A DERIVATION BY PHASE ANALYSIS OF THE EKEGUSII VERB SYSTEM
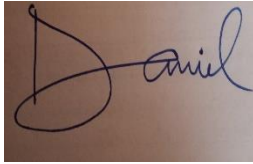
BY

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A RESEARCH PROJECT SUBMITTED IN PARTIAL FULFILMENT OF THE REQUIREMENTS FOR THE DEGREE OF MASTER OF ARTS IN LINGUISTICS

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DECLARATION

This research project is my original work and has not been submitted for examination in any other university.

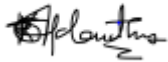Signature………………….   November 11, 2021

AMENYA NYAGUCHA DANIEL   Date

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This research project has been submitted for examination with our approval as the university supervisors.
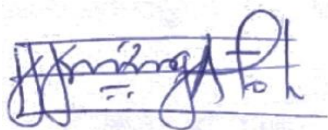

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DEDICATION

This research project is specially dedicated to my soulmate Caroline Moraa who had to endure my long and extended hours of sitting and to my parents, Gerald Bosire and Pacifica Kwamboka, who always worked hard to ensure I received top notch education.

ACKNOWLEDGMENT

LIST OF ABBREVIATIONS

1, 2 &3Pers	First, second and third Person
ACC	Accusative
Af	Affix
AGRo	Agreement object
AGRs	Agreement subject
ASP	Aspect
AUX	Auxiliary
BEN	Benefactive
C	Complementizer
CAUS	Causative
CFCs	Core Functional Categories
C_{HL}	Computation for Human Language
C-I	Conceptual-Intentional Interface
COND	Conditional
CP(s)	Complementizer Phrase(s)
COMP	Complement
D	Derivation
DbP	Derivation by Phase
DP	Determiner Phrase
DS	Deep Structure
EA	External Argument
EF	Edge Feature
EPP	Extended Projection Principle
EM	External Merge
EXPR	Expression
FL	Faculty of Language
FOC	Focus
FV	Final Vowel
G	Goal
GB	Government and Binding
H	Head
HAB	Habitual
IC	Interface Condition
*i*f	interpretable feature(s)
IM	Internal Merge
INF	Infinitive
Infl	Inflection
IPs	Inflectional Phrase(s)

INST	Instrumental
L	Language
LA	Lexical Array
Lex	Lexicon
LF	Logical Form
LI(s)	Lexical Item(s)
LOC	Locative
M	Mood
MP	Minimalist Program
NEG	Negation
NEGP	Negation Phrase
NOM	Nominative
NP	Noun Phrase
NS	Narrow Syntax
NTC	No Tampering Condition
Num	Number
Obj	Object
OM	Object Marker
P	Probe
P&P	Principles and Parameters
PASS	Passive Voice
PASSP	Passive Phrase
PF	Phonetic Form
PIC	Phase Impenetrability Condition
PHON	Phonological Component
Pl	Plural
PLD	Primary Linguistic Data
Pr	Present Tense
PROG	Progressive
PSG	Phrase Structure Grammar
PT	Past Tense
RECIP	Reciprocal
REFL	Reflexive
SEM	Semantic Component
Sg	Singular
SM	Sensorimotor
SM	Subject Marker
SMT	Strong Minimalist Thesis
S-O	Spell-Out
SO(s)	Syntactic Object(s)

SPEC	Specifier
SS	Surface Structure
Subj	Subject
SUT	Strong Uniformity Thesis
T	Tense Head in DbP
T_{comp}	φ-complete Tense Head
T_{def}	Tense Head lacking φ-features
TNS	Tense Head in MP
Tns	Tense
TP	Tense Phrase
u	unvalued feature
UG	Universal Grammar
*u*f	uninterpretable feature(s)
V	Lexical Verb
v*	Light verb
VP	Verb Phrase
v*P	Light verb Phrase
Ø	Null

ABSTRACT

This study was morpho-syntactic and qualitative in nature. The researcher was the primary source of data for analysis, which were mainly Ekegusii sentences, clauses, and phrases. In this study, an attempt was made to account for the phase structure of the morpho-syntactic nature of the Ekegusii verb system using Noam Chomsky's phase-based theory of syntax – Derivation by Phase (hereafter DbP). This theoretical framework reduces the computational burden in the generation of sentences by positing two indispensable syntactic operations: Merge and Agree, in the probe-goal pair and in phases through which a derivation proceeds. The study considered the derivation of Ekegusii transitive, intransitive, unaccusative, negative, passive and infinitival structures. The analysis of these structures revealed that Ekegusii verb responds pretty closely to the split VP (i.e. VP shell) analysis posited in DbP. Besides, Ekegusii has the phase structure propounded in DbP. For instance, an Ekegusii transitive verb with an external argument (EA) is a $v*P$ phase, a finding that is in favour of Chomsky's claim that a transitive verb with an EA is a phase (Chomsky 2008, p.143).

