C is a BARRIER between A and B if and only if C is a maximal projection that contains B and excludes A, and either:

(i) C is not selected, or

(ii) the head of C is distinct from the head of D and selects some WP equal to or containing B.

The definition of barrier includes the notions of selection. The selection principle is stated as follows:

(32) ***Selection*** (Baker 1988:57)

A selects B if and only if:

(i) A assigns theta-role to B, or

(ii) A is of category C and B is its IP, or

(iii) A is of category I and B is its VP.

(32) suggests that IP and VP are selected by C^0 and I^0 respectively and that complements of the verb are selected by the verb and complements of the preposition are selected by the preposition. However, according to Baker (1988: 57), C^0 and I^0 do not select their specifiers, namely SpecCP and SpecIP.

Consider the example in (33):

(33) John decided [$_{CP}$ *e* [$_{IP}$ PRO to [$_{VP}$ see the movie]]]. (Baker 1988: 57)

In (33), *decided* fails to govern PRO because CP is a barrier between *decided* and PRO according to condition (ii) in (31). This is due to the fact that CP contains PRO and excludes *decided,* and its head C^0 is distinct from V^0 and selects IP which contains PRO.

Now consider (34) in which government is possible:

(34) John believes [$_{IP}$ him to [$_{VP}$ be a liar]]

In (34) the verb *believes* takes an IP as its complement. The subject of the infinitive is *him,* which receives case from the matrix verb *believes*. This is because IP is selected by the verb, and thus not a barrier to government.

The notion of distinctness will be discussed and explained more fully in Section 2.6.

One principle pertaining to this theory is the *Empty Category Principle* (ECP), which requires traces left behind by moved constituents to be properly governed. This principle will be discussed in more detail in the section on incorporation theory.

2.4.5. Case theory

Case-theory requires that every overt NP in a sentence is marked as possessing a property referred to as 'case'. Examples of cases are 'nominative case' and 'accusative case'. Cases are assigned by transitive verbs, prepositions and tensed Infls. These heads assign case to the NPs they govern (see section 2.4.4.). Case assignment requires that every NP occupies a position in which it gets case (see (38) below). There are two types of case assignment: 'inherent case' is assigned at D-structure and 'structural case' is assigned at S-structure. The difference is that the former is assigned by particular lexical items while the latter is assigned in particular configurations (Chomsky 1980 cited in Trask 1993). According to Chomsky (1981) and Baker (1988), inherent case is associated with a particular thematic role, i.e. theme/patient. To put it differently, inherent case received by an NP is determined by the properties of its governor while structural case is dependent on government and assigned according to the position in which the NP occurs. For example, in the sentence,

(35) Mary bought Jane a cake.

the NP *Jane* receives structural case from the verb due to its structural position (that of a direct object). Structural case is dissociated from theta-roles. As for the NP *a cake*, it receives inherent case from the verb since the latter theta-marks it. In this case, it bears the theta-role of theme.

Case will be relevant in the discussion of applicatives in Chapter 3 and Chapter 4 as it enables one to determine the status of an object. An object is considered to be a direct object if it gets structural case. Thus, only a direct object can be passivised since only structural case can be absorbed in passives. Moreover, in order for an NP to get structural case, it has to be *adjacent* to the verb. Adjacency is defined as follows:

(36) ***Adjacency*** (Haegeman 1991: 167)
Case assigners must not be separated from the NPs they case-mark by intervening material.

This is illustrated in (37):

(37) a. Poirot speaks [$_{NP}$ English] fluently.
b. *Poirot speaks fluently [$_{NP}$ English].

(37b) is ungrammatical because *fluently* intervenes between the case assigner *speak* and the NP *English* that has to be case-marked.

An important principle of case theory is C*ase Filter*. This principle is stated as follows:

(38) ***Case Filter*** (Chomsky 1982: 6)
Every NP with phonological content must receive case.

Case assignment is summarised in (39) below (Chomsky 1981: 50)

(39) a. An Infl with the feature [+tense] assigns nominative case to its subject
b. A verb assigns accusative case to its object
c. A preposition assigns oblique case to its object
d. The Spec of N" may receive genitive case.

2.4.6. Bounding theory

Bounding theory states conditions of locality, which also constrain possible movement operations. The main principle is the Subjacency Principle, defined as follows:

(40) ***Subjacency Principle*** (Baker 1988: 41)
Movement cannot cross more than one bounding node.

The principle "limits how far Move Alpha can take a category in one step" (Chomsky 1973 cited in Baker 1988: 41). According to this condition, a phrase cannot cross more than one bounding node. In English, bounding nodes are NP and IP. Individually, these nodes do not prevent movement from taking place.

Consider the example below:

(41) *Who$_i$ do [$_{IP}$ you believe [$_{NP}$ my statement [$_{CP}$ t_i that [$_{IP}$ I saw t_i]]] (Baker 1988: 41)

The ungrammaticality of (41b) is due to the fact that the wh-phrase has crossed more than one bounding node, namely NP and two IPs.

2.4.7. Binding theory

Binding theory is concerned with relations between anaphors, pronouns, names and variables and their possible antecedents (Chomsky 1981; 1986a,b). It is characterised by the following Binding Conditions and definitions in (42) and (43).

(42) A. Anaphors (e.g. reflexives, reciprocals) must be bound in their governing category.
B. Pronouns must not be bound in their governing category.
C. Denoting Expressions [or R-Expressions] must not be bound.
(Baker 1988: 42)

(43) ***Binding*** (Baker 1988: 42)
A binds B if and only if A c-commands B and A and B are coindexed.

(44) ***Governing Category*** (Haegeman 1991: 211)

The minimal domain containing the pronoun, its governor and an accessible subject.

Consider the examples below:

(45) a. John$_i$ knows *himself*$_i$.

b. Peter$_i$ knows *him*$_j$.

d. *Peter$_i$ said that Mary likes *that bastard*$_i$.

In (45a), *himself* obeys condition A in that it is bound within the clause and is coindexed with the NP *John*. (Coindexation here represents coreference). In (45b), *him* is a pronoun which is bound in its Governing Category. Therefore, coreference of the pronoun and the NP *Peter* would be a violation of Condition B. *That bastard* is a denoting or R-expression which according to Condition C, must not be bound at all. Therefore, coindexation of peter and that bastard makes (45b) ungrammatical.

2.5. The Minimalist Program (MP) (Chomsky 1995)

For the purpose of my thesis, it is sufficient to adopt the framework provided by GB-theory; moreover, this theory seems particularly well-suited, because Baker's Incorporation Theory (which I will present below) has been developed on the basis of GB-Theory. However, I will adopt some core assumptions of the MP in section 4.4.2, where I discuss an analysis of Kinyarwanda applicatives which is based on the idea of multiple specifiers. More specifically, I will discuss the proposal which is based on a modified version of the Minimal Link Condition (cf. Chomsky 1995, Nakamura 1997) as it accounts for certain aspects of applicatives that are not accounted for by the incorporation theory. The Minimal Link Condition is originally defined as follows:

(46) ***Minimal Link Condition*** (Chomsky 1995: 311)

K attracts α only if there is no β, β closer to K than α such that K attracts β.

For example, consider the ungrammatical sentence below:

(47) *[$_{CP}$ who$_i$ did [$_{IP}$ Mark claim [$_{CP}$ what [$_{IP}$ t_i loved t_j]]]]? (Carnie 2002:319)

The ungrammaticality of (47) is accounted for by the Minimal Link Condition, that is, the fact that movement has gone beyond the closest landing site, which is SpecCP. The wh-feature in matrix SpecC has attracted *who* in SpecIP, but SpecCP is closer.

It is also important to note that in the Minimalist Program, case assignment is treated as feature checking. A case assigning feature attracts an element which has an unchecked feature. For example, I (T in the Minimalist Program), has a noun-feature which needs to be checked against the noun-feature of an NP (the subject). If an element does not need a case feature, it is not attracted. For detailed discussion, see Chomsky (1995: 308ff).

2.6. Incorporation Theory

As the aim of this thesis is to analyse Kinyarwanda applicatives on the basis of the theory of incorporation developed in Baker (1988), this section provides a background to this theory. I shall discuss the key concepts underpinning the theory, such as the Uniformity of Theta Assignment Hypothesis, the theory of Head Movement, the Empty Category Principle and Baker's definition of barrier (see also (31) in section 2.4.4), and the Government Transparency Corollary.

2.6.1. D-Structure and the Uniformity of Theta Assignment Hypothesis (UTAH)

According to Chomsky (1981: 39 ff) and Baker (1988), it is at the level of D-Structure that all phrases appear in the position that the theta-roles they receive are assigned to. For example, although wh-phrases appear at the beginning of a sentence in English, their thematic roles are assigned to their position before movement takes place. An important assumption is that "every theta-role determined obligatorily in D-structure must be filled by some argument with the appropriate GF [grammatical function]" (Chomsky 1981: 43).

Baker proposes the UTAH as a guiding principle for the determination of syntactic relations between arguments and theta-role assignment at D-Structure:

(48) ***The 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.

(Baker 1988: 46)

Baker illustrates the UTAH by discussing the Unaccusative Hypothesis developed by Perlmuter (1978 cited in Baker 1988: 47). According to this hypothesis, the sole argument of certain non-agentive intransitive verbs (such as *roll*, *move*, *withdraw*, *melt* and *close*), is a structural object at D-structure. Consider the examples in (49) and their counterpart at D-Structure in (50) below.

(49) a. Julia melted the ice cream into mush.

b. The ice cream melted into mush.

(50) a. Julia [$_{VP}$ melted [the ice cream] into mush]].

b. [$_{IP}$ *e* [$_{VP}$ melted [the ice cream] into mush]]. (Baker 1988: 47)

The NP *ice cream* bears the same theta-role in (49b) as it does in (49a); according to the UTAH, it must therefore be an internal argument at D-Structure in both examples. Therefore, although it appears as a surface subject of *melt* in (49b), it is the object at D-structure (see 50b) and moves to SpecIP for case reasons.

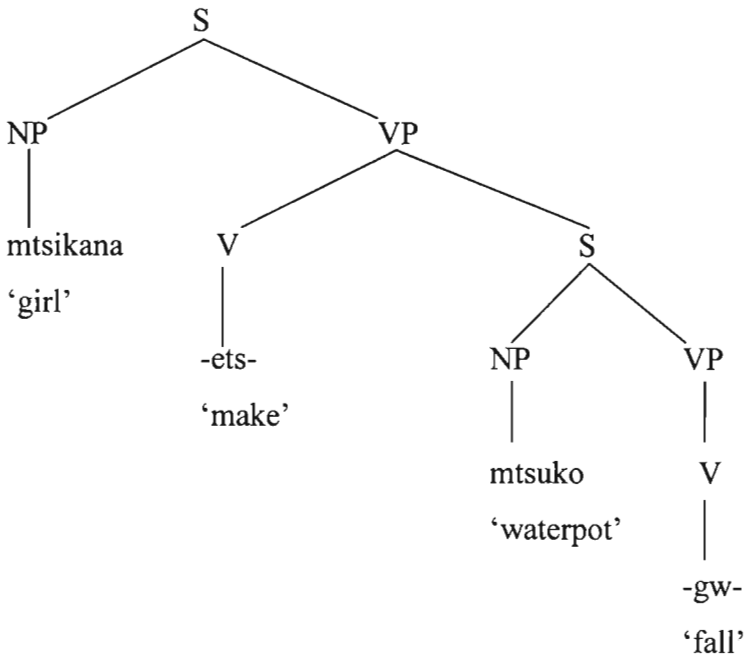
In addition, the UTAH also has consequences for grammatical function changing, a process such as causatives and applicatives. Let us first look at the example of a causative construction in Chichewa, a Bantu language spoken in Malawi.

(51) a. Mtsikana a-na-chit-**its**-a kuti mtsuko u-gw-e.
girl do-cause that waterpot fall
'The girl made the waterpot fall."

b. Mtsikana a-na-gw-**ets**-a mtsuko.
girl fall-cause waterpot
'The girl made the waterpot fall.' (Baker 1988: 47)

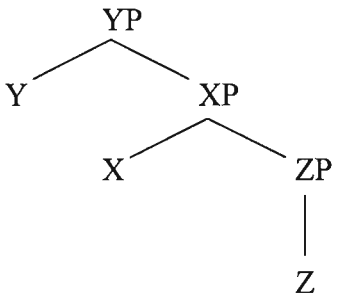
In (51a), the verb root *-gw-* is inflected for tense and agreement and is the predicate of an independent sentence functioning as the complement of the main causative verb *-its-* (*-ets-*) ('make'). At D-Structure, the NP *mtsuko*, 'waterpot', is the subject of the embedded verb in (51a) and the object of the complex causative verb *-gwets-* in (51b). Importantly, *mtsuko* (waterpot) bears the same thematic relationships (i.e. that of theme) to the verbal root *-gw-* (fall) in both examples. According to the UTAH, the verb *-gw-* and *mtsuko* should stand in the same structure relationship at D-structure in both examples. This thus suggests that *-gw-* and *-ets-* are independent constituents at D-structure as in (52). Therefore, Baker argues that causative suffixes are verbs and that all causatives are biclausal, even if they are morphologically causatives. For the sake of convenience S has been used to represent IP.

(52)

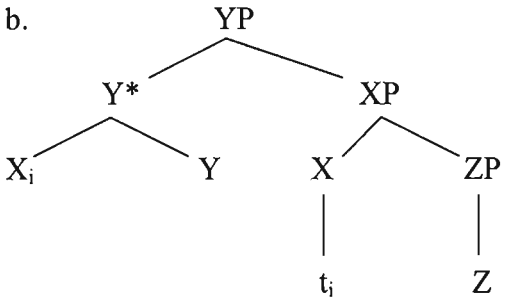


How is the surface structure of causatives such as the one in (51b) derived? According to Baker, the complex causative verb in (51b) is the result of *incorporation*. In this process an affixal head combines with/attaches to the verb, which is also a head, hence head-to-head movement. Incorporation is abstractly represented in (53) below:

(53) a.



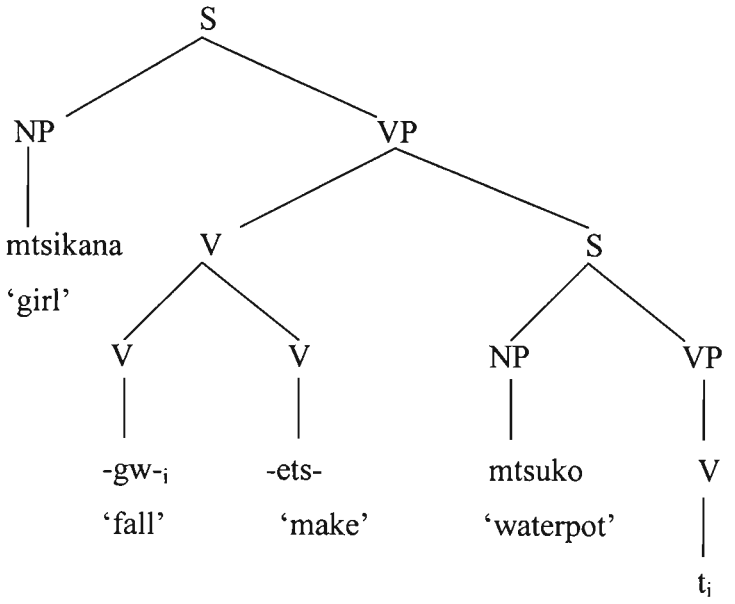
b.



(53a) shows the structure before incorporation. X and Y are two distinct heads. As is shown in (53b), X has undergone movement and adjoined to Y to form the complex syntactic head Y*. This process results in the change of syntactic relations between heads and arguments. As can be seen in (53a), the phrase ZP is governed by X and not Y. Due to the intervening head X, XP constitutes a barrier between Y and ZP. However, after incorporation, the head of XP is no longer distinct from Y and Y* can govern ZP.

Following (53) above, (52) is derived from (51a) as is shown in the tree structure below:

(54)



In (54), the head *-gw-* has been incorporated into the causative verb *-ets-* ('make') to form a complex causative verb *-gwets-* .

Now let me turn to applicative constructions.

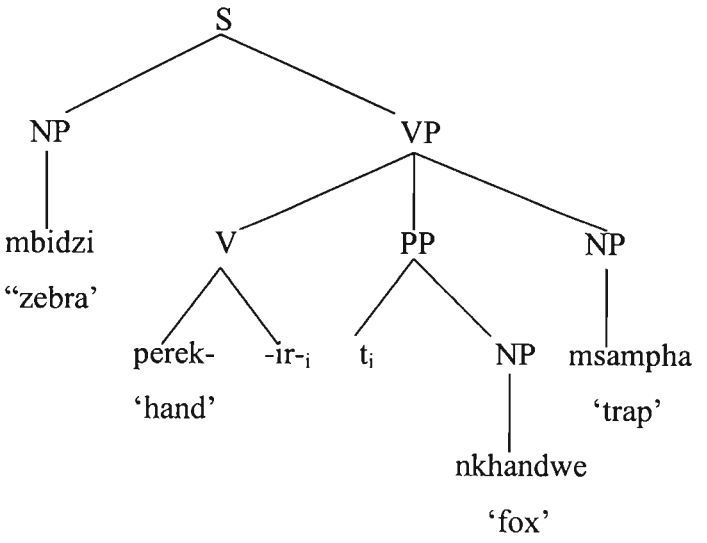
(55) a. Mbidzi zi-na-perek-a msampha **kwa** nkhandwe.
zebras SP-PST-hand-ASP trap to fox
"The zebras handed the trap to the fox."

b. Mbidzi zi-na-perek-**er**-a nkhandwe msampha[1].
zebras SP-PST-hand-APPL-ASP fox trap
"The zebras handed the fox the trap." (Chichewa; Baker 1988: 229)

The UTAH suggests that (55b) is the 'thematic paraphrase' of (55a) because the corresponding elements receive the same thematic roles throughout. The morphologically complex verb *-pereker-* does the work of two words, namely a preposition and a verb (an applicative suffix does the work of a preposition). According to the UTAH, since the thematic relations in (55a) and (55b) are the same, the syntactic relation between the NPs and the verb at D-Structure should be the same. Therefore, the D-Structure of (55b) also includes a PP where the applied object is licensed by the applicative morpheme *-ir-*.

-ir- and *kwa* perform the same function, namely that of assigning a (benefactive) theta-role. However, since *kwa* is a preposition it can stand alone but *-ir-* cannot since it is an affix. Therefore it must move to attach to the verb as in (56).

(56)



[1] The applicative morpheme *-ir-* may be realised as *-er-* depending on the phonetic environment in which it appears.

In short, if a word "shows syntactic signs of assigning or receiving a thematic role in the same way that morphologically independent constituents would do, the UTAH will imply that part of the word is independent at D-structure" (Baker 1988: 49). For example, although in causative constructions such as (51) above the verb root and the causative morpheme form a transitive verb, the UTAH determines that the root verb and the causative morpheme are independent constituents at D-structure. Therefore, the UTAH is relevant to the analysis of causatives, noun incorporation, and applicatives. The discussion of applicatives in Chapter 4 will be based on this principle to a great extent.

2.6.2. The Head Movement Constraint (HMC) and the Empty Category Principle (ECP)

As shown above, incorporation is characterised by the syntactic movement of an X^0 level category which adjoins to another head Y^0. Like wh-movement, head movement is an instance of the general rule Move-α and therefore subject to the same conditions and constraints established by Chomsky (1981):

(57) (i) The trace is properly governed
[i.e., it is subject to ECP]
(ii) The antecedent of the head is not in a theta-position
(iii) The antecedent-trace relation satisfies the subjacency condition.
(Baker 1988:52)

Let me first consider conditions (ii) and (iii). Condition (ii) suggests that an NP should not move to a position "from which a theta-role is assigned", or to a position "to which a theta-role is assigned" (Koopman 1984 cited in Baker 1988: 52). Head movement meets this criterion, because Baker assumes that head movement *adjoins* the X^0-element to the head Y^0 into which it incorporates.

Condition (iii) is that of subjacency. In Section 2.4.6. it was stated that, according to the subjacency condition, movement should not cross two bounding nodes. However, (iii) is irrelevant in this instance since it never causes a problem for head movement.

Condition (i) states that head movement is subject to the Empty Category Principle. This principle requires that traces of movement be properly governed. It is defined as follows:

(58) ***Empty Category Principle*** (ECP).

a. Traces must be PROPERLY GOVERNED

b. A PROPERLY GOVERNS B iff A governs B, and A and B are coindexed.

Baker (1988: 39)

According to (58b), a trace B is properly governed by a governor A if A and B are *coindexed.* Coindexation of A and B can be the result of two configurations: either A assigns a theta-role to B, or A is an antecedent of the trace B in a movement chain and governs B. This explains the contrast between (59a) and (59b):

(59) a. ?What$_i$ do [you wonder [$_{CP}$ whether [Angelo [$_{VP}$ fixed t_i]]]]

b. *How$_i$ do [you wonder [$_{CP}$ whether[Angelo[$_{VP}$ fixed the car] t_i]]]

(Baker 1988: 40)

Both examples in (59) show movement of a wh-phrase out of a wh-island. Due to the intervening wh-phrase *whether*, the wh-traces are not governed by their antecedent, (*what* and *how*) since CP is a barrier which can only be circumvented if the wh-phrase moves to intermediate SpecCP. The ECP can therefore only be fulfilled if the wh-traces are theta-marked. Since the extracted wh-phrase in (59a) is an internal argument, it is theta-marked by the verb *fix*, and the sentence is grammatical (it exhibits only a mild subjacency violation). In contrast, the wh-trace of *how* is in an adjunct position, and since adjuncts are never theta marked, the ECP in (59b) can not be fulfilled, and (59b) is ungrammatical.

However, since a head is never theta-coindexed with another head (only phrases are), traces of head movement can never be properly governed through theta-marking. Thus the condition below follows:

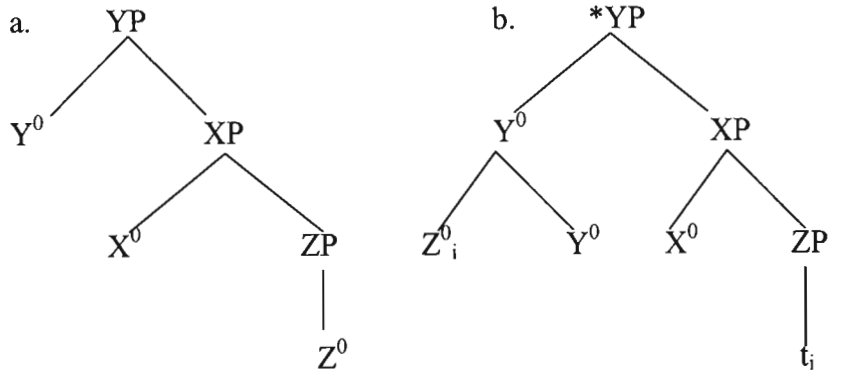
(60) An X^0 must govern its trace (Baker 1988: 54)

In order for an X^0 to govern its trace, two conditions must be met. First, it must m-command it.[2] In addition, there must be no barrier category that intervenes between the incorporated X^0 and its trace.

[2] *m-command* corresponds to Baker's (1988) definition of *c-command* and *c-command* is Baker's *strict c-command*

Consider the following representation of barrier.

(61)



According to the definition of barrier (as outlined in section 2.4.4., (31)), the structure in (61b) is not well-formed. In (63b) XP constitutes a barrier between Y^0 and Z^0 since Y^0 and X^0 are distinct heads. Moreover, the maximal projection XP contains X^0 but excludes Y^0 and selects ZP. Therefore, Z^0 cannot incorporate into Y^0. Recall that maximal projections that block government are those that are not theta-marked.

2.6.3. The Government Transparency Corollary (GTC)

The Government Transparency Corollary is a consequence of head movement. Baker (1988) defines it as follows:

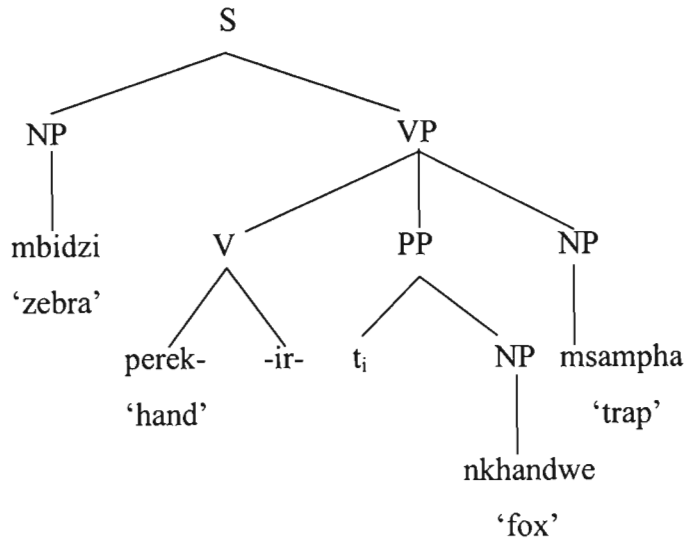
(62) ***The Government Transparency Corollary (GTC)***

> A lexical category which has an item incorporated into it governs everything which the incorporated item governed in its original structural position. (Baker 1988: 64)

Consequently, head movement is followed by changes in government properties. For example, if a preposition is incorporated into a verb, the new head will govern the NP that was governed by the preposition before it was incorporated.

To illustrate the GTC, the Chichewa example used in (56) is repeated here in (63).

(63)



The tree shows that before incorporation, the preposition *-ir-* is the head of the PP *-ir- nkhandwe*, and hence the governor of the NP *msampha*. V cannot govern the NP since the PP is a barrier. Indeed, this is in conformity with head distinctness which is defined by Baker as follows:

(64) X is distinct from Y only if no part of Y is a member of a (movement) chain containing X.

Specifically the V^0 *-perek-* and the N^0 *msampha* are distinct heads since the PP which is a maximal projection contains the head *nkhandwe* but not the verb *-perek-*. However, after incorporation, the PP *-ir- nkhandwe* becomes 'invisible' for the ECP as V^0 and P^0 are no longer distinct heads. Consequently, PP cannot prevent the head V^0+P^0 from governing the NP *nkhandwe*. Therefore, as predicted by the GTC, a lexical category which has a category incorporated into it, governs everything that was governed by the incorporee before its incorporation. In the example above the new head *-pereker-* governs properly the NP that was governed by *-ir-* which has now been incorporated as *-ir-*.

In this section, I have discussed the key concepts in Baker's (1988) incorporation theory such as the UTAH, the Government Transparency Corollary as well as Head Movement. In the next section, I will look at Larson's (1988) account of double object constructions.

