WH-MOVEMENT IN KISWAHILI

A GOVERNMENT AND BINDING APPROACH

BY

PETER M. MATU

A dissertation submitted in partial fulfilment for the degree
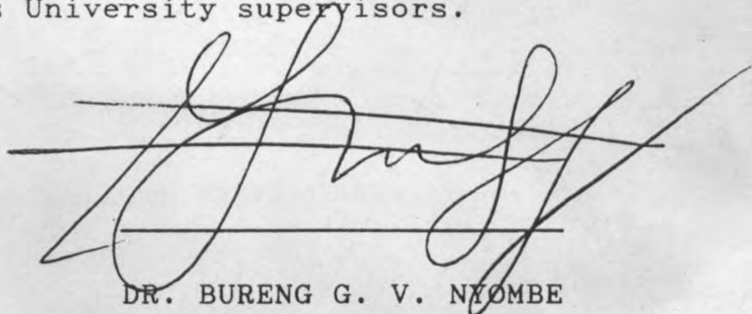of Masters of Arts in the University of Nairobi.

JUNE,1991

DECLARATION

This dissertation is my original work and has not been presented for a degree in any other University.
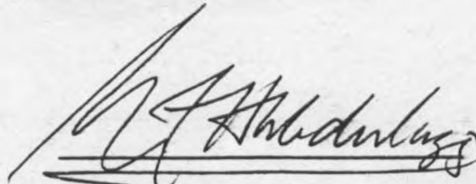
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This dissertation has been submitted for examination with our approval as University supervisors.

DR. BURENG G. V. NYOMBE

PROF. M. H. ABDULAZIZ

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DEDICATION

TO MY DEAR PARENTS: WANGECHI,D

AND

JOSEPH G. MATU

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ACKNOWLEDGEMENTS

concern with my work and they always gave me moral support. I am also grateful to Muthoni who sacrificed her precious time to correct this work. I would also like to thank Mungai Mutonya of the MA II Kiswahili class who not only gave me access to use his carrel but also enlightened me on the structure of Kiswahili sentences. Thanks also go to Pamela and Ngina for their tremendous help and cheerful moments. I would also like to thank other friends who helped me a lot and these include Kamau-'Nyakari', K'owuor, Njenga, Ntoruru, Taiga and others.

Finally, I would like to thank Christine Muhoro and Rayah Ali who typed this work with a lot of concern and diligence.

<div align="center">

TO ALL OF YOU I SAY:

SHUKRAN.

</div>

ABSTRACT

This study is an attempt to analyse Kiswahili sentences in which wh-phrases appear. Therefore, we want to explain the constituent order variations that are found in these kind of sentences. The study analyses these sentences within the framework of the GB theory as presented in Chomsky (1981).

In chapter one we have a background information on the language under study, the problem statement, objectives, hypothesis, rationale, theoretical framework and methodology.

In chapter two we give a brief introduction of wh-questions in Kiswahili then we start giving an analysis of these interrogatives within the framework of GB's move ∝ . Moreover, in this chapter there is a brief introduction of wh-relatives and then their analysis. Three types of relatives are identified in this section and they include the AMBA- Relatives, the Reduced Relative clauses and the Tenseless Reduced Relative clauses. Each type of the relatives has been analysed within the framework of the GB theory.

Chapter three provides the summary and conclusions of what we found out in Chapter two.

LIST OF SYMBOLS AND ABBREVIATIONS

1	A-bound	-	Antecedent Bound
2	$\overline{A}$-bound	-	Operator Bound
3	Adv	-	Adverb
4	AGR	-	Agreement
5	ASP	-	Aspect
6	α	-	Alpha (a Category or node)
7	Comp	-	Complementiser node
8	$\overline{C}$	-	Equivalent to $\overline{S}$
9	CM	-	Class Marker
10	CP	-	Complementiser Phrase (Equivalent to $\overline{\overline{S}}$)
11	Det	-	Determiner
12	e	-	empty node
13	ECP	-	Empty Category Principle
14	FT	-	Future
15	GB	-	Government and Binding
16	i	-	An index
17	$\overline{I}$	-	Inflection Single Bar
18	I	-	Inflection Category
19	INFL	-	Inflectional Component
20	IP	-	Inflectional Phrase (Equivalent to S)
21	j	-	An Index
22	k	-	An Index
23	l	-	An index

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24	LF	–	Logical Form
25	N	–	Noun
26	Neg	–	Negation
27	NP	–	Noun Phrase
28	NPe	–	Empty NP node
29	OA/OM	–	Object Agreement/Marker
30	PF	–	Phonetic Form
31	PRES	–	Present
32	Pro	–	Minimal Pronominal Element
33	PT	–	Past
34	Rel	–	Relative
35	SA	–	Subject Agrement
36	Spec	–	Specifier
37	t	–	trace
38	TNS	–	Tense
39	V	–	Verb
40	VP	–	Verb Phrase
41	*	–	ill-formed sentence

CHAPTER ONE

1.1.0 BACKGROUND TO THE LANGUAGE

Kiswahili, the language under study, is one of the most widely spoken languages. It belongs to the Niger- Kordofanian family of languages. Nurse, D and Spear, T (1985) have classified Kiswahili as belonging to the Sabaki Subgroup; one of the North East Coast Bantu.

Kiswahili as a language is composed of a number of dialects, thus Kiswahili is used as a generic term which designates a total of about eighteen dialects which are grouped into the Northern, the Central and the Southern dialects.

The present study is based on the Standardized version of Kiswahili. The Standard Kiswahili is based on the Unguja dialect (the dialect used in Zanzibar islands). The Unguja dialect was chosen to be used as a basis for standardization in 1929 at a meeting held in Mombasa (Kenya). The year 1930 saw the formation of the Interterritorial language committee which was charged with the responsibility of standardizing Kiswahili. The feeling then was that there was need for a language which would serve as a medium of instruction in a number of schools in the East African region. Kiswahili was seen as the most suitable language because it was a predominant language over a large area of Eastern Africa. However, the existence of dialectical and orthographic variation in the language hindered its use throughout the educational

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system. Thus the need for a standardized version of the language which would give a common orthography.

Presently, Kiswahili is estimated to be spoken by over 50 million people according to Chiraghdin and Mnyampala (1977). Kiswahili is the National language of Kenya and Tanzania.

1.2.0   STATEMENT OF THE PROBLEM

In English WH-questions are so called because they typically involve the use of an interrogative word beginning with WH(as in who, what, when.....). In English relatives also start with WH-(as in who, which......).

> On the basis of facts relating to
> subcategorization, case-marking, agree-
> ment, idiom chunks, auxilliary contrac-
> tion, wanna contraction, reflexives
> and selection restrictions, it is argued
> that initial wh-phrases in wh-questions
> originate internally within the sentence
> in underlying structure, and subsequently
> get adjoined to the initial (Comp) posi-
> tion by a transformation of WH-MOVEMENT.

> (Radford 1981:176)

WH-MOVEMENT states that:

1)   Adjoin a wh-phrase immediately to the left of COMP. If we have a structure like:

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2)   What will you do ?

Underlyingly the D-structure would be

3)   [$\overline{C}$ COMP [IP you will do what]]

The application of the WH-MOVEMENT to (3) would adjoin what
to Comp (plus NP-INFL inversion) and you get the following S-
structure.

4)   [$\overline{C}$ what$_i$ [IP will you do t$_i$]]

        In English wh-relatives have a wh-word on the surface
in the COMP position of $\overline{C}$. Furthermore, they have a gap
in the IP dominated by $\overline{C}$ as in

5) The boy [who$_i$] [Juma saw t$_i$]
              $\overline{C}$ IP

        The present study investigates, move $\propto$ (WH-Movement) in
Kiswahili within the Government and Binding framework. The
Wh-words in Kiswahili are realised as nani 'who' lini
'when',wapi 'where'..... in questions but as ambaye 'who',
ambako 'where' , ambacho 'which'.....for relatives.

        In view of the different and variant ways by which the
Wh- words[1] are realised in English and Kiswahili and in view
of the agglutinative nature of Kiswahili syntax, where study-

---

1 Wh-words in this study will represent all those Kiswahili
interrogatives and relatives which can translate to the
English WH-

ing syntax also involves studying the morphology, the present study is an attempt to describe and analyse how WH-Movement is realized in Kiswahili.

Our task therefore will be to test the adequacy of the GB theory in explaining the constituent order variations that are attested in Kiswahili data such as the following:

6) (a)   Juma   a-li- kuja   lini?
                      TNS

           Juma SA PT come   when

           (When did Juma come?)

   (b)   Lini   Juma   a-li-kuja?
                              TNS

          When   Juma   SA PT come

          (When did Juma come)

   (c)   Juma   lini   a-li-kuja?
                              TNS

          Juma   when   SA PT come

          (When did Juma come)

   (d)   A-li- kuja   lini   Juma?
              TNS

          SA PT come when Juma

          (When did Juma come)

   (e)   Lini   a-li-kuja   Juma?
                      TNS

          When. SA PT come   Juma

          (When did Juma come)

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This study also wants to find out whether there is any
movement in the three different realizations of Kiswahili
relatives as indicated below:

7)   (a) Kijana   ambaye   a-li-kuja......   .....
                                TNS
            boy   who   SA PT come....
            (The boy who came........)

    (b)   Kijana   a-li-ye-kuja ....
                             TNS REL
            boy   SA PT (who) come
            (The boy who came ......)

    (c)   Kijana   a-ja-ye.....   .....

            boy   SA come (who)
            (The boy who comes......)

    The present study will also concentrate on the
analysis of focus constructions which have wh-phrases typical
of questions and relatives. These constructions are portrayed
in the following examples:-

8)   Ni nani   a-li-ye-kuja?
                        TNS REL
            is who   SA PT (that)come
            (Who is it that came)

                            5

9)   Ni lini a-li-po-cheza?
                              TNS REL

          is when SA PT (that) play

          (when is it that he played)

     We shall set out to investigate whether the wh-ques-
tions in (6), the relatives in (7) and the focus construc-
tions in (8) and (9) conform to the Wh-diagnostics of Chom-
sky (1977) and how this diagnostics are incorporated in the
GB theory as presented in Chomsky (1981). The wh-diagnostics
are presented below:

10(a) A wh-construction has a wh-word on the surface in the
COMP position of a $\bar{C}$.

(b) It has a gap in the IP dominated by the $\bar{C}$.

(c) The relation between the wh-word and the gap is governed
by subjacency.

(d) The relation between the wh-word and the gap can span
many cycles, so long as subjacency is maintained.

1.3.0   AIMS   AND   OBJECTIVES

     The main objective of this work is to analyse wh-
constructions in Kiswahili within the GB theory.   Therefore
our goals will be to :

i) Find out whether there is any movement in constructions

that have wh-words.

ii) Find out at what level of representation move α (WH-movement) applies.

iii) The study also pays particular attention to move α in Kiswahili wh-words vis a vis the Subjacency condition and the Empty Category Principle.

1.4.0 HYPOTHESES

The working hypothesis for this study include the supposition that :

(i) In Kiswahili move α is subject to Subjacency.

(ii) That move α (WH-movement) in Kiswahili conforms to the Empty Category Principle.

(iii) That wh-movement in Kiswahili can be from D-Structure to S-Structure.

(iv) And that wh-words in Kiswahili can remain in situ (that is unmoved)

(v) And that movement in Kiswahili is optional.

1.5.0 RATIONALE

An analysis of Kiswahili question words and relatives and their movement will provide useful insights into the

structure of other Bantu languages that may not have been studied within this theory.

We believe that question words and relatives are an integral part of any language. Therefore, by studying them we are making a significant contribution to the study of Kiswahili syntax.

In this study we are subjecting proposals concerning Universal Grammar (U.G) to a much broader test to determine both its validity and its range of parametric variation.

1.6.0   SCOPE AND LIMITATIONS

In this study we analyse and discuss WH-Movement in Kiswahili within the GB theory with specific reference to the modules that are related to our study. These modules include:

        (i)   Bounding theory

        (ii)   Binding theory

        (iii) Case theory

        (iv)   Theta theory

        (v)   Government theory

        (vi)   Trace theory

        (vii). X-bar theory

Since our major interest is on wh-words we shall restrict ourselves to WH-movement. Other movements will only be

looked into whenever they relate to our study.

1.7.0   <u>THEORETICAL FRAMEWORK</u>

The descriptive tool for this study is the Government
and Binding Theory. At this stage we shall trace the develop-
ment of the model of grammar from Chomsky(1957) upto the GB
era.