The study also explored structural Case assignment (i.e. Nominative and Accusative) and agreement between Ekegusii verb and its arguments. The findings of the study showed that: first, the Ekegusii tense head T does not assign NOM Case contrary to what is held in DbP that the tense head T assigns NOM Case to a c-commanded (pro)nominal in a derivation by either triggering movement to its SPEC or through long distance agreement. Part of the reason Ekegusii NOM Case is not assigned in such a manner is because Ekegusii T-constituent that is a finite one carries subject-verb agreement affixes which render it valued. For this reason, Ekegusii finite T-constituent does not get into the probe-goal pair syntactic relation with its c-commanded goal (goal within its local search space): Ekegusii finite T-constituent does not serve as a probe because its φ-features are valued as a consequence of carrying subject-verb agreement affixes. Therefore, a subject raises to SPEC T not on account of agreement with T, but on account of the EPP feature carried by T. However, Ekegusii T-constituent that is a to infinitive agrees with its c-commanded goal in person feature and attracts the element to move to its SPEC because Ekegusii T-constituent that is a to infinitive carries uninterpretable person feature. Structural ACC Case, on the other hand, is assigned by a transitive light verb in the manner held in DbP. This is so because, following Chomsky's claim that features of lexical items are introduced in the

course of the derivation (2000, p. 100), Ekegusii transitive light verb (which serves as a probe) agrees with its c-commanded goal and assigns ACC Case to it at the v*P phase, at which point the verb has not received the φ-features: the verb receives the person and number inflections when the derivation gets to the higher CP phase. The crucial conclusion of the study, therefore, was that the assumptions of Derivation by phase theory on NOM Case assignment are problematic when it comes to the Ekegusii linguistic data. Consequently, a revision to the properties of a T-constituent should be undertaken in order to accommodate other T-constituents such as that of Ekegusii because its T carries person and number affixes which inactivate it because they are already valued as at the time T is introduced into the derivation.

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CHAPTER ONE

1.1 Overview

In this chapter, I start in section 1.2 and look at the background to the study. Here I talk about the language of study and trace the development of generative grammar since its inception in the 1950s to the recent theoretical framework for this study. In 1.3, I state the research problem. In 1.4, I list the research questions. In 1.5, I derive the corresponding objectives of the study from the questions in 1.4. In 1.6, I justify my study. In 1.7, I explore the theoretical framework used for this study: Derivation by Phase theory. In 1.8, I sketch the scope and limitations of the study. In 1.9, I review the literature on Ekegusii studies and that which is related to the verb system. I conclude the chapter in 1.10 by outlining the data collection and data analysis procedures.

1.2 Background to the Study

In this section, I start by looking at the language of study: Ekegusii, and then trace the development of generative grammar since its inception in the 1950s to the recent theoretical framework for this study: Derivation by Phase theory.

1.2.1 Language of Study

Ekegusii is the language under study. It is a Bantu language mainly spoken in Gusii (or Kisii land) in the counties of Nyamira and Kisii found in the south western part of Kenya. According to the Kenya national census report (2019, p. 7), the two Kisii counties have a population of 1,872,436. Ekegusii is also spoken in different parts of the country and the world by *Abagusii* people and other non-native speakers who have learnt the language.

Guthrie (1971), in his classification of Bantu languages, classifies Ekegusii, which he refers to as *Gusii*, under group JE42, according to (Maho, 2009, p. 62). The language has dialectical variations. In this connection, Bosire (1993) identifies two dialects of Ekegusii: *Maate* 'of the South' and *Rogoro* 'of the North'. The former variety is mainly spoken in South Mugirango constituency and parts of Etago sub-county of Kisii county, while the latter dialect is

spoken in most parts of Kisii region. The classification of the two varieties of Ekegusii is guided by phonological, morphological and lexical differences between them. The *Rogoro* variety is considered to be the standard variety, and, in light of the major differences between the two varieties, this study focused on the *Rogoro* dialect.

1.2.2   Development of Generative Grammar

Noam Chomsky's 1950s approach to language study shifted linguistic thought from structuralism, which viewed language as a social or behavioural phenomenon to generativism (=Generative Grammar), which views language as a mental phenomenon and is characterized by mentalism, anti-behaviourism, explicitness, universalism, rationalism, deductionism, nativism and transformationalism.

Generative grammarians hold the view that language is species-specific, that is, language is part of the brain and that every child is born with a language capacity which Chomsky (1965) calls faculty of language (hereafter FL), and because of it, speakers of a language can internalize a system of rules of the language. This FL has an initial state before it is introduced to linguistic data, which upon exposure to other factors such as genetic endowment and experience, external to it but internal to an individual, gets modified to a considerable extent.

The generativist approach views language as a recursive system, which generates unlimited expressions through the application of limited rules. This recursive property of natural human language syntax has, to a considerable extent, evolved over the years. To kick start the generativist thinking, Chomsky (1957) took a biolinguistic approach to language study. He demonstrated how complex sentences are formed from underlying simple constructions. This is what came to be called Phrase Structure Grammar (PSG), which was found to be inadequate in accounting for passive constructions.

Katz and Postal (1964) and Chomsky (1965) extended the PSG and introduced recursive phrase structure systems (=transformations) that were capable of generating deep structures without an upper bound on length. This system was criticized because it embodied generalized transformations. An additional problem was that the phrase structure rules failed to provide an adequate account of the rules underlying the formation of constructions. Moreover, it could not

lay down the proper order followed in the application of the rules to generate well-formed constructions.

The development of X´ theory, first by Chomsky (1970) and later extended by Jackendoff (1977), was occasioned by the apparent inadequacy of phrase structure rules: the rules alone were not sufficient in making generalizations about the phrase structure of human language. The X´ theory then introduced the notion that human language is endocentric, that is, constructions are based on a central element called the "head" of a phrase which determines the basic properties of a phrase, and that the head is accompanied by other non-central elements (intermediate constituents), forming a large structure. Some of the tenets of the theory like the notion of "head" have proven to be tenable and are adopted in the most recent theorization within the generative framework, but the theory falls short on its stipulations on the number of specifiers a construction should have.