2.7. The Double Object Construction

Different researchers hold different views as far as the syntactic representation of the double object construction is concerned. While some maintain that the double object construction derives from the corresponding dative construction (see the pair in (65) below) through a process similar to passivisation (Larson 1988), or is derived by incorporation (Baker 1988, 1996) or morphological merger (Marantz 1984), others assume that both the double object and the dative construction are independent of each other and that no derivational relation exists between the two.[3]

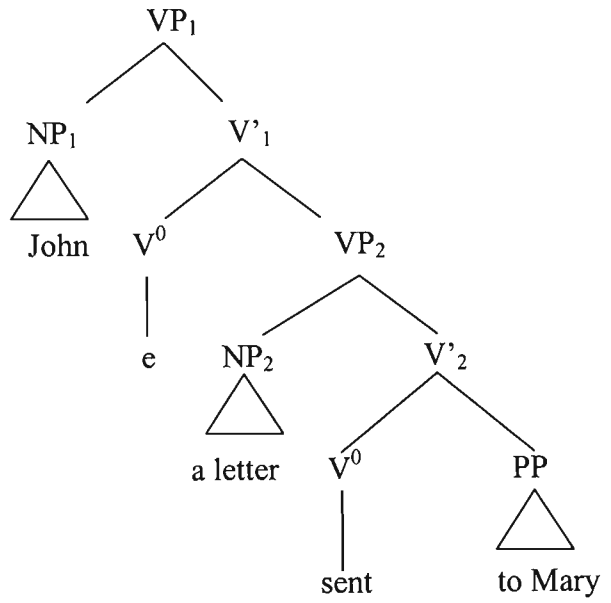
According to Larson, the double object construction is derived from the dative construction through a process similar to passivisation. Let us consider the example below from Larson (1988).

(65) a. John sent a letter to Mary.
b. John sent Mary a letter.

The predicate of a dative construction like (65a) consists of two VPs, VP_1 and VP_2. The head of the lower VP has as its complement the PP *to Mary* which includes the goal NP *Mary* and the specifier *a letter*, as shown in the tree below:

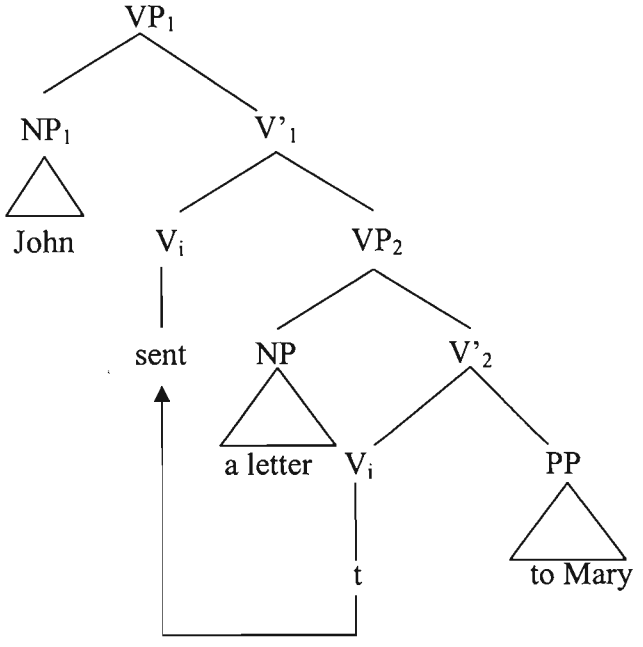
[3] For other analyses of the double object construction, see Aoun and Li (1989), Hale and Keyser (2002), Hoffman (1995) and Jackendoff (1990).

(66)



To derive the S-Structure of the dative, the verb moves to light V (the head of VP_1), the position from which it can govern the NP in Spec VP_2. This yields the dative construction represented in the tree below:

(67)



According to Larson, the relation between the D-Structure representation of a dative shift construction such as (65a) and the D-Structure of a double object construction such as (65b) is similar to the relation between the D-structure of an active and passive sentence and its corresponding passive:

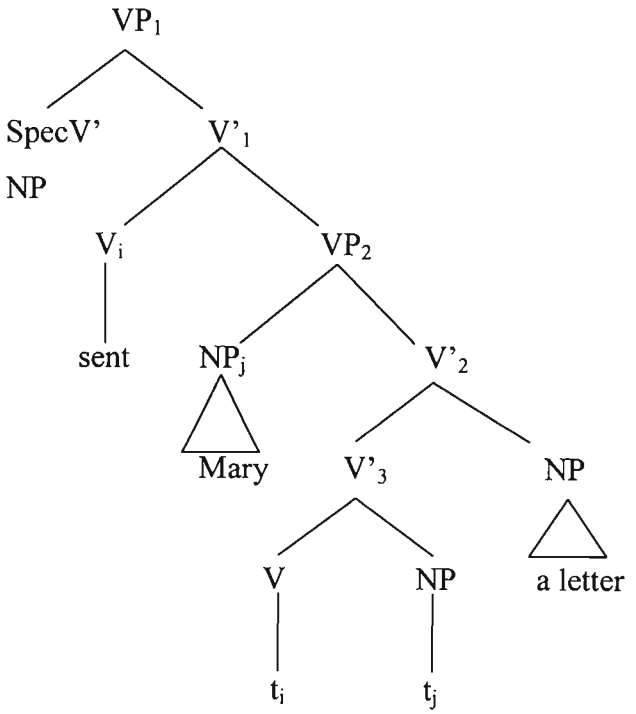
(68) a. John read the book

b. The book was read by John.

In the passive, the case of the verb and the external theta role are absorbed, turning SpecIP into a non-theta-position. Similarly, Larson (1988) argues that the D-Structure of a double object construction is characterised by case and theta-role absorption.

In the passive, the case assigned to the object is absorbed. Similarly, in dative constructions, the preposition which assigns case to the goal NP in a dative is deleted. The object of the preposition remains without case. The theta-role assigned to the theme NP is suppressed as is the case for the subject in the passive. Therefore, the theme can no longer be generated in SpecVP and has to be realised as an adjunct.[4] The object of the preposition, which is caseless after preposition deletion, moves to Spec VP_2 where structural case is assigned. The process results in a dative shifted construction *John sent Mary a letter.*

(69)



[4] In passives, the Agent is realised as an NP in the so-called *by*-phrase, where it receives case from the preposition. According to Larson, the demoted theme-NP in a double object construction receives inherent case

Consequently, the goal NP *Mary* precedes the theme NP and behaves like a direct object in that, for example, unlike the NP *a letter* in (65b), it can be passivised:

(70) a. Mary was sent a letter.
b. * A letter was sent Mary.

Larson's analysis of the double object is supported by Baker (1996). Like Larson, Baker argues that the sentence *I send Mary a letter* derives from the sentence *I sent a letter to Mary*. This idea is captured within the context of the incorporation theory and more specifically the UTAH.

Consider the examples in (71)

(71) a. I gave the candy to the children.
b. I gave the children the candy. (Baker 1996)

According to Baker, (71b) is derived from the underlying structure in (71a). Baker claims that benefactive/goal objects are not underlying direct objects in (71). To demonstrate this, he uses the secondary predicate test. As he argues, secondary predicates obey the c-command condition; they must both c-command and be c-commanded by their subjects at D-Structure. As Baker says, a secondary predicate (AP) cannot be predicated of the goal/benefactive NP when the latter is the object of a preposition or when it appears in the double object construction. This is illustrated in the examples that follow.

(72) a. I gave *the meat* to Mary *raw.*
b. *I gave the meat to *Mary hungry.*
c. I gave Mary *the meat raw.*
d. *I gave *Mary* the meat *hungry.* (Baker 1996)

Consider how Baker presents the sentences in (72c,d) in a tree diagram.

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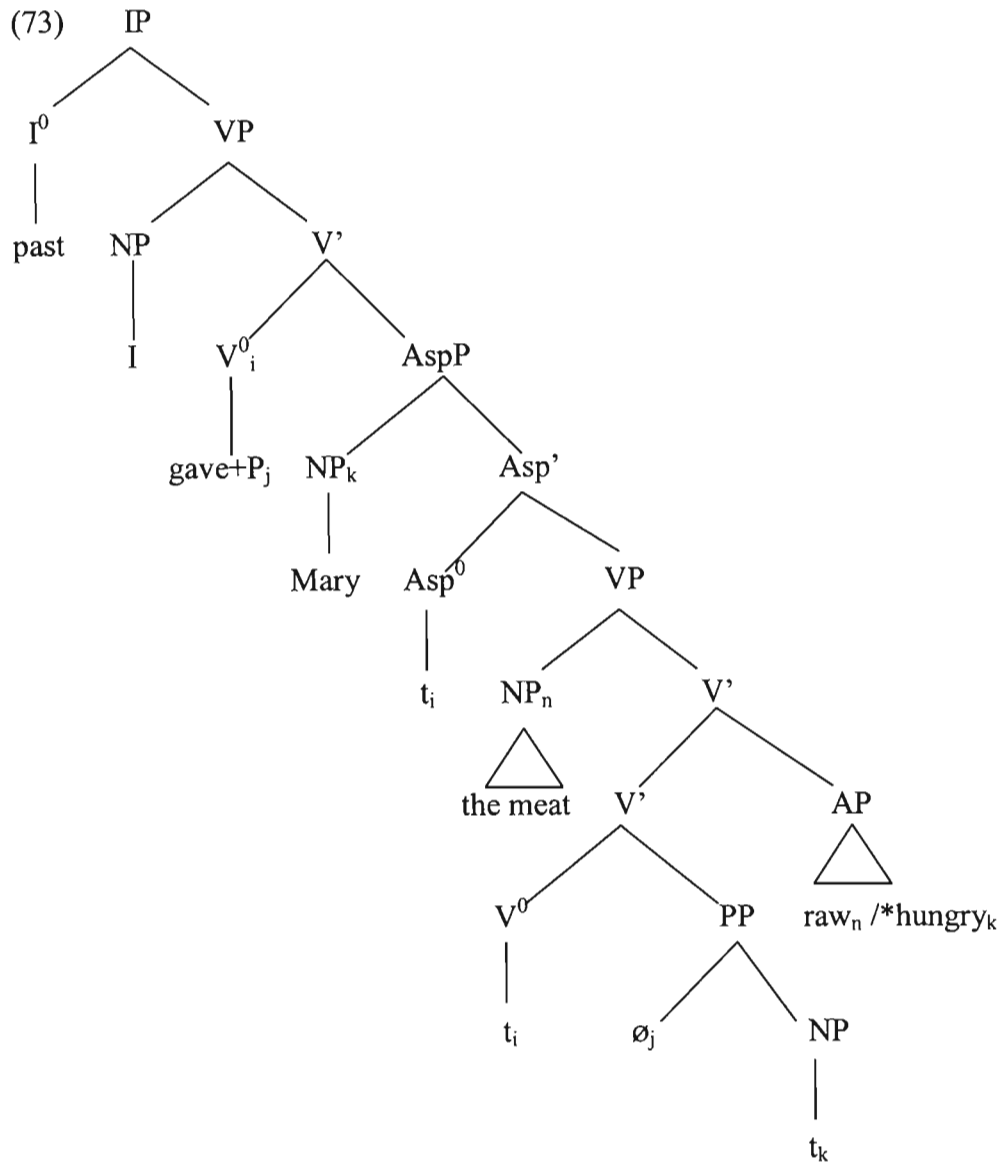
from the V'-node dominating the verb and the (trace of) goal NP to which it is adjoined. Larson's case-theoretical approach relies on a number of additional assumptions and arguments which I cannot discuss here in detail.

(73)



According to Baker (1996), the double object in (72c), hence (73) is derived as in Larson's double object construction.

However, Baker's analysis differs from Larson's in two ways. The first difference is that Larson's case absorption is preposition incorporation in Baker's analysis. Baker argues that after preposition incorporation, the preposition can no longer assign case to the goal NP. Consequently, this NP has to move out of the lower VP ('inner VP') to the specifier of AspP (AspP is a functional head which projects according to X-bar theory). As a result of this movement, the goal comes to precede the theme NP.

The second difference is that in contrast to Larson's analysis, for Baker, the theme is generated in the specifier of VP and remains there. As the tree (73) shows, the NP_k *Mary* does not c-command the secondary predicate *hungry,* neither in its base position, nor after movement. According to Baker, the fact that the theme remains in SpecVP and c-commands the secondary predicate whatever position the goal NP occupies, motivates the derivational approach to the double object construction. However, it argues against Larson's claim that the theme is demoted and becomes an adjunct. The problem with this analysis is that Baker (1996) does not specify whether the theme maintains the direct object properties in the presence of the applied object, which suggests that is gets inherent case. Nakamura's (1997) analysis, which will be discussed in Chapter 4, is based on Baker (1996).

1.8. Summary

In this chapter, I have discussed the main aspects of the theory of grammar which I will use as the framework in my thesis. I have illustrated the concept of UG, the theory of Principles and Parameters and Government and Binding Theory. I have also discussed the theory of incorporation as developed by Baker (1988) and its main foundations, namely the UTAH, the GTC, the ECP and the theory of head movement. Finally, I have outlined the double object construction as developed by Larson (1988). These theories will be particularly important in accounting for the structures of various applicative constructions which will be examined in the next chapters.

Chapter 3: Kinyarwanda applicatives

3.1. Introduction

This chapter is devoted to the detailed description of Kinyarwanda applicatives. Section 3.2. provides the definition of applicative and related terms. Before describing the various applicative constructions that exist in Kinyarwanda, I discuss in Section 3.3. the different morphemes used to derive these constructions. In Section 3.4., I discuss applicatives derived from intransitive verbs. Then, I show in Section 3.5. that applicative constructions increase the number of objects through a grammatical function changing process in which oblique objects become direct objects of the clause in which they appear. In this section, I discuss various types of Kinyarwanda applicatives focusing on those involving two objects. Seven types of applicatives will be explored: benefactives, instrumentals, datives, locatives, manner, reason, and motive/purpose. To test the behaviours exhibited by various objects, five syntactic tests will be applied, i.e., passivisation, word order, object marking, object extraction and theme/patient deletion. Section 3.6. provides details on object property interaction. However, as one of the aims of this thesis is to provide a thorough description of Kinyarwanda applicatives, Section 3.7. will be devoted to constructions in which more than two objects are involved.

3.2. Definition of applicative and related terms

Applicative constructions have been extensively discussed by Kimenyi (1980), Marantz (1984), Baker (1988) and later on by other linguists such as Bresnan and Moshi (1990), Alsina and Mchombo (1993), Harford, (1993), Kimenyi (1995), Nakamura (1997), Ngonyani (1998), Moshi (1998), Pylkkanen (2000), McGinnis (2001), and others. An applicative construction is derived through a grammatical function changing process in which the addition of the applicative morpheme to the verb adds a new NP argument to the clause:

(1) a. Umufuundi y-a-tem-ye itafaari **n'** umwiiko.
builder SP-PST-cut-ASP brick with trowel
"The builder cut the brick with a trowel."

b. Umufuundi y-a-tem-**eesh**-eje itafaari umwiiko.
builder SP-PST-cut-APPL-ASP brick trowel
"The builder cut the brick with a trowel."

In sentence (1a), the verb *-tem-* ('cut') takes one internal argument (the NP *itafaari* ('brick')). The sentence also contains an instrumental NP (*umwiiko*, 'trowel') which is contained in a PP and represented as the complement of the preposition *na*. In contrast, the verb in (1b) is extended by means of the applicative morpheme *-eesh- (iish).* As a result, the instrumental NP no longer needs to be part of a PP, but has become the second object of the complex verb *yatemeesheje* ('cut with'). In the following sections, I will refer to the original internal argument of a basic transitive verb as the *basic object*, and I will use the term *applied object* to refer to the second argument NP introduced by the applicative. As an example, *itafaari* is the basic object in (1); and *umwiiko* is the applied object in (1b). Whereas the basic object usually corresponds to the theme/patient of the verb, I will show that the applied object can perform various functions, such as locative or benefactive, or, as in (1b), instrumental. For the sake of convenience, the terms theme and patient will be used interchangeably as the thematic equivalent to the "basic object."

Not only can the applicative morpheme add an argument to a transitive verb, it can also add an object to an intransitive verb as in the example (2):

(2) Abasore ba-kor-**er**-a abasaaza.
young men SP-work-APPL-FV old men
"Young men work for old men."

According to Marantz (1984), applicative constructions are the result of a process called merger. After the applicative morpheme and the verb have combined or merged, the argument structure of the verbal complex is a simple combination of the argument structure of the verb (V) and that of the preposition (P). As a consequence, all the arguments of P and V become arguments of V+P in the derived construction. Similarly, Bresnan and Moshi (1990), Spencer (1991) and Ngonyani (1998) note that the incorporation of the applicative morpheme increases the valency of the verb and introduces a new NP to the argument structure. They observe that the applied object of an applicative verb acquires all the characteristics of the direct object.

Furthermore, the presence of an applied morpheme (such as *-iish-* in (1b) or *-i-* in (3)) makes the existence of the applied object NP obligatory:

(3) a. *Umujuura y-iib-**i**-ye amafaraanga.
thief SP-steal-APPL-ASP money
"The thief stole money."

b. Umujuura y-iib-**i**-ye umugore amafaraanga.
thief SP-steal-APPL-ASP woman money
"The thief stole money for the woman."

As was shown in Chapter 2, Baker (1988) analyses applicatives in terms of his theory of incorporation. According to Baker, an applicative morpheme (such as *–iish* in (1b)) fulfils the same function as a preposition (such as *na* in (1a)) does in a non-applied construction. This means that *-iish-* in (1) is now a preposition which takes the applied object NP as its complement at D-structure. The difference between the applicative morpheme and the full preposition is that the former has the morphological subcategorisation feature of an affix, meaning that it must be attached to the verb at S-structure, whereas the preposition is an independent morpheme that can stand alone. Therefore, the affixal preposition must undergo head movement; according to Baker's theory, applicatives are hence the result of moving a preposition out of a PP into the verb that governs it.

In the following sections I will offer a detailed description of the different ways in which the applicative construction in Kinyarwanda can be realised. In order to illustrate the various meanings of the applicative, I will introduce the relevant examples in pairs, with one example showing the applied object as the object of an applicative verb and another example where it is the complement of a preposition.

3.3. Applicative morphemes in Kinyarwanda

The applicative construction in Kinyarwanda is realised with the following morphemes:

- Applicative morpheme *-ir-* (also realised as: *-er-, -e-, or -i-*)
- Locative morphemes *-ho, -mo,- yo*
- Causative morpheme *-iish-* (for instrumentals)

- Comitative *-an-* (for manner)

As the term *applicative* refers to constructions such as the one in (1b) as well as to the morphological marker (Trask 1993, Matthews 1997), I shall refer to the morphemes above as follows: applicative morpheme for *-ir-*, locative applicative morpheme for *-ho (-mo, -yo)*; instrumental applicative morpheme for *-iish*; and manner applicative for the comitative morpheme *-an-*. However, for the sake of convenience, all the morphemes above *(-ir-, -ho, -iish- and -an-)* will be glossed as APPL (= applicative) regardless of whether they are locative, instrumental or comitative merphemes.

As I will argue in 3.5.3., some dative constructions include an applicative morpheme which is phonologically 'zero', meaning that it is not phonologically realised.

3.3.1. The applicative morpheme *-ir-*

Applicative constructions with this morpheme exhibit phonologically conditioned allomorphy, as illustrated in (4) below. The morpheme *-ir-* may be realised as *-er-* when the preceding syllable contains the vowels *-e-* and *-o-* (vowel harmony) and as *-i-* or *-e-* when *r* has been dropped in front of the perfective suffix *-ye* (Kimenyi 1995).

(4) a. Yohaani a-biik-**ir**-a Yoozefu amafaraanga.
John SP-keep-APPL-FV Joseph money
"John keeps money for Joseph."

b. Peetero a-reeb-**er**-a abaantu inomero.
Peter SP-look-APPL-FV people numbers
"Peter checks numbers for people."

c. Peetero y-iib-**i**-ye Mariya ikaanzu.
Peter SP-steal-APPL-ASP Mary dress."
"Peter stole a dress for Mary."

d. Jaane y-a-sek-**e**-ye Peetero.
Jane SP-PST-smile-APPL-ASP Peter.
"Jane smiled at Peter."

As can be seen, all examples express benefactive applicatives, yet the morpheme is realised by different elements.

The applicative morpheme occurs before the perfective morpheme *-ye* and the locative morheme *-ho*, after the instrumental applicative morpheme *-iish-* and the comitative morpheme *-an-* but before or after the reciprocal morpheme *-an-*. Consider the example below:

(5) a. Abasirikare ba-ras-*an*-**ir**-a igihugu cyaabo.
soldiers SP-shoot-REC-APPL-FV county their
"Soldiers shoot each other for their country."

b. Abasirikare ba-ras-**ir**-*an*-a abaanzi.
soldiers SP-shoot-APPL-REC-FV enemies
"Soldiers shoot enemies for each other."

In (5a), the applicative morpheme *-ir-* appears after the reciprocal morpheme *-an-* while in (5b) it appears before the same reciprocal morpheme.

The applicative morpheme *-ir-* can perform various functions including locative, dative, benefactive, cause/goal, possessive, temporal, subjective and narrative (Kimenyi 1995). Examples of such functions will be discussed in Section 3.5. In this thesis, the possessive, the temporal, the subjective and the narrative will not be of much concern and will therefore not be studied in detail. However, for completeness sake, I provide examples in (6), (7), (8) and (9) to illustrate each of these constructions.

(6) a. Abatuurage ba-a-sann-ye inzu **ya** Jaane. (possessive)
population SP-PST-repair-ASP house of Jane.
"The population repaired Jane's house."

b. Abatuurage ba-a-san-**i**-ye Jaane inzu.
population SP-PST-repair-APPL-ASP Jane house
"The population repaired Jane's house."

(7) a. Yoozefu y-a-ge-ze i Kigali **ku** gihe. (temporal)
Joseph SP-PST-arrive-ASP at Kigali on time
"Joseph arrived at Kigali on time."

b. Yoozefu y-a-ger-**e**-ye i Kigali igihe.
Joseph SP- PST-arrive-APPL-ASP at Kigali time
"Joseph arrived at Kigali on time."

(8) Yoozefu ntaa kazi a-fit-e. Y-ii-taah-**i**-ye. (subjective)
Joseph no work SP-have-FV. SP-REFL-go home-APPL-ASP
"Joseph has no work. He has gone home."
Lit: "Joseph has no work. He has gone home for himself."

(9) Umuhuungu a-gu-fat-**ir**-a ibye a-ra-gend-a. (narrative)
boy SP-OP- take-APPL-FV his SP-PRES-go-FV
"The boy took his stuff and went off."
Lit: "The boy took his stuff for you and went."

Note that sentences containing possessives may also have a benefactive interpretation. For example, sentence (6b) is ambiguous in the sense that it could mean that the population repaired the house that belonged to Jane or that the population repaired a house for Jane (so that Jane could benefit from the repairing of the house; the house does not have to belong to her).

The subjective use of the applicative reflects that the subject is the focus of concern and denotes the speaker's 'affectionate' or 'sentimental' attitude towards the subject. It is also worth noting that when the applicative construction has this interpretation, the applicative morpheme must co-occur with the reflexive prefix *-ii-* as in (8) above. Similarly, the narrative *-ir-* co-occurs with the verbal preffix *-ku-* (a verbal morpheme referring to the object 'you') which seems not to have any semantic content in this particular case. For example:

(10) Umukoobwa a-ku-nyw-**eer**-a inzoga.
girl SP-OP-drink-APPL-FV beer
"The girl drank beer.'
Lit: "The girl drank beer for you."

The difference between a sentence such as (10) and a sentence without any inflection is actually that of style. In fact, constructions containing a morpheme void of meaning such as *-ku-* ('you') also exist in spoken French as in the example below.

(11) Le jeune homme te consomme cinq bières par jour.
the young man you consume five beer per day
Lit: "The young man consumes for you five beers per day."

3.3.2. The locative applicative morphemes *-ho,- mo, -yo.*

The suffix *-ho* is a locative applicative morpheme which corresponds to the preposition *ku* and means "on" or "at". The morphemes *-mo* and *-yo* fulfill a similar function to *-ho*. The suffix *-mo* corresponds to the preposition *mu* which means "in" whereas *-yo* corresponds to the preposition *i* which has the same meaning as the English preposition *at*. In contrast to *ku*, *i* refers to wider areas such as villages, districts, towns, cities and provinces. (12), (13) and (14) illustrate the use of the three locative applicative morphemes.

(12) a. Umufuundi y-oome-tse amatafaari **ku** rukuta.
builder SP-stick-ASP bricks on wall
"The builder stuck bricks on the wall."

b. Umufuundi y-oome-tse-**ho** urukuta amatafaari.
builder SP-stick-ASP-APPL wall bricks
"The builder stuck bricks on the wall."

c. Umufuunndi y-oome-tse urukuta **ho** amatafaari
builder SP-stick-ASP wall APPL bricks
"The builder stuck bricks on the wall."

(13) a. Umwaana y-a-menn-ye amaazi **mu** mwoobo.
child SP-PST-pour-ASP water in hole
"The child poured water into a hole."

b. Umwaana y-a-menn-ye umwoobo **mo** amaazi (also : **m**'aamaazi).
child SP-PST-pour-ASP hole APPL water
"The child poured water into a hole."

c. ?Umwaana y-a-menn-ye-**mo** umwoobo amaazi.
child SP-PST-pour-ASP-APPL hole water
"The child poured water in a hole."

(14) a. Umucuruuzi y-ooher-eje abaana **i** Nairobi.
businessman SP-send-ASP children at Nairobi
"The businessman sent children to Nairobi."

b. Umucuruuzi y-ooher-eje-**yo** abaana (*Nairobi).
businessman SP-send-ASP-APPL children
"The businessman sent children there"

The locative morphemes *-ho* and other locative morphemes are attached to the verb just after all the other morphemes such as the aspect morpheme *-ye*, the passive morpheme *-w-*, the applicative morpheme *-ir-*, etc. Moreover, the applicative morpheme *-mo* (or *-ho*) can also appear after its NP object, as is shown in (12b). This unexpected position of the locative applicative has been observed by Kimenyi (1995) and Nakamura (1997), yet no account of why the morpheme occurs after the locative NP has been offered by these authors.

Unlike *-ho* and *-mo*, *-yo* does not co-occur with an overt locative NP as is seen in (14), which is why it can be considered a substitute for a whole PP. However, it is also possible for the locative applicatives *-ho/-mo* to occur without a locative applied object as in (15b)-(16b). In fact, such constructions are more frequent than those containing a locative applicative morpheme and a full locative NP.

(15) a. Umufuundi y-oome-tse-**ho** urukuta amatafaari.
builder SP-stick-ASP-APPL wall bricks
"The builder stuck bricks on the wall."

b. Umufuundi y-oome-tse-**ho** amatafaari.
builder SP-stick-ASP-APPL bricks
"The builder stuck bricks there."

(16) a. Umwaana y-a-menn-ye umwoobo **mo** amaazi.
child SP-PST-pour-ASP hole APPL water
"The child poured water into the hole."

b. Umwaana y-a-menn-ye-**mo** amaazi.
child SP-PST-pour-ASP-APPL water
"The child poured water into it/there."

Kimenyi (1995) observes that in cases such as the ones in (14b), (15b) and (16b) above, the locative applicative morpheme acts as a prepositional proform. However, it is unclear why *-ho* and *-mo*, but not *-yo*, can co-occur with a locative applied object.

Kimenyi's view seems to be adequate, since *-mo, -ho* and *-yo* are in complementary distribution with *-ha-* , the object marker for class 16 (= locative NPs).