In 1957 Chomsky wrote <u>Syntactic Structures</u> where he
presented a model of grammar that was different from that of
his predecessors, that is, the American Strucuralists.The
model of grammar in Chomsky (1957) was modified in 1965 when
Chomsky wrote <u>Aspects of the Theory of Syntax</u>. The '<u>Aspects</u>'
model of grammar is known as The Standard Theory (ST). In
this theory grammar is seen as composed of three levels of
representation, namely :

-The Syntactic component
-The Phonological component
-The Semantic component

The semantic component was additional and it was seen
as a major point of departure from the 1957 publication.
According to ST, every sentence has two identifiable levels
of syntactic structures which are :

(i)   The Deep structure

(ii) The Surface structure

The Deep structure has phrase markers generated by the rules of the Base-Subcomponent. They are mapped on to surface structures by application of transformational rules which are present in the transformational component. Deep structures are the input to the semantic component whereas surface structures are the input to the phonological component. The standard theory can be presented diagramatically as follows:

11)

Phase structure
rules   Lexicon

D-Structure ___semantic rules___ Semantic
representation

transformations

S-structure

Phonological
represenatation
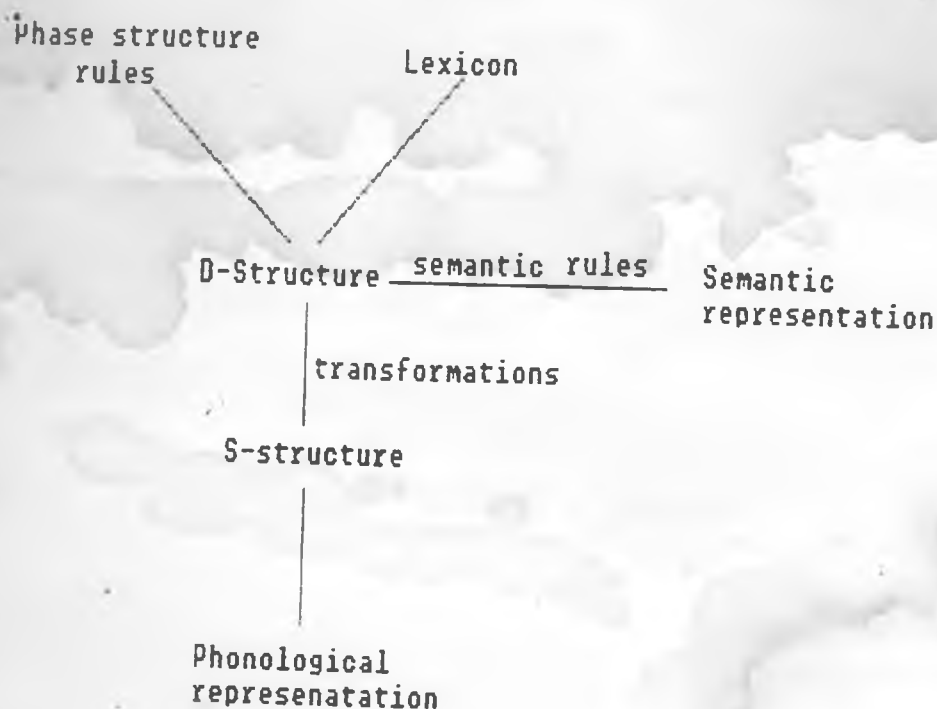
Due to some pertinent facts such as:

    -Focus and presupposition

    -Scope of quantifiers and

    -Coreference relations,

the 'Aspects' model was revised and this saw the emergence of the Extended Standard Theory (EST). This revision saw the introduction of $\overline{X}$-theory of Phrase structure rules and the realization that S-Structure contributes significantly to semantic interpretation. In ST semantic interpretation could only be done at the level of D-Structure. But in EST both levels, that is, D-Structure and S-Structure were available for semantic interpretation. The structure of EST is represented in figure 12:

12)

$\overline{X}$-theory of phase structure rules   Lexicon

D-structure   rules of thematic structure

semantic representation

S-structure   rules of anaphora and quantification

Phonological rules

Phonetic representation
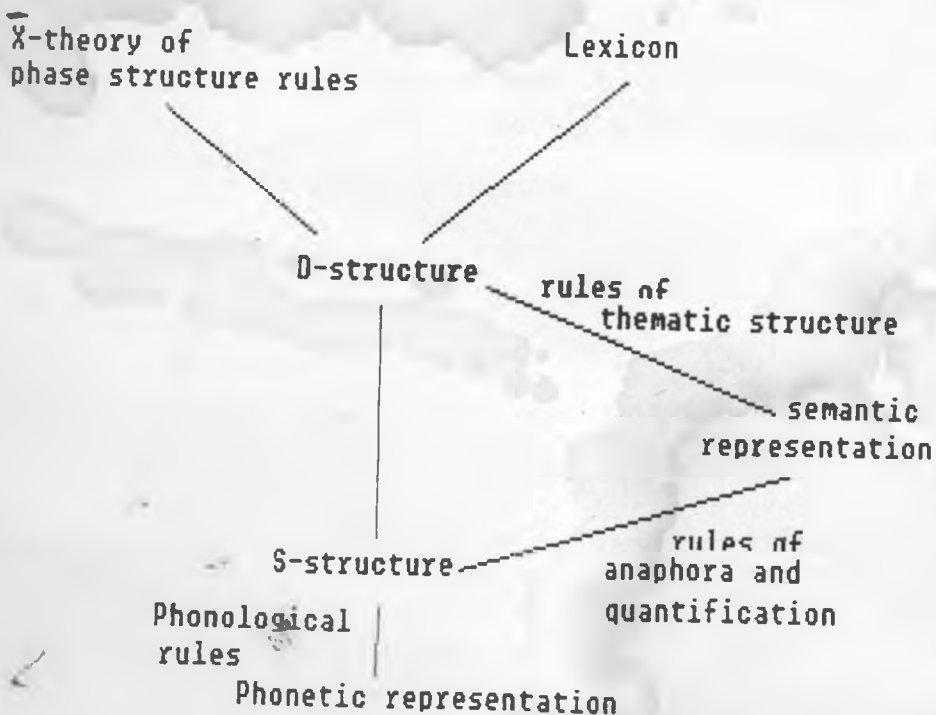
Further revisions were made on EST. This saw the inclusion of traces in the study of grammar. With the inclusion of traces a new conception of S-Structures emerged. S-Structures were enriched in such a way to preserve many of the properties of D-Structure. It was now possible to apply the rules of the thematic structure to S-Structure thereby simplifying the Semantic component. These revisions and modifications led to the stage known as the Revised Extended Standard Theory (REST). This REST is what is presently known as the Government and Binding Theory (GB). The Organization of the model of grammar as presented in the GB theory can be represented diagramatically in figure 13:

13.

$\overline{\text{x}}$-theory of p.s. rules   Lexicon

D-structure
move α (subject to subjacency)
S-structure

PF (phonetic form)   LF(logical form)
phonetic rules   rules of anaphora
deletion rules   (including ssc/tcs)
surface filters
stylistic rules   rules of quantification
                                rules of control
                                binding conditions

Phonetic representation   Semantic representation

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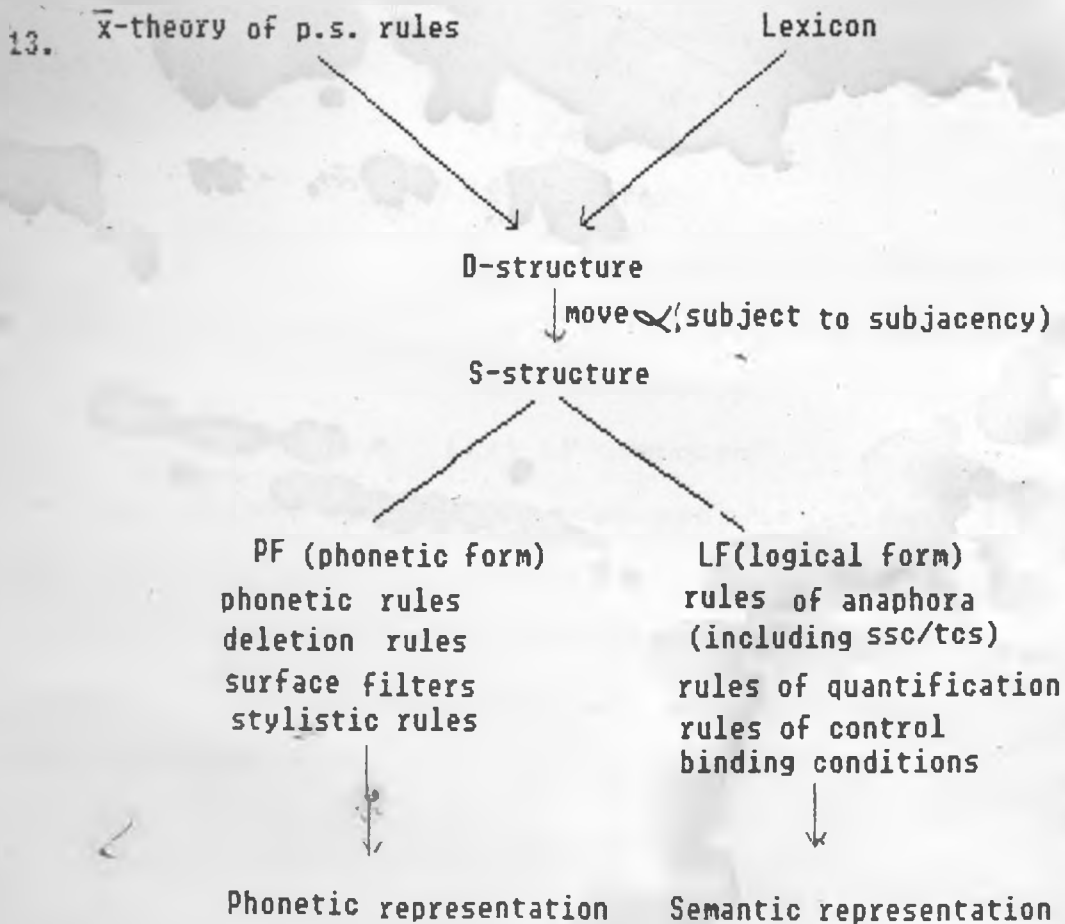
The GB theory is Chomsky's theory of Universal Grammar (UG). In UG the syntactic component of the grammar generates an infinite set of abstract structures, S-structures which are assigned a representation in phonetic form (PF) and in logical form (LF).The theory of UG must therefore specify the properties of three systems of representation, -S- structure, PF, LF, and of three systems of rules: the rules of syntactic component generating S-structures, the rules of PF component mapping S-structures to PF, and the rules of the LF component mapping S-structures to LF.

UG consists of interacting subsystems,which are,the subcomponents of the rule system of grammar and the subsystems of the principles.The following are the subcomponents of the rule system:

> (i) Lexicon
>
> (ii) Syntax
>
>> (a) Categorial Component
>>
>> (b) Transformational Component
>
> (iii) PF component
>
> (iv) LF component

The lexicon and categorial component constitute the base. Base rules generate D-structures through the insertion of lexical items into structures generated by the categorial component. Subsequently, they are mapped to S-structures by the transformational rule schema move $\propto$. The syntax gener-

ates   S-structures that are assigned PF and LF representa-
tions by the PF and LF components.

The subsystems of the principles include the
following:

(i) Bounding theory

(ii) Government theory

(iii) θ-theory

(iv) Binding theory

(v) Case theory

(vi) Control theory

The GB theory is seen as an organization of subtheories that
describe the grammar of a language. In this theory the sub-
components of the rule system interact with the subsystems
(sub-theories) of the principles. We shall at this stage
describe briefly the subtheories that we need for our study.

(1) **CASE THEORY**

This theory deals with the principles of Case assign-
ments to constituents. Furthermore, this theory concerns
itself with the assignment of abstract Case and its morpho-
logical realization. In GB theory Case is assigned under
government. In English NP is assigned the Case feature
[+NOMINATIVE] if governed by TENSE. NP is assigned the Case
feature [+OBJECTIVE] if governed by a transitive Verb or a
Preposition.

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Case Filter: *NP, where NP has no Case.

(ii) BINDING THEORY

This theory is concerned with relations of anaphors, pronouns, names and variables to possible antecedents. It is a theory that was developed to account for an area of semantic interpretation crucial to the discussion of syntax. In the binding theory, three binding conditions have been set out and these are:

(A) · An anaphor must be bound in its governing category

(B) A pronominal must be free in its governing category

(C) R-expressions must be free everywhere

In order for us to understand the binding conditions we need the following explanation:

(i) X is bound if X is an argument coindexed with a c-commanding argument, if not bound it is free.

(ii) An argument is an NP-position within IP or NP

(iii) X c-commands Y if the first branching node dominating X dominates Y, and if neither X nor Y dominates the other

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(iv) X is the _governing category_ for Y if and only if X is the minimal NP or IP containing Y, a governor of Y, and a SUBJECT accessible to Y.

(v) X _governs_ Y if X is the minimal governing node (V,A,N,P, or TENSE) c-commanding Y, and the is no intervening NP or C-bar barrier between X and Y.

(iii) BOUNDING THEORY

This theory is concerned with placing locality conditions on movement transformations and its chief principle is Subjacency. Subjacency condition states that :

> No constituent can move across more than one bounding node in any single rule application. (Radford 1981).

The nodes that count for Subjacency are known as 'Bounding nodes'. Since the bounding theory involves moving of constituents from one place to another, the position to which movement takes a constituent must be empty. And the position from which movement extracts a constituent should either be adjacent or subjacent (not more than one bounding node away from) to the landing site. The bounding nodes are NP,IP and even sometimes C̄.

(iv) θ-THEORY

This theory deals with the assignment of thematic roles such as agent-of-action, etc (henceforth θ-roles). It accounts for the relation between Verbs and their arguments.

The most important task of θ-theory is to determine the circumstances under which an NP can be an argument of a Verb, terms such as agent, patient and goal are commonly used. Under this theory we have the θ-criterion which states that:

> Each argument bears one and only one θ-role, and each θ-role is assigned to one and only one argument.

Furthermore, we have the projection principle which states:

> θ-criterion holds at D-structure, S-structure and LF.

(v) GOVERNMENT THEORY

The central notion of government theory is the relation between the head of a construction and categories dependent on it. Government is defined as:

X governs Y if and only if Y is contained in the maximal $\bar{X}$-projectin of X, X^{max}, and X^{max} is the smallest maximal projection containing Y, and X c-commands Y.

The Governors are

(i) X^0 (ie, V, N, A,P)

(ii) [INFL [+tns] AGR] INFL

(iii) NPi, where Y(the governee)=NPi

Under this theory we have proper government which is defined as:

X properly governs Y if and only if X governs Y in terms of government described above and X is either X^0 (ie,V, N, A, P) or NPi, where Y = NPi

(VI) EMPTY CATEGORY PRINCIPLE (ECP)

[e]must be properly governed

The ECP is not restricted to [NPe] NP but applies to other

empty categories as well.

(VII) $\bar{X}$-THEORY OF PHRASE STRUCTURE RULES

The head of any phrase is termed X, the phrasal
category containing X is termed $\bar{X}$ and the phrasal
category containing $\bar{X}$ is termed $\bar{\bar{X}}$. ($\bar{X}$ and $\bar{\bar{X}}$ are then
known as projections of X). The most important nodes in terms
of the rules and principles of grammar are the head(X or X^0)
and the phrasal node (the X with the maximal number of bars).
It is therefore useful to refer to the latter as X^{max}.

$\bar{X}$-theory also deals with the feature analysis of
syntactic category. Four basic syntactic categories have been
identified as follows in terms of the features[+-N] (substan-
tive) and [+-V] (predicative). Therefore, we have

$$[+N, +V]=A$$
$$[+N, -V]=N$$
$$[-N, +V]=V$$
$$[-N, -V]=P$$

Within the $\bar{X}$-framework each verb is subcategorized in terms
of the number of arguments it allows to co-occur with it.
Such information provides the basis for the D-structure.