In 1981, Chomsky proposed a modular theory of grammar dubbed Government and Binding (GB), a version of Principles and Parameters theory (P&P). The P&P approach provides a viable solution to the central linguistic problem called Plato's problem: how children successfully acquire language despite the poverty of the stimulus (insufficient external language data) they are introduced to. Finding an expedient answer to Plato's problem has always been the impetus for generative linguistics and linguistic theoretical proposals have, to a large extent, been evaluated in relation to its demands. The basic idea of P&P is that children are pre-wired with a set of principles that, with equal force, hold across languages, and a set of parameters that account for many parametric variations among languages. Some of the parameter-setting tasks that form a core part of a child's task in acquiring language include learning whether or not their language is a null subject one, whether it is a wh-in situ or a wh-movement language, or whether the language is head last or head first.

The GB model of grammar worked with the hypothesis that information about linguistic expressions is encoded by levels of representation of a linguistic system. The theory kept the notions of syntactic representation, DS and SS, posited in earlier theories of the generative enterprise. Two more levels, PF and LF, were postulated, as conceptually necessary. Besides, GB analysed sentences as types of phrases, labeling them inflectional phrases (IPs) and Complementizer Phrases (CPs). Furthermore, GB is a modular theory that comprises other

theories such as theta theory, which describes the semantic roles (i.e. theme, agent, experiencer, goal, instrument, source and locative) performed by arguments in reference to their predicates; case theory, which describes the abstract structural Case-marking done by Infl[ection], which also involves movement of objects to specifier positions for purposes of Case assignment; and Binding theory, which generally deals with anaphoric references and the noun phrase.

Chomsky (1993) suggested that the acceptance of the four syntactic levels postulated in GB was to some extent hasty. Consequently, in 1995, he developed the Minimalist Program (MP), to ascertain how well the FL is designed and to reduce the syntax to its absolute minimum using two kinds of economy considerations: simplicity and parsimony. The MP restricted the possible linguistic levels to two: PF and LF, of representation which are conceptually indispensable, that is, the ones that link with performance systems; PF interfaces with the Articulatory-Perceptual (A-P) and LF links with the Conceptual-Intentional (C-I). These two levels are conceived to be providing instructions to the respective performance systems.

Syntactic structures are analysed as CPs under MP, with head positions such as agreement subject AGRs, agreement object AGRo and Tense (TNS), where the agreement of verb with subject and object and checking of tense features occurs, respectively. The structure-building process involves several operations, namely, Numeration, which provides lexical items that enter into syntactic derivation replete with their features (inflectional and morphological); Merge, a computational process that takes objects and combines them to form other objects; Movement, an operation which moves objects for purposes of Case checking and agreement (in tense and other properties of derivational morphology) (=feature-checking operation); and Spell-Out, which relays the derivation to the PF and LF levels.

The computational burden that MP set out to mollify by employing the economy considerations was still not fully achieved. To reduce the computational operations in syntactic derivation to a bare minimum, Chomsky (2000, 2001) proposed Derivation by Phase theory (DbP), a less costly approach in terms of the derivational resources expended, which he later developed fully in Chomsky (2004, 2007, 2008). The phase theory, DbP, is a feature-based theory of syntax which posits two syntactic operations: Merge and Agree, with only one level of syntactic representation, the phase, through which a derivation proceeds, awarding premium to probe-goal pair syntactic relation. In the probe-goal relation, the probe searches (due to its

uninterpretable features) within its search space and locates a goal, which has interpretable matching features, with which to Agree.

1.3 Statement of the Research Problem

This study was devoted to examining the tenability and optimality of the operations, Merge and Agree in the computation of Ekegusii sentences. It also tested the efficacy of the probe-goal pair syntactic relation in accounting for the Ekegusii verb phase structure of transitive, intransitive, negative, unaccusative, passive and infinitival structures as well as their morphosyntax. Besides, Case assignment and agreement were explored as well.

Chomsky's most recent theory, Derivation by Phase, has sparked new insights into the study of human language. The theory hinges on economic considerations and advocates for the reduction of the computational burden in the procedure for computation of human language. In this connection, the theory posits two indispensable syntactic operations in the generation of expressions: Merge and Agree, considerably reducing the operative complexity. In the proposed framework for the study, operations such as numeration, Move, feature checking and feature heads in the structure building process posited in the MP are considered to be superfluous and impeding computational efficiency. Consequently, they are dispensed with. Syntactic computation therefore proceeds in probe-goal pair syntactic relation and in phases.

1.4 Research Questions

In analysing the Ekegusii verb phase structure, the study sought to answer the following questions:

i.   How does agreement hold between the Ekegusii verb and its arguments?
ii.   What constituents of the Ekegusii verb serve as probes in the Case-agreement system?
iii.   What are the circumstances under which the Ekegusii verb carries valued φ-features?
iv.   What are the DbP structural designs of Ekegusii verb phase of transitive, intransitive, negative, unaccusative, passive, and infinitival structures?

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1.5 Objectives of the Study

i. To examine how agreement holds between Ekegusii verb and its arguments and complements.

ii. To establish the constituents of the Ekegusii verb which serve as probes in the probe-goal pair syntactic relation.

iii. To identify circumstances under which Ekegusii verb enters a computation process with a full complement of valued φ-features.

iv. To develop DbP structural descriptions of Ekegusii verb phase of transitive, intransitive, negative, unaccusative, passive and infinitival structures.

1.6 Rationale of the Study

Many studies have been done in Ekegusii using the generative grammar enterprise. This study adds value to the linguistic data on the Ekegusii language. It examined the verb system using the assumptions posited in Derivation by Phase theory, arguably the most recent theory of the computation of human language. The aim was to establish the efficacy of the aforementioned theoretical framework in handling Ekegusii data, and described the Phase structure of the Ekegusii verb by examining the transitive, intransitive, negative, unaccusative, passive and infinitival structures.