(17) a. Umuuntu y-a-kor-**e**-ye akazi **ku** isoko.
person SP-PST-do-APPL-ASP work at market
"A person did the work at the market."

b. Umuuntu y-a-kor-**e**-ye-**yo** akazi.
person SP-PST-do-APPL-ASP-APPL work
"A person did the work there."

c. Umuuntu y-a-*ha*-kor-e-ye akazi.
person SP-PST- class16-do-APPL-ASP work
"A person did the work there."

d. *Umuuntu y-a-*ha*-kor-e-ye-**yo** akazi.
person SP-PST-class16-do-APPL-ASP-APPL work.
"A person did the work there."

-yo in (17b) is equivalent to 'at+Pro' whereas *-ha-* is a class 16 marker. (17b) and (17c) show that *-ha-* and *-yo* are in complementary distribution since their co-occurrence in (17d) makes the sentence ungrammatical. This follows if both *-ha-* and *-yo* are considered as locative proforms.

Before ending this section, it is important to point out that the applicative morpheme *-ir-* (and its allomorphs) can also be used to derive a locative applicative (see example (23b) in Section 3.4. and the discussion in Sections 3.5.4.2. and 3.5.4.3.).

3.3.3. The instrumental applicative morpheme *-iish-* (*-eesh-*)

The instrumental applicative morpheme *-iish-* has already been illustrated in example (1) in Section 3.2. above. It can also be realised as *-eesh-*, due to vowel harmony, as shown in example (18) (*-iish-* appears after a syllable containing the vowels *a, i, u* while *-eesh-* follows stems with the vowels *e* and *o*):

(18) Umufuundi a-ra-teer-**eesh**-a umusumaari inyuundo.
builder SP-PRES-fix-APPL-FV nail hammer
a. "The builder is fixing the nail with a hammer."
b. "The builder makes the hammer fix the nail."

If (18) is an instrumental applicative, (18a) would be the correct paraphrase for (18). However, not all linguists agree that *–iish-* is actually an applicative morpheme. Some analyse it as a causative morpheme instead (Kimenyi 1980, 1995). This assumption is mainly motivated by examples such as (19):

(19) Umucaamaanza y-a-siny-**iish**-ije perezida ibarwa.
judge SP-PST-sign-CAUS-ASP president letter
a. "The judge made the president sign a letter."
b. *"The judge signed the letter with the president."

In (19), the morpheme *-iish-* attached to the verb stem is unambiguously a causative affix, as is illustrated by the impossible paraphrase (19b). Since (18) exhibits the same element, one could analyse (18) as a causative construction as well. (18) could then be paraphrased as (18b) and would mean that the builder caused the hammer to fix the nail. Thematically, the hammer would be the subject of the fixing-event. According to this view, the instrumental meaning in (18a) is then merely a consequence of the causative interpretation and not the result of an applicative construction.

However, it can be shown that there are some cases in which the morpheme *-iish-* must be unambiguously analysed as an applicative morpheme:

(20) Umugabo a-ra-ri-**iish**-a umuceri ikanya.
man SP-PRES-eat-APPL-FV rice fork
a. "The man is eating rice with a fork."
b. "*The man makes the fork eat the rice."

The translation (20b) shows that a causative interpretation of constructions involving the morpheme *-iish-* is not always appropriate. The NP *ikanya* ('fork') in (20) cannot be the thematic subject of the basic predicate; it can only be interpreted as the applied object. This means that *-iish-* in (20) is a true applicative morpheme.

In the light of examples such as (18)-(20), it may be concluded that the instrumental applicative morpheme and the causative morpheme are homonyms. Whereas constructions such as (19a) are unambiguously causatives and constructions such as (20) can only be applicatives, other examples, such as (18), are ambiguous and can be analysed as either causative or applicative.

3.3.4. The comitative morpheme *-an-*

This morpheme corresponds to the preposition *na* in non-applied manner constructions, as is shown in (21) below.

(21) a. Umugabo a-ra-kor-a akazi **n'** ingufu.
man SP-PRES-do-FV work with strength
"The man is doing the work with strength."
b. Umugabo a-ra-kor-**an**-a akazi ingufu.
man SP-PRES-do-APPL-FV work strength
"The man is doing the work with strength."

The manner morpheme must not be confused with the reciprocal morpheme in (22) below.[1]

[1] A similar suffix (*-an-*) is used to de-transitivise some transitive verbs and has nothing to do with manner or reciprocalisation. Consider the examples below:
(i) a. Iriiya mbwa i-ra-ry-**aan**-a
that dog SP-PRES-eat-DETRANS-FV
"That dog bites (people)."
b. Iriiya mbwa i-ry-a abaantu
that dog SP-eat-FV people

(22) Abahuungu ba-ra-reeb-**an**-a.
boys SP-PRES-look-REC-FV
"Boys are looking at each other."

(22) shows that the NP *abahuungu* functions thematically as both the agent and the theme.

It is also important to note that of all the applicative morphemes, the manner applicative morpheme is the only one which is morphologically similar to the preposition to which it corresponds in the non-applied construction (compare *na* and *-an-*) This may be a piece of evidence supporting Baker's incorporation theory.

3.4. Applicatives derived from intransitive verbs

As noted above, the applicative increases the number of objects of the verb. Section 3.2. showed that in Kinyarwanda, an intransitive verb can become a transitive verb and the transitive verb ditransitive. This section will show that in Kinyarwanda, the object of a transitive applicative verb derived from an intransitive base verb exhibits all the characteristics of a direct object. To test the direct objecthood of such objects, I apply three syntactic tests in the following examples, namely *object marking*, *passivisation* and *extraction* (relativisation).

Before these tests are introduced, the sentences below show that all the types of Kinyarwanda applicatives that will be discussed in this thesis (the benefactive, locative, instrumental, manner, reason, and purpose/motive applicatives) can be derived from intransitive verbs:

(23) a. Mariya y-a-sek-**e**-ye umugabo. (benefactive)
Mary SP- PST-smile-APPL-ASP man.
"Mary smiled at the man."

b. Igiti cy-aa-gw-**iir**-iye umuuntu. (locative)
tree SP-PST-fall-APPL-ASP person
"The tree fell on a person."

"That dog bites people."

c. *Iriiya mbwa i-ra-ry-**aan**-a abaantu
that dog SP-PRES-eat-DETRANS-FV people

c. Juma a-sek-**eesh**-a ameenyo yoose. (instrumental)
Juma SP-smile-APPL-FV teeth all
"Juma smiles with all his teeth."

d. Kagabo y-a-pfa-**aan**-ye agahiinda. (manner)
Kagabo SP-PST-die-APPL-ASP sorrow
"Kagabo died with sorrow."

e. Mariya y-aa-z-**i**-ye iki? (reason)
Mary SP-PST-come-APPL-ASP what?
"Why did Mary come?"

f. Abaana ba-rir-**ir**-a ibiryo. (purpose/motive)
children SP-cry-APPL-FV food
"Children cry for food."[2]

In the following subsections I will demonstrate that the object of intransitive applicative verbs has all the properties of a direct object.

3.4.1. Object-marking

Object marking in Kinyarwanda differs from object marking in other Bantu languages such as Kiswahili (Ngonyani 1998), Chichewa (Alsina and Mchombo 1993, Mchombo 1993b), Zulu (Zeller 2004) or Kirimi (Woolford 2001). In the latter languages, the object marker can co-occur with a full object NP, as shown by the examples in (24):

(24) a. Mgeni a-li-*i*-let-a zawadi.
guest SP-PST-OP-bring-FV present
"The guest brought a present." (Kiswahili; Ngonyani 1998: 67)

b. N-a-mu-onaa Maria
SP-PST-OP-see Maria
"I saw Maria." (Kirimi; Woolford 2001: 2)

c. ku-*mu*-ti-il muntu mupit
INF-OP-set-APPL person trap
"to set a trap for a (any particular) person (Ruwund; Woolford 2001)

[2] The examples in (23) do not contain the dative; datives cannot be derived from intransitive verbs, since they naturally entail two obligatory objects, the theme and the goal.

d. Anyani a-ku-u-phwany-ir-a ndengu mwala.
baboons SP-PRES-break-APPL-FV basket stone
"The baboons are breaking the basket with it (the stone).
(Chichewa; Alsina and Mchombo 1993: 22).

In contrast, in Kinyarwanda, the object marker cannot co-occur with the object NP, as is shown in (25b):

(25) a. Umuhiinzi a-ra-sarur-a ibishyiimbo.
farmer SP-PRES-harvest-FV beans
"The farmer is harvesting the beans."

b. *Umuhiinzi a-ra-*bi*-sarur-a ibishyiimbo.
farmer SP-PRES-OP-harvest-FV beans
"The farmer is harvesting the beans.

c. Umuhiinzi a-ra-*bi*-sarur-a.
farmer SP-PRES-OP-harvest-FV
"The farmer is harvesting them."

In the light of this observation, Kimenyi (1995) analyses the object marker in Kinyarwanda as an *object pronoun* (or clitic) which replaces a direct object. In contrast, in the languages in which the object marker can co-occur with a direct object, it may be considered an object agreement morpheme (Woolford 2000, 2001, Ngonyani 1998), although an analysis as a pronominal object marker is also possible in these languages (Alsina and Mchombo 1993, Mchombo 1993b for Chichewa; Zeller 2004 for Zulu). Importantly, only direct objects can be realised as object markers. Object marking is therefore a suitable test for direct objecthood of an internal argument.

All types of applicatives formed from intransitive verbs in Kinyarwanda allow object marking on the verb. All the objects in (23) can be realised as pronouns.

(26) a. Mariya y-aa-*mu*-sek-**e**-ye.
Mary SP-PST-OP-smile-APPL-ASP
"Mary smiled at him."

b. Igiti cy-aa-*mu*-gw-**ir**-iye.
tree SP-PST-OP-fall-APPL-ASP
"The tree fell on him."

c. Juma a-*ya*-sek-**eesh**-a yoose.
Juma SP-OP-smile-APPL-FV all
Lit: "Juma smile with them all."

c. Kagabo y-a-ra-*ga*-pf-**an**-ye.
Kagabo SP-PST-FOC-OP-die-APPL-ASP
"Kagabo died with it."

d. ?Mariya y-a-*ki*-z-**i**-ye
Mary SP-PST-OP-come-APPL-ASP
"Mary came for it."

e. Abaana ba-ra-*bi*-rir-**ir**-a
children SP-FOC-OP-cry-APPL-FV
"Children cry for it."

Finally, it is relevant that, unlike languages such as Chichewa (Alsina and Mchombo 1993), Kirimi and Ruwund (Woolford 2000, 2001), which allow only one object-marker attached to the verb, Kinyarwanda allows as many object-markers as there are arguments with direct object properties.

3.4.2. Passivisation

Passivisation only affects direct objects, i.e, the object of a transitive sentence. If an NP can become the subject of a passive sentence, then that NP is said to be a direct object. With the exception of the reason applicative, all types of applicatives formed with intransitive verbs in Kinyarwanda allow passivisation of the object:

(27) a. Umugabo y-a-sek-**e**-w-e na Mariya. (benefactive)
man SP-PST-smile-APPL-PASS-ASP by Mary
"The man was smiled at by Mary."

b. Umuuntu y-a-gw-**ir**-i-w-e n'igiti. (locative)
person SP-PST-fall-APPL-ASP-PASS-ASP by tree
Lit: "A person has been fallen on by a tree."

c. Ameenyo yose a-sek-**eesh**-w-a na Juma. (instrumental)
teeth all SP-smile-APPL-PASS-FV by Juma
"All the teeth are smiled with by Juma."

e Agahiinda k-aa-pf-**an**-y-w-e na Kagabo
sorrow SP-PST-die-APPL-ASP-PASS-ASP by Kagabo
Lit: "Sorrow was died with by Juma."

f. *Ni iki cy-aa-z-**i**-w-e? (reason)
be what SP-PST-come-APPL-PASS-ASP
"What was come for?"

g. Ibiryo bi-rir-**ir**-w-a n'abaana. (motive/purpose)
food SP-cry-APPL-ASP-FV by children
Lit: "Food is cried for by children."

As (27) shows, passivisation in Kinyarwanda is morphologically marked by adding the passive morpheme *-w-* to the verb. The morpheme *-w-* is placed after the applicative *-ir-* and the aspectual morpheme *-ye* but before the locative applicative morphemes *-ho* (*-yo/-mo*). Furthermore, passives in Kinyarwanda allow for an optional agent by-phrase introduced by the preposition *na*.

Note also that the example with the reason applicative from an intransitive verb produces an ungrammatical sentence when it is passivised as has happened in (27f).

3.4.3. Object extraction

Extraction is another characteristic of the direct object in Bantu languages. Indeed, only so-called "direct functions", that is, direct objects and subjects, can be relativised, topicalised or clefted (Bresnan and Moshi 1990). Throughout this thesis, I will therefore use object relativisation as a test for objecthood.

The data on intransitive verbs in (23) above indicate that object extraction does not show restrictions as far as applicatives derived from intransitive verbs are concerned:

(28) a. umugabo Mariya y-a-sek-**e**-ye
man Mary SP-PST-smile-APPL-ASP
"the man whom Mary smiled at"

b. umuuntu igiti cy-aa-gw-**ir**-iye
person tree OP-PAST-fall-APPL-ASP
"the person on whom the tree fell"

c. Amenyo yoose Juma y-a-sek-**eesh**-eje
teeth all Juma SP-PST-smile-APPL
"all the teeth Juma smiled with"

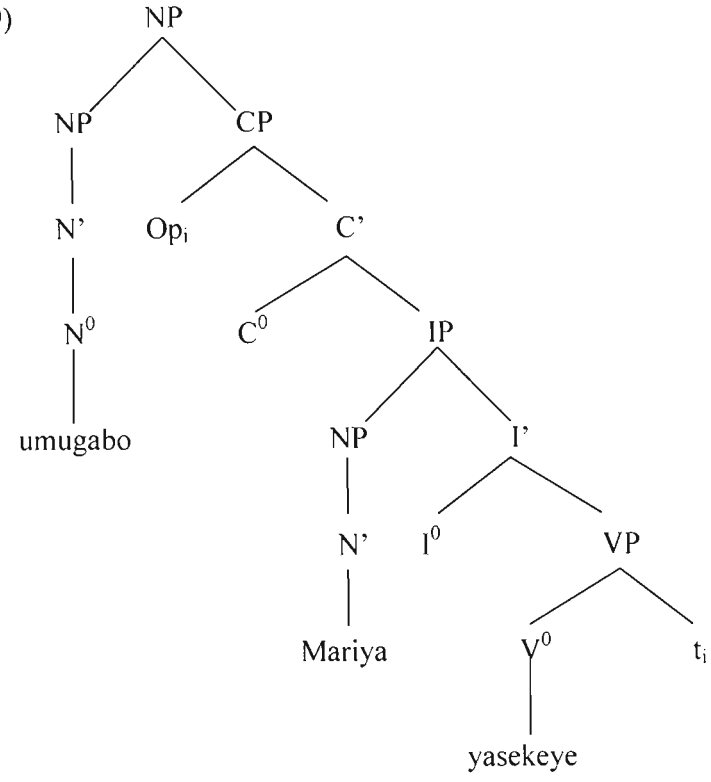
d. Agahiinda umugabo y-a-pf-**aan**-ye
sorrow man SP-PST-die-APPL-ASP
"the sorrow that the man died with"

e. icyo Mariya y-aa-z-**i**-ye
what Mary SP-PST-come-APPL-ASP
"what Mary came for"

f. ibiryo abaana ba-rir-**ir**-a
food children SP-cry-APPL-FV
"the food children cry for"

In Kinyarwanda the relativisation of the object consists of adjoining the relative clause to the head noun. For example, the tree representation of (28a) looks like (29) below:

(29)



The data discussed in this section hence confirms that the use of the applicative morpheme turns intransitive verbs into transitive verbs and that the objects of such verbs, apart from a few exceptions (e.g. (23h)), behave exactly the same way as the direct objects of simple transitive verbs.

3.5. Applicatives derived from transitive verbs

This section is devoted to the description of the applicative constructions in Kinyarwanda involving two objects, that is, the basic object and the applied or derived object. With the use of the applicative morpheme, transitive verbs become ditransitive. In other words, the applicative morpheme adds a second object to the argument structure of the verb. For example, the benefactive applicative indicates the beneficiary of the action, the motive expresses the motive or purpose of the action, the instrumental adds the instrument with which the action is performed and the manner indicates how the action is done. Such functions can only be expressed in English by means of PPs or adverbs:

(30) Yohaani y-a-ko-ze intebe.
John SP- PST-make-ASP chair
"John made a chair."

(31) a. Yohaani y-a-kor-**e**-ye umugore intebe. (benefactive)
John SP-PST-make-APPL-ASP woman chair
"John made a chair for a woman."

b. Yohaani y-a-kor-**e**-ye intebe amafaraanga. (motive)
John SP-PST-make-APPL-ASP chair money
"John made a chair for money."

c. Yohaani y-a-kor-**eesh**-eje intebe urukezo. (instrumental)
John SP-PST-make-APPL-ASP chair saw
"John made a chair with a saw."

d. Yohaani y-a-kor-**an**-ye intebe ubunebwe. (manner)
John SP-PST-make-APPL-ASP chair laziness
"John made a chair lazily."

e. Yohaani y-a-kor-**e**-ye intebe impaamvu nyiinshi. (reason)
John SP-PST-make-APPL-ASP chair reasons many
"John made a chair for many reasons".

f. Yohaani y-a-kor-**e**-ye intebe mu isoko. (locative)
John SP-PST-make-APPL-ASP chair in market
"John made a chair in the market."

Before looking at different types of Kinyarwanda applicatives, it is important to point out in this section that Kinyarwanda is a symmetrical language. The term 'symmetrical' is used for languages in which more than one object exhibits syntactic properties of a direct object (Bresnan and Moshi 1990, Moshi 1998). Other symmetrical languages are Kichaga, Kihaya and Runyambo (cf. Moshi 1998). In contrast, in other languages, the applied object "supplants the direct object by assuming the syntactic properties of a primary object" (Moshi 1998:138). Such languages are called 'asymmetrical' languages and only the applied object can have all the characteristics of a direct object. Examples of such languages are Chichewa (Mchombo 1993b), and Kiswahili (Ngonyani 1998). For example the sentences in (32) below show that in Kichaga, a symmetrical language like Kinyarwanda, either or both objects can be marked on the verb.

(32) a. N-a-i-lyi-*i*-a mka kelya[3].
FOC-SP-PRES-eat-APPL-FV wife food
"He is eating food for/on his wife."

b. N-a-i-*m*-lyi-i-a kelya
FOC-SP-PRES-OP-eat-APPL-FV food
"He/she is eating food for/on him/her."

c. N-a-i-*ki*-lyi-i-a mka
FOC-SP-PRES-OP-eat-APPL-FV wife
"He/she is eating it on/for the wife (Bresnan and Moshi 1990:50)

This is not possible in Chichewa, but it is in Kinyarwanda.

(33) a. N-a-ri-**ir**-iye umugore ibiryo.
SP-PST-eat-APPL-ASP woman food
"I ate the food for the woman."

b. N-a-*bi*-ri-ir-iye umugore.
SP-PST-OP-eat-APPL-ASP woman
"I ate it for the woman."

c. N-a-*mu*-ri-ir-iye ibiryo.
SP-PST-OP-eat-APPL-ASP food
"I ate the food for her."

d. N-a-ra-*bi*-*mu*-ri-**ir**-iye[4].
SP-FOC-PST-OP-OP-eat-APPL-ASP
"I ate it for her." (Kinyarwanda)

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[3] The gloss has been adapted.

[4] The morpheme *-ra-* in (33b) appears in structures which do not contain an object unlike in Kirundi (Ndayiragije 1999) in which a similar morpheme co-occurs with an object. Consider for example:

a. Abaana b-iiz-e amateeka.
children SP-study-FV history
"Children studied history."

b. Abaana b-aa-r-iiz-e.
children SP-PST-FOC-study-ASP
"Children studied."

c. * Abaana b-aa-r-iiz-e amateeka.
children SP-PST-FOC-ASP history
"Children studied history."

This morpheme is called VP Focus marker (Givón 1975).

e. Chitsiru ki-na-*wa*-gul-**ir**-a mphatso (atsikana)
fool SP-PST-OP-buy-APPL-FV gift (girl)
"The fool bought a gift for them (the girls)."

f. *Chitsiru chi-na-*i*-gul-**ir**-a atsikana (mphatso).
fool SP-PST-OP-buy-APPL-FV girl (gift)
"The fool bought it (the gift) for the girls."

(Chichewa; Alsina and Mchombo 1993: 22)

It is important to point out that the terms 'symmetrical' and 'asymmetrical' cannot be straightforwardly applied to a language. For example, although Kinyarwanda is said to be a symmetrical language because of examples such as (33), in some types of applicatives (e.g. locative applicatives), objects do not exhibit symmetrical behaviour. Similarly, Chichewa is considered an asymmetrical language, yet objects in Chichewa instrumental applicatives behave the same way as objects in symmetrical languages since either of the two objects can be marked on the verb. Therefore, the terms symmetrical and asymmetrical should be applied to types of applicatives rather than languages.

In the following sections I will explore the behaviour of objects in Kinyarwanda ditransitive applicative constructions. This will be done by applying five tests commonly used to test direct objecthood. In addition to passivisation, object marking and relativisation, I will also test the possible order of the two objects in ditransitive applicatives, and I will investigate whether the theme can be omitted ("theme deletion"). These tests will be applied to the seven types of applicative constructions in Kinyarwanda that were introduced in Sections 3.4.1.-3.4.3. above: benefactive, dative, locative, instrumental, manner, reason and motive/purpose.

3.5.1. Benefactive applicatives

Before looking at the syntactic properties of the benefactive, let us first look at its possible interpretations. Consider the example in (34) below:

(34) Yoozefu y-a-teek-**e**-ye umugore ibiryo.
Joseph SP- PST-cook-APPL-ASP woman food
"Joseph cooked food for the woman."

The sentence in (34) may be interpreted in different ways. Under the first reading, it means that when Joseph cooked the food, he intended that the woman would get the *result* of the cooking, i.e. the food (cf. Pylkkanen 2000, Hoffman 1995). This meaning corresponds to the English double object construction in (35).

(35) Joseph cooked the woman the food.

However, (34) can also mean that the woman benefited from the *action* of cooking and not the result. For example, the woman was supposed to cook the food but for some reason she could not. So Joseph did the cooking on her behalf. This interpretation is not available in the English construction in (35) (cf. Pylkkanen 2000).

Therefore, unlike the English benefactive in (35), Kinyarwanda benefactives have two interpretations.

Now let me turn to the behaviour of objects in a benefactive applicative in terms of passivisation, word order, object-marking, relativisation and theme deletion.

Passivisation: In benefactive applicative constructions, any of the two objects can become the subject of a passive sentence.

(36) a. Umusore y-uubak-**i**-ye umugore inzu.
young man SP-build-APPL-ASP woman house
"The young man built a house for the woman."

b. Inzu y-uubak-**i**-w-e umugore n' umusore.
house SP-build-APPL-PASS-ASP woman by young man
"The house was built for the woman by the young man."

c. Umugore y-uubak-**i**-w-e inzu n' umusore.
woman SP- build-APPL-PASS-ASP house by young man
Lit: "The woman was built a house for by the young man."

Word order: The word order in benefactive constructions is flexible. Although the applied object normally appears before the theme, the latter may also precede the former. Thus both (37a) and (37b) are grammatical.

(37) a. Umugabo y-a-gur-**i**-ye umwaana imyeenda.
man SP-PST-buy-APPL-ASP child clothes
"The man bought the child clothes."

b. Umugabo y-a-gur-**i**-ye imyeenda umwaana.
man SP-PST-buy-APPL-ASP clothes child
"The man bought clothes for the child."

Placing the basic object before the applied object in benefactive constructions seems to show that the theme is focused.

Object marking: In the benefactive applicative constructions in (38) (which are based on (37) above), the theme *imyeenda* (in 38b), the applied benefactive object *abaana* (in 38a) can appear as object-markers on the verb. Recall that in Kinyarwanda, the object marker is pronominal and cannot co-occur with a full object NP.

(38) a. Umugabo y-a-*mu*-gur-**i**-ye imyeenda.
man SP-PST-OP-buy-APPL-ASP clothes
"The man bought clothes for him."

b. Umugabo y-a-*yi*-gur-**i**-ye umwaana.
man SP-PST-OP-buy-APPL-ASP child
"The man bought them for the child."

It is important to point out that unlike many Bantu languages such as Chichewa (Alsina and Mchombo 1993), Kirimi and Ruwund (Woolford 2000, 2001), which allow only one object marker attached to the verb, Kinyarwanda allows as many object markers as there internal arguments with direct object properties and structural case. Thus, both objects in the examples (38) and (39) can be marked on the verb.

(39) a. Umugabo y-a-gur-**i**-ye umukozi ibiraayi.
man SP-PST-buy-APPL-ASP worker potatoes
"The man bought potatoes for the worker."

b. Umugabo y-aa-*bi-mu*-gur-**i**-ye.
man SP-PST-OP-OP-buy-APPL-ASP
"The man bought them for him."

Relativisation: In a benefactive construction, it is possible to extract the theme/patient and the benefactive by way of relativisation, as in the example below:

(40) a. imyeenda umugabo y-a-gur-**i**-ye umwaana
clothes man SP-PST-buy-APPL-ASP child
"the clothes the man bought for the child"

b. umwaana umugabo y-a-gur-**i**-ye imyeenda
child man SP-PST-buy-APPL-ASP clothes
"the child for whom the man bought clothes"

Theme/patient deletion: Theme deletion is a phenomenon in which the verb allows one of its objects (the theme/patient) to be omitted without resulting in an ungrammatical construction. When the theme is omitted, the applied object becomes the only object of the verb and has all the properties of a direct object. This is not possible in languages referred to as asymmetrical languages such as Chichewa (Bresnan and Moshi 1990) but it is possible in those referred to as symmetrical languages such as Kichaga and Kinyarwanda. This is because in the latter languages, the theme maintains the direct objecthood properties while in the former it is no longer a direct object.

(41) a. N-a-i-lyi-i-a mka kelya.
FOC-SP-PRES-eat-APPL-FV wife food
"He is eating food for/on his wife."

b. N-a-i-lyi-i-a mka. (theme deletion)
FOC-SP-PRES-eat-APPL-FV food
"He/She is eating for/on the wife."

c. Na-i-m-lyi-i-a (theme deletion +object marking)
FOC-SP-PRES-OP-eat-APPL-FV
"He/she is eating for/on him/her."

d. Mka na-i-lyi-i-o. (theme deletion + passivisation).
wife FOC-SP-PRES-eat-APPL-PASS
"The wife is being eaten for/on." (Kichaga; Bresnan and Moshi 1990:155)

(42) a. Umugore y-a-teek-**e**-ye abaana ibiryo.
woman SP-PST-cook-APPL-ASP children food
"The woman cooked the children food."

b. Umugore y-a-teek-**e**-ye abaana. (theme deletion)
woman SP-PST-cook-APPL-ASP children
"The woman cooked for the children."

c. Umugore y-a-ra-*ba*-teek-**e**-ye. (theme deletion + object marking)
woman SP-PST-FOC-OP-cook-APPL-ASP
"The woman cooked for them."

d. Abaana b-aa-teek-**e**-w-e n'umugore. (theme deletion + passivis.)
children SP-PST-cook-APPL-PASS-ASP by woman
Lit: "Children were cooked for by the woman." (Kinyarwanda)

The data above suggest that in benefactive constructions, the applied object and the basic object are true direct objects bearing structural case, as they can be passivised, object marked and relativised. The theme can also be deleted leaving the applied object as the only object of the applied verb.