(VIII) TRACE THEORY

In this theory a moved constituent leaves behind in the position out of which it moves a coindexed empty node 'trace' of itself. When an element moves from one place to another, there is an empty node left behind. In order to know which category has been moved from the empty node, the latter is coindexed with the moved category by using subscripts. A coindexed empty node left behind by some moved constituent is called the trace of the moved constituent.

Chomsky has this to say about the interaction of the subtheories:

> These subsystems(subtheories) are closely related in a variety of ways. I will suggest that binding and Case theory can be developed within the framework of government theory, and that Case and θ-theory are closely related. Certain notions, such as c-command, seem to be central to several of these theories....Chomsky (1981:6).

Our study concentrates on WH-movement with specific reference to the modules that we have reviewed above."Through the interaction of these systems, (that is subtheories and subcomponents of the rule system) many properties of particular languages can be accounted for." Chomsky 1981. And it is in this light that we want to account for WH-movement in Kiswahili.

1.8.0 <u>LITERATURE REVIEW</u>

Most of the early works written on Kiswahili syntax (grammar) are those by the Foreign Service Institute and by Christian missionaries. We shall not review these works here.

Studies in Kiswahili grammar that will be of assistance to us include Ashton(1944), Myachina(1973),Loogman(1977), Nkwera(1978), Kapinga(1982) and Mbaabu(1985). These works have outlined the various wh-words in Kiswahili and their occurence within the Kiswahili Noun Class System. These works will help us identify the various wh- words and their occurence within the Kiswahili sentence structure. The present study, therefore, differs from the works cited above in that these works are done within no theoretical framework. Furthermore, these works have not mentioned anything on the movement of wh-words.

Maw (1969) has written on the internal relationship of Swahili sentences within the Hallidaian model of Scale and Category. This work will help us discover the internal structure of Swahili sentences but it differs from our work in that we are using a different theoretical framework which in this case is Chomsky's GB theory.

Other works that will be helpful to us though written on Nilotic Languages include Omondi(1982) especially the chapter on interrogatives and relativisation. Kurgatt(1989)

and Ogutu (1989) will be looked at in relation to WH- move-
ment.

Works that have a direct bearing to our study and will
be helpful to us include Mwove (1987). Due to the fact that
she deals with the NP in Kikamba which is a Bantu language,
chapter 2 of her work which is on relative clauses will give
us useful insights on the relative clause in Kiswahili , also
a Bantu language.

Thandi (1988) Pronominalisation in Kiswahili, will be
relevant to our work especially with the fact that she is
working within the same theoretical framework we are using.
Khamis (1988)- A typology of gaps in Kiswahili -this work
will help us identify easily the different types of empty
categories that are found in Kiswahili. Furthermore, Khamis
is working within one of the modules(binding) of the theory
we are using. His work will show us how to apply the binding
theory to Kiswahili data.

Owili (1989), In chapter 3 of this work interroga-
tives and relative constructions in Kiswahili are discussed.
Her work will provide us with a better understanding of
movement of wh-words when the theory we are using was on its
early stages of development.

Mgullu(1990) will be referred to especially his
chapter on relative clauses. Note that Mgullu uses the EST

which is a precursor to GB theory.

For theoretical issues we rely on Chomsky (1981C),(1984),(1985) and 1986. We also rely on other scholars who have written on GB and these include Van Riemsdijk and Williams(1986), Cowper(1986), Horrocks(1987) and Lasnik(1988). We will also look at other works by other scholars that we may find useful to our study.

1.9.0   METHODOLOGY

In order to give a comprehensive data, I relied on my own intuitions as a speaker of Standard Kiswahili. We also cross-checked our data with other native speakers of Kiswahili.

Library research was another method we used especially to gain insights into the Government and Binding Theory.

CHAPTER TWO

2.1.0 INTRODUCTION

In section 1.2.0 we said that WH-questions in English involve the use of an interrogative word beginning with WH-, for example who and what . In Kiswahili, the interrogatives cannot be identified with any prefix. The interrogatives in Kiswahili include nani 'who', wapi 'where', nini 'what' , -pi- 'which', kwa nini 'why', ngapi 'how many/much', lini 'when' and gani 'which'. Therefore, in this study WH- questions will refer to all those Kiswahili interrogatives which can translate to wh-words (questions) in English. Wh- questions in English and Kiswahili usually requests information about the identity of some entity in the sentence, for example , a who-question asks for information about the identity of a particular person.

The interrogative words -pi- 'which' and ngapi 'how many' differ from other interrogatives in Kiswahili in that this two take class prefixes. In the sentence below :

11)   Kiti ki- pi   ki-me-potea?

        Chair CM which   SA/ASP lost

        (which chair is lost)

The underlined -ki- in (11) shows that the entity being questioned belongs to -ki- class, and the entity in this case is kiti 'chair'.We may also argue that ki is also a subject agreement

marker because it agrees with the subject _kiti_. We do not want
to involve ourselves in the controversy about what criteria one
uses to classify Kiswahili nouns, but we only suggest that, that
class markers and concordial markers, like subject agreement, are
in free variation. The wh-word _- ngapi-_ which indicates 'how
many/much' takes class prefixes which marks plurality. This is
attested in the following example:

12) (a)   U-na-taka   mayai ma- ngapi?
                TNS

         SA pres want eggs CM how many

         (how many eggs do you want)

The class marker _-ma-_ is referring to _mayai_ 'eggs' which are in
plural and in the _ma-_class. Whereas _-ma-_ in _mangapi_ marks the
class in which _mayai_ 'eggs' belong, it is also an object agree-
ment marker allowing concordial agreement between _mayai_ and _ngapi_
'how many'. Note that in an example like (12b).

   (b)   Nguo   ngapi   zi-me-ibiwa?

             clothes   how many SA ASP-stolen

             (how many clothes have been stolen)

the class marker/prefix is missing. In such a case it is claimed
that the class prefix is realised as ø (zero) but '_ngapi'_ still
marks plurality·and this is supported by the fact that the sub-
ject agreement marker _-zi-_ is in plural. If the subject agreement
is in singular then the sentence will be illformed as in:

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*Nguo   ngapi   i-me-ibiwa?

clothes how many SA ASP stolen

* (how many clothes is stolen)

All the Kiswahili wh-words can occur in a pre-verbal or a post-verbal position in a sentence. We shall exemplify this with the following sentence which will be taken as a representative of all the other wh-words in questions in Kiswahili.

13) (a)   post verbal: Akach a-li-kuja lini?
                                    TNS

Akach   SA PT come when

(When did Akach come)

(b)   pre-verbal: Lini Akach a-li-kuja?
                                    TNS

when Akach SA PT come

(when did Akach come)

We now proceed to show the movement of wh-words in English and see whether this is also attested in Kiswahili. In a con-struction like:

14) (a) When did you come?

underlying it would be

(b) you came when

Radford (1981) has argued that the wh-phrase actually origi-
nates from the position after the verb as in (14b) and only
gets moved into initial position as in (14a) by a rule of
WH-movement. Therefore, (14b) which is the initial phrase can
be represented in a phrase marker as 15(a) below:

15) (a)

```
                         IP
                        /  \
                       /    \
                      /      T
                     /      / \
                    /      /   \
                   NP     /     \
                   |      |      \
                   N      |       VP
                   |      |      /  \
                  you     I     /    \
                          |    /      \
                        INFL  V        ADV
                         TNS  |         |
                          |   |         |
                          PT  come     When
```

26
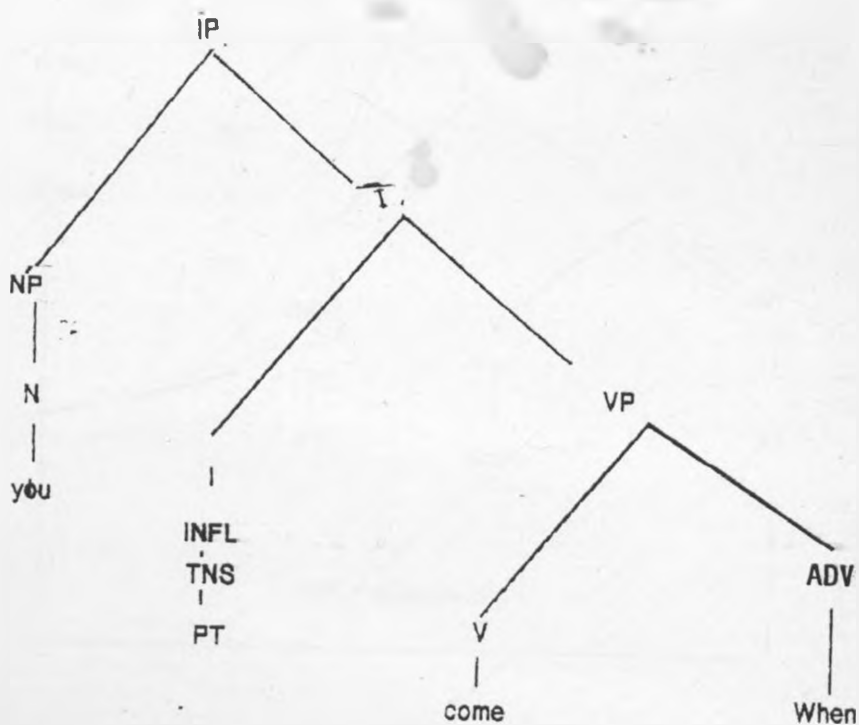
Rule (1) in section 1.2.0 applies to (15a) to give us (15b)
as the S-Structure.

(15 b)
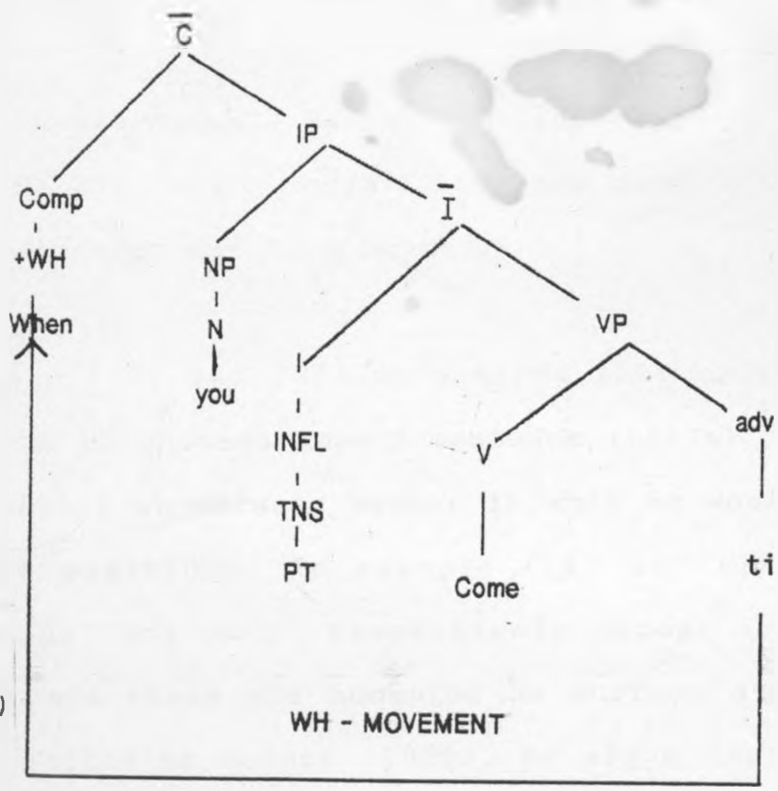
(Ignoring the
`do` insertion)

2.2.0   IN SITU WH-PHRASES

With that brief introduction of wh-words in Kiswahili and WH-movement in English in section 2.1.0. We now proceed to consider some Kiswahili constructions and investigate the possibility of WH-movement applying to them. Let us first look at the following examples:

16)   Mweri   a-na- m- penda nani?

                      TNS

Mweri SA PRES OA love who

(Whom does Mweri love)

   17)   Anne   a-me- nunua   ma-yai   ma-ngapi?

         Anne   SA ASP   buy   eggs   CM   how many

        (How many eggs has Anne bought)

In examples (16) and (17) we observe that unlike in English where the wh-phrases appear sentence initially in S-structure, Kiswahili wh-phrases appear in what we would call the D-structure positions. In example (16) and (17) <u>nani</u> 'who' and <u>mangapi</u> 'how many' respectively appear in post-verbal position and these are accepted as surface structure constructions. Following Lasnik (1988), we argue that something that is not in COMP in S-structure can be questioned. This is due .to the fact that, in Kiswahili, in the examples just cited above, the wh-phrase <u>nani</u> 'who'and <u>mangapi</u> 'how many' respectively are not in COMP at all, therefore they are all in situ-that means they are unmoved.

It is worthwhile to note that the examples above can be given an echo question interpretation in English because they fall under the class of echo questions. But we cannot give them an echo question interpretation in Kiswahili because they are not. They can only be given an echo question interpretation within certain restricted contexts within the domain of discourse, but this is not of our concern here. The way (16) and (17) are structured is one of the forms in which Kiswahili wh- questions have.

It has been observed that English has a S-structure requirement, which states that at S-structure the wh-phrase must already be in COMP (as shown in example 15b). But in a language such as Kiswahili which lack, in some cases, overt WH-movement (as shown in examples 16 and 17) this S-structure requirement is optional. The rule for WH-movement is inapplicable to (16) and (17)since the rule applies only to wh-phrases in COMP. Chomsky (1981) has argued that there is a rule for interpreting the in situ(unmoved) wh-words. He says that the rule for interpreting in situ wh-words is the same as the rule interpreting quantified NPs in general. The rule is given as:

(18)   [.. wh-phrase...]------[xi] [...xi....]

Rule (18) would adjoin the question operator to some IP

dominating the wh-phrase and would place a coindexed variable
in the place of the wh-phrase. If we apply this rule to a
construction like(16) repeated here as(19)(a)

(19)(a)   Mweri anampenda nani?
              (whom does Mweri love)

we would get (b)

(b)   Xi[Mweri anampenda Xi]
                      which reads
        for which Xi,Xi is a person, Mweri loves Xi.