To the best of my knowledge, no one has studied the Phase Structure of the verb system of Ekegusii using Derivation by Phase theory. This was the gap in knowledge that this study sought to fill by establishing how Ekegusii verb system is computed in phases, paying attention to the verb morphosyntax and provided a principled explanation on how Case assignment and agreement hold within the probe-goal pair syntactic relation, on which the theory employed hinges. The findings of this work not only contribute to the ongoing debate in linguistic thought, but are also useful to future researchers interested in Derivation by Phase theory.

1.7 Theoretical Framework

The theoretical assumptions and descriptive strategies employed in the analysis of Ekegusii Verb Phase Structure were adopted from Derivation by Phase theory propounded by Chomsky (2000, 2001, 2004, 2007, 2008). The theory is a fairly recent one within the Generative Grammar framework and particularly within the MP, which advocates for economy in the procedure for computation of human language.

1.7.1   Towards a Phase-Based Theory of Syntax

Chomsky (2000) maintains a biolinguistic approach to language study. As his starting point, he maintains his earlier fundamental assumption that human beings have an internal linguistic property that he calls the Faculty of Language (FL). This FL is genetically-determined and has an initial state, which undergoes state changes through the influences triggered by the environment. Since the environment triggers changes on FL, Chomsky (2005) posits three factors that interact with the FL to determine the I[nternal]-language:

(1) (i) Genetic endowment;
      (ii) Experience (also called external data, Primary Linguistic Data (PLD)); and
      (iii) Principles that are not specific to language.

In 2001, Chomsky's pursuit of an optimal linguistic theory that could explain the workings of human language and thought heightened, as he sought to formulate an answer to the question: "to what extent is the […] FL an optimal solution to minimal design specifications, conditions that must be satisfied for language to be usable at all?" (p.1). The design specifications are what he calls legibility conditions, which can formally be stated as:

(2) "Legibility Conditions: for each language (L), the expressions generated by L must be [accessible] to systems that access these objects at the interface between FL and external systems – external to FL, internal to the person" (*Ibid.*).

Chomsky (2000) posits that language is a composite of information about sound, meaning, and structure from which performance systems, external to FL, obtain these pieces of

information and put them to use. He further argues that language provides information to the performance systems in levels of representation he calls interface levels (ILs). The performance systems are of two kinds: sensorimotor systems (SM) and systems of thought. These performance systems are unitary and distinct, in the sense that each of the systems accesses a distinct interface level. In this sense, language is understood to be a device that generates EXPR[essions] that have both PHON[ological] and SEM[antic] realizations; EXPR=<PHON SEM>. Whereas PHON provides instructions to SM, information about meaning and sound (i.e. thought system) is provided by SEM. This interaction between FL and the cognitive system must satisfy certain conditions for the interaction to be optimal. Chomsky calls these conditions interface conditions:

(3) Interface Conditions (IC): The "information in the expressions generated by language must be accessible to other systems, including the SM and conceptual-intentional (C-I) systems that enter into thought and action" (Chomsky, 2004, p. 106).

In formulating an answer to the minimal design specifications of FL, Chomsky proposes that language study should be following the uniformity principle, which in its strong version states that:

(4) "Strong Uniformity Thesis (SUT): In the absence of compelling evidence to the contrary, take languages to be uniform, with variety restricted to easily detectable properties of utterances" (Chomsky, 2001, p. 2).

Given the fundamental assumption that FL is uniform for the human species, and coupled up with (4) above, Chomsky (2004) asserts that the minimal design specifications are met by language itself, or put differently, the legibility conditions imposed on FL are optimally satisfied by language itself. This is called the strong minimalist thesis, which states:

(5) "Strong Minimalist Thesis: Language is an optimal solution to legibility conditions [that it must satisfy to be usable at all]" (Chomsky, 2000, p. 96).

According to Chomsky (2008), this conclusion is concretized by the C-I, which he considers to be an optimal interface (an epitome of how language itself meets the conditions it imposes on FL), that resolves difficulty which impedes communication efficiency. The optimality of C-I in

resolving such problems is well captured in Chomsky's C-I hypothesis on the duality of the semantic interface, whereby the base structure and the derived structure are streamlined to particular components; whereas the former structure yields a generalized argument structure such as theta roles, the latter yields properties related to discourse such as definiteness and old information. Based on these fundamental assumptions, Chomsky proposes Derivation by Phase theory within which he sets out to provide empirically supported evidence in answer to the question on the study of human language.

1.7.2 Derivation by Phase Theory

Phase theory is the most recent conception in the computational process of linguistic expressions in Chomsky's generative grammar tradition. It aims at reducing the operative complexity in the procedure for the computation of human language. Thus, fostering minimality and maximizing on computational efficiency. Chomsky (2000, 2001, 2004, 2007, 2008) posits that, in the phase-based theory of syntax, the computation of syntactic objects (SOs) proceeds in a piecemeal fashion, phase by phase, with only two operations: Merge and Agree, dispensing with operative complexity. Therefore, the process of deriving expressions is constrained to phases, in a single cyclic process. Expressions are analysed as CPs and TPs. Figure 1.0. shows the syntactic computation process (Adapted from Quicoli, 2008, p. 303):