3.5.2. Instrumental applicatives

It was mentioned in Section 3.4. that instrumental applicatives sometimes have a causative meaning, especially when the verb to which the instrumental morpheme is attached is intransitive. In this section, we will look at instrumentals with two objects that have a corresponding non-applied construction with a PP headed by the preposition *na*. One of the typical examples of an instrumental applicative with two objects is provided in (43) below:

(43) a. Umugabo y-a-tem-ye igiti **n**'umuhoro.
man SP-PST-cut-ASP tree with machete
"The man cut a tree with the machete."

b. Umugabo y-a-tem-**eesh**-eje igiti umuhoro.
man SP-PST-cut-APPL-ASP tree machete
"The man cut a tree with the machete."

Passivisation: In instrumental applicative constructions, any of the two objects can be passivised.

(44) a. Igiti cy-aa-tem-**eesh**-ej-w-e umuhoro.
tree SP-PST-cut-APPL-ASP-PASS-ASP machete
"The tree was cut with the machete."

b. Umuhoro w-a-tem-**eesh**-ej-w-e igiti.
machete SP-PST-cut-APPL- ASP-PASS-ASP tree.
Lit.: "The machete was cut the tree with."

Word order: In instrumentals, the basic object more often precedes the applied object, contrary to benefactives. However, as in the benefactive applicative, the order of objects is flexible. If the applied object precedes the theme, the sentence does not become ungrammatical. Thus it is possible to have both (45a) and (45b).

(45) a. Umugabo y-a-tem-**eesh**-eje igiti umuhoro.
man SP-PST-cut-APPL-ASP tree machete
"The man cut the tree with the machete."

b. Umugabo y-a-tem-**eesh**-eje umuhoro igiti.
man SP-PST-cut-APPL-ASP machete tree
The man cut the tree with the machete."

Object marking: It is possible to realise any of the two objects, or both, as object markers on the verb.

(46) a. Abanyarwaanda ba-nyw-**eesh**-a inzoga umuheha.
Rwandans SP-drink-APPL-FV beer straw
"Rwandans drink beer with a straw."

b. Abanyarwaanda ba-*yi*-nyw-**eesh**-a umuheha.
Rwandans SP-OP-drink-APPL-FV straw
"Rwandans drink it with a straw."

c. Abanyarwaanda ba-*wu*-nyw-**eesh**-a inzoga.
Rwandans SP-it-drink-APPL-FV beer
"Rwandans drink beer with it."

d. Abanyarwaanda ba-ra-*wu-yi*-nyw-**eesh**-a.[5]
Rwandans SP-FOC-OP-OP-drink-APPL-FV
"Rwandans drink it with it."

Relativisation: Any of the two objects can be relativised.

(47) a. igiti umugabo y-a-tem-**eesh**-eje umuhoro
tree man SP-PST-cut-APPL-ASP machete
"the tree the man cut with the machete"

b. umuhoro umugabo y-a-tem-**eesh**-eje igiti
machete man SP- PST-cut-APPL-ASP tree
"the machete the man cut the tree with."

Theme/patient deletion: It is possible in Kinyarwanda to delete/suppress the theme in an instrumental applicative construction.

(48) Umugabo y-a-tem-**eesh**-eje umuhoro.
man SP-PST-cut-APPL-ASP machete
"The man cut with the machete."

The data on instrumentals above show that both objects behave the same way in exhibiting properties of a direct object.

3.5.3. Datives

Some of the verbs that in English are typically used in dative constructions do not bear an applicative suffix in Kinyarwanda. However, others, such as *–ooherez-* ('to send'), require the applicative suffix. (49) below illustrates both cases.

(49) a. Umugabo y-a-haa-ye abahiinzi amafaraanga.
man SP-PST-give-ASP cultivators money
"The man gave money to the cultivators."

[5] The order of object markers is not fixed when both objects are non-human. Thus, *ba-ra-**yi-wu**-nyw-eesh-a* in (45d) could also be *ba-ra-**wu-yi**-nyw-eesha*.

b. Kamaali y-ooher-**er**-eje abanyeeshuuri impapuro.
Kamaali SP-send-APPL-ASP students paper
"Kamaali sent students paper."

Though the verb *-ha* ('give') does not bear the applicative morpheme, it has a counterpart which seems to bear that morpheme: *-herez-* "to hand something to someone" which apparently is derived from the same verb.[6] Compare the example (50) with (49a) above:

(50) Umugabo y-a-h-**er**-eje abahiinzi amafaraanga.
man SP-PST-hand-APPL-ASP cultivators money
"The man handed the money to the cultivators."

While discussing the dative applicatives, the discussion will be based on examples such as the one in (49b) in which the applied object is introduced by an applicative morpheme.

Passivisation: Any of the two objects can become the subject of the passive sentence.

(51) a. Kagabo y-ooher-**er**-eje amafaraanga ababyeeyi.
Kagabo SP-send-APPL-ASP money parents
"Kagabo sent money to his parents."

b. Ababyeeyi b-ooher-**er**-ej-w-e amafaraanga na Kagabo.
parents SP-send-APPL-ASP-PASS-ASP money by Kagabo
"The parents were sent money by Kagabo."

c. Amafaraanga y-ooher-**er**-ej-w-e ababyeeyi na Kagabo.
money SP-send-APPL-ASP-PASS-ASP parents by Kagabo
"Money was sent to the parents by Kagabo."

Word order: The word order between objects in a dative construction is not fixed; both objects can appear adjacent to the verb:

[6] The root is *-ha-* ('give') but with the addition of the applicative morpheme *-ir-*, the vowel is deleted and *-ha-er-* becomes *h-er* and the morpheme *-ez* seems to be the result of phonological change. That is why I consider *-herez-* as the root of the verb which seems to be derived from the root *-ha-*

(52) a. Kamaali y-ooher-**er**-eje abanyeeshuuri impapuro.
Kamaali SP-send-APPL-ASP students paper
"Kamaali sent the students paper."

b. Kamaali y-ooher-**er**-eje impapuro abanyeeshuuri.
Kamaali SP-send-APPL-ASP paper students
"Kamaali sent paper to the students."

Object marking: Any of the two objects or both can be realised by object markers:

(53) a. Kamaali y-a-*b*-ooher-**er**-eje impapuro.
Kamaali SP-PST-OP-send-APPL-ASP paper
"Kamaali sent them paper."

b. Kamaali y-a-*z*-ooher-**er**-eje abanyeeshuuri.
Kamaali SP-PST-OP-send-APPL-ASP students
"Kamaali sent it to the students."

c. Kamaali y-a-ra-*zi*-*b*-ooher-**er**-eje.
Kamaali SP- PST-FOC-OP-OP-send-APPL-ASP
"Kamaali sent it to them."

Relativisation: Any of the two objects can be relativised/extracted.

(54) a impapuro Kamaali y-ooher-**er**-eje abanyeeshuuri
paper Kamaali SP-send-APPL-ASP students
"the paper Kamaali sent to the students"

b. abanyeeshuuri Kamaali y-ooher-**er**-eje impapuro
students Kamaali SP-send-APPL-ASP paper
"the students Kamaali sent paper to"

Theme/patient deletion: It is possible to delete the theme and form a grammatical sentence which only includes the goal-NP.

(55) Umwaarimu y-ooher-**er**-eje abanyeeshuuri.
teacher SP-send-APPL-ASP students
"(*)The teacher sent to the students."

3.5.4. Locative applicatives

The locative applicative is realised with the morphemes *-ho, -mo* and *-yo*, which correspond to the prepositions *ku, mu* and *i* in non-applied constructions respectively (see Section 3.3.2.). After the discussion of the locative applicative in Section 3.5.4.1., constructions in which a locative PP or the locative applicative morpheme *-ho/-mo* may co-occur with the applicative morpheme *-ir-* (see Subsection 3.4.5.2.) will be explored. It will also be shown that the locative applicative derived from intransitive verbs may take a cognate object which has all the properties of a direct object (see Subsection 3.5.4.3. below). In this type of constructions, the affixal morpheme *-ir-* rather than the applicative morpheme *-ho/-mo* appears attached to the verb.

3.5.4.1. Locative applicatives with the morphemes *-ho (-mo, -yo)*

Consider the examples in (56).

(56) a. Umubooyi y-a-menn-ye amaazi **ku** mwaana.
cook SP-PST-pour-ASP water on child
"The cook poured water on the child."

b. Umubooyi y-a-menn-ye-**ho** umwaana amaazi.
cook SP-PST-pour-ASP-APPL child water
"The cook poured water on the child."

c. Umubooyi y-a-menn-ye umwaana **ho** amaazi.
cook SP-PST-pour-ASP child APPL water
"The cook poured water on the child."

(56a) is the locative structure with the full PP headed by the preposition *ku*. In (56b) the locative applicative morpheme *-ho* is attached to the verb. In contrast, in (56c), it appears after the locative NP.

Although Baker (1988) claims that this type of locative is regular and productive in Kinyarwanda, this does not seem to be the case. It rather seems that the use of the applicative morpheme *-ho/-mo* is much less regular in Kinyarwanda than the use of the corresponding construction with a PP headed by the prepositions *ku* or *mu*; some Kinyarwanda speakers

claim that (56b) is not as good as (56a). Moreover, not every construction with a locative PP has a corresponding applicative construction with *-ho/-mo*. Rather, this applicative construction seems to be possible only with some verbs that imply 'goal-impact', such as "to pour", "to stick", and "to push". For example, the sentence in (57b) is only marginally acceptable for many Kinyarwanda speakers.

(57) a. Umwaana y-a-shyi-ze ibiryo **ku** meeza.
child SP-PST-put-ASP food on table
"The child put the food on the table."

b. ??Umwaana y-a-shyi-ze-**ho** ameeza ibiryo.
child SP-PST-put-ASP-APPL table food
"The child put the food on the table."

Consider also the following example, quoted in Givón (1997: 17) and McGinnis (2001: 5) which is originally due to Kimenyi (1980).

(58) (*) Umugore y-ooher-eje-**ho** isoko umubooyi.
woman SP-send-ASP-APPL market cook
"The woman sent the cook to the market."

(58) is judged by native speakers (including myself) as impossible in Kinyarwanda. Therefore it should be marked as ungrammatical.

What follows is an investigation of how this type of locative behaves with regard to passivisation, word order, object marking, relativisation, and deletion of the theme.

Passivisation: With the locative morpheme *-ho (-mo)* it is possible to passivise the applied object but in contrast to the other applicatives discussed above, the basic object cannot be passivised.

(59) a. Umwaana y-a-menn-w-e-**ho** amaazi n'umubooyi.
child SP-PST-pour-PASS-ASP-APPL water by cook
"The child was poured on the water by the cook."

b. *Amaazi y-a-menn-w-e-**ho** umwaana n'umubooyi.
water SP-PST-pour-PASS-ASP-APPL child by cook
"The water was poured on the child by the cook.

However, once the locative NP has been marked on the verb as an incorporated pronoun (62a) or extracted (62b), it is possible to passivise the theme:

(60) a. Amaazi y-a-*mu*-menn-w-e-**ho** n' umubooyi.
water SP-PST-OP-pour-PASS-ASP-APPL by cook
"The water was poured on him by the cook."
b. umwaana amaazi y-a-menn-w-e-**ho** n'umubooyi
child water SP-PST-pour-PASS-ASP-APPL by cook
"the child the water was poured on"

I will return to examples such as (60) in section 3.6.

Word order: Unlike the applicative constructions discussed so far, locative applicatives do not permit a flexible word order. Thus (61), with the theme preceding the applied object, is ungrammatical.

(61) *Umubooyi y-a-menn-ye-**ho** amaazi umwaana.
cook SP-PST-pour-ASP-APPL water child
"The cook poured the water on the child."

Object marking: In this type of locative, only the applied object can be marked on the verb, (62d) vs (62b). The theme can be marked on the verb only when the locative is also object-marked, relativised or passivised (62c) and (62d):

(62) a. Umubooyi y-a-*mu*-menn-ye-**ho** amaazi.
cook SP-PST-OP-pour-ASP-APPL water
"The cook poured water on him."
b. *Umubooyi y-a-*ya*-menn-ye-**ho** umwaana.
cook SP-PST-OP-pour-ASP-APPL child
"The cook poured it on the child."

c. Umubooyi y-a-*ya*-*mu*-menn-ye-**ho**.
cook SP-PST-OP-OP-pour-ASP-APPL
"The cook poured it on him."

d. umwaana umubooyi y-a-*ya*-menn-ye-**ho**
child cook SP-PST-OP-pour-ASP-APPL
"the child the cook poured it on"

e. Amaazi y-a-*mu*-men-w-e-**ho** n'umubooyi.
water SP-PST-OP-pour-PASS-ASP-APPL by cook
"Water was poured on him by the cook."

f. Umwaana y-a-*ya*-menn-w-e-**ho**
child SP-PST-OP-pour-PASS-ASP-APPL
Lit: "The child was it poured on."

Relativisation : The locative applied object can be relativised as in (63a), but the theme cannot (63b). However, the theme can be relativised if the applied object is marked on the verb (63c) or passivised (63d), or when the theme has first been passivised and therefore is relativised from the subject position, (63e) which is only possible if the applied object is realised as a pronoun on the verb, (see 60)).

(63) a. umwaana umubooyi y-a-menn-ye-**ho** amaazi
child cook SP- PST-pour-ASP-APPL water
"the child on whom the cook poured water"

b. *amaazi umubooyi y-a-menn-ye-**ho** umwaana
water cook SP-PST-pour-ASP-APPL child
"the water the cook poured on the child"

c. amaazi umubooyi y-a-*mu*-menn-ye-**ho**
water cook SP-PST-OP-pour-ASP-APPL
"the water that the cook poured on him"

d. amaazi umwaana y-a-menn-w-e-**ho** n'umubooyi.
water child SP-PST-pour-PASS-ASP-APPL by cook
"the water the child was poured on by the cook"

e. amaazi y-a-*mu*-menn-w-e-**ho** n'umubooyi
water SP-PST-OP-pour-PASS-ASP-APPL by cook
"the water that was poured on him by the cook"

Theme/patient deletion: In this type of locative, it is not possible to delete the theme, hence the ungrammaticality of (64).

(64) *Umubooyi y-a-menn-ye-**ho** umwaana.
cook SP-PST-pour-ASP-APPL child
"(*)The cook poured on the child."

3.5.4.2. Co-occurrence of the applicative *-ir-* and a locative PP or *-ho/-mo*

In Kinyarwanda, the locative construction can be realised with the use of the applicative suffix *-ir-* and a locative PP as in (65):

(65) Umugabo y-a-ri-**ir**-iye imineke **mw**'iisoko.
man SP-PST-eat-APPL-ASP bananas in market
"The man ate bananas in the market."

As the example shows, the applicative morpheme *-ir-* is used together with the PP *mw'iisoko.* The PP in such constructions is referred to by Kimenyi (1995) as an "event localiser PP", as opposed to a "goal locative PP". An event localiser PP specifies the place (or time) in which the event/action takes place, while the goal locative PP implies a source and a goal. The example above, for instance, means that the man ate the bananas while being in the market. In this type of construction, the preposition does not incorporate into the verb to derive a double object construction such as the one below:

(66) *Umugabo y-a-ri-**ir**-iye-**mo** isoko imineke.
man SP-PST-eat-APPL-ASP-APPL market bananas
"The man ate the bananas in the market."

In examples such as (65), only the basic object has direct object properties. For example, it can become the subject of a passive:

(67) Imineke y-a-ri-**ir**-i-w-e **mw**' iisoko n'umugabo.
bananas SP-PST-eat-APPL-ASP-PASS-ASP in market by man
"The bananas were eaten in the market by the man."

However, under certain circumstances, the preposition can incorporate into the verb in this type of construction, as in the case of the locative applicative expressing the goal. For this to be possible, one of the following three conditions must be met. The locative NP must be the subject of the passive, marked on the verb, or extracted, as illustrated by the examples below:

(68) a. Isoko ry-aa-ri-**ir**-i-w-e-**mo** imineke n' umugabo.
market SP-PST-eat-APPL-ASP-PASS-ASP-APPL bananas by man
Lit: "The market was eaten in bananas by the man."

b. Umugabo y-a-*ri*-ri-**ir**-iye-**mo** imineke.
man SP-PST-OP-eat-APPL-ASP-APPL bananas
"The man ate bananas in it."

c. isoko umugabo y-a-ri-**ir**-iye-**mo** imineke
market man SP-PST-eat-APPL-ASP-APPL bananas
"the market in which the man ate bananas"

Due to the presence of the preposition, the locative NP in examples such as (65) does not have the property of a direct object. Passivisation is not possible since Kinyarwanda does not allow for preposition stranding of the type found in English pseudopassive constructions.

In constructions such as (65), the applicative can also occur on the verb as a proform, that is, when it replaces the whole PP. The example in (69) is a perfectly Kinyarwanda grammatical sentence.

(69) Umugabo y-a-ri-**ir**-iye-**mo** imineke.
man SP-PST-eat-APPL-ASP-APPL bananas
"The man ate bananas in it/there."

The data above show that the locative applicative morpheme *-mo* and the applicative morpheme *-ir-* can be used in the same structure. This constitutes a major difference between the construction containing a locative applied object with the locative applicative morpheme *-ho/mo* and the one which initially contains the applicative morpheme *-ir-* and a PP.

Although the PP in constructions such as (65) which also contain an applicative morpheme is claimed by Kimenyi (1995) to express the place or location of an event in space, it turns out

not to be always the case. Consider the example below, in which a goal NP co-occurs with the applicative morpheme.

(70) Umwaana y-a-rekur-**i**-ye imbuto **ku** mategura.
child SP-PST-drop-APPL-ASP fruits on tiles
"The child dropped the fruits on the tiles."

Despite the fact that the construction in (70) is similar to the construction in (65) in which the PP is an "event localiser", the NP *mategura* is a goal rather than the location of the event. The child may have not been on the tiles when he/she dropped the fruits, but maybe in a tree over the roof of the house. According to Kimenyi (19950, one can test an event localiser PP by adding a goal locative PP to it. This is not possible for sentences such as (70). Consider (71):

(71) a. *Umwaana y-a-rekur-**i**-ye imbuto **ku** mategura **ku** muntu.
child SP-PST-drop-APPL-ASP fruits on tiles on person
"The child dropped the fruits on the tiles on a person."

Therefore, it can be concluded that a genuine locative PP expressing the goal can co-occur with the applicative morpheme *-ir-*

Constructions such as the one in (70) are slightly different from those interpreted as event localiser applicatives in that they allow the incorporation of the preposition (although the sentence is slightly marginal).

(72) ?Umwaana y-a-rekur-**i**-ye-**ho** amategura imbuto.
child SP-PST-drop-APPL-ASP-APPL tiles fruits
"The child dropped the fruits on the tiles."

As is the case in locative applicatives in 3.5.4.1., in constructions such as (70) above, only the applied object has the properties of a direct object. For example it can be passivised (73a) and object marked (73b) while the theme cannot:

(73) a. Amategura y-a-rekur-**i**-w-e-**ho** imbuto.
tiles SP-PST-drop-APPL-PASS-ASP-APPL fruits
"The tiles were dropped on the fruits."

b. Umwaana y-a-*ya*-rekur-**i**-ye-**ho** imbuto.
child SP-PST-OP-drop-APPL-ASP-APPL fruits
"The child dropped the fruits on them."

c. *Imbuto z-a-rekur-**i**-w-e-**ho** amategura.
fruits SP-PST-drop-APPL-PASS-ASP-APPL tiles.
"The fruits were dropped on the tiles."

d. *Umwana y-a-*zi*-rekur-**i**-ye-**ho** amategura.
child SP-PST-drop-APPL-ASP-APPL tiles
The child dropped them on the tiles."

(74) shows that like in locative applicatives without *-ir-*, passivisation, object marking and extraction of the theme are possible when the applied object is marked on the verb.

(74) a. Imbuto z-aa-*ya*-rekur-**i**-w-e-**ho**.
fruits SP-PST-OP-drop-APPL-PASS-ASP-APPL
"The fruits were dropped on them."

b. Umwaana y-a-*zi-ya*-rekur-**i**-ye-**ho**.
child SP-PST-OP-OP-drop-APPL-ASP-APPL
"The child dropped them on them."

c. imbuto umwaana y-a-*ya*-rekur-**i**-ye-**ho**
fruits child SP- PST-OP-drop-APPL-ASP-APPL
"the fruits that the child drop on them"

This type of construction is similar to the construction containing an "event localiser" PP, and to "the goal locative applicative" as defined by Kimenyi (1995) in that in order for the theme to have direct object properties, the applied object must be marked on the verb, relativised or passivized. It differs from the goal locative applicative in Section 3.5.4.1. in that it contains two applicative morphemes, namely the applicative morpheme *-ir-* and the locative applicative morpheme-*ho*.

3.5.4.3. The locative applicative with a cognate object and *-ir-* as the applied affix

This section aims to show that the locative construction derived from an intransitive verb may take a cognate object, which behaves like a direct object with respect to passivisation, object marking and extraction. In such constructions, the verb bears the applicative morpheme *-ir-* (see also (23) above for the locative applicative derived from intransitive verbs).

(75) a. Uruhiinja rw-aa-nyaa-ye (inkari) **ku** muyaaya.
baby SP-PST-urinate-ASP (urine) on baby-sitter
"The baby urinated (urine) on the baby-sitter."

b. Uruhiinja rw-aa-nyaar-**i**-ye umuyaaya (inkari).
baby SP-PST-urinate-APPL-ASP baby-sitter (urine)
"The baby urinated (urine) on the baby-sitter."

How does this type of locative behave with respect to passivisation, word order, object marking, passivisation and theme deletion?

Passivisation: Both objects can be passivised.

(76) a. Inkari z-aa-nyaar-**i**-w-e umuyaaya n' uruhiinja.
urine SP-PST-urinate-APPL-PASS-ASP baby-sitter by baby
"The urine was urinated on the baby-sitter by the baby."

b. Umuyaaya y-a-nyaar-**i**-w-e inkari n'uruhiinja
Baby-sitter SP- PST-urinate-APPL-PASS-ASP urine by baby
Lit: "The baby-sitter was urinated (urine) on by the baby."

The locative applied object in this type of construction can be passivised in two ways. In addition to (76b), it is also possible to use the locative applicative suffix *-ho* instead of the applicative morpheme *-ir*:

(77) Umuyaaya y-a-nyar-w-e-**ho** inkari n'uruhiinja
baby-sitter SP-PST-urinate-PASS-ASP-APPL urine by baby
"The baby-sitter was urinated on urine by the baby."

Word order: In this type of construction, the order of objects is flexible. Thus both (75b) above and (78) are grammatical.

(78) Uruhiinja rw-aa-nyaar-**i**-ye (inkari) umuyaaya.
baby SP-PST-urinate-APPL-ASP- (urine) baby-sitter
"The baby urinated urine on the baby-sitter."

Object marking: Either of the two objects or both can be marked on the verb.

(79) a. Uruhiinja rw-aa-*zi*-nyaar-**i**-ye umuyaaya.
baby SP-PST- OP-urinate-APPL-ASP baby-sitter
Lit: "The baby urinated it on the baby-sitter."

b. Uruhiinja rw-aa-*mu*-nyaar-**i**-ye (inkari)
baby SP-PST-OP-urinate-APPL-ASP (urine)
"The baby urinated (urine) on her."

c. Uruhuhiinja rw-a-*zi*-*mu*-nyaar-**i**-ye.
baby SP-PST-OP-OP-urinate-APPL-ASP
"The baby urinated it on her."

Relativisation: Both objects can be relativised.

(80) a. inkari uruhiinja rw-aa-nyaar-**i**-ye umuyaaya
urine baby SP-PST-urinate-APPL-ASP baby-sitter
"the urine the baby urinated on the baby-sitter"

b. umuyaaya uruhiinja rw-aa-nyaar-**i**-ye inkari[7]
baby-sitter baby SP-PST-urinate-APPL-ASP urine
"the baby-sitter the baby urinated urine on"

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[7] It is also possible to extract the locative NP with the use of the locative applicative morpheme *-ho*. However, in this type of locative applicatives the applicative morpheme *-ir-* does not co-occur with the locative applicative morpheme *-ho* as in:

(i) a. umuyaaya uruhiinja rw-aa-nya-ye-**ho** (inkari)
baby-sitter baby SP-PST-urinate-ASP-APPL (urine)
"the baby-sitter the baby urinated on (urine)"

b. *umuyaaya uruhiinja rw-aa-nyar-**i**-ye-**ho** (inkari).
Baby-sitter baby SP-PST-urinate-APPL-ASP-APPL(urine)
"The baby-sitter was urinated on (urine)

Theme/patient deletion: Since verbs such as *-nyar-* ('urinate') take a cognate object, most often they occur without that object. Thus, the sentence below is grammatical.

(81) a. Uruhiinja rw-aa-nyaar-**i**-ye umuyaaya.
baby SP-PST-urinate-APPL-ASP baby-sitter
"The baby urinated on the baby-sitter."

To sum up this section on locative applicatives, it has been shown that unlike in the applicative constructions discussed is Sections 3.5.1.-3.5.3., the theme in the locative construction with the morpheme *-ho* (or *-mo)* does not exhibit the properties of a direct object. Indeed, it cannot be the subject of a passive sentence, it cannot be extracted, nor can it be deleted. It can exhibit the characteristics of a direct object only when the locative NP has been incorporated into the verb as an object pronoun, passivised and relativised. It was also noted that the preposition in this type of locative can be marked on the verb or it can appear after the locative NP. Moreover, it was shown that the applicative morpheme *-ir-* can appear with a locative PP and that the preposition can incorporate into the verb in case the NP is marked on the verb, extracted or passivised. In such constructions, the applicative morpheme *-ir-* and the locative applicative morpheme *-ho* co-occur. Finally it was shown that the locative applicatives derived from verbs with cognate objects can be realised either with the applicative morpheme *-ho*, *-ir-* or both at the same time.

3.5.5. Manner applicatives

To the best of my knowledge, the Kinyarwanda manner applicative construction has not received much attention in research literature on applicatives. Therefore, this section aims to show that this type of applicative is productive and regular in Kinyarwanda.

The manner applicative uses the suffix *-an-* as the equivalent to the preposition *na*.

(82) a. Mariya a-r-iig-a imibare **n'** umuraava.
Mary SP-PRES-study-FV maths with courage
"Mary is studying Maths with courage."

b. Mariya a-r-iig-**an**-a imibare umuraava.
Mary SP-PRES-study-APPL-FV maths courage
"Mary is studying Maths with courage."

The manner applicative morpheme and the associative morpheme are homonyms. It is important therefore to make a distinction between the two in this section as they may be confused. Although the manner and associative constructions are similar, they are semantically and syntactically different. While the manner NP is an object (and does not participate), the associative NP is part of the subject NP and is therefore involved in the performing of the action.