     Rule(18) shows that it is only at the level of syntax in
which the wh-words in (16) and (17) remain in situ.
Otherwise, at the level of Logical Form (henceforth LF) these
wh-phrases move. In essence what (18) says is that at the
level of LF there is a rule just like WH-movement, except
that its results are silent. There are some syntactic opera-
tions whose results can be heard. These are operations form-
ing S- structures like (15a) and (b). There are other opera-
tions whose results cannot be heard. These are operations in
LF. Therefore if we perform some operation between S-Struc-
ture and LF its results will not be heard like in (16) and
(17).

2.3.0 WH-MOVEMENT

After giving an analysis of wh-phrases that occur in their D-structure positions, our next task is to consider the following constructions and explain what causes the constituent order variations if any

20)   Lini Juma a-li-kuja?

                    TNS

          when Juma SA PT come

               (when did juma come)

(21)   Nini Maria a-na-taka?

                    TNS

          what Maria SA PRES want

          (what does Maria want)

Since Kiswahili is an SVO language the verbs kuja 'come' and 'taka' 'want' in (20) and (21) respectively are subcategorized within the $\bar{X}$-framework as verbs which take object complements which can either be NP[S] or PP[S]. But in (20) and (21) we observe that the object complements are missing. Furthermore, in sentence initial position we do not have subjects but we have objects which precede the sujects. Following subcategorization facts we shall posit that lini 'when' and nini 'what' originate from the position immediately after the verb (extraction site). Therefore, the underlying structure for (20) is (22):

31

22)   Juma a- li- kuja lini
             TNS

     Juma SA PT   come when

     (when did Juma come)

Lini 'when' in (22) is moved from the post-verbal position (its extraction site) to the Comp position (its landing site) by a rule of WH-movement so that we get (20). 22 can be represented in a phrase marker as in (23):

23)
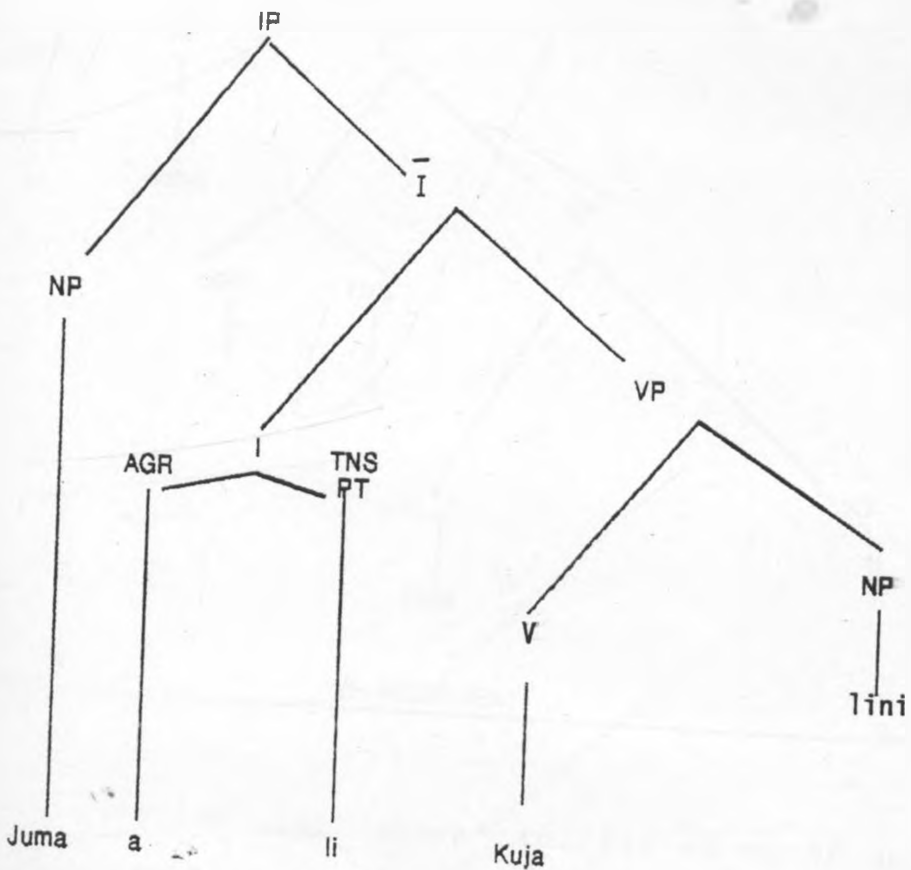
WH-movement applies to (23) and we get:

24)
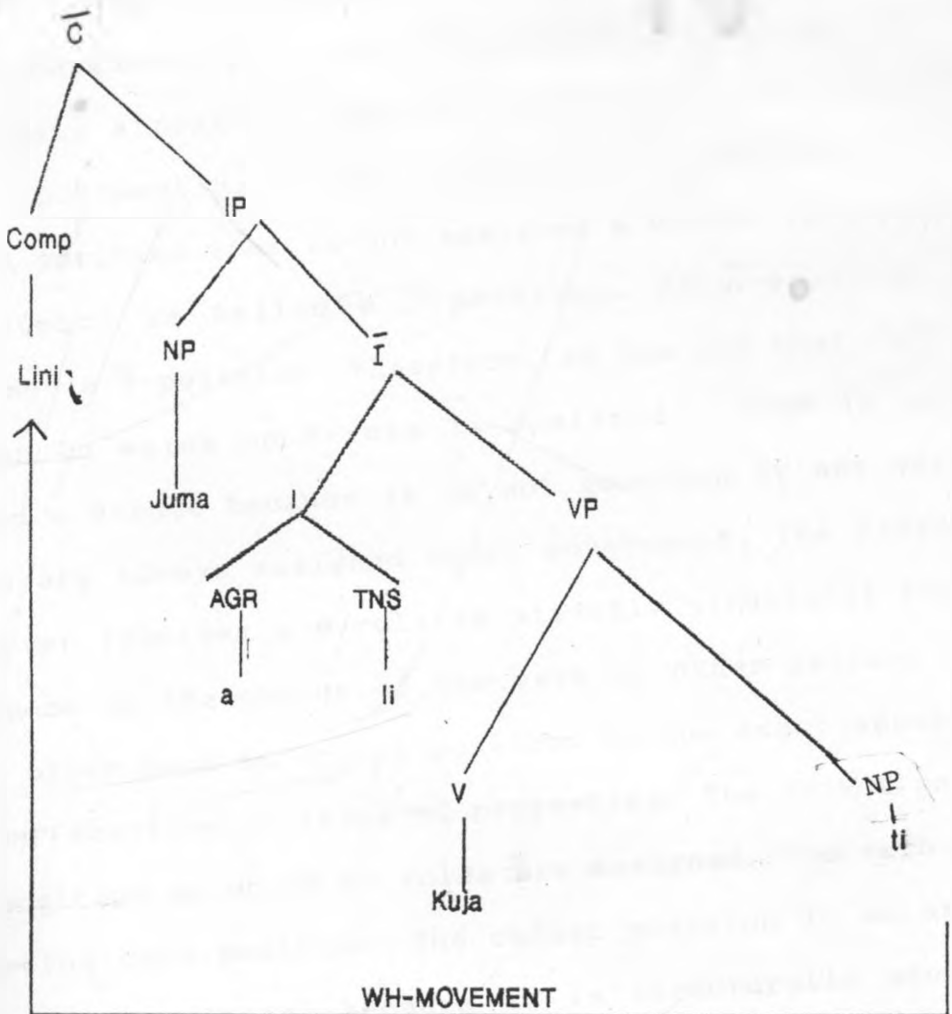
We have labelled _lini_ 'where' in (23) as an NP and we have also labelled t_i as an NP in (24) because we can substitute them with an NP such as _Jumatatu_ 'Monday'

Before we continue with our analysis, it is better at this juncture to explain the COMP position and object position in view of the GB theory. The phrase structure positions in which arguments can appear at D-structure are referred to as argument positions (A-positions) and phrase structure positions in which no argument can appear at D-structure are called nonargument positions ($\bar{A}$-positions). Or we can still put it that, a position that is structurally inaccessible to θ-role assignment is called a nonargument position ($\bar{A}$-position). A position that is not assigned a θ-role in a particular sentence is called a $\bar{\theta}$-position. An $\bar{A}$-position will always be a $\bar{\theta}$-position. Therefore, we can say that COMP is a position to which no θ-role is assigned. COMP is never a assigned a θ-role because it is not governed by any verb and θ-roles are always assigned under government. The reason why COMP never receives a θ-role is strictly structural and does not depend on the choice of the verb or other lexical items. On the other hand an object position is the exact opposite of the COMP position in terms of properties. The object position is a position to which θ- roles are assigned. The verb usually governs this position. The object position is an argument position (A-position) because it is structurally accessible to θ-role assignment.

After that brief discussion about A and $\overline{A}$-positions in line with Van Riemsdijk and Williams (1986), we now return to our analysis in example (24). In this example the constituent order variations are accounted for by a rule of WH-movement. Lini 'when' moves from an A-position marked ti   to COMP which is an $\overline{A}$-position or it moves from a θ-position to a $\overline{\theta}$-position. In this light let us examine the status of the trace ti. Chomsky (1977) points out that WH-movement leaves a nonterminal trace, just as all movements do. That is, the position from which the wh-phrase moved from remains in the derived constituent structure with its index identical to the index of the wh-phrase in COMP. As a result of this we have assigned the index-i- to lini 'when' in COMP and its trace in example (24) in line with Chomsky and the trace theory.

The trace (ti) is the object complement of the verb kuja 'come'. The verb kuja 'come' therefore governs the trace and assigns it a θ-role because the position occupied by the trace is an A-position. Since Case is assigned under govern-ment the verb kuja assigns the trace an objective Case. We say that the verb kuja 'come' governs the trace (ti) because the verb is the minimal governing node c-commanding the trace (ti) and there is no $\overline{C}$ or NP barrier intervening between the verb and the trace. The verb kuja c-commands the trace (ti) since the first branching node (that is VP) domi-nating the verb also dominates the trace and neither the verb

nor the trace dominates the other.

The trace (ti) conforms to the Binding Condition C (see chapter 1 sec 1.7.0) because it is an [-anaphor,-pronominal] NP, then it must be free. The trace ti is free because it is not coindexed with a c-commanding argument. Although the trace (ti) is in an A-position it is coindexed with Lini 'when' in COMP, Lini 'when' in COMP is not an argument position, it is an Ā-position, because Lini is contained within a C̄ not an IP or NP as an argument must be.

Case marking takes place at S-structure after transformations apply, it seems then that Lini 'when' will fail to be assigned Case since it is in COMP an Ā-position and therefore it might violate the Case filter. But this is not the case, as we said earlier the wh-trace is governed by the transitive verb Kuja 'come' and assigned objective Case. In order for the wh-phrase (lini) in COMP not to violate the Case filter, it will inherit this objective Case assigned to the trace (ti) which is coindexed with it.

The movement of Lini in (24) from A-position (object position) to Ā-position (COMP position) by a rule of WH-movement does not violate subjacency because Lini crosses at most one bounding node which in this case is IP. Therefore this movemnt conforms to the bounding theory.

We now turn to look at the relationship between WH-movement and quantifier scope assignment, we shall look at this in the light of the wh-trace and NP-trace. The difference between wh-trace and NP-trace rests on a distinction familiar from predicate logic, the distinction between variables and quantifiers (or operators). In predicate logic, variables fill argument positions of predicates to give propositional forms.

WH-movement bears several similarities to a rule of quantifier scope assignment. First, it moves an item to an $\overline{A}$-position, just as we saw <u>Lini</u> in (24) moving, on the periphery of a clause; in other words to a position very similar to the position of quantifiers in predicate logic. Secondly, it leaves a coindexed trace in the position which movement has taken place (just as <u>lini</u> leaves in (24) a coindexed trace from its extraction site); in this way, it is like the binding of a variable (wh-trace) by a quantifier or operator (wh-word) in predicate logic. Thirdly, the wh-trace, like a variable is in the argument position of a predicate. Thus our example (24) would be presented here as (25).

25)   Lini   [Juma alikuja ti]

       operator   variable

A variable is an empty category whose closest binder is in an $\overline{A}$-position (A variable is locally $\overline{A}$-bound). Therefore our

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wh- trace (ti) is a variable because it is an empty category whose closest binder is in an $\overline{A}$-position. Lini 'when' binds ti because lini and ti are coindexed and lini c-commands ti as we saw in (24). Lini 'when' c-commands ti because the first branching node, that is $\overline{C}$, dominating Lini in COMP dominates ti and neither lini nor ti dominates the other. We can also say that the variable ti (wh-trace) is operator bound by lini in COMP position, we can therefore reach a conclusion that an operator binds its trace. So far we have been basing our analysis on example (24). We now posit that all the analysis we have proposed for example (24) also holds true for example (21) because (21) has the same structure as (24).

2.4.0   TOPICALISATION AND WH-MOVEMENT

Topicalisation is a transformation that allows certain types of constituents in a sentence to be fronted (beyond COMP position). The following Kiswahili constructions have undergone topicalisation as well as WH-movement.

26)   Pamela   kwa nini   a-na-cheka?
                                    TNS

        Pamela   why   SA PRES laugh

        (why is Pamela laughing)

27)   Mtoto   shati   gani   a-me-vaa?

        Child shirt   which SA ASP wear

        (which   shirt   has   the   child   worn)

In section 2.3.0 we said that Kiswahili is an SVO language. Therefore, in example (26) and (27) the subject NPs Pamela and Mtoto 'child' have been moved from subject position to topic position (specifier) by topicalisation transformation, whereas the wh-phrases kwa nini 'why' and shati gani 'which shirt' have been moved to COMP position by a rule of WH-movement. Therefore, the constituent order variations from SVO (see section 2.3.0) to SOV in (26) and (27) seems to be accounted for by WH-movement and topicalisation. We argue this way because in relation to subcategorization facts the wh-phrases kwa nini 'why' and shati gani 'which shirt' originate from the post verbal position.   The subject NPs Pamela and Mtoto 'child' originate from the position just immediately before the verb. At this stage we shall represent example

(26) in phrase marker as (28) to relay this information.