Figure 1.0. Derivation by Phase Theory Model of Grammar.

```
                        Lexicon
                           ↓
                        Subarray
                           ↓
                      Merge/Agree
                           ↓
…....…..…………Phase 1……………..........
                           ↓
     PHON 1         Merge/Agree         SEM 1
        ↓                ↓                ↓
      …...………….Phase 2…………………
                           ↓
     PHON 2         Merge/Agree         SEM 2
        ↓                ↓                ↓
     PHON n           Phase n           SEM n
```
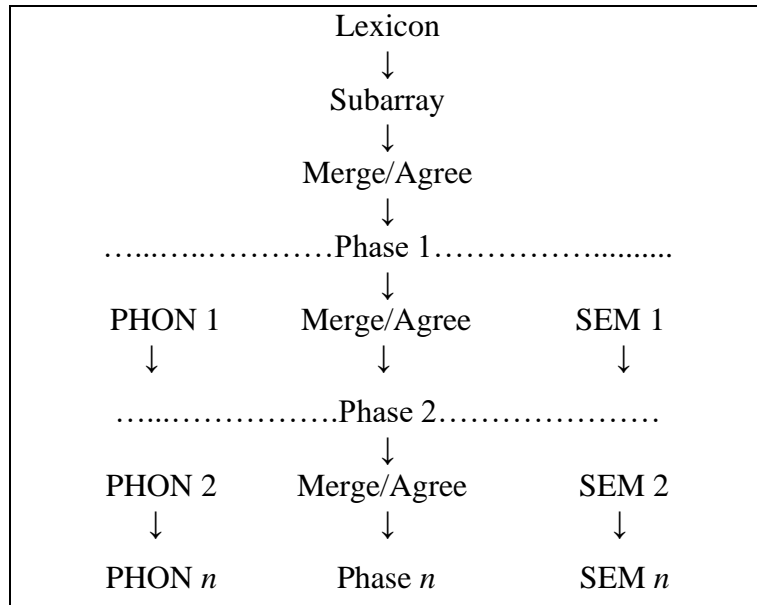
1.7.2.1 The Computational System

The computational procedure for human language (C_{HL}) assumes a derivational approach to language. The process is fed by Universal Grammar (UG), which makes available a bunch of linguistic features to be accessed by the C_{HL} to generate expressions. The generative procedure then proceeds in a manner that dispenses with superfluous elements in representation as well as steps in the derivation. The former ensures conformity to legibility conditions and convergence, and the latter allows operations only for which there is reason.

According to Chomsky (2000, 2001, 2004), after the UG has made available the linguistic features, language makes a one-time selection (it is assumed that there will be no assembly of new elements as the derivation proceeds) of a set of elements from the Lex[icon] and assembles them to a lexical array (LA) (also called subarray), with features of its items, which are the specific set of items that will be used in the derivation of a particular sentence. If elements of the lexicon are accessed more than once, this is called numeration. The LA is accessed once every cycle of derivation, thus, reducing operative complexity. The selected subset is then mapped to expressions without recourse to the lexicon. The generation of syntactic

objects occurs in the Narrow Syntax (NS), with two syntactic operations involved: Merge, which comes free; and Agree.

1.7.2.1.1 Narrow Syntax (NS)

Chomsky (2004) argues that NS is a "generative engine" (p. 108), which generates a derivation when a subarray is made available to it. At the NS component, derivations are realized through Merge. This operation takes two syntactic objects (SOs) A, B formed beforehand and out of their merger forms a new unit comprising of the two {A, B}, at which point the syntactic operation enters into further operations: Agree and Move (also known as internal Merge (IM), combines Merge and Agree). The NS derivation is then said to provide a basis for the semantic dichotomy at conceptual-intentional (C-I) interface, and for assignment of order at SM interface.

Language has three components of derivation which occur cyclically parallel: Narrow Syntax (NS), PHON[ological] component and SEM[antic] component. NS maps the Lexical array LA to D[erivation]; the PHON to SM; and the SEM to C-I. NS and SEM are universal (Chomsky, 2004, p. 107). The mapping of units, constructed by NS, to the relevant components occurs in accord with the inclusiveness condition, which states:

(6) "Inclusiveness Condition: Introduction of new elements (such as bar-levels, traces, indices, etc.) in the course of the derivation is barred, but only rearranging those of the domain" (Chomsky, 2004, p. 107).

In order to reduce the computational burden, derivation of expressions proceeds piece-by-piece, cyclically, in what is called phases. According to Chomsky (1999, p. 9), the reason the derivation proceeds in this fashion (in small chunks=phases) is due to the limited amount of structure that FL can hold in its workspace (active memory) at any one time. The lexical array (LA) placed on the workspace must contain labels for the resulting phases. Consequently, one lexical item from the core functional categories CFCs (C=Complementizer), v*=light verb and T=Tense), in this case C or v*, which are the heads of phases, must be present in the LA for appropriate labeling of the phases to be realized. Once the appropriate labeling has taken place, the syntactic object (=phase) formed undergoes a transfer operation to the relevant components.

For minimal computation, immediately after information is transferred, cyclicity is preserved because the transferred information becomes inaccessible in the subsequent operations in the derivation consonant with the phase impenetrability (inaccessibilty) condition. Finally, spell-out occurs to the phase.

> (7) "Phase Impenetrability Condition (PIC): Taking H to be the head of the phase HP, the PIC states that the complement of H is inaccessible to operations outside HP; only H and its edge are accessible to such operations" (Chomsky, 2001, p. 13).

1.7.2.1.2 Phases

Phases are SOs formed by mapping LA to expressions in NS. Syntactic computations proceed in these small chunks, owing to the limited structure that can be held by FL at any one time. Chomsky (2000, 2001, 2004, 2007, 2008) posits that phases are complementizer Phrase (CP) and Verb Phrase (v*P). One key defining feature of phases is their semantic and phonological coherence and independence. At the semantic interface, phases (CP and v*P) are propositional constructions; CP with tense, event structure and force (i.e. represents a full clausal complex), and v*P with a transitive v*, with an external argument. Experiencer constructions are also v*P phases (Chomsky, 2008, p. 143).