(83) a. Umugore a-ra-hiing-a umurima **n**'umwaana.
woman SP-PRES-plough-FV field with child
"The woman is ploughing the field with the child."

b. Umugore a-ra-hiing-**an**-a umwaana umurima. (manner)
woman SP-PRES-plough-APPL-FV child field
"The woman is ploughing the field with the child."

c. Umugore a-ra-hiing-**an**-a **n**'umwaana umurima. (associative)
woman SP-PRES-plough-APPL-FV with child field
"The woman is ploughing the field with the child."

The sentence in (83a) is ambiguous as it can be interpreted as manner as well as associative. On the associative reading (83c), the sentence means that the woman ploughed the field together with the child. In other words, both the woman and the child were ploughing the field. As for the manner reading (83b), the woman ploughed the field having the child with her (for example carrying him/her in the back). The child did not plough the field. Syntactically, the manner reading permits the incorporation of the preposition, which results in a construction with two objects. As far as the associative meaning is concerned, the applicative morpheme *-an-* on the verb co-occurs with the independent preposition *na,* as in (83c).

In line with the distinction between these two constructions, Givón's (1997) sentence in (84b) below should be marked as ungrammatical since it is modelled on the manner applicative while the two constructions are totally different.

(84) a. Umuhuungu y-a-riimb-jye[sic] ururiimbi[sic] **na-** umugore.[8]
boy SP-PST-sing-ASP song ASSOC woman
"The boy sang the song with the woman."

b. Umuhuungu y-a-riimb-**an**-ye[sic] ururiimbi [sic] umugore
boy SP-PST-sing-ASSOC-ASP song woman
"The boy sang the song with the woman." (Givón 1997: 17)

Clearly, the intended interpretation of (84) is that the woman is involved in the performing of the action. It should not therefore appear as an applied object. The intended associative meaning in (84) should rather have been expressed as in (85b):

(85) a. Umuhuungu y-a-ririimb-ye indiriimbo **n**'umugore.
boy SP-PST-sing-ASP song with woman
"The boy sang a song with the woman."

b. Umuhuungu y-a-ririimb-**an**-ye indiriimbo **n**'umugore.
boy SP-PST-sing-APPL-ASP song with woman
"The boy sang a song with the woman."

Now I turn to the object properties exhibited by the manner NP.

Passivisation: With the manner applicative construction, both the theme and the applied object can be passivised.

(86) a. Mariya a-ra-hiing-an-a umurima ingufu.
Mary SP-PRES-plough-APPL-FV field strength
"Mary is ploughing the field with strength."

b. Ingufu zi-hiing-**an**-w-a umurima na Mariya.
strength SP-plough-APPL-PASS-FV field by Mary
Lit: "Strength is ploughed the field with by Mary."
"Strength is used by Mary to plough the field."

[8] I have adapted Givón's gloss

c. Umurima u-hiing-**an**-w-a ingufu na Mariya.
field SP-plough-APPL-PASS-FV strength by Mary
Lit: "The field is ploughed with strength by Mary."

Consider Givón's (1997) example in (84b) on associatives in which the NP *umugore* has been passivised. Such a construction is semantically excluded since the NP *umugore* is an agent and therefore cannot be the subject of a passive sentence.

(87) *Umugore ya-riimb-**an**-w-e[sic] ururiimbi [sic].
woman SP-sing-ASSOC-PASS-ASP song
"*The woman was sung a song with."
(Someone sang a song with the woman). (Givón 1997)

In associative constructions, only the theme can be passivised as in the example below.

(88) Indiriimbo y-a-ririmb-w-e **n'** umuhuungu **n'**umugore.
song SP-PST-sing-PASS-ASP by boy and woman
"A song was sung by the boy and the woman."

Clearly, the manner and the associative are two distinct morphemes and should not be confused.

Word order: The theme NP normally precedes the manner in examples such as (86) but it is also possible to place the theme NP before the manner, as in (89), without changing the meaning of the sentence.

(89) Mariya a-hiing-**an**-a ingufu umurima.
Mary SP-plough-APPL-FV strength field
"Mary ploughs the field with strength."

Object marking : Either of the two objects, or both, can be marked on the verb.

(90) a. Mariya a-*wu*-hiing-**an**-a ingufu.
Mary SP-OP-plough-APPL-FV strength
"Mary ploughs it with strength."

b. Mariya a-*zi*-hiing-**an**-a umurima.
Mary SP-OP-plough-APPL-FV field.
"Mary ploughs the field with it."

c. Mariya a-ra-*zi*-*wu*-hiing-**an**-a.
Mary SP-PRES-OP-OP-plough-APPL-FV
"Mary ploughs it with it."

Relativisation: Either of the two objects can be relativised.

(91) a. umurima Mariya a-hiing-**an**-a ingufu
field Mary SP-plough-APPL-FV strength
"the field that Mary ploughs with strength"

b. ingufu Mariya a-hiing-**an**-a umurima
strength Mary SP-plough-APPL-FV field
"the strength Mary ploughs the field with"

Constructions containing the manner applied object are regular and productive in Kinyarwanda, much more so than locative applicatives. Furthermore, the data above show that in the manner applicative construction, both objects have direct object properties.

3.5.6. Reason applicatives

In Kinyarwanda, the adverbial function of reason can be expressed with a clause introduced with the conjunction *kubeera ko* ('because') as in (92a), or by an adverbial PP headed by its prepositional counterpart *kubeera* ('because of') (see 92b). In an applied construction, the reason is expressed by means of the applicative morpheme *-ir-*, (92c).

(92) a Abaantu beenshi ba-kuund-a inyama *kubeera ko* zi-ryooh-a.
people many SP-like-FV meat because SP-taste good-FV
"Many people like meat because it tastes good."

b. Abaantu beenshi ba-kuund-a inyama *kubeera* uburyoohe.
people many SP-like-FV meat because of good taste
"Many people like meat because of its good taste."

c. Abaantu beenshi ba-kuund-**ir**-a inyama uburyoohe.
people many SP-like-APPL-FV meat good taste
"Many people like meat because of its good taste."

Passivisation: The theme, but not the applied object, can become the subject when the sentence is passivised.

(93) a. Inyama zi-kuund-**ir**-w-a uburyoohe n' abaantu beenshi.
meat SP-like-APPL-PASS-ASP good taste by people many
"Meat is liked for its good taste by many people."

b. *Uburyoohe bu-kuund-**ir**-w-a inyama n'abaantu beenshi.
good taste SP-like-APPL-PASS-FV meat by people many
Lit: "Good taste is liked meat for by many people."

Word order: In reason applicative constructions, the basic object precedes the reason as in (92c); the reversed order results in an ungrammatical sentence.

(94) *Abaantu benshi ba-kuund-**ir**-a uburyoohe inyama.
people many SP-like-APPL-FV good taste meat
"Many people like meat because of good taste."

Object marking: The theme as well as the reason can be marked on the verb.

(95) a. Abaantu benshi ba-*bu*-kuund-**ir**-a inyama.
people many SP-OP-like-APPL-FV meat
"Many people like meat because of it."

b. Abaantu benshi ba-*zi*-kuund-**ir**-a uburyoohe.
people many SP-OP-like-APPL-FV good taste
"Many people like it because of its good taste."

Relativisation : It is possible to extract both the theme and the reason by way of relativisation.

(96) a inyama abaantu benshi ba-kuund-**ir**-a uburyoohe
meat people many SP-like-APPL-FV good taste
"the meat that many people like because of its good taste"

b. uburyoohe abaantu benshi ba-kuund-**ir**-a inyama
good taste people many SP-like-APPL-FV meat
"the good taste for which many people like meat"

Theme/patient deletion: The deletion of the theme in a reason applicative is only marginally possible.

(97) ??Abaantu benshi ba-kuund-**ir**-a uburyoohe.
people many SP-like-APPL-FV good taste
Lit: "Many people like because of good taste."

In this section it has been shown that the applied object (the reason NP) in reason applicative constructions exhibits some, but not all, of the properties of direct objects. Although the reason applied object can be marked on the verb and extracted in relative clauses, it cannot precede the theme and cannot become the subject of a passive sentence.

3.5.7. Motive/purpose applicatives

In a non-applied construction, the motive or purpose is expressed with the conjunction *kugira ngo* (in order that) in Kinyarwanda when the purpose/motive is a clause, as in the example (98a). Alternatively, the purpose or motive can be expressed by means of a PP whose head is the preposition *ku* ('on') as seen in (98b). The applicative morpheme expressing purpose or motive is *-ir-* as seen in (98c):

(98) a. Abafuundi b-uubak-a amazu *kugira-ngo* ba-bon-e amafaraanga.
builders SP-build-FV houses in-order-that SP-get-FV money
"Builders build houses in order to get money."

b. Abafuundi b-uubak-a amazu *ku* mafaraanga.
builder SP-build-FV houses on money
"Builders build houses for money."

c. Abafuundi b-uubak-**ir**-a amazu amafaraanga.
builder SP-build-APPL-FV houses money
"Builders build houses for money."

Passivisation: Only the theme can be the subject of a passive sentence in a motive/purpose applied construction.

(99) a. Amazu y-uubak-**ir**-w-a amafaraanga n'abafuundi.
houses SP-build-APPL-PASS-FV money by builders
"Houses are built for money by builders."

b. *Amafaraanga y-uubak-**ir**-w-a amazu n' abafuundi.
money SP-build-APPL-PASS-FV houses by builders
Lit: "Money is built houses for by builders."

Word order: In motive/purpose applicative constructions, the basic object generally precedes the motive/purpose applied object, hence the marginality of (100).

(100) ??Abafuundi b-uubak-**ir**-a amafaraanga amazu.
builders SP-build-APPL-FV money houses
"Builders build houses for money."

Object marking: Only the theme can be marked on the verb.

(101) a. Abaantu ba-kor-**er**-a akazi amafaraanga.
people SP-do-APPL-FV work money
"People do the work for money."

b. Abaantu ba-*ga*-kor-**er**-a amafaraanga.
people SP-OP-do-APPL-FV money
"People do it for money."

c. *Abaantu ba-*ya*-kor-**er**-a akazi.
people SP-OP-do-APPL-FV work
"People do the work for it."

Relativisation: The theme can be relativised but the reason cannot.

(102) a. akazi abaantu ba-kor-**er**-a amafaraanga
work people SP-do-APPL-FV money
"the work people do for money"

b. ?amafaraanga abaantu ba-kor-**er**-a akazi
money people SP-do-APPL-FV work
"the money people do the work for"

Theme deletion: It is possible to delete the theme in reason applicative constructions.

(103) Abafuundi b-uubak-**ir**-a amafaraanga.
builders SP-build-APPL-FV money
"Builders build for money."

It is interesting that the motive NP can be passivised and realised as an object marker once the theme has been deleted. (104) hence contrasts with the examples in (99b) and (101c):

(104) a. Amafaraanga y-uubak-**ir**-w-a n'abafuundi.
money SP-build-APPL-PASS-FV by builders
"Money is built for by the builders."

b. Abafuundi ba-ra-*y*-uubak-**ir**-a.
builders SP-FOC-OP-build-APPL-FV
"Builders build for it."

3.5.8. Summary: Applicatives derived from transitive verbs

This section has discussed the object properties exhibited by different types of applicatives. It was found that whereas in the locative applicative, the theme fails to have direct object properties, most other applicatives allow both the theme and the applied object (with some exceptions, specifically motive and reason applicatives) to adopt direct object properties. In the next section I show how different direct object properties interact.

3.6. Interaction of object properties

It has been suggested and shown that in symmetrical languages such as Kinyarwanda more than one object can exhibit object properties (Bresnan and Moshi 1990, Ngonyani 1998, Alsina and Mchombo 1993). This section examines the interaction of these properties by discussing the co-occurrence of passives with object marking; co-occurrence of theme deletion with passives and co-occurrence of theme deletion with object marking.

3.6.1. Passive and object marking.

The passive can co-occur with object marking. Only benefactive and locative applicative examples are provided below for illustration.

(105) a. Umusore y-a-hiing-**i**-ye umugore umurima.
young man SP-PST-plough-APPL-ASP woman field
"The young man ploughed the field for the woman."

b. Umugore y-a-*wu*-hiing-**i**-w-e n'umusore.
woman SP-PST-OP-plough-APPL-PASS-ASP by young man
Lit: "The woman was it ploughed for by the young man."

c. Umurima w-a-*mu*-hiing-**i**-w-e n'umusore.
field SP-PST-OP-plough-APPL-PASS-ASP by young man
"The field was ploughed (for) her by the young man."

(106) a. Umushuumba y-a-hirits-e-**ho** umwaana igiti.
shepherd SP-PST-push-ASP-APPL child tree
"The shepherd pushed a tree on the child."

b. Umwaana y-a-*gi*-hirit-w-e-**ho** n'umushuumba.
child SP-PST-OP-push-PASS-ASP-APPL by shepherd
Lit: "The child was it pushed on by the shepherd."

c. Igiti cy-aa-*mu*-hirits-w-e-**ho** n'umushuumba.
tree SP-PST-OP-push-PASS-ASP-APPL by shepherd
"The tree was pushed on him/her by the shepherd."

The data above show that in Kinyarwanda ditransitive applicatives, it is possible to turn one internal argument NP into the subject of the passive and represent the other as an object marker on the verb. This is a particularly interesting observation with respect to locative applicatives derived by the suffix *-ho*. As was shown in Section 3.5.4.1. above, this type of applicative normally does not permit passivisation or object marking of the basic object, but only of the applied object. It therefore contrasts with, for example, benefactive applicatives such as the one in (105). However, as was also mentioned in Section 3.5.4.1., and as demonstrated by (106), the basic object can be represented as an object marker once the applied object is the subject of the passive, and the basic object can become the subject of the passive once the applied object is realised as an object marker. (See also example (60) in section 3.5.4.1).

The examples in (105) and 106) also have to be considered from the point of view of case assignment, namely the possibility of having two cases in Kinyarwanda, i.e., structural case and inherent case (see Chapter 4, Section 4.4.3.)

Furthermore, the examples in (105) and (106) illustrate a difference between Kinyarwanda and Kichaga, which, like Kinyarwanda, is a symmetrical language. Although it is possible in principle to have one internal argument NP realised as the subject and the other as an object marker in passivised ditransitive applicatives in Kichaga, an animate object marker which is pronominal cannot appear with a passivised inanimate subject (Bresnan and Moshi 1990:154). As (105b) and (106c) show, there is no such restriction in Kinyarwanda.

3.6.2. Theme deletion and passive

Bresnan and Moshi (1990: 155) show that in symmetrical languages like Kichaga, the theme can be deleted even if the applied object has become the subject of a passive construction. The

same is possible in Kinyarwanda benefactive applicatives derived with *-ir-*, (107). However, as was already shown in Section 3.5.4.1., locative applicatives generally do not allow theme deletion (108a). Even if the applied object is passivised, the theme cannot be deleted, (108b):

(107) a. abagabo b-uubak-**i**-ye umukeecuru.
men SP-build-APPL-ASP old woman
"The men built for the old woman."

b. Umukeecuru y-uubak-**i**-w-e n'abagabo.
old woman SP-build-APPL-PASS-ASP by men
Lit: "The old woman was built for by the men."

(108) a. *Umubooyi y-a-menn-ye-**ho** umwaana.
cook SP-PST-pour-ASP-APPL child
"The cook poured on the child."

b. *Umwaana y-a-menn-w-e-**ho** n'umubooyi.
child SP-PST-pour-PASS-ASP-APPL by cook
Lit: "The child was poured on by the cook."

Notice that asymmetrical languages such as Chichewa (Bresnan and Moshi 1990:155) generally do not permit theme deletion after passivisation of the applied object.

3.6.3. Theme deletion and object marking

In applicatives which allow for theme deletion, this is possible when the applied object is marked on the verb. However, since theme deletion is not possible with locative applicatives, (109b) is ungrammatical.

(109) a. Abagabo b-aa-ra-*mw*-uubak-**i**-ye.
men SP-PST-FOC-OP-build-APPL-ASP
"Men built for her."

b. *Umubooyi y-a-*mu*-menn-ye-**ho.**
cook SP-PST-OP-pour-ASP-APPL
"The cook poured on him."

3.7. Multiple objects

In Kinyarwanda, it is possible to have applicatives with three and even four objects with one verb. In some cases, this follows from the possibility of having more than one applicative morpheme on the verb. For illustration purposes, two grammatical sentences with four objects are provided below.

(110) a. Umukozi y-a-h-**eesh-er**-eje umugore umwaana ibiryo ikanya.[9]
worker SP-PST-give-APPL-APPL-ASP woman child food fork
"The worker gave the food to the child for the woman with a fork."

b. Umujuura y-a-men-**eesh-er**-eje umugabo imbwa umutwe inkoni.
thief SP-PST-break-APPL-APPL-ASP man dog head stick
"The thief broke the dog's head for the man with a stick."
Also: "The thief broke the head of the dog of the man with a stick."

The example in (110a) contains the benefactive NP *umugore* ('woman'), the dative NP *umwaana* ('child'), the theme NP *ibiryo* ('food') and the instrument NP *ikanya* ('fork'). (110b) comprises the benefactive (or possessor) NP *umugabo* ('man'), the possessor NP *imbwa* ('dog'), the theme NP *umutwe* ('head'), and the instrument NP *inkoni* ('stick').

However, (110b) suggests that in case of two NPs licensed by a same morpheme, that morpheme will appear only once. Indeed, the verb structure one would expect in (110b) is *y-a-men-**eesh-er-er**-eje*, if the NPs *man* and *dog* had to be introduced by an applicative morpheme each. The first *-er-* would add the applied object *umugabo* ('the man'), the second one the possessor *imbwa* ('the dog'). However, one finds that only one of the two expected morphemes *-er-* is realised.

[9] Sentences such as those in (110) are not ambiguous since Kinyarwanda does not have structures such as [the woman [with a fork]] or [the man [in the park]]. Only constructions such as [the woman] [with a fork] or [the man] [in the park] are available. For example, [the woman [with a fork]] would be expressed by a Kinyarwanda speaker as 'the woman who has/is holding a fork' and [the man [in the park]] would be expressed as 'the man who is/stays/can be found in the park'.

It is also important to note that in (110) the interpretation 'give food to the woman for the child' is not possible because the data on constructions with 4 objects suggest that the benefactive is placed before the other objects

In the following examples, I will look at applicative constructions with three objects and illustrate the different combinatorial patterns that are possible.

The following applicative verbs take three object NPs:

(111) ***Benefactive-patient-instrumental***

Umugabo y-a-tem-**eesh-er**-eje umugore igiti ishooka.

man SP-PST-cut- APPL-APPL-ASP woman tree axe

"The man cut the tree for the woman with an axe."

(112) ***Benefactive-patient-manner***

Umugaanga y-a-suuzum-**an-i**-ye umugore umwaana uburaakari.

doctor SP-PST-examine-APPL-APPL-ASP woman child anger

"The doctor examined the child for the woman with anger."

(113) ***Goal-patient-instrumental***

Umugore a-ra-h-**eesh**-a umwaana ibiryo ikanya.

woman SP-PRES-give-APPL-FV child food fork

"The woman is giving the child food with a fork."

(114) ***Goal-patient-manner***

Umugore a-ra-h-**an**-a umwaana ibiryo umujinya.

woman SP-PRES-give-APPL-FV child food bitterness

'The woman is giving food to the child with bitterness."

(115) ***Goal-patient-reason***

Ishuuri ry-aa-h-**er**-eye Karooli akazi ubushobozi.

school SP-PST-give-APPL-ASP Charles job skills

"The school gave Charles a job because of his skills."

(116) ***Locative-patient-instrumental***

Umwaarimu y-a-andik-**iish**-ije-**ho** ikibaaho imibare ingwa.

teacher SP-PST-write-APPL-ASP-APPL blackboard math chalk

"The teacher wrote math on the blackboard with chalk."[10]

(McGinnis 2003 based on Kimenyi 1980)

(117) ***Locative-patient-instrument***

Umubooyi y-a-men-**eesh**-eje-**ho** umwaana amaazi indobo.

cook SP-PST-pour-APPL-ASP-APPL child water bucket

"The cook poured water on the child with a bucket."

The examples in (111)-(112) and (116)-(117) show basic transitive verbs which are modified with two applicative morphemes. Since each morpheme introduces an applied object, the derived verbs now take three NP objects. In the examples in (113)-(115), the base verb is already ditransitive (see Section 3.5.3. for a discussion of these dative constructions), and combines with an applicative morpheme which introduces a third NP.

In the light of the preceding discussion, it is worth examining the direct object-properties of the internal NP arguments in the examples above. Three tests will be used to test these object properties in the following: passivisation, object marking and object extraction (relativisation). However, for reasons of space, it is not possible to provide examples for each and every test here, but only to summarise the relevant observations in the following tables.

Table1: Benefactive -patient-instrument (see (111))

Passivisation			Object marking			Object extraction		
Benefact.	Patient	Instrum.	Benefact.	Patient	Instrum.	Benefact.	Patient	Instrum.
√	√	√	√	√	√	√	√	√

Table 2: Benefactive-patient-manner (see (112))

Passivisation			Object marking			Object extraction		
Benefact.	Patient	Manner	Benefact.	Patient	Manner	Benefact.	Patient	Manner
√	√	√	√	√	√	√	√	√

[10] I have changed the original gloss.

Table 3: Goals-patient-instrument (see (113)

Passivisation			Object marking			Object extraction		
Benefact.	Patient	Instrum.	Goal.	Patient	Instrum.	Goal.	Patient	Instrum.
√	√	√	√	√	√	√	√	√

Table 4: Goal-patient-manner (see (114))

Passivisation			Object marking			Object extraction		
Goal	Patient	Manner	Goal	Patient	Manner	Goal.	Patient	Manner
√	√	√	√	√	√	√	√	√

The tables show that in the constructions in (111)-(114), each of the three NP-arguments behaves like a direct object. Each object can be passivised, marked as a pronoun on the verb and can be extracted in relative clauses. Furthermore, the order is relatively free and the theme can be deleted without resulting in an ungrammatical construction. These properties are not surprising, because, as was shown in Sections 3.5.1-3.5.7 above, each of the applicative morphemes involved in (111)-(114) derives a construction in which both the applied object and the basic object behave like direct objects.

Consider next Table 5:

Table 5: Goal-patient-reason (see (115))

Passivisation			Object marking			Object extraction		
Goal	Patient	Reason	Goal.	Patient	Reason	Goal.	Patient	Reason
√	√	X	√	√	√	√	√	√

Recall from Section 3.5.6. that the applied object in reason applicative constructions cannot be passivised. Consequently, as shown in table 5, the construction in (115) only allows passivisation of the two basic objects of the verb *-ha-* "give", but not of the NP introduced by the morpheme *-er-*.

Now let me turn to example (116). (116) exhibits the co-occurrence of two applicative morphemes which individually give rise to constructions with different properties (Refer to the discussion in Sections 3.5.4.1. and 3.5.4.2). Whereas both the basic and the applied object

of an applicative with *-iish-* can be passivised, object marked and relativised (see Section 3.5.2), I showed in section 3.5.4.1 that the basic object of a *-ho* applicative loses these direct object properties. It is therefore an interesting question whether the basic object of the verb and the applied object of the instrumental applicative morpheme maintain their direct object properties when the applicative morpheme *-ho* introduces a third object NP. Table 6 and the examples in (116) show that this is not the case. The data in Table 6 suggest that in the presence of the locative, the theme and the instrumental lose their direct object properties (cf. Gerdts and McGinnis 2003).

Table 6: Locative-patient-instrument (see (116))

Passivisation			Object marking			Object extraction		
Locative	Patient	Instrum.	Locative	Patient	Instrum.	Locative	Patient	Instrum.
√	X	X	√	X	X	√	X	X

Consider for instance the examples (118a) and (118b) below in which the theme and instrument are passivised.

(118) a. *Imibare y-a-andik-**iish**-ij-w-e-**ho** ikibaaho ingwa .
math SP-PST-write-APPL-ASP-PASS-ASP-APPL blackboard chalk
"Math was written on the blackboard by the teacher with chalk."

b. *Ingwa y-a-andik-**iish**-ij-w-e-**ho** ikibaaho imibare.
chalk SP-PST-write-APPL-ASP-PASS-ASP-APPL blackboard math
"Chalk was used to write math on the blackboard by the teacher."

(Kimenyi 1980)

The restrictions for the example in (116) (and Table (6)) above are the same as those for locative applicatives with two objects. The theme and the instrument cannot be extracted, nor can they be marked on the verb.

Surprisingly, however, not all instances of applicatives with a locative and an instrumental morpheme behave like example (116). As is shown in Table 7, (117) is different:

Table 7: Locative-patient-instrument (see (117))

Passivisation			Object marking			Object extraction		
Locative	Patient	Instrum.	Locative	Patient	Instrum.	Locative	Patient	Instrum
√	√	√	√	√	√	√	√	√

Indeed, the patterns in (116) and (117) are similar. However, as the table shows, the theme and instrument have the properties of a direct object in (117) but not in (116). Compare for example the grammatical sentences in (119) below in which the patient has been passivised, extracted and object marked on the verb, and their ungrammatical counterparts in (118) above.

(119) a. Umubooyi y-a-men-***eesh***-eje-**ho** umwaana amaazi indobo.
cook SP-PST-pour-APPL-ASP-APPL child water bucket
"The cook poured water on the child with the bucket."

b. Amaazi y-a-men-**eesh**-ej-w-e-**ho** umwaana indobo.
water SP-PST-pour- APPL-ASP-PASS-ASP-APPL child bucket.
"The water was poured on the child with the bucket."

c. Amaazi umubooyi y-a-men-**eesh**-eje-**ho** umwaana indobo.
water cook SP-PST-pour-APPL-ASP-APPL child bucket
"The water that the cook poured on the child with the bucket."

d. Umubooyi y-a-*ya*-men-**eesh**-eje-**ho** umwaana indobo.
cook SP-PST-OP-pour-APPL-ASP-APPL child bucket
"The cook poured it on the child with the bucket."

The data above reveal that the locative applicative does not behave consistently when combined with an instrumental applicative. One would suspect that (116) and (117) have exactly the same syntactic structure (i.e. locative, patient and instrument in both cases) although (118) and (119) cast doubt on this assumption, since the object properties are clearly different. However, if one assumes that (116) and (117) have the same syntax, then the ungrammaticality of (118) would follow from the semantic properties of the verb rather than syntactically.

3.9. Summary

In this chapter, I offered a detailed description of different types of applicatives in Kinyarwanda. First, it was shown that applicative constructions can be derived from transitive as well as intransitive verbs. Then I demonstrated that of all the seven applicatives described in this chapter, both internal NP arguments in the benefactive, the instrumental, the dative and the manner applicative exhibit direct object properties. With respect to the locative construction, a number of points were raised. It was shown that the applicative morpheme can co-occur with a full PP. In this type of construction, only the theme has direct object properties, as the preposition does not incorporate to allow a two-object construction. However, the preposition can incorporate if the locative NP is extracted, passivised or marked on the verb. Consequently, the locative applicative morpheme *-ho* (and its allomorphs) co-occurs with the applicative morpheme *-ir-*. It was also noted that in locative applicatives, the theme does not have direct object properties. However, it seems to acquire these properties when the applied locative object is extracted, marked on the verb or passivised.