28)

CP
SPEC
Pamela$_j$
C'
COMP
Kwanini$_i$
IP
NP
t$_j$
I'
I
AGR
a
TNS
Pres
na
VP
V
Cheka
Adv
t$_i$

TOPICALISATION
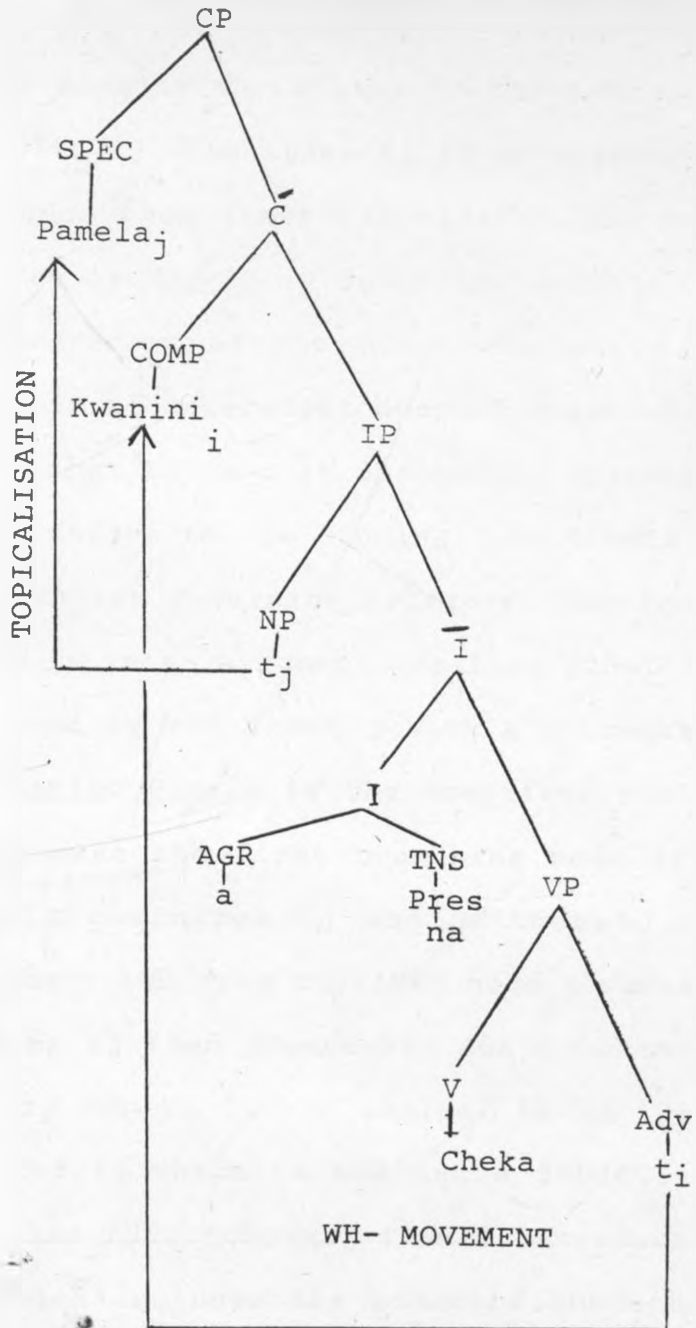
WH- MOVEMENT

From (23) above we can see that the topicalisation transformation moves Pamela from the position marked tj to the specifier position of CP whereas WH-movement moves kwa nini 'why' from the position marked ti to the COMP position.

Let us now examine the status of the traces in (28), first we start with tj. The trace tj is an anaphor because it picks its reference from something else in the sentence. In fact its reference is Pamela in specifier position, note that Pamela is an antecedent of the trace, therefore they enter into a relationship of antecedent anaphor relations. Since we have established that tj is a [+ anaphoric, -pronominal] NP we expect it to conform to the Binding Condition A in that it should be bound in its governing category. The trace (tj) is bound because it is in an argument position (that is in an A-position) coindexed by the index j with a c-commanding argument which is Pamela. Pamela in the specifier position of CP c-commands tj because the first branching node (that is CP) dominating Pamela dominates tj and neither tj nor Pamela dominates the other. AGR from the INFL node governs the trace tj. If AGR governs tj then presumably AGR C-commands tj. The governing category for tj is the minimal IP in (28) containing a governor for tj which is AGR and a SUBJECT accessible to tj which is also AGR. (Chomsky (1981) introduced the concept SUBJECT which includes the standard subject and AGR). AGR (-á-) which is the subject agreement marker in (28)

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is accessible to the trace t_j because AGR (-a-) c-commands t_j (that is the first branching node dominating AGR dominates t_j and neither dominates the other), and AGR (-a-) is not coindexed with any category containing t_j. Infact AGR has no index. Though the trace t_j is governed by AGR thus conforming to ECP, it is not assigned Case since np-traces are Caseless.

The movement of <u>Pamela</u> from the position marked t_j to the specifier position of CP conforms to the bounding theory. This is because in its movement <u>Pamela</u> crosses only one bounding node which is $\overline{C}$ thus not violating the subjacency condition.

All along we have been examining the status of the trace t_j which we have seen is an anaphor. Let us now examine the status of the trace t_i. The trace t_i is an adjunct therefore, it is antecedent governed by <u>kwa nini</u> 'why' in COMP. <u>Kwa nini</u> 'why' in COMP antecedent governs the trace t_i because <u>kwa nini</u> binds t_i and <u>kwa nini</u> and t_i are not too far apart. <u>Kwa nini</u> and t_i are not too far apart because t_i is contained in a $\overline{C}$ that contains <u>kwa nini</u>. The trace t_i conforms to the Binding Condition C(see ch.1). Although the trace t_i in (28) is coindexed with <u>kwa nini</u> by the use of an index (i) it is free because the position that <u>kwa nini</u> (Comp position) occupies is an $\overline{A}$-position.

WH-movement moving <u>kwa nini</u> in (28) from the position marked t_i to the COMP position does not violate subja-

cency because it crosses at most one bounding node which is IP.

It is worthwhile to note that the analysis given here for example (28) also applies to example (27).

2.5.0   WH-MOVEMENT AND V-MOVEMENT

We shall discuss WH-movement and V-movement within the framework of the following examples:

29)   Wapi   a-na-ishi   mwalimu?
                        TNS

   where   SA PRES live   teacher

   (where does the teacher live)

30)   Kitabu kipi a-me-nunua   baba?

       book   which SA ASP buy   father

       (which book has father bought)

In Kiswahili the verbs _ishi_ 'live' in (29) and _nunua_ 'buy' in (30) are subcategorized as taking subject NPs which precede them and object NPs which come after them   (post verbal). Restricting ourselves to examples (29) we argue that the verb complex has the subject agreement marker -a- which agrees with the NP _mwalimu_ 'teacher', we can say that since _mwalimu_ 'teacher' is supposed to precede the verb, then the verb must have moved. On the other hand _wapi_ 'where' seems to be the object and we expect it to occur in the position after the verb but in our construction (29) _wapi_ 'where ' occurs

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{

pre-verbally. We argue that the occurence of _wapi_ in pre-verbal position is as a result of WH-movement which moves _wapi_ from post-verbal position to pre-verbal position. More-over, the occurence of the verb in the pre-subject position is as a result of V-movement. Let us represent this informa-tion in a phrase marker as (31).

31)
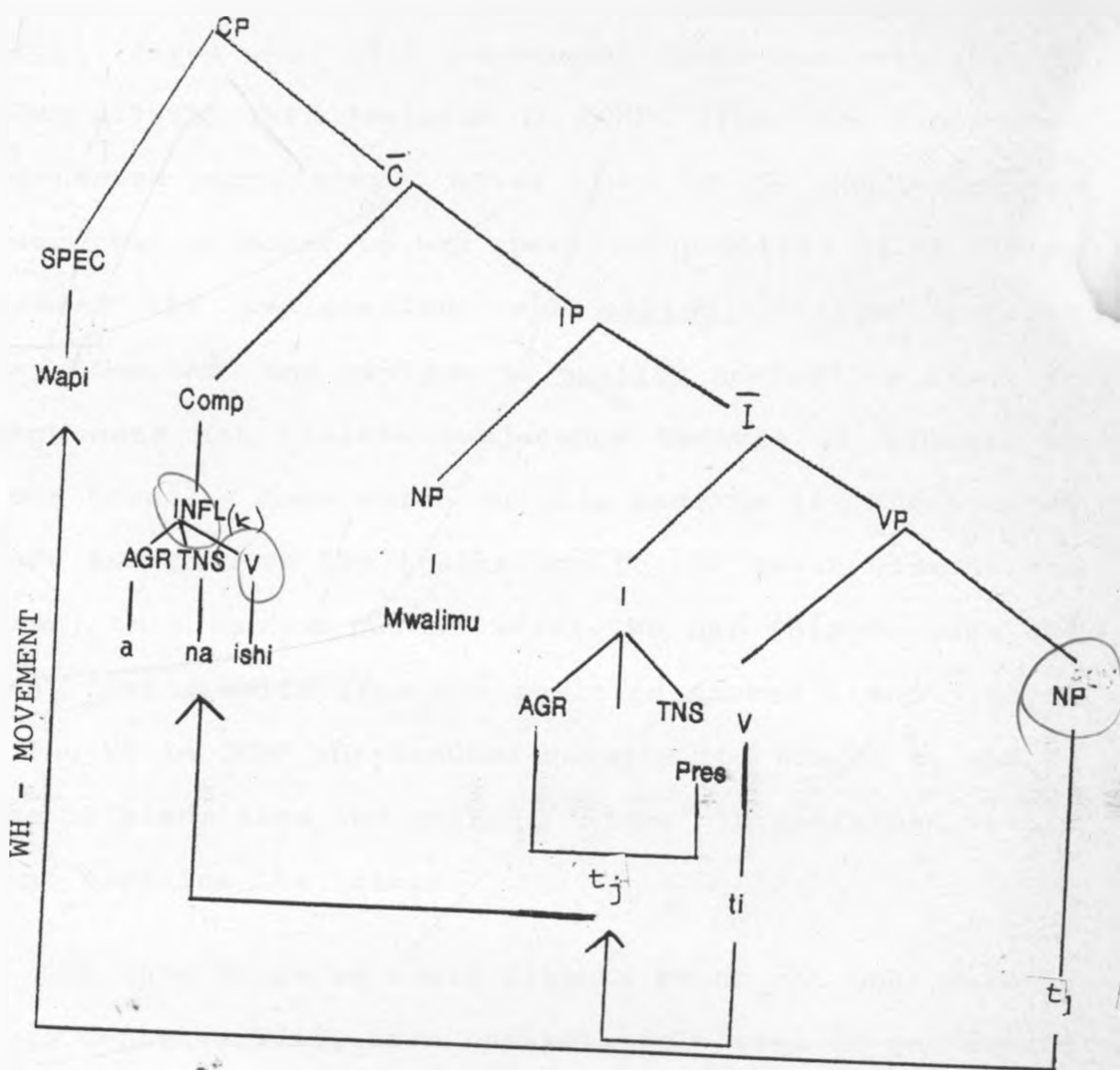
In example (31) it seems that the INFL node must move so as to assign Case to mwalimu 'teacher'. But since INFL cannot move on its own to COMP to assign Case, V-movement must take place to support INFL. Therefore, the verb ishi 'live' must move to the INFL node. The verb ishi 'live' moves to the INFL node and amalgamates with the INFL features of AGR (-a-) and tense -(na)- after the amalgamation we get 'anaishi' 'lives' and then V-movement moves the verb that is amalgamated with INFL features to COMP. After the V-movement the wh-phrase wapi 'where' moves since it is the interrogative word and it moves to the specifier position of CP. After V-movement the amalgamated verb anaishi 'lives' governs mwalimu 'teacher' and assigns to mwalimu nominative Case. V-movement does not violate subjacency because it crosses at most one bounding node which in this case is IP. The indices that are assigned to the traces and to the moved element are the same, this can be put as k=j=i. We say this because the movement that results from the position marked i and j gives us k. The VP in COMP antecendent governs its traces t_i and t_j because it binds them and anaishi 'lives' is contained within a $\overline{C}$ that contains the traces.

At this stage we would like to point out that example (31) was controversial, some speakers felt that it was totally unacceptable, others felt it was marginally acceptable, but most of our informants felt that the sentence was accept

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able especially when 'mwalimu' was uttered with a rising
tone. We concurred with the majority of our informants and
that is why we have analysed it, bearing in mind that it is
acceptable. The analysis given here for example (31) also
applies to example (30).

2.6.0   I-MOVEMENT

The following sentences illustrate that constituent
word order variation is brought about by I-movement.

32) A -na -taka   nguo   ipi Salma?
       TNS

   SA PRES want cloth which Salma

   (which cloth does Salma want)

33) A-me-vaa   shati   gani mtoto?

   SA ASP wear shirt   which child

     (which shirt has the child worn)

Sentence (32) can be represented in the following phrase
marker as (34)

34)

$\overline{C}$

Comp

IP

$\overline{I}_i$

I

VP

NP

Salma

$\overline{I}$

AGR

TNS
PRES

v

NP

ti

A

na taka

N Det

nguo ipi

$\overline{I}$ - MOVEMENT

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The $\bar{I}$ node moves from the position marked ti to COMP. This movement does not violate subjacency because it crosses only one bounding node which in this case is IP. The trace ti is antecendent governed by the $\bar{I}$ node in COMP . The $\bar{I}$ node in Comp antecedent governs ti because $\bar{I}$ binds ti and $\bar{I}$ and ti are not too far apart. $\bar{I}$ is not too far from ti because ti is contained in a $\bar{C}$ that contains $\bar{I}$. $\bar{I}_i$ in COMP binds ti because they are coindexed.

The underlying order of costituents in Kiswahili is SVO and as we have seen in this section there is a process of $\bar{I}$-movement resulting in a VOS surface order. In section 2.5.0 there is a process of Verb movement to COMP which in this case results to an OVS surface order.

2.7.0   COMP TO COMP CONDITION

This condition states that once a phrase is in COMP, it can only move to a higher COMP. This condition will be discussed within the following examples:

35)   kikombe kipi u-li-sema Juma a-na-fikiri
                      TNS   TNS

        cup   which SA PT say Juma SA PRES think

        Matu   a-ta-beba?
                 TNS

        Matu SA FT carry

(which cup did you say Juma thinks Matu will carry)

Sentence (35) can be represented in a phrase marker as (36).

36)

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Chomsky(1975:81-115) refers to a category that can serve as the domain of a transformation a cyclic category.