Chomsky (2001, p. 12) distinguishes between two kinds of phases: strong and weak ones. He argues that strong phases are those that are prospective candidates for movement, and that at the strong phase level, deleted features within the computational cyclic process remain until the whole phase is sent to the PHON and subsequently Spelled-Out cyclically. Once a phase has exhausted the LA from which it is constructed, its head C or v* may carry an EPP (Extended Projection Principle)-feature, which will satisfy each of their edge features (EF), if there will be any. After a phase has been Spelled-Out, the domain (i.e. complement), TP for CP and VP for v*P, of its head becomes inaccessible to further syntactic operations in accord with PIC in (7) above, because it is simultaneously sent to two components for processing: "to the PHON to be assigned appropriate phonetic representation and to the SEM to be given appropriate semantic representation" (Chomsky, 2001, p. 5). The structure in (8) below shows the domains (i.e. complements of the phase heads) handed over to the two components at the end of each phase:

(8). Domains (Search or probe) Spaces of C and v* (phase heads).

CP

C   **TP** The search (probe) space (i.e. domain) of the phase head C.

T   **v*P**

SPEC[ifier]   **v*´**

v*   **VP**   The domain and search space of the

V   **COMP[lement]**   phase head v*.
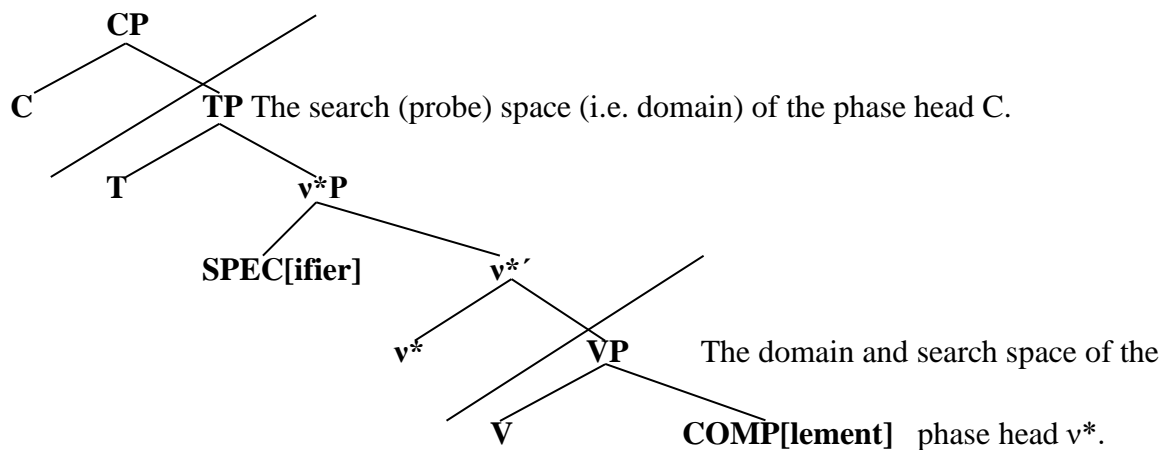
After phase v*P has been built, the domain of its head v* is handed over to the PHON and the SEM, becoming impenetrable to the higher phase head C. However, v*, [SPEC, v*P] and T are still accessible (and their features are visible) to C.

1.7.2.1.3 Lexical Items (LIs)

Chomsky (2000, p. 102) takes lexical items to be of two categories: substantive and functional. The latter category is one that is of interest in Derivation by Phase theory; it is formally dubbed as Core Functional Categories (CFCs), which include C, T and v*. C expresses force or mood, T tense or structure of an event and v* heads a transitive expression. C, v* serve as heads of phases (which may carry an edge feature (EF), those related to focus, topicalization or grammatical force e.g. +wh) and C, T and v* serve as probes, in the probe-goal pair syntactic relation that establishes agreement.

1.7.2.1.3.1 C[omplementizer]

C expresses force or mood and it is the highest head of a phase. Chomsky (2000) indicates that C varies parametrically among languages. This category is selected by substantive categories (such as Noun etc.), and it is said to be the source of φ(Phi)-features (person and number). Therefore, it is φ-complete. To put it differently, Agree- and Tense-features are

acquired from C. Consequently, T acquires its features from C and C selects T, one that is φ-complete, thus, C-T function as a unit in inducing agreement. In making selection, C must select T that is complete (T_{comp}) for its unvalued features to delete under Match/Agree. Beyond its S[emantic]-selection, C allows an EPP-feature, which means it can allow an extra SPEC[ifier] (i.e. wh-phrase to be raised) to meet this requirement.

1.7.2.1.3.2 T[ense]

T is the locus of tense (carries an interpretable tense feature) or event structure. Chomsky (2001, 2004, 2008) points out that T's φ-features are uninterpretable and Match and Agree with interpretable φ-features of a (pro)nominal within its search domain or remote (i.e. long distance, nonlocal), yielding agreement between a noun and a verb. According to Chomsky (2008), T does not contain φ-features while in the lexicon; it manifests them only when selected by C (which is the locus of the φ-features). Either C or V select T. If T is selected by the former, it has complete φ-features; if by the latter, it is defective (lacking a complete complement of φ-features). Against this backdrop, T is of two types: T with φ-complete (T_{comp}) and defective T (T_{def}). The former type has uninterpretable EPP-feature and is able to value and delete structural Case of a goal ((pro)nominal), while the latter type neither checks the unvalued case of its goal nor does it have an EPP-feature (Chomsky, 2001, p. 9). Consequently, there is no movement to the specifier position of a defective T ([SPEC, T_{def}]).