Concerning other applicative constructions, it was shown that in the reason applicative, word order is not flexible and that the reason NP cannot be passivised. Similarly, the applicative morpheme *-ir-* as a motive applicative does not allow for passivisation or extraction of the applied object, nor does it allow the applied object to be placed before the basic object.

With regard to different morphemes used in applicatives, some of them (*-ir-*, *iish-*, *-an-*) are placed, for example, before the aspect morpheme or the passive morpheme while the locative is a true suffix morpheme as it attaches to the verb after all the other affixes. In addition to that, it can even be placed after the locative NP.

In short, in contrast to other applicatives, the locative, the reason and the motive applicatives do not reflect entirely the symmetrical aspect of Kinyarwanda. Therefore, as was observed in Section 3.5 'symmetrical' and 'asymmetrical' should be used to distinguish between types of applicatives and not between languages.

Chapter 4: Syntactic analyses of Kinyarwanda applicatives

4.1. Introduction

This chapter discusses Kinyarwanda applicatives on the basis of Baker's (1988) theory of incorporation, Larson's (1988) analysis of the double object construction and Nakamura's (1997) account of object extractability in Bantu languages. I decided to focus on these proposals and to ignore alternative approaches that have been put forward, for example by Alsina and Mchombo (19930 and Bresnan and Moshi (1990) because I had to restrict myself in this thesis to the discussion of the theories that have been presented within the Principles and Parameters framework. Further studies would have to include other theories.

The chapter is divided into three sections. Section 4.2. looks at applicatives as a process of preposition incorporation (Baker 1988 and subsequent work), which results in grammatical function changing. Section 4.3. provides an account of applicatives as double object constructions as developed in Larson (1988) and in Marantz (1993). As the two analyses leave many questions unanswered, I will look at applicatives from the perspective of the Minimalist Program by discussing the proposal made by Nakamura (1997) in section 4.4. Each section is divided into three subsections. The first gives a review of the respective analysis, the second applies this analysis to Kinyarwanda, and the third identifies problems raised by the theory, suggesting, where possible, how the existing analysis can be improved.

4.2. Incorporation (Baker 1988 and subsequent work)

In this section I discuss the theory of preposition incorporation as put forward in Baker (1988 and subsequent work). Most examples that I adopted in the following section to illustrate the incorporation theory are from Chichewa. After the discussion, I show how this theory can be applied to Kinyarwanda and discuss the problems that are not addressed.

4.2.1. Incorporation theory

As was discussed in Chapter 2, Section 2.6, incorporation is a syntactic theory developed by Baker (1988 and subsequent work), which accounts for grammatical function changing processes such as applicatives, causatives and passives. For example, in applicative constructions, the oblique phrase of a non-applicative construction becomes the direct object of the clause; in the passive, the direct object of the corresponding active sentence becomes the subject, etc. In these constructions, the change in grammatical function is typically coupled with an affixal morpheme which appears on the verb. In Baker's theory, affixal morphemes are lexical categories such as V or P, and are represented as independent heads in syntax, realising their arguments within their own maximal projection at D-Structure. However, since they are suffixes, they are not licensed as independent elements at S-Structure according to the following stray affix filter:

(1) ***Stray Affix Filter*** (Baker 1988: 40)
X^* if X is a lexical item whose morphological subcategorisation is not satisfied at S-Structure.

In (1), morphological subcategorisation means that an affix of category P subcategorises for a head of category V. Therefore, incorporation is required before the whole thing branches to phonological form. The affixal head combines with its host and they form a verbal complex. In order to see how the theory of incorporation accounts for the properties of applicatives, consider first the Chichewa example in (2).

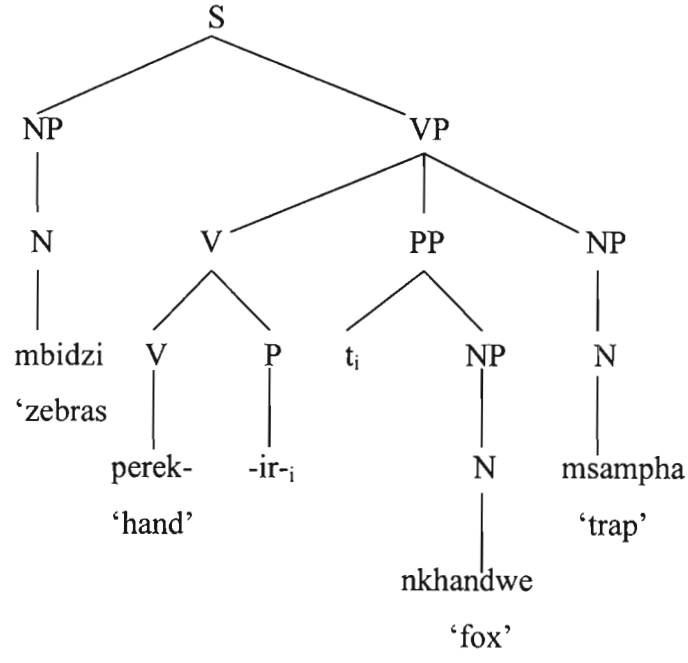
(2) a. Mbidzi zi-na-perek-a msampha kwa nkhandwe.
zebras SP-PST-hand-ASP trap to fox
"The zebras handed the trap to the fox."

b. Mbidzi zi-na-perek-**er**-a nkhandwe msampha.
zebras SP-PST-hand-APPL-ASP fox trap
"The zebras handed the fox the trap." (Baker 1988: 229)

In (2a), the verb *-perek-* combines with an NP-object and an oblique NP embedded in the PP headed by the preposition *kwa*. (2b) is the corresponding applicative construction with two NP-objects. Importantly, the thematic relations between the verb and its argument in V-NP-PP

and V+APPL-NP-NP are the same. Therefore, according to the UTAH (see Chapter 2, Section 2.6.1), the applied object in (2b), like the oblique NP in (2a), is generated at D-Structure as the object of a preposition. This preposition is the applicative suffix. Because of the Stray Affix Filter, it undergoes head movement and incorporates into the verb. As a result, the verb now governs the complement of the incorporated preposition (according to the GTC). Therefore, the oblique NP becomes the direct object of the verbal complex after incorporation. The surface structure representation of (2b) is provided in (3) below. (For the sake of convenience, S will be used in the tree representation instead of CP).

(3)



Preposition incorporation as in the example (3) obeys the Empty Category Principle (ECP), according to which a head can only move to a head which governs it, at the same time satisfying the Head Movement Constraint (HMC). If the head does not adjoin to a head that governs it, it will not be able to antecedent-govern its trace. In (3), the moved element c-commands its trace, and the PP it has moved from is theta-coindexed with the verb. Therefore, the PP is not a barrier to government between the incorporated preposition and its trace.

The incorporation process which results in applicative constructions has a consequence on case assignment. As Baker (1988) suggests, since the NP stranded by the incorporated preposition is governed by the verb, it receives structural case from the verbal complex as is predicted by the GTC. This means that the applied object in (2b) has direct object properties

and therefore can become the subject of passive sentence (4b) or object marked on the verb (5b).

(4) a. Kalulu a-na-gul-**ir**-a mbidzi nsapato.
hare SP-PST-buy-APPL-ASP zebras shoes
"The hare bought shoes for the zebras."

b. Mbidzi zi-na-gul-**ir**-dw-a nsapato (ndi kalulu).
zebras SP-PST-buy-APPL-PASS-ASP shoes by hare
"The zebras were bought shoes by the hare."

(5) a. Amayi a-ku-*mu*-umb-**ir**-a mtsuko mwana.
woman SP-PRES-OP-mold-APPL-ASP waterpot child
"The woman is moulding the waterpot for the child."

b. Amayi a-ku-*mu*-umb-**ir**-a mtsuko.
woman SP-PRES-OP-mold-APPL-ASP waterpot
"The woman is molding the waterpot for him." (Baker 1988: 247-248)

With regard to the basic object, it loses its direct object properties. For example, (6) shows that it cannot be the subject of a passive sentence:

(6) *Nsapato zi-na-gul-**ir**-idw-a mbidzi (ndi kalulu).
shoes SP-PST-buy-APPL-PASS-ASP zebras by hare
"Shoes were bought for the zebras by the hare." (Baker 1988: 248)

It cannot be marked on the verb either.

(7) a. *Amayi a-na-*u*-umb-**ir**-a mwana mtsuko.
woman SP-PST-OP-mold-APPL-ASP child waterpot
"The woman is molding the waterpot for the child."

b. *Amayi a-na-*u*-umb-**ir**-a mwana.
woman SP-PST-OP-mold-APPL-ASP child
"The woman is molding it for the child." (Baker 1988: 266-267).

As stated above, the applied object receives structural case. As for the basic object, Baker argues that it gets inherent case. In contrast to structural case assigned at S-Structure, inherent

case is assigned at D-Structure, the level at which the basic object is governed by the verb. Therefore, this explains why the theme fails to be passivised or marked on the verb in the examples above.

However, instrumental applicatives in Chichewa behave differently from benefactive applicatives. For instance, unlike what was shown to be the case in benefactive applicatives, either the applied object or the basic object of instrumental applicatives can be marked on the verb.

(8) a. Mavuto a-na-*u*-umb-**ir**-a mpeni mitsuko.
Mavuto SP-PST-OP-mold-APPL-ASP knife waterpots
"Mavuto molded the waterpot with a knife."

b. Mavuto a-na-*i*-umb-**ir**-a mpeni mitsuko.
Mavuto SP-PST-OP-mold-APPL-ASP mpeni mitsuko
"Mavuto molded the waterpots with a knife."

The data above lead Baker to propose a different analysis for instrumental applicatives. Baker (1988) suggests that, unlike the benefactive applied object, which gets its theta-role from a preposition, the instrumental applied object is not governed by a preposition. Instead, it is governed by the verb at D-Structure and the preposition is inserted at the S-Structure to spell out case assignment (Baker 1988). Consequently, Baker (1992: 33) argues that the applicative morpheme *-ir-* should not be considered an incorporated preposition in Chichewa but is "a derivational suffix that attaches in the lexicon and adds an argument of some kind to the argument structure of the base verb".

As the NP-complement of the incorporated preposition in an applicative construction derived as in (3) receives structural case from the verb at D-Structure, Baker's (1988) analysis predicts that applicatives are not possible with intransitive verbs. For example, applicative constructions derived from intransitive verbs are prohibited in languages such as Bahasa Indonesia, because the intransitive base verb does not have structural case to assign to the object complement of the incorporated preposition (Baker 1988: 259). Baker's prediction is also borne out for Chichewa. Consider the examples below:

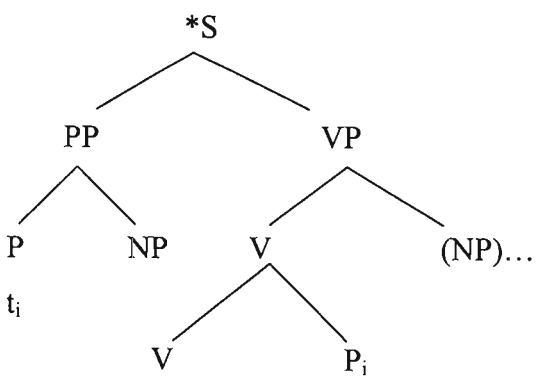
(9) a. Mkango u-ku-yend-a.
lion SP-PRES-walk-ASP
"The lion walked."

b. *Mkango u-ku-yend-**er**-a anyani.
lion SP-PRES-walk-APPL-ASP baboons
"The lion walked for the baboons." (Baker 1988: 255)

Baker (1988) maintains that (9b) is ungrammatical if it is meant to be an applicative construction with the meaning given in the translation. However, sentences such as the one in (9b) are not ungrammatical as such. For example, (9b) is possible with the meaning that the lion inspected the baboons. According to Baker, the grammatical reading of this example does not pose a problem, since, here, the UTAH does *not* imply that the verb and the applicative morpheme are separate elements at D-Structure. Instead, the verb and the applicative morpheme in constructions such as (9b) assign their internal theta-role as an 'atomic unit', which suggests that the applicative verb is lexically derived; the verb and the applicative suffix are not separate constituents at D-Structure.

As incorporation is governed by the ECP, the latter determines the cases in which incorporation cannot take place. For example, no head movement from the subject position is possible, since the moved element would not be able to c-command its trace (Baker 1988: 235) as is illustrated in (10):

(10)

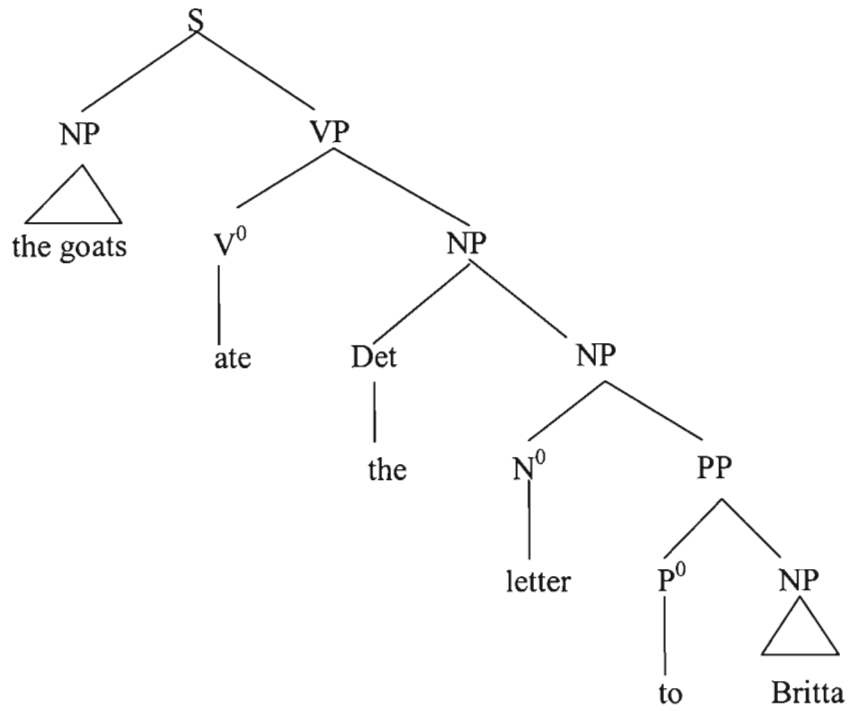


Similarly, it is not possible for incorporation to take place out of more deeply embedded structures. Thus an applicative such as (11) could not be derived in Chichewa (or any other language).

(11) a. The goats [$_{VP}$ ate [$_{NP}$ the letter [$_{PP}$ to Britta]]].

b. (*)The goats [$_{VP}$ ate-to$_i$ [the letter [$_{PP}$ t$_i$ Britta]]]. (Baker 1988: 235)

c.



In (11b,c), the N^0 *letter* turns the NP into a barrier between V^0 and the head of the embedded PP which has incorporated into the verb (see the discussion on barrier in Chapter 2, Section 2.4.4). V governs NP but not PP and therefore the preposition cannot incorporate into the verb.

Finally, incorporation can only take place out of selected complements, since non-selected phrases are always barriers for government, according to Baker's definition (see (31i) in Chapter 2, Section 2.4.4). Therefore, it is predicted that incorporation cannot take place out of an adjunct phrase, as the adjunct phrase constitutes a barrier for government between the position of the verb and heads contained in the adjunct. According to Baker (1988), this prediction is borne out by the ungrammaticality of examples such as (12b), which is derived by incorporating the prepositional head of a (certain class of) locative adjunct PP:

(12) a. Abaana b-iica-ye **ku** musozi.
children SP-sit-ASP on mountain
"The children are sitting on (the top of) the mountain."

b. *Abaana b-iica-ye-**ho** umusozi.
children SP-sit-ASP-APPL mountain
"The children are sitting on the mountain." (Kinyarwanda; Baker 1988: 245)

Baker (1988) suggests that in addition to the locative in (12), temporal phrases, manner phrases and reason phrases are also adjunct PPs and hence do not permit the head to incorporate.

However, the analysis raises questions about the status of benefactive applicatives. Marantz (1984) maintains that benefactive PPs are not arguments, but adjuncts, as they are optional, and no verb subcategorises for them. This creates a problem for Baker since, according to his analysis, benefactive applicatives are derived by incorporation of the head of a benefactive PP. Therefore, in order to maintain that incorporation is possible out of benefactive PPs, Baker (1988) has to demonstrate that these types of PPs are indeed theta-marked by the verb. His argument proceeds as follows. According to the ECP, every trace must be properly governed either by its antecedent or by an element which assigns it a theta-role. If a phrase is moved across a barrier such that antecedent government is not possible, but the resulting sentence is still grammatical, then the fact that the ECP is not violated means that the trace of the moved phrase must be theta-marked, and hence is an argument of the verb. (13c, d) versus (13e, f) show that benefactive extraction yields a better result than manner extraction, which suggests that benefactives, in contrast to manner PPs, are arguments. (13c-f) are extractions out of wh-islands, where the wh-phrase in the intermediate SpecCP blocks antecedent government. If (13c-d) are acceptable, then it is only because the traces of the benefactive wh-phrases are theta-governed. Therefore, these PPs must be arguments.

(13) a. I know to bake a good cake [for my friends] [by whipping the eggwhites vigorously].

b. I remember to buy clothes [for my wife] [by checking the sizes].

c. (?)For which of your friends do you know how to bake a cake (that they will enjoy)?

d. (?)For whom do you remember how to buy clothes (that will fit properly)?

e. * How do you know for which friends to bake a cake (that they will enjoy)?

f. * How do you remember to buy clothes (that will fit) for?

(Baker 1988: 242-243)

Similar examples are provided for other types of applied PPs where Baker shows that they are arguments of the verb. The incorporation analysis of these kinds of applicatives can hence be maintained.

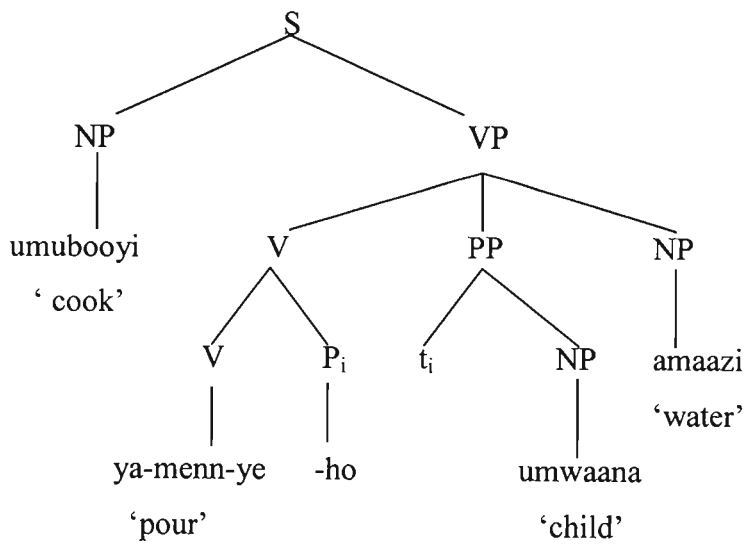
4.2.2 Application to Kinyarwanda

In this section, I show how the incorporation theory, as developed by Baker (1988 and subsequent work) can account for Kinyarwanda applicatives. Consider the locative applicative construction in (14) and the tree diagram in (15):

(14) a. Umubooyi y-a-menn-ye amaazi **ku** mwaana.
cook SP- PST-pour-ASP water on child
"The cook poured water on the child."

b. Umubooyi y-a-menn-ye-**ho** umwaana amaazi.
cook SP-PST-pour-ASP-APPL child water
"The cook poured water on the child."

(15)



According to the theory of preposition incorporation, the D-Structure representations for (14a) and (14b) are identical in many crucial respects. Both *ku* and *-ho* are prepositions. However,

whereas the preposition *ku* is a free morpheme and remains in situ, *-ho* is an affix which moves from its base position and adjoins to the verb stem *-men- (-menn-),* (15). The ECP is satisfied since *-ho* moves to the position from which it c-commands its trace, antecedent-governing it. Moreover, the PP node is no longer a barrier for government of the NP *umwaana* by the verb because, according to the GTC, if a head is incorporated into another head, the new head governs everything that was governed by the head before incorporation. Therefore, the complex verb derived by preposition incorporation now governs the NP *mwaana* and assigns structural case to it.

This explains why the applied object in (14b) has acquired all the properties of a direct object: As was shown in detail in Section 3.4.5.1, it is adjacent to the verb (see 14b), can be object marked on the verb and passivised. As for the basic object (*amaazi* in the example above), it loses all direct object properties, failing to passivise, to be marked on the verb, and to be adjacent to the verb. This follows from Baker's (1988) theory, according to which the basic object in (14a) is marked with inherent case. The examples in (16) illustrate the contrast between applied objects and basic objects with respect to passivisation:

(16) a. Umwaana y-a-menn-w-e-**ho** amaazi n'umubooyi
child SP-PST-pour-PASS-ASP-APPL water by cook
"The child was poured on the water by the cook."

b. *Amaazi y-a-menn-w-e-**ho** umwaana n'umubooyi.
water SP-PST-pour-PASS-ASP-APPL child by cook
"The water was poured on the child by the cook.

However, the example in (14) is not representative of all Kinyarwanda applicatives. Consider benefactive applicatives in Kinyarwanda again, which were discussed in Section 3.5.1. In contrast to the locative applicative in (14), the verb bears the applicative morpheme *-ir-* (*-i-*), like in Chichewa, as is shown in (17b).

(17) a. Umugabo y-a-gu-z-e imyeenda.
man SP-PST-buy-ASP-ASP clothes
"The man bought the clothes."

b. Umugabo y-a-gur-**i**-ye umwaana imyeenda.
man SP-PST-buy-APPL-ASP child clothes
"The man bought the child the clothes."

(17b) shows that the morpheme *-ir-* adds a benefactive applied object to the argument structure of the verb. As was already shown in Chapter 3, the applied object acquires the passivisation- and object marking-properties of a direct object:

(18) a. Umugabo y-a-*mu*-gur-**i**-ye imyeenda. (object marking)
man SP-PST-OP-buy-APPL-ASP clothes
"The man bought the clothes for him."

b. Umwaana y-a-gur-**i**-w-e imyeenda n'umugabo. (passivisation)
child SP-PST-buy-APPL-PASS-ASP clothes by man
"The child was bought clothes by the man."

However, in contrast to Chichewa benefactives and Kinyarwanda locatives, the theme in Kinyarwanda benefactive applicatives also has all the properties of a direct object. For example, as was shown in Chapter 3, it can be passivised and object-marked:

(19) a. Umugabo y-a-*yi*-gur-**i**-ye umwaana. (object marking)
man SP-PST-OP-buy-APPL-ASP child
"The man bought them for the child."

b. Imyeenda y-a-gur-**i**-w-e umwaana n'umugabo. (passivisation)
clothes SP-PST-buy-APPL-PASS-ASP child by man
"The clothes were bought for the child by the man."

The examples show that both object NPs in Kinyarwanda benefactive applicatives show direct object properties. This recalls the properties of instrumental applicatives in Chichewa. Baker's (1988) claim that this type of applicative is lexically derived can therefore be adopted for Kinyarwanda benefactives. Given the data above, it is therefore possible to conclude that Kinyarwanda benefactive applicatives are not derived by preposition incorporation but lexically derived since both objects have direct object properties. This means that Kinyarwanda benefactive applicatives and instrumental applicatives pattern with and behave

more like Chichewa instrumentals, but differ from Chichewa benefactive applicatives and Kinyarwanda locative applicatives, which are derived by preposition incorporation.

Let me now turn to instrumental applicatives in Kinyarwanda:

(20) a. Umugabo y-a-tem-ye igiti **n'** umuhoro.
man SP-PST-cut-ASP tree with machete
"The man cut the tree with a machete."

b. Umugabo y-a-tem-**eesh**-eje igiti umuhoro.
man SP-PST-cut-APPL-ASP tree machete
"The man cut the tree with a machete."

(20a) shows that in non-applicative constructions, the instrument PP is headed by the preposition *na (n')* and that in (20b) the verb bears the instrumental applicative morpheme *-iish-*. As discussed in chapter 3, both the applied object and the theme can be marked on the verb and passivised.

(21) a. Igiti cy-aa-tem-**eesh**-ej-w-e umuhoro. (passivisation)
tree SP-PST-cut-APPL-ASP-PASS-ASP machete
"The tree was cut with a machete."

b. Umuhoro w-a-tem-**eesh**-ej-w-e igiti.
machete SP-PST-cut-APPL-ASP-PASS-ASP tree
"Lit.: The machete was cut the tree with."

(22) a. Umugabo y-a-*gi*-tem-**eesh**-eje umuhoro. (object marking)
man SP-PST-OP-cut-APPL-ASP machete
"The man cut it with a machete."

b. Umugabo y-a-*wu*-tem-**eesh**-eje igiti.
man SP-PST-OP-cut-APPL-ASP tree
"The man cut the tree with it."

The data above then suggest that the instrumental applicative is lexically derived and that therefore both objects have direct-object properties. This means that both the benefactive applied object and theme can get structural case from the verb.

To summarise, the theory developed by Baker (1988), which accounts for certain types of applicatives in Chichewa, can also explain some of the fundamental properties of Kinyarwanda applicatives. Locative applicatives in Kinyarwanda are derived by preposition incorporation and hence pattern with benefactive applicatives in Chichewa. Benefactive and instrumental applicatives in Kinyarwanda are lexically derived and therefore similar to instrumental applicatives in Chichewa.

4.2.3. Problems

This section looks at some problems raised by Baker's (1988) theory of incorporation and his analysis of applicative constructions in relation to Kinyarwanda applicatives. Although his analysis captures generalisations about locatives, instrumentals and benefactives, a few questions remain unanswered and need to be examined here.

First, let us consider Baker's (1988) analysis of benefactives again. Although the benefactive applied object acquires the direct object properties, it cannot be extracted. According to Baker (1988), this is a consequence of the trace left by the preposition incorporated into the verb which blocks extraction. This is a problem since, given the parallels between Kinyarwanda locatives and Chichewa benefactives discussed above, it would be predicted that the applied object of Kinyarwanda locative applicatives cannot be extracted. However, in contrast to the applied object in Chichewa benefactive applicatives, the applied object in Kinyarwanda locative applicatives can be extracted, as was already shown in chapter 3, (23a):

(23) a. umwaana umubooyi y-a-menn-ye-**ho** amaazi
child cook SP-PST-pour-ASP-APPL water
"the child on whom the cook poured water" (Kinyarwanda)

b. *Iyi ndiyo mfumu imene ndi-ku-ganiz- a
this is chief which SP-PRES-think-ASP
kuti Mavuto a-na-umb-ir-a mtsuko.
that Mavuto SP-PST-mold-APPL-ASP waterpot
"This is the chief which I think that Mavuto molded the waterpot for."
(Chichewa; Baker 1988: 295)

If the trace of the incorporated preposition blocks extraction in Chichewa benefactives (as assumed by Baker 1992), then it is not clear why the trace of the incorporated preposition *-ho* in (23a) does not block extraction as well.