Therefore, the three C's in (36) are cyclic categories. Chomsky continues to say that the tranformational component applies to an initial phrase marker with more than one cyclic category in a definite and regular manner, namely, cyclically. The tranformations first apply to the most deeply embedded categories. This is attested in example (36) because WH-movement moves the wh-phrase <u>Kikombe kipi</u> 'which cup' from the most deeply embedded category so that we can get a grammatical sentence (37a)

37a) U-li-sema Juma a-na-fikiri kikombe kipi Matu a-ta-beba
     TNS   TNS   TNS

SA PT say Juma PRES think cup   which Matu SA FT carry
(which cup did you say Juma thinks Matu will carry)

Sentence (37a) is a result of what we have called 1st movement in example (36). Then WH-movement applies to the next most deeply embedded sentence so that we get a grammatical sentence (37b).

37b) U-li-sema kikombe kipi Juma a-na-fikiri Matu atabeba?
    (which cup did you say Juma thinks Matu will carry)

Sentence (37b) is borne out of the 2nd movement as exemplified in (36). WH-movement applies again to the next embedded category and we get a grammatical sentence (36)

repeated here as (37c).

37c) Kikombe kipi ulisema Juma anafikiri Matu atabeba?
Sentence (37c) results from what we call 3rd movement in (36).

WH-movement in (36) as a transformation meets the subjacency condition which requires that transformations apply to positions at the same level of the cycle or in adjacent levels. Thus movement may not move an item within a cyclic category A (see 1st movement in 36) to a position within the cyclic category C(see 3rd movement in 36) if there is a cyclic category B(see 2nd movement in 36) including A and included in C. Thus in example (36) we cannot move the wh-phrase Kikombe kipi 'which cup' from the lower IP in the position marked ti to the highest C̅ where we have Kikombe kipi. By doing this we shall be skipping the two COMP positions in (36) therefore violating subjacency. Note that the 1st movement in (36) does not violate subjacency because it crosses only one bounding node which is IP. The second movement also crosses one boundig node IP and therefore does not violate subjacency. The 3rd movement also conforms to the subjacency condition because it also crosses only one bounding node which in this case is also IP. The trace ti in (36) is properly governed by the verb beba 'carry' thus conforming to the ECP.

Beba 'carry' governs ti because it is the minimal potential
governor c-commanding ti. In view of the fact that the verb
governs the trace, it assigns the trace (ti) an object θ-role
and also assigns it an objective Case due to the fact that
Case is assigned under government. The moved wh-phrase,
Kikombe kipi 'which cup' is an NP so it inherits the Case of
its trace thus not violating the Case filter. This trace
(ti) conforms to condition C of the binding theory. The trace
(ti) is free because it is in an A- position, it is not
coindexed with a c-commanding argument . The operator in
COMP, that is, kikombe kipi 'which cup' binds its variable
ti. In other words the trace is A-bound by an operator in
COMP.

We now examine the status of pro in (36). Following
Khamis A.M.(1988), it is shown that Kiswahili shows agreement
between the verb element and the respective noun phrase. Thus
in sentence (36) -u- which is generated under the INFL node
is the subject agreement marker. We said that Kiswahili shows
agreement between the verb element and the respective noun
phrase but it seems there is no noun phrase in example (36)
showing agreement with -u-. The absence of the NP which is
indicated by the agreement prefix -u- constitutes an empty
category which we have indicated as pro (small pro) in (36).
Since the positions of empty categories are normally filled
by actual NPs or R-expressions their absence allows the
theory to fill the gaps with a trace. We should note that
Kiswahili is a pro-drop language, therefore in this case we

cannot motivate any rule of the missing NP. Chomsky (1982:78ff) refers to an empty category that develops in the position of the trace but that does not result from a movement rule a small pro. Since we have established that we have a small pro in (36) we expect it to conform to the Binding Condition B. Small pro in (36) is governed by AGR (-u-) which is the subject agreement marker generated under the INFL node. AGR governs small pro because AGR is the minimal potential governor c-commanding small pro and there is no intervening $\bar{C}$ or NP barrier between them. Pro-drop languages differ from non pro-drop languages in that in the former AGR can properly govern the subject position as we have seen above. Though AGR governs small pro it does not assign it any Case since np traces are Caseless.

The governing category for small pro is the highest IP because it is the minimal IP containing the small pro, a governor for the small pro which is AGR and a SUBJECT accessible to the small pro which is also AGR. AGR is accessible to the small pro because AGR c-commands it and AGR is not coindexed with any category containing the small pro. Small pro is free in its governing category because it is not coindexed with a c-commanding argument, the small pro has no index at all.

All the traces that we have, that is, ti, tj and tk are antecedent governed by the operator kikombe kipi 'which cup' in COMP. Therefore we can say that l=k=j=i, we say this

53

because l is in the COMP position as a result of it moving from i to j, then from j to k and finally from k to l. That means that we have no new category moving, it is <u>kikombe kipi</u> 'which cup' which is moving all the way from i to l.

2.8.0 <u>FOCUS CONSTRUCTIONS/ CLEFT SENTENCES</u>

Let us discuss these constructions within the framework of the following examples:

38) Ni   nani a-li -ye- kuja?
                TNS Rel

   Is   who SA PT (that) come

   ((It) is who that came)

39) Ni lini a-li -po- fika?
                TNS Rel

   Is when SA PT (that) arrive

   ((It) is when that she/he arrived)

40)   Ni nini u-na -cho- taka
                TNS Rel

   Is what SA PRES (that) want

   ((It) is what you want)

We could also have the wh-phrases in (38), (39), (40), which appear sentence initially, remaining in situ (see section 2.2.01   so   that   we   have   the   following:

41)   A-li -ye- kuja ni nani
          TNS Rel

       SA PT   come is who

42)   A-li -po- fika ni lini?
          TNS

       SA PT   arrive is when

43)   U-na -cho- taka ni nini?
          TNS   Rel

       SA PRES   want is what

   The wh-phrases ni nani 'is who' in (38) ni lini 'is when' in (39) and ni nini 'is what' in (40) have been fronted for the purpose of focus. In (38) for example, ni nani 'is who' has been fronted because the speaker wants to focus on a particular person. It is assumed here that, in a certain group of people known to the speaker and the hearer, one among the group was supposed to come, therefore, by fronting the wh-phrase the speaker wants to know exactly who came. The speaker is asking for specific information on a particular person whom he wants his identity revealed.

   Examples, (38), (39) and (40) are cleft constructions. A cleft construction is a sentence with following structure:

44)   [W - X - Y - Z]

Where W=it; X=a form of the copula verb "be"; Y=a constituent (especially an NP);and Z=a relative clause. Restricting ourselves to example (38) we could say that this example conforms to (44) in the following way: we have X in (38) which is _ni_ 'is', we also have y which is _nani_ 'who' a constituent which is an NP and we also have Z which is _aliyekuja_ 'that came' which is a relative clause. (44) also applies to (39) and (40). We should note that (-it-)is never realized overtly in Kiswahili, it is only realized in our translation.

In a Kiswahili cleft sentence the copula _ni_ 'is' is very important for fronting an element as topic and also for putting focus. Note that in the kind of constructions that we pointed out in (38) ,(39) and (40) we cannot focus\front the wh-words and leave the _ni_ 'is' in its base generated position, if we did this the resulting structure will be ill-formed as in :

45) *Nani   a-li -ye- kuja ni?
                TNS Rel

    who   SA   PT that come is

  *(who that came is)

Furthermore, we cannot front _ni_ 'is' only and leave the wh- word in its base generated position, if this is done we shall end up with an illformed string such as :
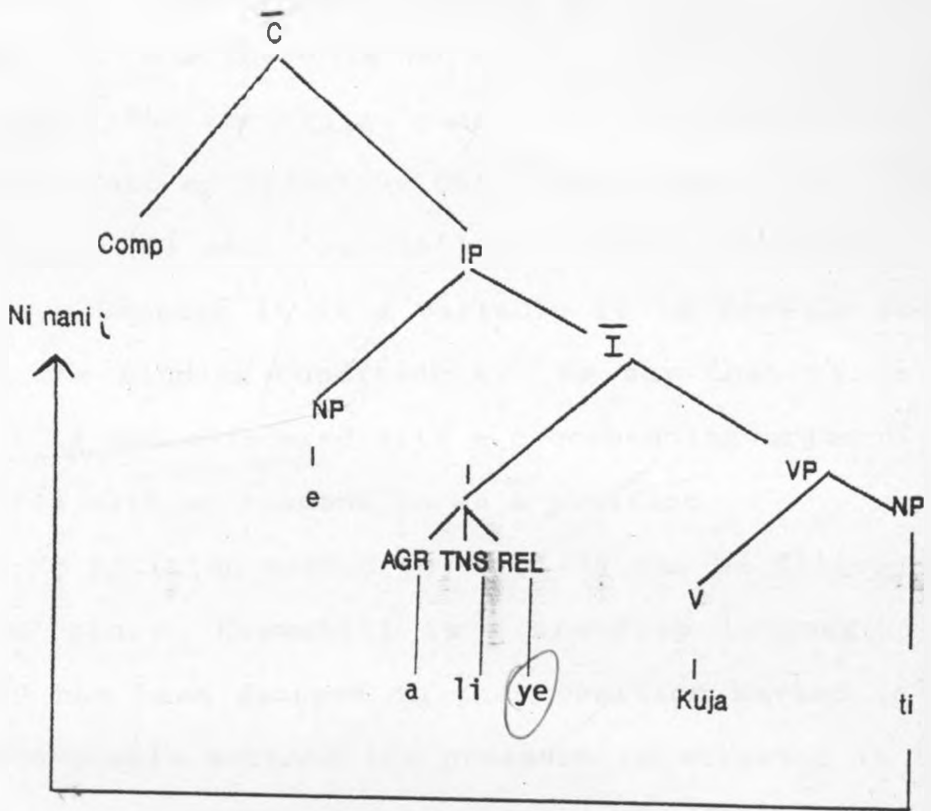
46) * Ni   a-li -ye- kuja nani?
             TNS Rel
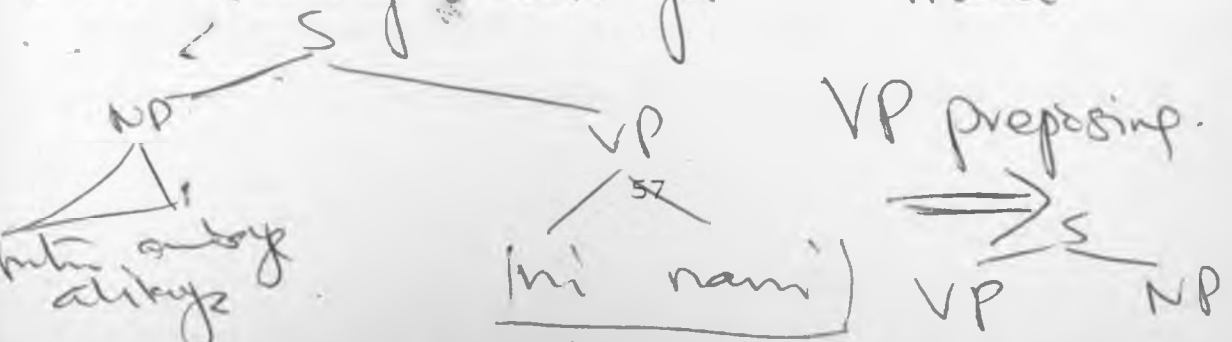
      is   SA PT   that come who

    * ((It) is that came who)

     If we topicalise (focus) an element and front it we
presumably leave a trace in its base generated position. This
can be illustrated in the following phrase marker:

47)

We propose that this fronting of the wh-phrase is done by the rule of WH-movement. The relation between the wh-word and the trace obeys subjacency. In its movement the wh-phrase crosses only one bounding node which is IP. Although the VP is a maximal projection and therefore a barrier, we assume that the wh-phrase does not violate subjacency because it comes directly from the VP node. The cleft construction in (47) involves a relation that meets the wh-diagnostics (see chapter 1). The trace ti is governed by the verb kuja 'come' because kuja is the minimal potential governor c-commanding ti and there is no intervening $\overline{C}$ or NP barrier between them. The verb kuja 'come' also assigns the trace an object θ-role and an objective Case. The trace ti is $\overline{A}$-bound by an operator (ni nani 'is who') in COMP and therefore it is a variable. Because it is a variable it is free in accordance with the Binding Condition C. We say that ti is free because it is not coindexed with a c-commanding argument. It is coindexed with an element in an $\overline{A}$ position.

The NP position marked (e) in (47) can be filled by a lexical NP since Kiswahili is a pro-drop language. The subject NP has been dropped in that position marked (e) but can be recoverable because its presence is attested in the $\overline{I}$ node where we have the subject agreement marker. The empty node (e) is properly governed by AGR and therefore assigned nominative Case by AGR. Within the binding theory the empty category (e) is free because it is coindexed with a C-

commanding argument. Although (e) is in an A position it has no index at all.

2.9.0 THE RELATIVE CLAUSES IN KISWAHILI

Relative clauses are those clauses which modify a noun phrase. They are introduced in a sentence by a relative pronoun as in the following sentence :

48) Msichana ambaye ni mrembo   a- li- nunua kitabu
                                         TNS

   Girl   who   is beautiful SA PT buy   book

   (The girl who is beautiful bought a book)

In (45) ambaye ni mrembo 'who is beatiful' is a relative clause modifying its antecedent msichana 'girl'. In this sentence ambaye is the relative pronoun introducing the relative clause.