T functions in the probe-goal pair relation courtesy of its selection by C. In such a selection, T is φ-complete and in possession of semantic properties of true tense. Therefore, T only gets into any agreement relation in the C-T arrangement. However, T is complete only when necessary; it must be complete only when selected by φ-complete element (goal) with uninterpretable features [uf], in this case the element is C, in which case the number and person features on C are deleted by T – the selectional property is formulated in terms of Match/Agree. Chomsky (2001, p. 4) adds that the φ-set and EPP-feature (which serve as a trigger of Move of a surface subject to the [SPEC, TP]) of T perform two functions: (i) establishing whether a position picked by a probe offers a landing site for movement and (ii) selecting the suitable

category of an element (a nominal phrase, wh-phrase etc., which has uninterpretable structural Case) to move to the position identified by the probe. T assigns NOM Case to its goal.

1.7.2.1.3.3 v* (light verb)

This is the head of a transitive construction. Chomsky (2000) indicates, as is the case with C, that v* varies parametrically among languages. This category is a phase head, which serves as a probe for the Case-agreement system, assigning accusative Case to its goal. As far as its selectional properties are concerned, v* is only selected by a CFC (C or T) and selects a verbal element. Moreover, as its external argument (EA), v* may also select a nominal phrase NP/DP or a *there*-type EXPL[etive] [SPEC, v*] – EA may or may not be an actual argument, it is not constrained by anything. v* has an interpretable V and uninterpretable EPP-feature, which serve as a trigger of Move to the [SPEC, v*P]. As the head of a phase v*P, v* requires a transitive v* with a full complement of φ-features, which are uninterpretable and, with an appropriate goal, to value and delete through the syntactic operation Agree. However, Chomsky (2004, p. 113) hints that v* can also include participles which are not φ-complete (lack person-feature) and cannot assign Case, as in the case of participle-object constructions, where participles show partial φ-feature agreement, without assigning Case to the object (Chomsky, 2001, p.7). Transitive verbs of the type v* in Ekegusii include verbs like *sibia* 'wash', *miga* 'squeeze' and *mita* 'wring'.

1.7.2.1.4 Feature System

Chomsky (2000, p. 95) points out two categories of features: interpretable and uninterpretable. The latter category is distinguished from the former by virtue of its entry into the derivation without values. Interpretable features [*i*f] are legible to the external systems at the interfaces, while uninterpretable [*u*f] (=unvalued features) are not. These features include φ-features (person and number), EPP, edge feature (EF), tense, gender, and abstract structural Case. [*u*f], on the one hand, include Case for nouns and φ-features for CFCs, probes, which Agree with nouns; v* for object agreement and T for subject agreement. On the other, [*i*f]

include φ-features of nouns (which serve as goals) whose features are always present (φ-complete); hence they value φ-features of categories, T and v*, with which they Agree.

Chomsky (2004) proposes that [*u*f] of element A must be in an appropriate relation to [*i*f] of some element B of a construction under consideration. What is more, B must have a full complement of person and number features (i.e. φ-complete) and A must be available with no search. For optimal computation and subsequent feature-checking, A must be the head of the construction, which will serve as the probe (P), seeking B, its goal (G), by virtue of it being φ-complete. If the A-B relation satisfies the requirements: A must be active because of its uninterpretable φ-features and B by reason of its uninterpretable structural Case feature, then the [*u*f] (whose values are redundant) of A, B delete from the NS because the values of the [*u*f] have been determined by the operation Agree, at which point the distinction between [*i*f] and [*u*f] is lost. However, the features are left available for the phonology, owing to the fact that they may have phonetic effects.

1.7.2.1.5 The Operation Merge

Merge is universal and it comes free. The operation occurs in the NS, where it takes A, B SOs constructed beforehand and from them forms a new one, comprising of the two {A, B}. This new unit formed is considered as a projection of a head, either of A or B. For computational efficiency, Merge of A and B is guided by No Tampering Condition, which requires that:

(9) "No Tampering Condition (NTC): Merge of [A] and [B] leaves the two SOs unchanged" (Chomsky, 2008, p. 138).

For example, Merge of (A, B) = {A, {A, B}. Merge iterates with no limit, which is an attribute of lexical items and the recursive-infinite nature of language. Chomsky (2004) makes a distinction between two kinds of Merge: "external Merge and Internal Merge" (p.111).

1.7.2.1.5.1 External Merge (EM)

Under EM, A and B are distinct objects. That explains why subsequent to their merger we end up with a new element consisting of the two. This operation is iterable and it is taken to be the sole computational operation of NS. Chomsky (2008) says that the label, the head (C or v*) of a phase, makes a selection and is selected (in return) in EM, and it serves as a probe that searches for a goal to operations (i.e. Agree or IM) internal to the syntactic object (SO). The labeling of a SO is information that is relevant to computations, considering that every syntactic object generated enters into further computations.

1.7.2.1.5.2 Internal Merge (IM)

This is the operation Move. Under IM, A is part of B, or vice versa. Put differently, IM produces a duplicate of B in {A, B}, one within A, the other external to A. IM is driven by heads of phases, and it leaves a copy in place. IM can be overt or covert, which yields pairs <A, B>, where phonological features of either A (under covert move) or B (under overt move) can be lost under Spell-Out. If copy is considered to cover the two scenarios, then it follows that:

(10) "[A] is a copy of B if [A] and B are identical except that [A] lacks the phonological features of [B]" (Chomsky, 2004, p. 111).