Furthermore, it is not clear why instrumentals in Chichewa pattern with Kinyarwanda benefactives and instrumentals, whereas Chichewa benefactives pattern with Kinyarwanda locatives. This is even more surprising, given that the morphological structures of the Chichewa benefactive and the instrumental applied verb are identical. The morphology of the Kinyarwanda applicatives could be taken to suggest that the applicative morpheme *-ir-* (which appears with benefactives and instrumentals) signals a lexically derived applicative, whereas true preposition incorporation is only attested with the locative applicative marker *-ho*. However, this leaves open the question why Chichewa benefactives, which are also derived by means of *-ir-*, are derived by preposition incorporation.

A second question posed by the incorporation theory is the statement that applicative constructions are not possible with adjunct PPs. According to Baker (1988), benefactive, malefactive, goal, instrumental and locative PPs are arguments of the verb and permit incorporation. In contrast, Baker suggests that temporal phrases, manner phrases and reason phrases are adjuncts. This could predict that applicative constructions are not possible with these PPs. However, as was shown in Chapter 3, Kinyarwanda permits reason and manner applicative constructions:

(24) a. Kaminuuza y-iirukan-**i**-ye umukozi ubujuura.
university SP-sack-APPL-ASP employee theft
"The University sacked the employee for theft."

b. Umusore y-a-hiing-**an**-ye umurima ingufu.
young man SP-PST-plough-APPL-ASP field strength
"The young man ploughed the field with strength."

In manner and reason constructions, the applied object has direct object properties such as the ability to be marked on the verb:

(25) a. Kaminuuza y-a-*bw*-iirukan-**i**-ye umukozi.
university SP-PST-OP-sack-APPL-ASP employee
"The University sacked the employee for it."

b. Umusore y-a-*zi*-hiing-**an**-ye umurima.
young man SP-PST-OP-plough-APPL-ASP field
"The young man ploughed the field with it."

Moreover, in manner and reason constructions, the theme maintains its direct object properties as, for example, it can be marked on the verb:

(26) a. Kaminuuza y-a-*mw*-iirukan-**i**-ye ubujuura.
university SP-PST-OP-sack-APPL-ASP theft
"The University sacked him because of theft."

b. Umusore y-a-*wu*-hiing-**an**-ye ingufu.
young man SP-PST-OP-plough-APPL-ASP strength
"The young man ploughed it with strength."

Therefore these applicatives pattern with the Kinyarwanda benefactive applied objects and can be lexically derived since the objects have all the direct object properties such as passivisation, object-marking, extraction, adjacency to the verb, etc.

Another problem raised by Baker's (1988) analysis concerns the co-occurrence of the applicative suffix *-ir-* and a PP in Kinyarwanda (see Section 3.5.4.2.):

(27) Umugabo y-a-ri-**ir**-iye imineke **kw**'iisoko.
man SP-PST-eat-APPL-ASP bananas at market
"The man ate the bananas at the market."

According to Baker (1988), all locative applicatives are derived by preposition incorporation. This suggests that the applicative morpheme and the locative PP should not co-occur, which is not true for all types of locative applicatives in Kinyarwanda, as is shown in (27). For locative applicatives such as (27), it is a fact that the applicative morpheme attaches to the verb to add a locative PP, specifying where the event takes place. Compare for example (28a) and (28b).

(28) a. Umugabo y-a-gu-ze imyeenda **kw**'iisoko.
man SP-PST-buy-ASP clothes at market
"The man bought the clothes at the market."

b. Umugabo y-a-gur-**i**-ye imyeenda **kw**'iisoko.
man SP-PST-buy-APPL-ASP clothes at market
"The man bought the clothes at the market."

While (28a) simply means that the man bought the clothes at (or from) the market, (28b) means that the man bought the clothes and that the action took place at the market (and not elsewhere). Consequently, it is possible to drop the PP phrase in (28a) but not in (28b) since the suffix on the verb indicates that there is a PP in the VP. This suggests that the PP is introduced by the affix, contrary to Baker's (preposition) incorporation theory.

PPs such as those in (28) do not allow preposition incorporation. Thus, the example (29b) considered by Baker as grammatical, is ungrammatical.

(29) a. Abaana ba-ra-ri-**ir**-a ibiryo **ku** meeza.
children SP-PRES-eat-APPL-FV food on table
"The children are eating food on the table."

b. (*)Abaana ba-ra-ri-**ir**-a-**ho** ameeza ibiryo.
children SP-PRES-eat-APPL-FV-APPL food table
"The children are eating the food on the table." (Baker 1992: 39)

A further problem has to do with the theme in locative applicatives. It was noted in Section 3.5.4.1. that the theme in locative applicatives does not have object properties. However, as was shown in Chapter 3, it adopts these properties once the applied object is marked on the verb, passivised or extracted.

(30) a. *Amaazi y-a-menn-w-e-**ho** umwaana n'umubooyi.
water SP-PST-pour-PASS-ASP-APPL child by cook
"The water was poured on the child by the cook."

b. Amaazi y-a-*mu*-menn-w-e-**ho** n'umubooyi.
water SP-PST-OP-pour-PASS-ASP-APPL by cook
"The water was poured on him by the cook."

(31) a. *amaazi umubooyi y-a-menn-ye-**ho** umwaana
water cook SP-PST-pour-ASP-APPL child
"the water that the cook poured on the child"

b. amaazi umubooyi y-a-*mu*-menn-ye-**ho**
water cook SP-PST-OP-pour-ASP-APPL
"the water the cook poured on him"

(32) a. *Umubooyi y-a-*ya*-menn-ye-**ho** umwaana.
cook SP-PST-OP-pour-ASP-APPL child
"The cook poured it on the child."

b. Umubooyi y-a-*ya*-*mu*-menn-ye-**ho**.
cook SP-PST-OP-OP-pour-ASP-APPL
"The cook poured it on him."

The (b)-examples constitute a problem since their grammaticality does not follow from Baker's theory, which can only explain the ungrammaticality of the (a)-examples.

A similar problem arises from the following observation. Although the locative applicative in (33b) is ungrammatical, since its derivation involves incorporation from an adjunct PP (see example (12b) in Section 4.2.1), the same construction seems to be possible as the input for subsequent passivisation, relativisation or object marking of the applied object, (33c-e):

(33) a. Abaana b-iica-ye **ku** musozi.
children SP-sit-ASP on mountain
The children are sitting on (top of) the mountain.

b. *Abaana b-iica-ye-**ho** umusozi.
children SP-sit-ASP-APPL mountain
"The children are sitting on the top of the mountain." (Baker 1988: 245)

c. Abaana ba-*w*-iica-ye-**ho**.
children SP-OP-sit-ASP-APPL
"The children are sitting on (top of) it."

d. umusozi abaana b-iica-ye-**ho**.
mountain children SP-sit-ASP-APPL
"the mountain the children are sitting on"

e. Umusozi w-iica-w-e-**ho** n'abaana.
Mountain SP-sit-PASS-ASP-APPL by children
"The mountain is sat on by the children."

The examples in (33) constitute a problem for the incorporation approach since sentence (33b), which is ruled out by the incorporation theory, serves as an input for the grammatical sentences in (33c)-(33e). The contrast between (33b) and (33c,d,e) is surprising, but is not discussed by Baker.

Another issue worthy of attention, but which is not discussed in Baker's analysis, is that the locative applicative in Kinyarwanda (but not other applicatives) permits the occurrence of the locative applicative morpheme *-ho* (or *-mo*) without an overt NP. Compare (34a-b) and (34c-d).

(34) a. Umufuundi y-oome-tse-**ho** urukuta amatafaari.
builder SP-stick-ASP-APPL wall bricks
"The builder stuck the bricks on the wall."

b. Umufuundi y-oome-tse-**ho** amatafaari.
builder SP-stick-ASP-APPL bricks
"The builder stuck the bricks on it/there."

c. Umugabo y-a-gur-**i**-ye umwaana imyeenda.
man SP-PST-buy-APPL-ASP child clothes
"The man bought the clothes for the child."

d. *Umugabo y-a-gur-**i**-ye imyeenda.
man SP-PST-buy-APPL-ASP clothes
"The man bought the clothes (for someone)."

(34a-c) show that the complement of *-ho* is a "pro-object", but the benefactive applicative does not permit a pro-object.

In short, on the basis of Baker's theory, we can distinguish between two types of applicatives. The first type are those applicatives which are lexically derived. This class includes Kinyarwanda benefactive and instrumental applicatives as well as Chichewa instrumental applicatives. Both objects in these applicatives exhibit direct object properties. The second

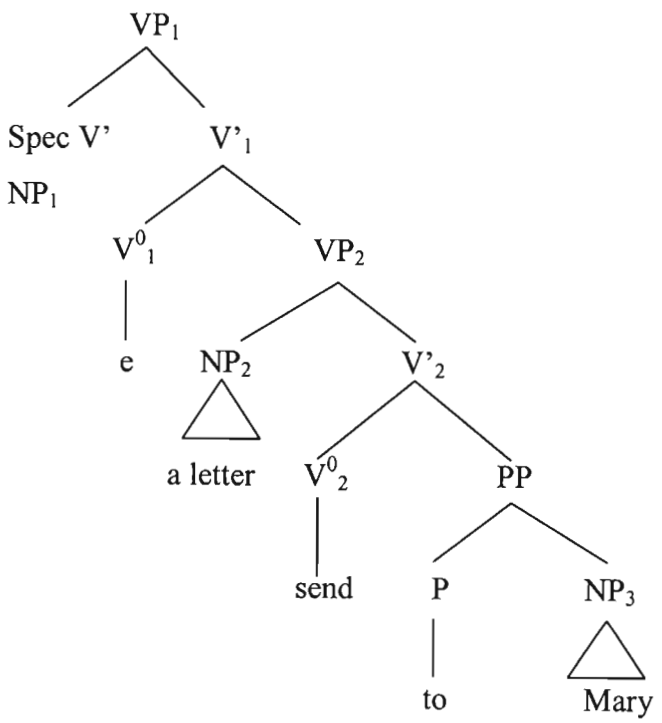
type is that of applicatives derived by preposition incorporation, namely Kinyarwanda locative applicatives and Chichewa benefactive applicatives. In this type of applicatives, only the applied object has direct object properties.

4.3. Applicatives as double object constructions (Larson 1988)

4.3.1. The double object construction

It was stated in Chapter 2 that, according to Larson (1988), the double object construction is derived from the dative construction through a process similar to passivisation. The underlying structure for both *I send a letter to Mary* and *I send Mary a letter* is *I a letter send Mary*:

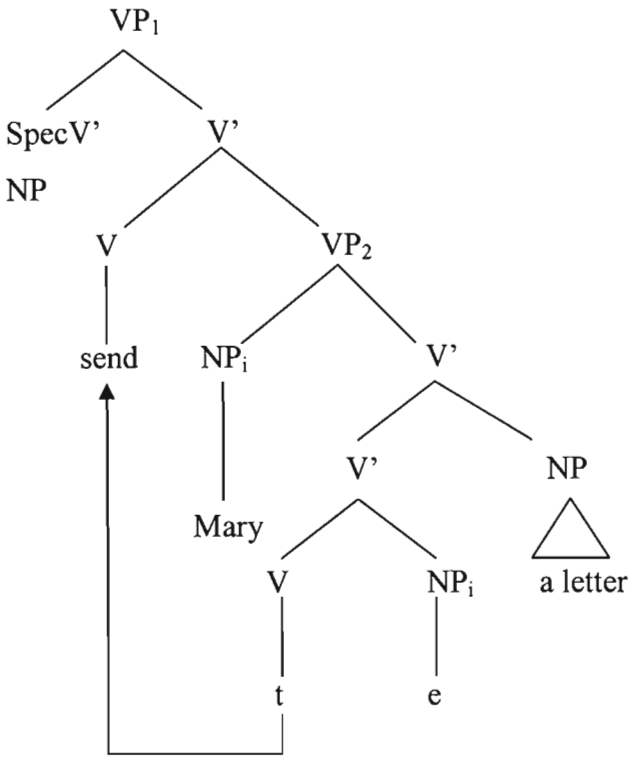
(35)



In Larson's analysis, the dative construction *I send a letter to Mary* is derived by movement of V^0_2 to light V^0_1, which allows it to assign case to the theme NP_2. In the derivation of the double object construction, the preposition which assigns case to the goal NP_3 is absorbed. The theme NP_2 is attached to V'_2 as an adjunct. The goal NP_3 which is caseless after

preposition absorption has to move to NP_2 which is a case position and the derived structure looks like (36), in which the goal NP_3 precedes the theme NP_2.

(36)



It is important to note that in the double object construction, the theme becomes an adjunct, losing its direct object properties as is shown in (37) in which only the goal can be passivised.

(37) a. Mary was sent a letter.

b *A letter was sent Mary.

4.3.2. Application to Kinyarwanda

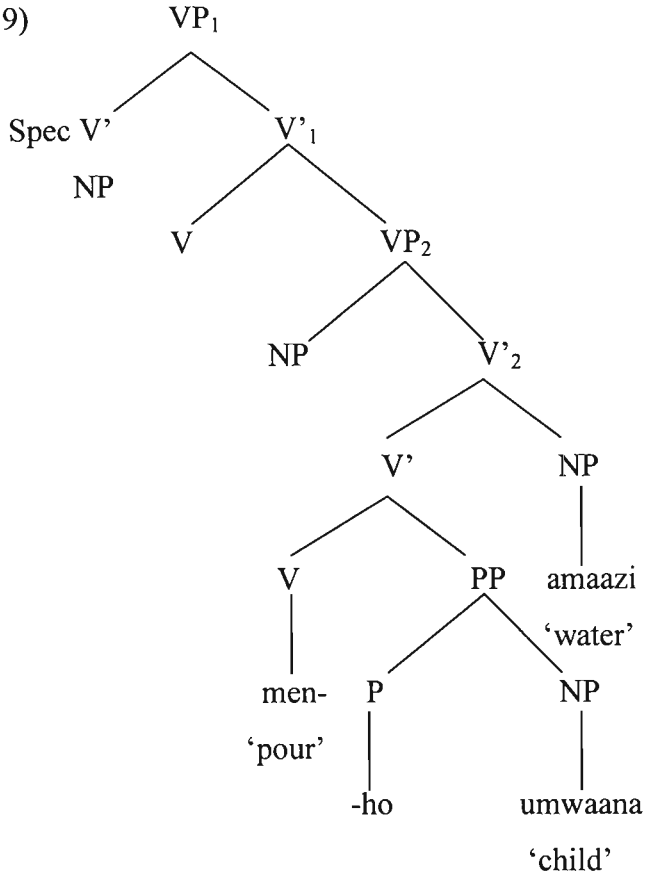
Consider the Kinyarwanda applicative construction below:

(38) a. Umubooyi y-a-menn-ye amaazi **ku** mwaana.
cook SP- PST-pour-ASP water on child
"The cook poured water on the child."

b. Umubooyi y-a-men-ye-**ho** umwaana amaazi.
cook SP- PST-pour-ASP-APPL child water
"The cook poured water on the child."

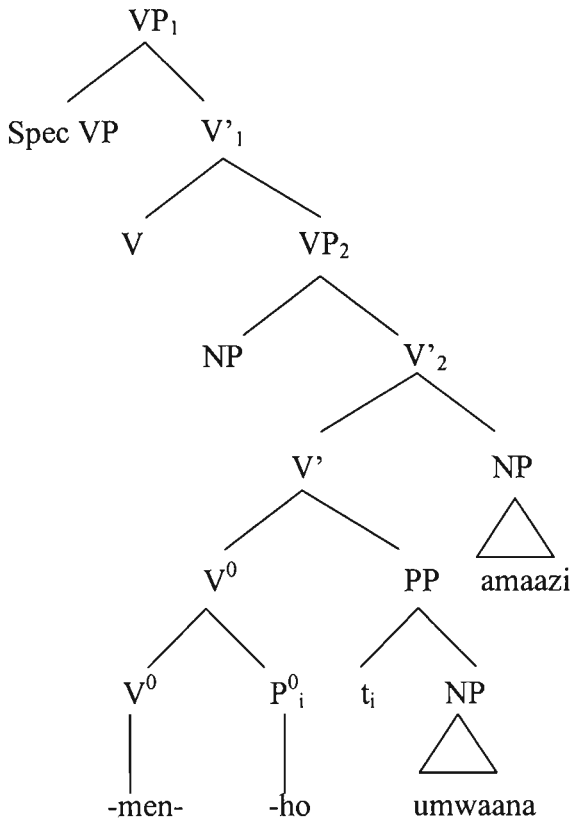
Applying Larson's analysis of double object constructions to Kinyarwanda, one could assume that (38b) represents a double object construction that is based on a D-Structure like (39):

(39)



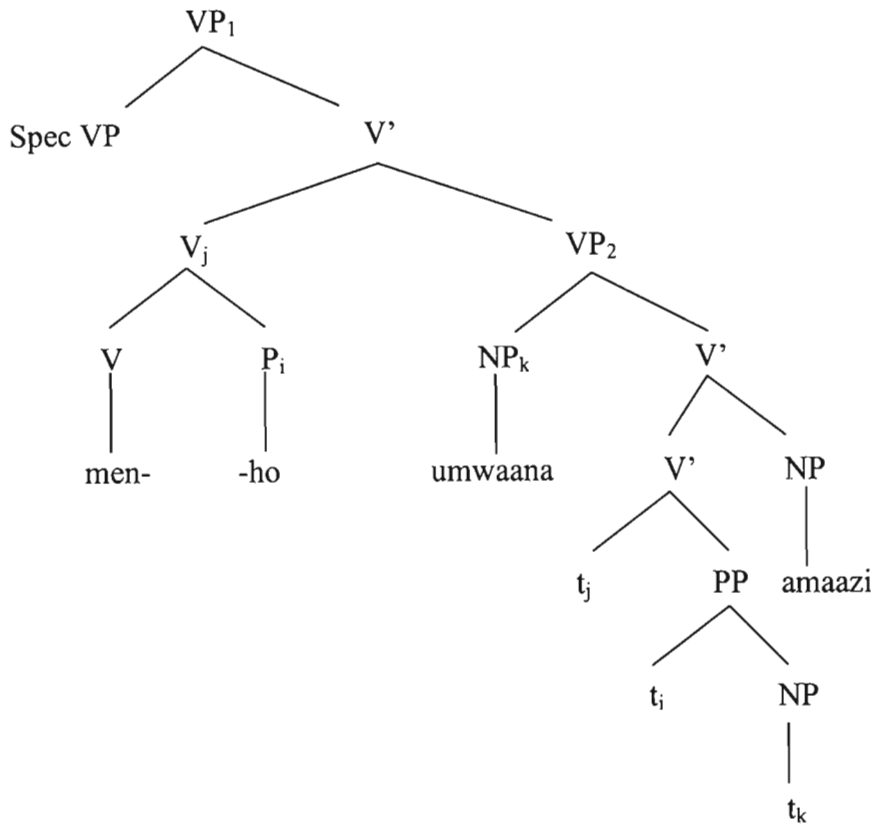
As in Larson's analysis, the theme NP in (39) adjoins to V'_2. The difference between Larson's analysis and its application to Kinyarwanda is that whereas the preposition is deleted in the double object construction, one could assume, following Baker's incorporation theory, that the preposition incorporates into the verb in applicatives. This step is illustrated in (40).

(40)



Following Baker (1988), one could also assume that the trace of the incorporated affix cannot assign case to the applied object. Therefore, this NP has to move to SpecVP, where structural case is assigned, in accordance with Larson's theory. The complex verb then moves to V^0_1. This derives the surface structure of the applicative construction:

(41)



As in double object constructions in English, the applied object precedes the basic object at S-Structure.

This analysis seems to work well for Kinyarwanda locative applicatives with regard to word order and other object properties.

4.3.3. Problems

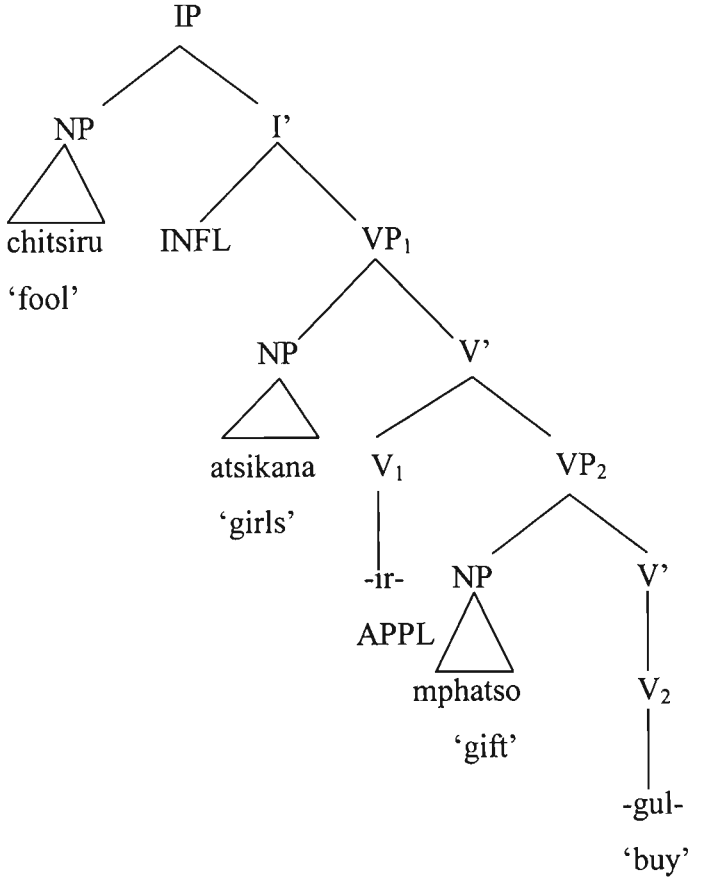
Larson's analysis does not work for many types of applicatives in Kinyarwanda. It fails to account for the differences between different types of applicatives or double object constructions, more generally with regard to direct object properties of the objects since he predicts that only one object, that is, the applied object, has these properties.

However, the difference between the locative applicative and other applicatives in terms of object behaviour seems to be accounted for by Marantz's (1993) analysis.

Marantz illustrates his analysis with the Chichewa examples in (42):

(42) a. Chitsiru chi-na-gul-**ir**-a atsikana mphatso.
fool SP-PST-buy-APPL-FV girls gift
"The fool bought a gift for the girls."

b.



Like in Larson's analysis, the tree structure comprises two VPs: the lower VP_2 and the higher VP_1. The head of the higher V' is an applied verb according to Marantz (1993). It corresponds to Larson's light V. In contrast to Larson's analysis, the applied object is generated in $SpecVP_1$ while the theme is generated in $SpecVP_2$ as is shown in (42b).

Marantz's analysis is based on the following assumptions: structural case is assigned only to a SpecVP position; the passive is specifier-to-specifier movement; object agreement (or object marking) is possible with an NP which is in a SpecVP position; an element which is in SpecVP is not governed by V^0 the head of the VP that dominates VP_2. For Marantz, SpecVP is an "active" position which he considers as "the locus for structural case" (Marantz 1993: 120)

Both symmetrical and asymmetrical languages have a tree representation of the double object construction like the one in (42) above. Marantz distinguishes symmetrical and asymmetrical languages as follows. According to Marantz, they differ in the way the verb and the applied affix combine. In asymmetrical languages (Incorporation/Merger languages), the lower V *incorporates* into or *merges* with the applied verb. Importantly, after incorporation/merger, the Spec of VP_2 no longer counts as a specifier position. Therefore, the basic object cannot get structural case in this position. Thus only the applied object is still in a specifier position ($SpecVP_1$) and therefore has structural case. Therefore it exhibits direct object properties. However, since the basic object is not in a specifier position anymore, the new head derived by incorporation can now govern it from above, according to Baker's GTC. The basic object is governed by V_1 and gets inherent case.

As for symmetrical languages (Raising/Adjunction languages), the lower V *raises* to *adjoin* to the applied verb. However, after the raising of the lower V, the trace left behind maintains all the properties the verb had prior to its movement. Thus, in contrast to Incorporation/Merger languages, the specifier of the lower VP continues to qualify as a SpecVP position. As a result, the theme in $SpecVP_2$, like the applied object in $SpecVP_1$, has direct object properties. The new verb complex derived by adjunction has only the properties of the higher V it has adjoined to and does not govern into the lower VP.

Concerning Kinyarwanda applicatives, it is then possible to say that the locative applicative corresponds to the double object construction in Merger/Incorporation languages (or asymmetrical languages). One could assume that after incorporation, $SpecVP_2$ no longer qualifies as a specifier, which results in the basic object losing its direct object properties. In contrast, applicatives in Kinyarwanda in which both objects behave like direct objects will be analysed as in Raising/Adjunction languages in which the verb complex does not govern into the lower VP.

However, Marantz's analysis is not without problems. For instance, Marantz (1993:135) suggests that in Raising/Adjunction languages, the fact that the higher V^02 fails to govern into the lower VP is because the lower VP acts as barrier for government. However, according to Baker's (1988) definition of barrier given in Section 2.4.4., VP is not a barrier if the lower V moves and adjoins to the higher V.

Another problem is that the difference in combining the applicative morpheme and the verb is not to be based on any syntactic principle; it rather seems to be an *ad hoc* stipulation.

Finally, Marantz's (1993) theory suffers from the same shortcomings as Baker's. For example, it cannot account for the data in (30) and (31) in Section 4.2.3. in which the theme in locative applicatives can acquire direct object properties under certain conditions despite the fact that the locative applicatives fall into the category of asymmetrical applicatives in which only the applied object has direct object properties.