Three types of relative clauses have been identified in Kiswahili and this include : (i) the AMBA relatives (ii) the reduced relative clauses and (iii) the tenseless reduced relative clauses. The amba relatives are so called because they are introduced by the relativiser-amba as in ambaye 'who' ambapo 'where' and ambacho 'which'. This form of -amba- relatives are said to have the widest distribution because they can be used in all Kiswahili tenses as illustrated below:

49) Kikombe ambacho ki= $\begin{bmatrix} li(PT) \\ ta(FT) \\ na(pres) \end{bmatrix}$ potea ni changu

    cup   which   SA   lost   is   mine

These amba relatives are attested in structures with the -me-
aspect and the habitual aspect -hu- as in :

(50) Kijana ambaye a-me-kuja ni ndugu yangu

     Boy   who   SA ASP come is brother my

        (The boy who came is my brother)

(51) Mwanafunzi ambaye hu-anguka mtihani

     Student   who   Asp fall   exam

     ha-somi kwa nguvu

     neg read hard

     (A student who fails exams does not read hard)

     The reduced relative clauses are so called because the
relativiser-amba-is absent in their structure. It looks as if
it has been deleted as in:-

(52) Mtoto a--na--ye--lia ni mkaidi
                TNS Rel

     Child SA pres who cry is naughty

     (The child who is crying is naughty)

The reduced relative clauses can appear in a structure with
any tense marker. But this relative clauses cannot be used
with the-me-aspect, otherwise we end up with an illformed
structure:

(53) * Mtoto   a-me-ye-lia

        Child SA ASP Rel cry

    Sentence (53) is illformed because the reduced relative
clause and the-me-aspect do not co-occur. Furthermore the
habitual aspect marker and the reduced relative clause also
do not co-occur, that is why the sentence below is illformed.

(54) * Mvulana hu-ye-cheza ni mzuri

        Boy   ASP Rel play is good

    In the tenseless reduced relative clauses, the relati-
viser- amba- and the tense marker are absent, hence their
name. We assume that in this type of construction amba has
been deleted and the tense marker has also been deleted.
Examples of tenseless reduced relative clauses are as fol-
lows:

(55) Mtoto a--ja--ye hapa kila siku ni mgonjwa
                Rel

    Child SA come(who) here every day is sick

    (The child who comes here everyday is sick)

(56)   Mwalimu   a-cheza-ye   vizuri   a-na-lia
                    Rel   Tns

    Teacher SA play who well SA pres cry

    (The teacher who plays well is crying)

61

Following Mgullu (1990) it seems that the tense marker is deleted when the relative pronoun (marker) is attached at the end of the verb stem. There is a rule in Kiswahili which blocks the co-occurence of the tense marker and the relative marker when the latter is put at the end of the verb stem.

We now analyse a construction that contains an-_amba_-relative in order to check whether there is any movement. Consider the following structure:

(57)a   Mwalimu a-li-m-piga mwanafunzi
                TNS

        Teacher SA PT OA beat student

        (The teacher beat the student)

If we relativize the subject _mwalimu_ 'teacher' we get

(57)b Mwalimu ambaye a-li-m-piga mwanafunzi
                        TNS

        Teacher   who SA PT OA beat student

        (The teacher who beat the student)

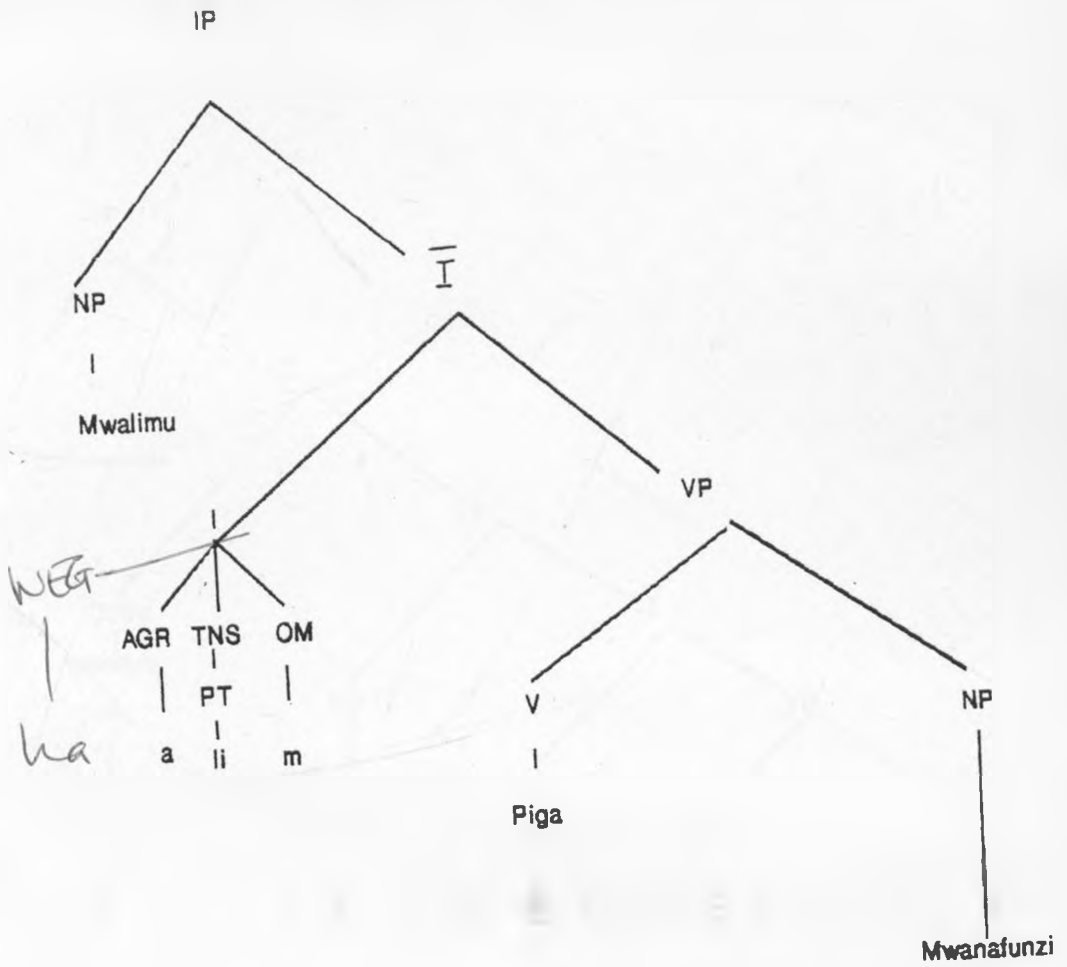If we now relativize the object _mwanafunzi_ 'student' we get

(57)c Mwanafunzi ambaye mwalimu a-li-m-piga
                                    TNS
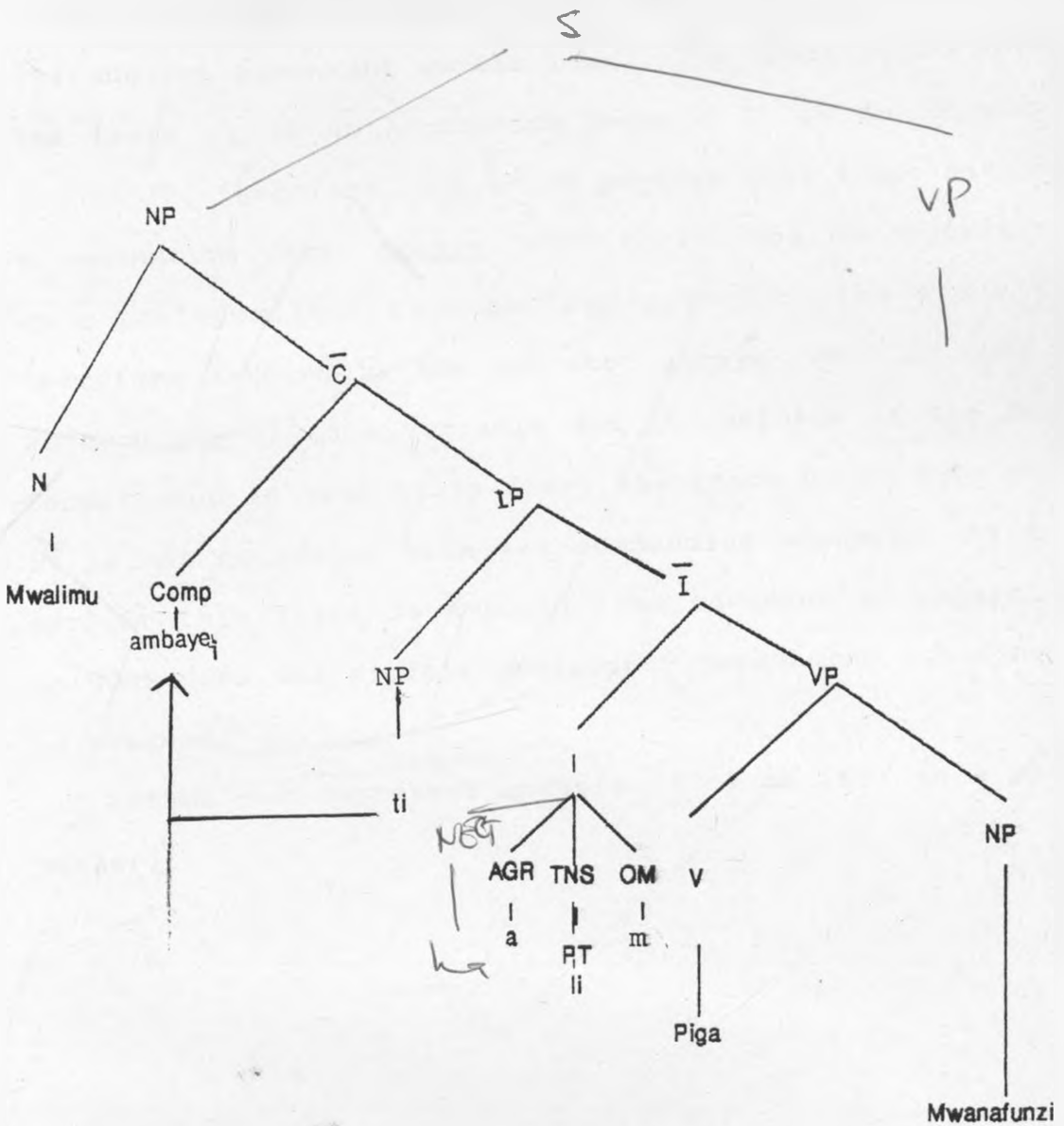
        Student   who   teacher SA PT OA beat

        (The student who the teacher beat)

Sentence (57a) can be represented in a phrase marker as (58)

IP

NP

Mwalimu

Ī

NEG

ha

AGR TNS OM

a li m

PT

VP

V

Piga

NP

Mwanafunzi

Whereas (57b) can be represented in a phrase marker as (59):

59)

We argue that in (59) _ambaye_ 'who' has been moved from the position marked ti to COMP by WH-movement. The trace ti has the same index with _ambaye_ 'who' to show that _ambaye_ 'who' moved from that position when it moved to COMP. The trace ti is properly governed by AGR which in this case is the subject agreement marker (-a-). The position occupied by the trace ti is an A-position because it is an NP position within IP, therefore, AGR which governs this trace assigns it a nominative Case. _Ambaye_ 'who' moves from an A-position to an Ā-position, that is, the COMP position. The trace ti is therefore Ā-bound by the operator _ambaye_ 'who' in COMP thus we conclude it is a variable and it conforms to the Binding Condition C in that it is free. The trace ti is free because it is not coindexed with a c-commanding argument. As I said earlier this trace is Ā-bound. The movement of _ambaye_ 'who' to COMP does not violate subjacency because no bounding node is crossed.

Let us now represent example (57c) as (60) in a phrase marker:

60)
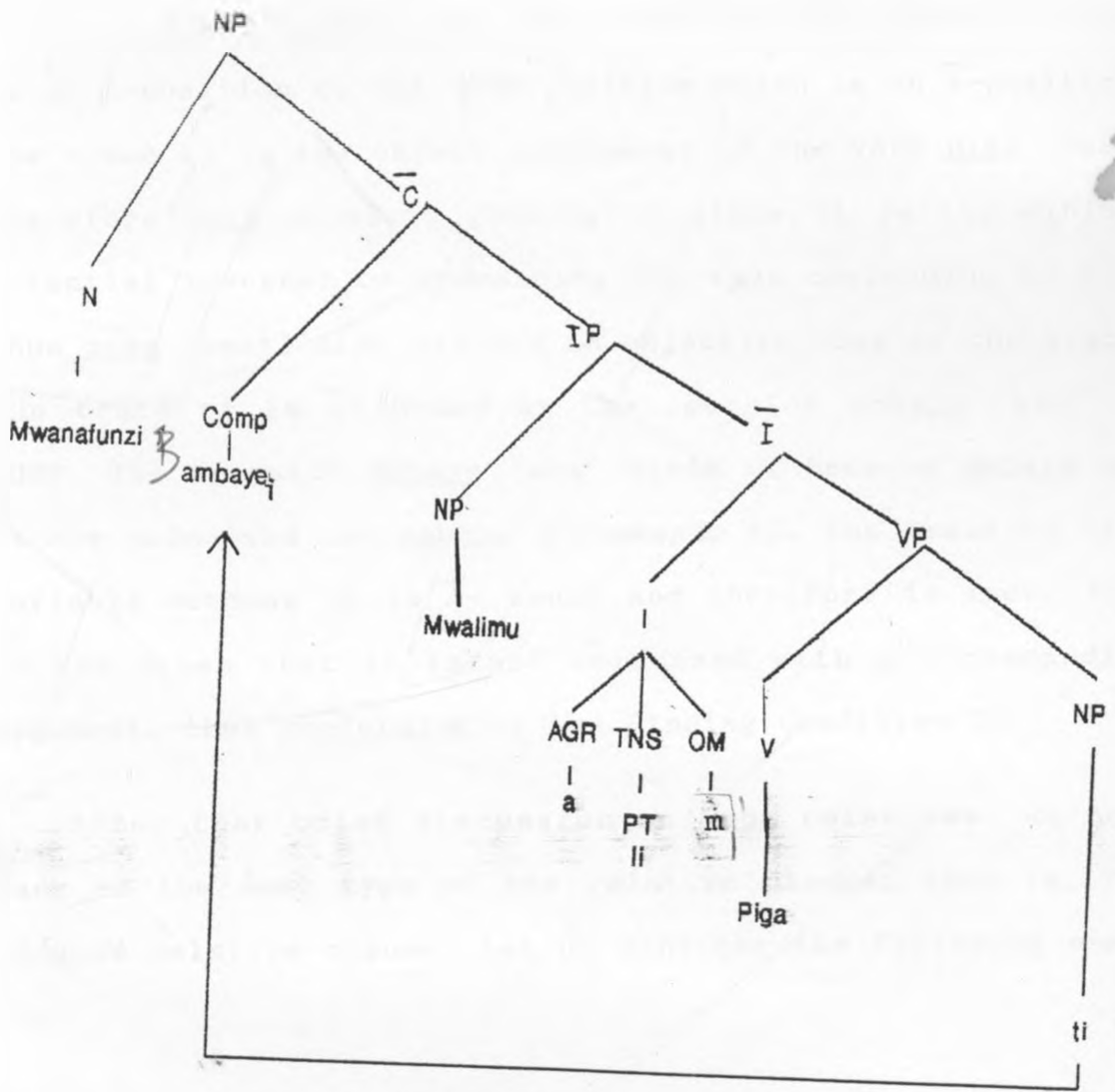
In example (57a) we found out that the verb piga 'beat' takes an NP complement but in example (60) however, the object NP is missing in the position immediately after the verb. This leads to the conclusion that the object NP has been moved to COMP by the rule move alpha (WH-movement). WH-movement moves ambaye 'who' from the position marked ti which is an A-position to the COMP position which is an $\overline{A}$-position. The trace ti is the object complement of the verb piga 'beat' therefore piga properly governs ti since it is the minimal potential governer c- commanding ti, thus conforming to ECP. Thus piga 'beat' also assigns an objective Case to the trace. The trace ti is $\overline{A}$- bound by the operator ambaye 'who' in COMP. The operator ambaye 'who' binds ti because ambaye and ti are coindexed and ambaye c-commands ti. The trace ti is a variable because it is $\overline{A}$- bound and therefore is free, free in the sense that it is not coindexed with a c-commanding argument, thus conforming to the Binding Condition C.