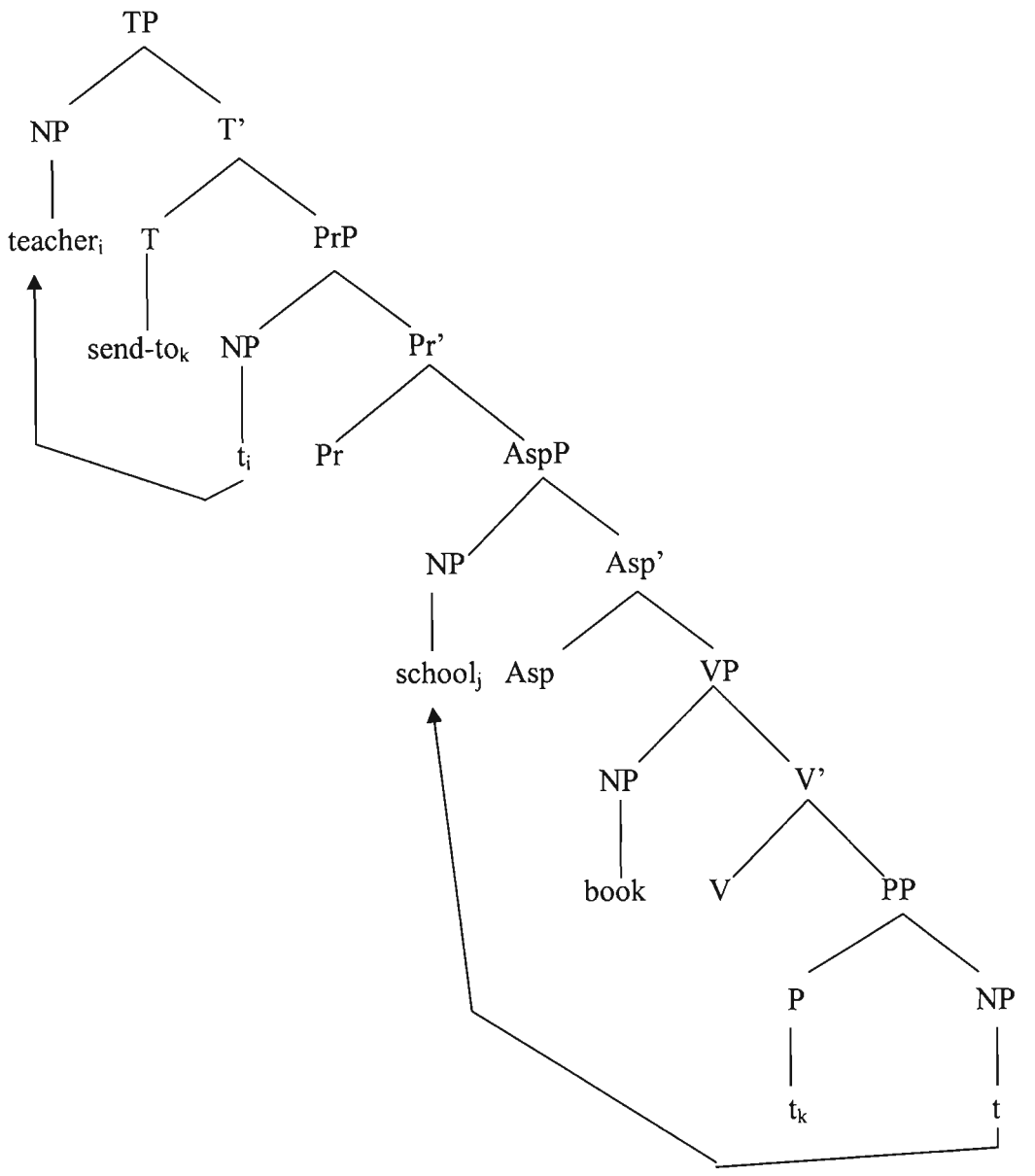
4.4. Nakamura (1997): Object extraction in Bantu applicatives

4.4.1. Object extraction and types of applicatives

Nakamura's (1997) analysis aims to explain the variation between Bantu languages with respect to the extraction of the theme in Bantu applicatives, but he also offers an elegant account for the differences between symmetrical and asymmetrical applicatives, which is based on the analyses proposed in Baker (1988) and Larson (1988) discussed above. Nakamura divides applicatives into four types. Type I and III are derived by Preposition Incorporation, along the lines of Baker (1988). In contrast, Type II and IV are not derived by preposition incorporation. Instead, the applicative morpheme combines with the verb morphologically and adds a new argument to the argument structure of the verb in the lexicon (Nakamura 1997: 27). According to Nakamura, Type I applicatives differ from Type III applicatives in that only the former have a corresponding construction with a full PP. The same difference distinguishes Type II from Type IV applicatives.

The tree structure of Type I and III applicatives looks like (43), with English words used for convenience.

(43)

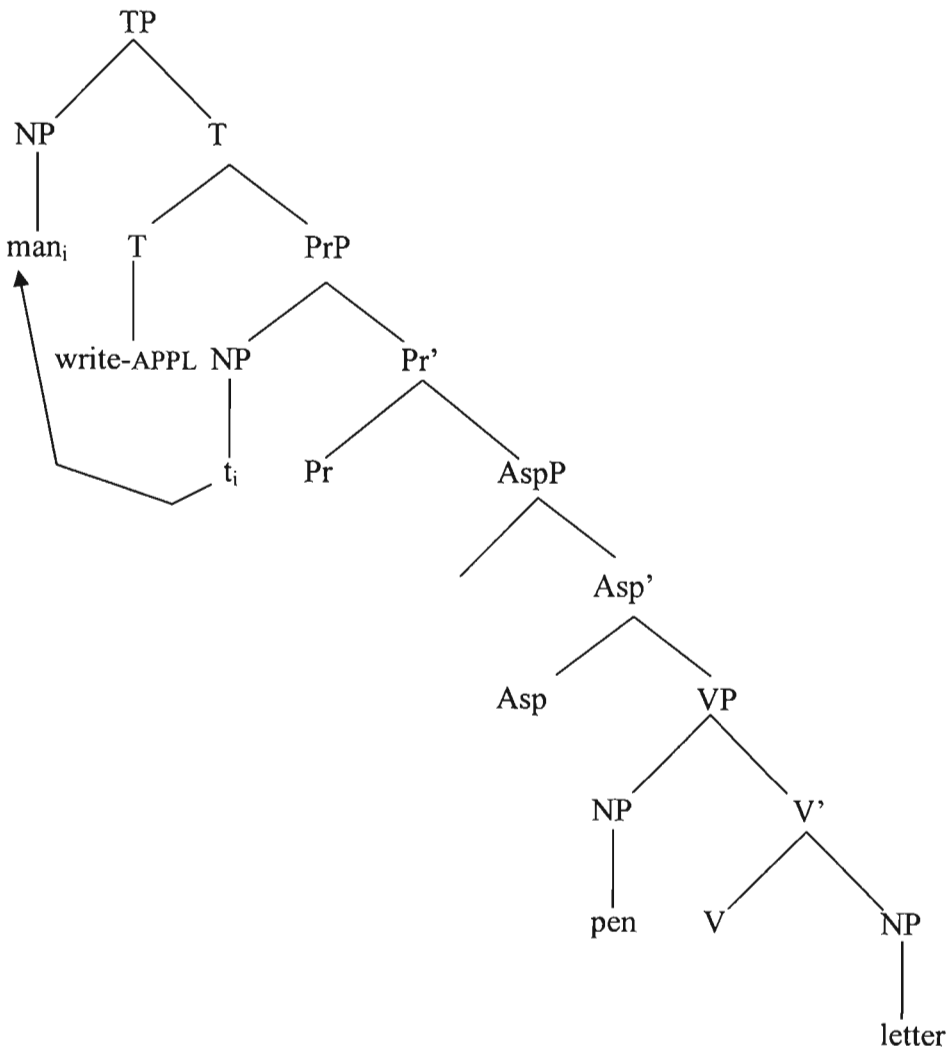


The structure in (43) is an elaboration of the structure of double object constructions developed by Larson and discussed in Section 4.3. The PP headed by the applicative affix is the complement of the verb while the theme occupies SpecVP (Larson's lower VP_2). The structure includes an aspect phrase (AspP) rather than VP_1 and structural case is assigned in SpecAsp (Larson's SpecVP_1). In non-applied constructions (when no incorporation has taken place and the preposition is non-affixal), the theme moves to SpecAspP to get structural case. However, as mentioned above, only Type I applicatives have a corresponding non-applied construction with a PP headed by a non-affixal preposition. If the preposition is incorporated to derive the applicative, it no longer assigns case to its complement, the applied object. Therefore, the applied object must move to SpecAspP to get case, while the theme remains in SpecVP. Since, according to Nakamura, only elements in SpecAspP can trigger object

marking and passivisation, it follows that in Type I and Type III applicatives, only the applied object, but not the theme, exhibits these direct object properties. It also follows that in these types of applicatives, the applied object is adjacent to the verb and obligatorily precedes the theme.

In Type II and IV applicatives, no incorporation is involved; the applicative morpheme adds a new internal argument to the existing argument structure of the verb. Therefore, both the theme and applied object are directly theta-marked by the verb. The tree structure looks like this:

(44)



Since both NPs are located inside the VP, either of the two can move to SpecAsp and receive structural case. This explains the fact that in Type II and Type IV applicatives, both objects can show direct object-properties (they can be passivised, object-marked etc.).

4.4.2. Application to Kinyarwanda

It is clear that Nakamura's analysis explains the two main types of Kinyarwanda applicatives straightforwardly. In fact, Nakamura uses Kinyarwanda examples for his illustration of Types I, II and IV. Kinyarwanda locative applicatives are of Type I and therefore show the asymmetrical behaviour discussed in Chapter 3. In contrast, Kinyarwanda instrumental applicatives are of Type II and benefactive applicatives are of Type IV. Therefore, these applicative constructions are symmetrical and both objects can function as direct objects. Moreover, Nakamura's analysis also explains why the theme can be extracted in non-applied locative constructions with a full PP, (45a), but not in applied construction such as (45b) (cf. example (63b) in section 3.5.4.1).

(45) a. amaazi umubooyi y-a-menn-ye ku mwaana
water cook SP-PST-pour-ASP on child
"the water the cook poured on the child"

b. *amaazi umubooyi y-a-menn-ye-**ho** umwaana
water cook SP-PST-pour-ASP-APPL child
"the water the cook poured on the child"

Nakamura accounts for the contrast exhibited in (45) on the basis of his version of the Minimal Link Condition (MLC) (see Chomsky 1995 and section 2.5).

(46) ***Minimal Link Condition (MLC)***
Derivation D blocks derivation D' if there exist chain links CL∈D and CL'∈D' such that CL and CL' are *comparable* and CL is shorter than CL'. (Nakamura 1997: 265).

As illustrated above, SpecAsp is the position in which structural case is assigned. In non-applied constructions, the theme NP moves there to receive (or, in Minimalist terms, to check) structural case, whereas it is the locative NP which moves to SpecAspP if the preposition is incorporated. In the latter case, the theme remains in SpecVP, as was shown in (43) above. Extraction of the Theme in the non-applied construction gives rise to the structure in (47a), whereas extraction of the Theme in applicatives is illustrated by (47b):

(47) a. $[_{CP}\ Op_i\ [_{TP}\ teacher_j\ sent\ [_{PrP}\ t_j\ Pr\ [_{Asp}t'_i\ Asp\ [_{VP}\ t_i\ tv\ [_{PP}\ to\ school]]]]]]]$

b. $*[_{CP}\ Op_i\ [_{TP}\ teacher_j\ sent\text{-}to_l\ [_{PrP}\ t_j\ Pr\ [_{AspP}\ school_k Asp\ [_{VP}\ t_i\ tv\ [_{PP}\ t_l\ t_k\ ]]]]]]$

(Nakamura 1997: 266)

In (47), the relative operator corresponding to the theme has been moved to SpecCP from SpecAsp. In contrast, the operator in (47b) has moved from SpecVP. Therefore, according to Nakamura's version of the MLC in (46), extraction of the theme in (47b) is banned, since (47a) is an alternative derivation with the same properties (i.e. extraction of the theme), but with shorter movement steps.

Nakamura's (1997) account predicts that theme extraction is possible in Type III applicatives, since these do not have corresponding constructions like (47a) with a full PP. Although the structure of theme extraction with these applicatives is identical to the ungrammatical (47b), the theme is expected to be extractable in Type III applicatives, since the shorter alternative (47a) does not exist. This prediction is borne out. As is shown in Nakamura (1997), Chimwiini benefactive applicatives are derived by preposition incorporation (and therefore show all the asymmetrical properties that were attested with Kinyarwanda locatives), but in contrast to Kinyarwanda locatives, a corresponding construction with a full preposition does not exist. Consequently, theme extraction is possible. The grammatical example (48) contrasts with the ungrammatical example (45b) from Kinyarwanda.

(48) Nama ya Nu:ru ø-m-tilang*ili*lo:mwa:na
meat REL Nuru SP-OP-cut-APPL-child
"The meat that Nuru cut for the child." (Chimwiini; Nakamura 1997: 270)

Kinyarwanda instrumental applicatives are of Type II. They are lexically derived, and a corresponding construction with a PP exists as well. In both constructions, the theme can raise to SpecAsp from where it can be extracted, as is shown in (49).

(49) a. $[_{CP}\ Op_i\ [_{TP}\ man_j$ write $[_{PrP}\ t_j$ Pr $[_{AspP}\ t'_i$ Asp $[_{VP}\ t_i\ t_v\ [_{PP}$ with pen]]]]]]

b. $[_{CP}\ Op_i\ [_{TP}\ man_j$ write-APPL $[_{PrP}\ t_j$ Pr $[_{AspP}\ t'_i$ Asp $[_{VP}$ pen $t_v\ t_i]]]]]$

(Nakamura 1997: 267).

Since no prepositional element is part of the applicative in (49b), (49a) and (49b) come from different numerations and therefore cannot be compared in terms of the MLC. Therefore, both constructions are possible. It follows that Kinyarwanda instrumental applicatives, in contrast to the locative applicatives, do allow for extraction of the theme (cf. (47) in Chapter 3):

(50) igiti umugabo y-a-tem-**eesh**-eje umuhoro
tree man SP-PST-cut-APPL-ASP machete
"the tree the man cut with the machete"

Finally, Kinyarwanda benefactive applicatives are of Type IV (there is no corresponding construction with a full PP), and consequently, extraction of the theme is possible in these applicatives as well(cf. (40) in Chapter 3):

(51) imyeenda umugabo y-a-gur-**i**-ye umwaana
clothes man SP-PST-buy-APPL-ASP child
"the clothes the man bought for the child"

An important aspect of Nakamura's analysis is that it associates direct object properties such as object marking with an NP located in SpecAspP. However, as was shown in Chapter 3, Kinyarwanda instrumental and benefactive applicatives do not only allow each of their two arguments to be marked by an object marker, but also allow for both object markers to *co-occur*:

(52) a. Abanyarwaanda ba-nyw-**eesh**-a inzoga umuheha.
Rwandans SP-drink-APPL-FV beer straw
"Rwandans drink beer with a straw."

b. Abanyarwaanda ba-ra-*wu-yi*-nyw-**eesh**-a.
Rwandans SP-FOC-OP-OP-drink-APPL-FV
"Rwandans drink it with it."

(53) a. Umugabo y-a-gur-**i**-ye umwaana imyeenda.
man SP-PST-buy-APPL-ASP clothes child
"The man bought clothes for the child."

b. Umugabo y-a-ra-*yi*-*mu*-gur-**i**-ye.
man SP-PST-FOC-OP-OP-buy-APPL-ASP
"The man bought them for him."

According to Nakamura's analysis, (52b) and (53b) can only be derived if *both* NPs corresponding to the object markers in (52b) and (53b) can be placed in SpecAspP simultaneously. Nakamura is therefore forced to assume that Asp in Kinyarwanda allows for multiple specifiers and that the feature which triggers movement of one object to its specifier is not necessarily erased in this process, but can still trigger movement of a second object to a second specifier (Nakamura 1997: 261ff., note 14).

This assumption is interesting, because it may also explain the observation concerning locative applicatives in Kinyarwanda made above. As was shown in Chapter 3, the theme in locative applicatives normally does not adopt direct object properties. However, data such as (54) (which were discussed in Chapter 3, Section 3.5.4.1 and repeated in Section 4.2.) show that the theme may adopt these abilities when the applied object is passivised, marked on the verb or extracted:

(54) a. Umubooyi y-a-*ya*-*mu*-menn-ye-**ho**.
cook SP-PST-OP-OP-pour-ASP-APPL
"The cook poured it on him."

b. Amaazi y-a-*mu*-menn-w-e-**ho** n' umubooyi.
water SP-PST-OP-pour-PASS-ASP-APPL by cook
"The water was poured on him by the cook."

c. umwaana amaazi y-a-men-w-e-**ho** n'umubooyi
cook water SP-PST-pour-PASS-ASP-APPL by cook
"the child the water was poured on by the cook"

According to Nakamura's analysis, the applied object may be realised as an object marker in (54a) since it has moved to SpecAspP. However, the object marking of the theme in the same example or the passivisation of the theme in (54b, c) suggests that it has also moved to

SpecAspP to check structural case after preposition incorporation and applied object movement. This would follow from the idea that Asp in Kinyarwanda allows for multiple specifiers. This point will be revisited in section 4.5.3.

For the sake of completeness, one could add that the other types of Kinyarwanda applicatives that pattern with Kinyarwanda instrumentals are also covered by Nakamura's analysis. For example, manner locative applicatives are symmetrical (both objects can show direct object properties), but an alternative non-applied construction may be realised by the full preposition *na*. Therefore, this type of applicative is also Type II.

As was shown in Chapter 3, the theme in Kinyarwanda locative applicatives can be extracted when the locative NP is the subject of a passive sentence or when it is realised as the object marker:

(55) a. amaazi umubooyi y-a-*mu*-menn-ye-**ho**
water cook SP-PST-OP-pour-ASP-APPL
"the water that the cook poured on him"

b. amaazi umwaana y-a-menn-w-e-**ho** n'umubooyi
water child SP-PST-pour-PASS-ASP-APPL by cook
"the water the child was poured on by the cook"

Nakamura's analysis also captures this surprising contrast between (55a,b) and (45b) above. The fact that the theme cannot be extracted in (45b) follows from the existence of an alternative derivation based on the same numeration. If such an alternative does not exist, as is the case in for example Chimwiini benefactives, then theme extraction is possible. Now, since the locative NP cannot be passivised or object-marked when it is part of a PP headed by a non-incorporated preposition, there is no alternative derivation with a full PP and passivisation or object-marking to which the constructions in (55) could be compared. This means that on the basis of a numeration which includes the passive morpheme and a locative subject or an object marker corresponding to the locative NP, only (55) can be derived, and therefore, extraction of the theme in (55) is the most economical (and therefore grammatical) derivation.

4.5.3. Problems

Alhough Nakamura's account captures most of the properties of applicative constructions in Kinyarwanda, some questions remain unanswered by his analysis. First, as was noted in Section 4.2.2., Nakamura suggests that in Type II applicatives, both NPs can become direct objects simultaneously by both moving to a SpecAspP position. I showed how this analysis may explain the fact that the theme in locative applicatives may be passivised once the applied object has been object marked. However, the idea that the theme in locative applicatives may also move to SpecAspP of course raises the question of why the theme can *only* move to SpecAspP in locatives if the applied object has moved there as well (and then has undergone passivisation or object marking). In contrast, the theme in instrumental applicatives can move to SpecAspP with the applied object receiving inherent case, but this is not possible in Type I applicatives. Furthermore, if both objects in locative applicatives can freely move to SpecAsp, why is the word order in these applicatives more restricted than in Type II applicatives?

(56) a. Umugabo y-a-tem-**eesh**-eje igiti umuhoro.
man SP-PST-cut-APPL-ASP tree machete
"The man cut the tree with the machete."

b. Umugabo y-a-tem-**eesh**-eje umuhoro igiti.
Man SP-PST-cut-APPL-ASP machete tree.
"The man cut the tree with the machete."

(57) a. Umubooyi y-a-menn-ye-**ho** umwaana amaazi.
cook SP-PST-pour-ASP-APPL child water
"The cook poured water on the child."

b. *Umubooyi y-a-menn-ye-**ho** amaazi umwaana.
cook SP-PST-pour-ASP-APPL water child
"The cook poured water on the child."

An answer to this problem may be sought along the following lines.[1] Suppose that in Kinyarwanda, Asp does indeed allow for multiple specifiers and therefore, both the theme and the applied object may receive structural case in all types of applicatives. More specifically, assume that Kinyarwanda applicatives with two objects allow in principle for two options: either the theme receives structural case in SpecAspP and the applied object inherent case in

[1] The solution outlined in the following was suggested to me by Jochen Zeller (personal communication)

VP, or both objects receive structural case in SpecAspP. Importantly, the reason why the theme cannot be the *sole* NP with structural case in Kinyarwanda locatives is that inherent case cannot be assigned to the complement of an incorporated preposition, but only to an applied object of a lexically derived applicative inside VP. Therefore, in Type I applicatives (= locatives) in Kinyarwanda, only the second option is possible, and both NPs have to move to SpecAspP to receive (check) structural case. This explains why both the theme and the applied object can simultaneously have properties of direct objects. However, this idea does not yet explain why the theme cannot be passivised or object-marked if the applied object has not been passivised or object marked as well. Here one could assume that this is because of certain ordering requirements of object NPs in multiple specifiers. Recall that the theme is in SpecVP, whereas the applied object is the complement of the incorporated preposition in locative applicatives. Therefore, the theme is closer to SpecAspP and is therefore attracted first, given the MLC, as it is formulated in Chomsky (1995) and in Section 2.5. in Chapter 2. This means that the first (= lower) SpecAspP will always be occupied by the theme; the applied object then moves to the second (= higher) SpecAspP. Therefore, the word order V-applied object-theme is the only possible order in Kinyarwanda locatives. Importantly, assuming that passivisation and object marking are feature-driven processes, this idea furthermore implies that for object marking and NP-movement to SpecTP in passives, the applied object will always be the closest NP which is attracted. Therefore, if only one of the two objects is passivised or object-marked, it has to be the applied object. Only if two such operations take place can the theme be attracted as well.

Another question that is not answered in Nakamura's account but which the account sketched above may answer, has to do with movement of the applied object in applicatives derived by preposition incorporation. Nakamura states that in locative applicatives, the applied object moves to SpecAspP to get structural case and that the theme gets inherent case. It is not clear, however, why the complement of the incorporated preposition is allowed to move to SpecAspP to check case when in fact the theme in SpecVP is closer to this target position. According to the MLC as stated in Chomsky (1995), the head Asp should attract the closest NP with an unchecked case feature – which is the theme. In order to make his account work, Nakamura therefore has to give up the MLC in the form proposed by Chomsky, which is certainly an unwelcome consequence of his analysis. In the analysis outline above, the theme moves to SpecAspP. Therefore, the Minimal Link would not have to be given up.

4.5. Summary

The chapter has presented the analysis of applicatives from different perspectives. It has been shown that preposition incorporation and Larson's double object construction theory can account for a number of properties of applicatives. I have demonstrated, for example, how the fact that Kinyarwanda locative applied objects behave differently from applied objects in other Kinyarwanda applicatives may be derived from the idea that the former type of applicative is derived by preposition incorporation, whereas the latter is derived in the lexicon. The most promising account, in my view, seems to be the one proposed by Nakamura (1997). This analysis, which incorporates core ideas developed in Baker's and Larson's work, would appear to provide a consistent and principle-based account which has captured a number of complicated and surprising aspects of the Kinyarwanda applicative construction, although some questions remain.

Chapter 5: Conclusion and recommendations for further research

The purpose of this dissertation was to provide a thorough discussion and syntactic analysis of applicatives in Kinyarwanda. To do so, the dissertation opened with a discussion of the theoretical background to allow a better understanding of the various analyses presented on this topic. In chapter 2 I discussed the theory of Universal Grammar and underpinning syntactic frameworks such as Government and Binding theory and the Principles and Parameters approach, as they are articulated in Chomsky (1981 and subsequent work). Since some analyses of Kinyarwanda applicatives are proposed within the Minimalist Program, the most recent theory in syntax, I introduced some aspects of this theory as well.

In Chapter 3, I provided a detailed description of Kinyarwanda applicatives which formed the basis of the discussion of various syntactic analyses in Chapter 4. Although the main emphasis has been on applicatives with two objects in this thesis, I also included a section on applicatives derived from intransitive verbs as well as on applicatives with more than two objects. I hope that the data on multiple objects will be useful for current and future research on the syntax of Kinyarwanda.

In Chapter 4, I discussed three analyses of applicatives I consider highly relevant to the study of Kinyarwanda: Baker's (1988) theory of incorporation, Larson's (1988) double object analysis and Nakamura's (1997) account of object extraction in Bantu applicatives. Baker's analysis accounts for Kinyarwanda locative applicatives, which are typically derived through preposition incorporation and also for instrumental and benefactive applicatives, which are lexically derived.

Similarly, Larson's double object analysis, if supplemented by some crucial assumptions of Baker's theory (most notably incorporation), accounts for the behaviour of objects in Kinyarwanda locatives.

Finally, the most successful analysis is Nakamura's (1997) account of object extraction in Bantu applicatives. Nakamura builds on Larson and Baker's work but pushes his analysis further to account for certain facts which are not addressed by the incorporation theory or in the double object analysis. For instance, on the basis of the MLC, Nakamura explains why the

theme in locative constructions has direct object properties only in non-applied constructions and fails to have them in the presence of a locative applied object.

Based on the data and analyses discussed in this thesis, a few issues have been identified that require further research into Kinyarwanda grammar.

1) The first issue has to do with the locative applicative morpheme. My research has shown that incorporation of a locative preposition does not always yield grammatical constructions. Instead, it is very common to have the locative applicative morpheme on the verb when the locative NP is not overt. Some researchers interpret this as *preposition+pro*, that is, as a case of 'pro-object." If this is the case, then the morpheme *-ho* would be the equivalent of the French locative clitic *y*. Future research would have to confirm or reject such an idea.

2) This study has revealed that some constructions in Kinyarwanda should be ruled out by the ECP although they are actually grammatical, whereas those which are expected to be grammatical according to the ECP are sometimes ungrammatical. Therefore, further research is required to determine whether incorporation is really possible from adjuncts or what alternative analysis can be given for reason, motive or some locative applicatives. These constructions are usually treated as adjuncts if realised as full PPs. Future research would also determine the limitations of the ECP in accounting for possible and impossible incorporation cases.

3) Baker's (1988) and Nakamura's (1997) analyses assume that some applicatives such as the locative are the result of preposition incorporation (e.g. *ku* is an independent prepositional phrase corresponding to the affixal morpheme *-ho),* while others, such as instrumentals or manner are lexically derived. More evidence is needed to demonstrate clearly why some prepositions in applicative constructions incorporate and others do not. For example, it is not clear why the manner affixal morpheme *-an* is not the result of incorporation despite its resemblance to the corresponding independent morpheme *na*.

4) In this research, it was also shown that the locative applicative morphemes *-ho* and *-mo* can appear after the locative NP, in contrast to other morphemes which must incorporate into the verb. Further study is required to establish whether *-ho* and *-mo* are indeed affixal morphemes or are rather prepositions with clitic properties. A related issue has to do with the applicative

morpheme *-yo*. Unlike *-ho* and *-mo*, the applicative morpheme *-yo* never co-occurs with an overt locative NP (see (14) in Chapter 3). Further research would have to focus on the syntactic properties of this morpheme in relation with *-ho* and *-mo*.

5) This research has also revealed that the locative applicative morpheme *-ho* can co-occur with the applicative morpheme *-ir-*. This suggests that *-ir-* does not add an applied object as is usually the case in applicative constructions, but a PP and, according to Baker's analysis, it could be interpreted as lexically derived. However, a syntactic analysis is required to determine its relationship with the PP it co-occurs with.

6) It was shown that the Kinyarwanda benefactive applicatives differ in behaviour from the Chichewa benefactive applicatives. Yet these applicatives are morphologically similar given that they both use the applicative morpheme *-ir-* to derive applied objects. In addition, objects in Chichewa benefactive applicatives behave like objects in Kinyarwanda locatives while objects in Kinyarwanda benefactive applicatives behave like Chichewa instrumentals. A further study would be required to provide a more detailed comparison between Kinyarwanda applicatives and Chichewa applicatives.

7) Finally, the existing syntactic analysis focuses mainly on applicatives with two objects. Yet, in Bantu languages, it is common to have constructions with more than two objects. A further study would, among other things, determine the syntactic representation of these objects in relation to the verb that heads the VP in which they appear.

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