After that brief discussion on amba relatives, we now turn to the next type of the relative clause, that is, the reduced relative clause. Let us consider the following example:

(61)a Mtoto a-li-ki-vunja kiti
             TNS

    Child SA PT OA break chair

    (The child broke the chair)

If the subject NP mtoto 'child' is relativised within the context of the reduced relative clause we get:

(61)b Mtoto a-li-ye- ki-vunja kiti
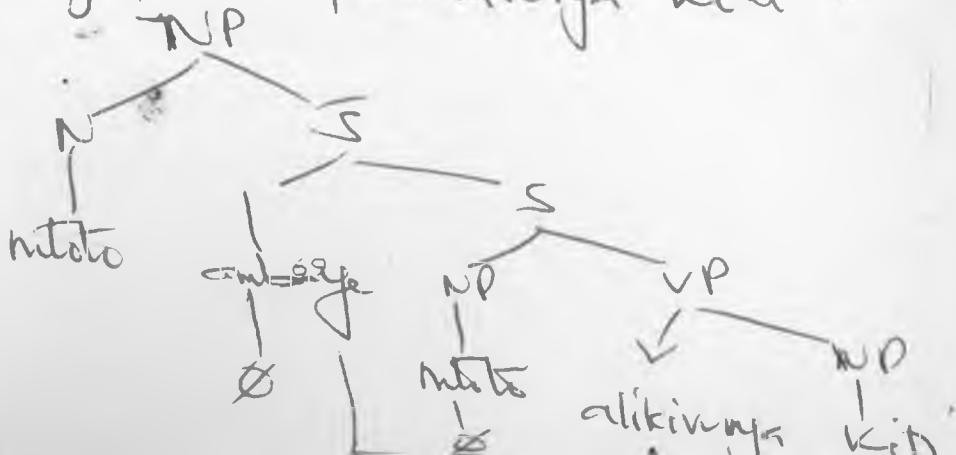   TNS Rel

    Child SA PT (who) OA break chair

    (The child who broke the chair)

It is clear from example (61b) that this type of relative clause has no-amba yet we said earlier that amba is the relativiser, furthermore, in this kind of construction the relative marker is slotted in the position immediately after the tense marker-(in (61b) and immediately before the object agreement marker which in this case is -ki-. Note that this relative marker -ye- 'who' refers back to its antecedent which is the subject NP mtoto 'child'. It seems then that there is quite a number of things happening in this kind of construction. Let us represent (61b) in a phrase marker as (62) and explain what is happening:

NP

N
mtoto

C̄

COMP
i

IP

NP
t_i

Ī

I

AGR

TNS Rel AGR

PT

VP

a li ye ki

V
vunja

NP
kiti
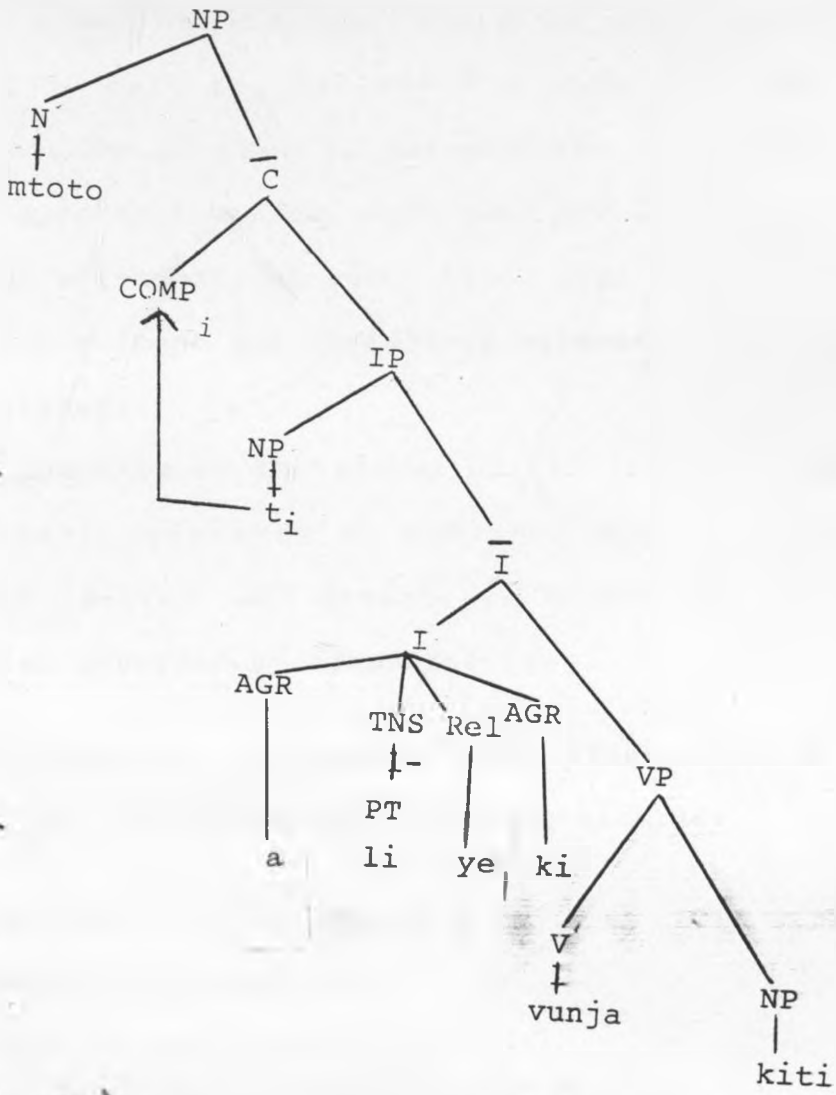
mtoto, ambaye, mtoto, alikivunja kiti.

NP

N
mtoto

S

ambaye
∅

S

NP
mtoto
∅

VP

alikivunya

NP
kiti

In (62) it is assumed that the underlying structure has
- amba- so that in the place marked ti we have ambaye 'who'
which moves to COMP. After ambaye 'who' moves to COMP -amba-
is deleted. The deletion of amba leaves the relative marker -
ye- alone in COMP, but since -ye- is a bound morpheme it
cannot stand on its own. There is a grammatical rule in
Kiswahili, call it, GR1 which allows -ye- (the bound mor-
pheme) to be slotted in between the tense marker and the
object agreement marker. Note that our GR1 is not a syntactic
rule but a grammatical rule. After -ye- is slotted in between
the tense element and the object agreement, the COMP position
remains empty.

.We now examine the status of the trace ti. The trace ti
is properly governed by AGR(-a-) which is the subject
agreement marker. AGR governs ti because it is the minimal
potential governer c-commanding ti.

The tenseless reduced relative clause will be discussed
within the context of the following example:

(63) Mwalimu hu- cheza mpira

    teacher ASP play ball

    (The teacher plays football)

If we relativize the subject NP mwalimu 'teacher' the
habitual marker-hu- is substituted with the subject agreement
marker-a- and the relative marker -ye- is attached at the end
of the verb stem so that we get:

70

(64) Mwalimu a-cheza-ye mpira
                    Rel

    Teacher SA play (who) football

    (The teacher who plays football)

    Let us now represent this information in (64) in a

phrase marker as (65).

65)
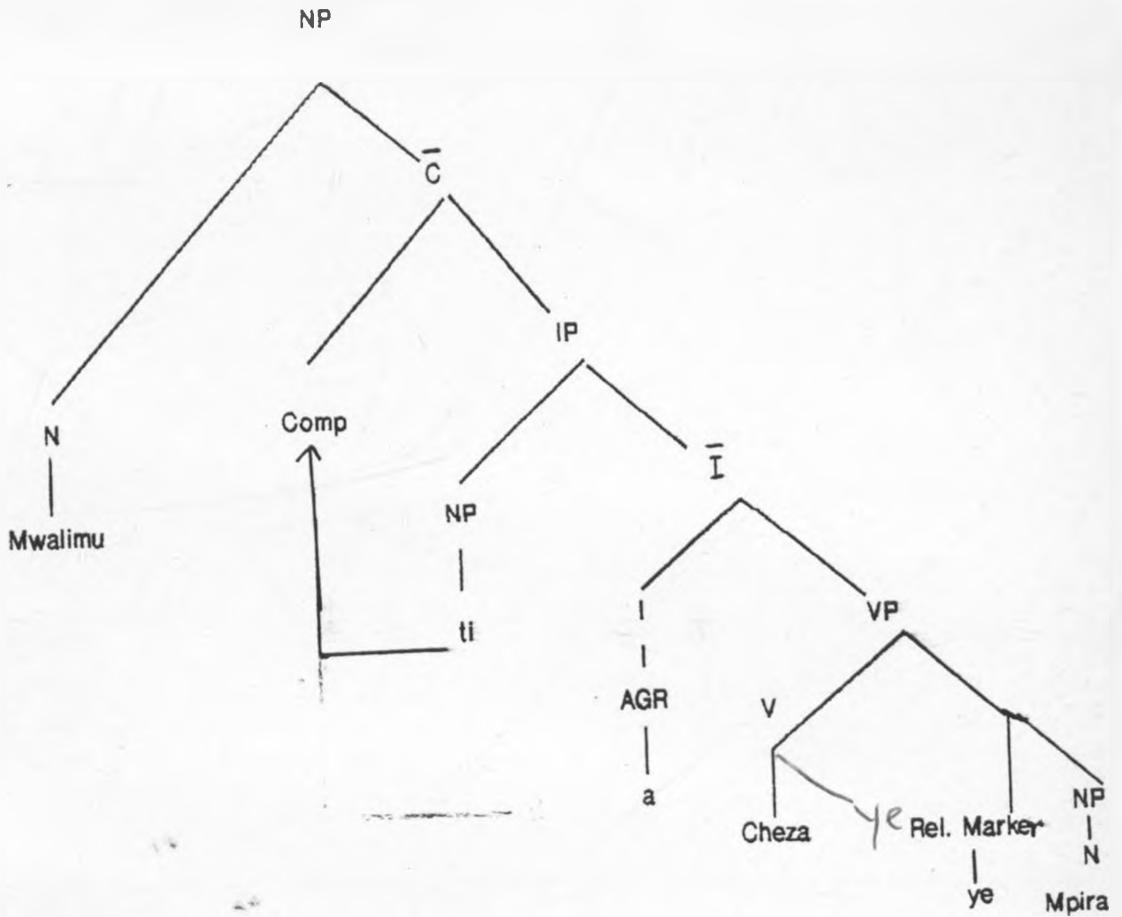
In the underlying structure of (65) we have -_amba_- the relativiser which moves from the position marked ti to COMP and we have _ambaye_ 'who' then amba is deleted, when amba is deleted -_ye_- the relative marker is left on its own in COMP but since it is a bound morpheme it cannot stand on its own. We now assume that there is a grammatical rule in Kiswahili, call it GR2 which attaches the relative marker -_ye_- 'who' to the end of the verb stem when -_ye_- is left in Comp. The trace ti is properly governed by AGR which in this case is the subject agreement marker(-a-).

CHAPTER 3

3.1.0 SUMMARY AND CONCLUSION

This study has shown the transformational processes which are found in Kiswahili sentences in which Wh-words/phrases appear. By using the Government and Binding theory we have shown that the constituent order variations (cf chapter 1) that are observed in Kiswahili sentences which have Wh-phrases can be accounted for by the rule move α . Kiswahili is a language which shows a very high rate of word order flexibility, this flexibility especially in structures which have interrogatives we have called movement in line with the GB theory. This study has found out that Wh-words in Kiswahili can remain in situ or they can be moved by move α (either Wh-movement, topicalisation, V-movement or I- move -ment). Thus we can say that move α in Kiswahili interrogatives is optional. This study has also found out that COMP to COMP movement holds in Kiswahili interrogatives.

The study also found out that there is no word order flexibility in Kiswahili relatives and that move α (Wh-movement) is also attested in relatives obligatorily. The study has also identified empty categories in Kiswahili and this include NP-trace, Wh-trace and Pro(small pro). We have shown that all this traces are governed and we have also shown that the Wh-trace in Kiswahili is a variable and there-fore $\bar{\text{A}}$-bound.

In chapter 1 we set out to test the adequacy of the GB theory in handling Kiswahili data with specific reference to constructions that have Wh-words. On the analysis given for our data the theory has been descriptively adequate. Thus in this study we have met our objective which was to explain and give an analysis of constructions in which Wh-words appear and the GB theory has been a useful descriptive tool in the analysis.

In conclusion we would like to say that we have tried to exhaust the analysis of the relatives and their movements. But the analysis proposed in this study is tentative and we hope that other scholars will take up the challenge and analyse them vigourously. Furthermore we did not find out what was the cause of the word order flexibility in Kiswahili. This is an area that needs serious research and we hope that scholars who will come after us will consider the word order flexibility and its cause.

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