Chomsky (2004, p. 116) suggests that IM requires three kinds of information for its optimal execution: (i) the element serving as a probe determines its target as well as the appropriate category to be merged to it, (ii) the element that is to be moved is determined by the goal and must be active, and (iii) determination of the location of the moved element (by the EPP-feature on a probe), which may allow long-distance agreement (one regarded to be a cheaper way of achieving agreement, because Move is more complex and only a last resort when nothing else is possible), or multiple subjects if the language allows that, that is, if the EPP-feature of a probe can be satisfied in both ways, through IM and EM. IM must pass through the edge (i.e. SPEC positions) successively-cyclic in subsequent phases.

In any probe-goal system, which is based on attract rather than Move, Merge must be binary (Chomsky, 2004, p.115) (both IM and EM are available for FL) and it yields two

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indispensable syntactic relations: probe-goal pair relationship and the relation of set-membership (Chomsky, 2008, p. 141). Chomsky (2008) argues that the two kinds of Merge relate mutually well with the semantic dichotomy created at the semantic interface: EM yields a base structure, with theta roles assigned to arguments; and IM yields a derived structure, with properties related to discourse such as definiteness and old information, in addition to effects of the scope.

In the wake of Chomsky's (2004, p.109) argument that during the computation of expressions the head first merges with its complement, and later on with its SPEC, it follows that in the computation of (11):

(11)   *Omwana o-turungan-ir-i*   *ekebuyu koru nyomba.*
        Child   3PersSgAGRs-roll-ASP-FV jerrycan from house
        'The child has rolled a jerrycan from the house.'

The verb *turungani* 'roll' (in its base form) merges with *koru nyomba* 'from the house', its PP complement, to form the V-bar *turungani koru nyomba*, which then merges with *ø ekebuyu* 'jerrycan' to form the VP *ø ekebuyu turungani koru nyomba*. The VP formed merges with the light verb, a causative form, which attracts the lexical verb *turungani* to raise and adjoin it at v* head position, forming the v-bar *turungani+ ø ø ekebuyu* ~~turungani~~ *koru nyomba*. Subsequently, the v-bar merges with the specifier *omwana* 'child' to form the v*P *omwana turungani+ ø ø ekebuyu* ~~turungani~~ *koru nyomba,* which in turn merges with T carrying a 3PersSgPr Af[fix] to form the T-bar, as shown in the structure in (12) below (with the ~~strikethrough~~ showing the null copy of the raised verb):

(12)

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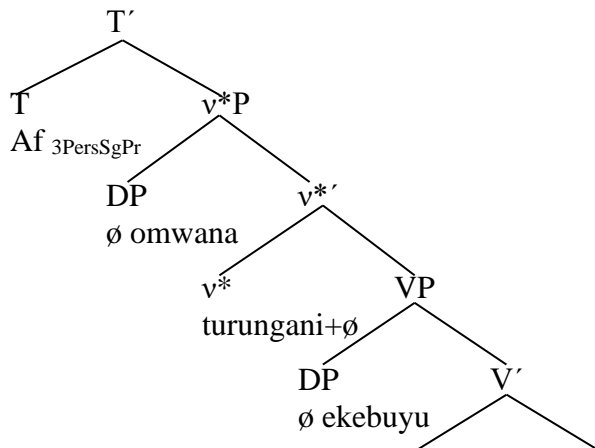
	V	PP
	~~turungani~~	koru nyomba

1.7.2.1.6 The Operation Agree

This operation is language-particular and it is based on the free relation of Match, taken to be identity. Agree must apply before a SO is Spelled-Out; otherwise, it crashes. The operation holds between a P and a G, which must be active by virtue of their uninterpretable features; for the probe, its φ-features must be uninterpretable (unvalued); for the goal, its structural Case must be uninterpretable, but have a complete complement of φ-features. If the [*uf*] of P and G relate appropriately, that is, a relation (agreement, Case-checking) is established between P and G, in some restricted search space (within P's domain, local), the uninterpretable φ-features of P are valued and P values G's structural Case in return, in a manner determined by the probe. That is, if the probe is T, NOM[inative] Case is assigned; if the probe is *v**, ACC[usative] Case is assigned. The valued features are then transmitted to the phonological component and thereafter simultaneously deleted from the NS and the derivation converges. Once the φ-features of P have been valued, P is rendered inactive and cannot subsequently derive any operation. Likewise, once Case of G has been checked, G is inactivated. Consequently, it cannot trigger further operations (Chomsky, 2004).

In the structure in (12) above, T carries present tense and third person singular affixes. The affixes are lowered onto the light verb consistent with Radford's (2009, p. 154) proposal that at this point in the derivation, the affixes get lowered onto the verb in the PHON through a morphological operation called "Affix Hopping" (*ibid.*). Consequently, the verb *turungani* is spelled out as *oturunganiri*. T carries an EPP feature which is satisfied through movement of *ϕ omwana* from [SPEC, *v**P] to [SPEC, TP]. The TP formed in turn merges with a null declarative C, forming the structure in (13) below (with the ~~strikethrough~~ on the lower DP *ϕ omwana* showing its null phonetic form):

(13)

```
                        CP
                     ╱     ╲
                    C       TP
                    ø     ╱    ╲
                        DP      T′
                    ø omwana  ╱    ╲
                            T        v*P
                         Af 3PersSgPr  ╱   ╲
                                    DP      v*′
                                 ø̶ ̶o̶m̶w̶a̶n̶a̶  ╱   ╲
                                          v*      VP
                                    turungani+ø  ╱   ╲
                                              DP      V′
                                           ø ekebuyu ╱   ╲
                                                    V      PP
                                                turungani̶  koru nyomba
```
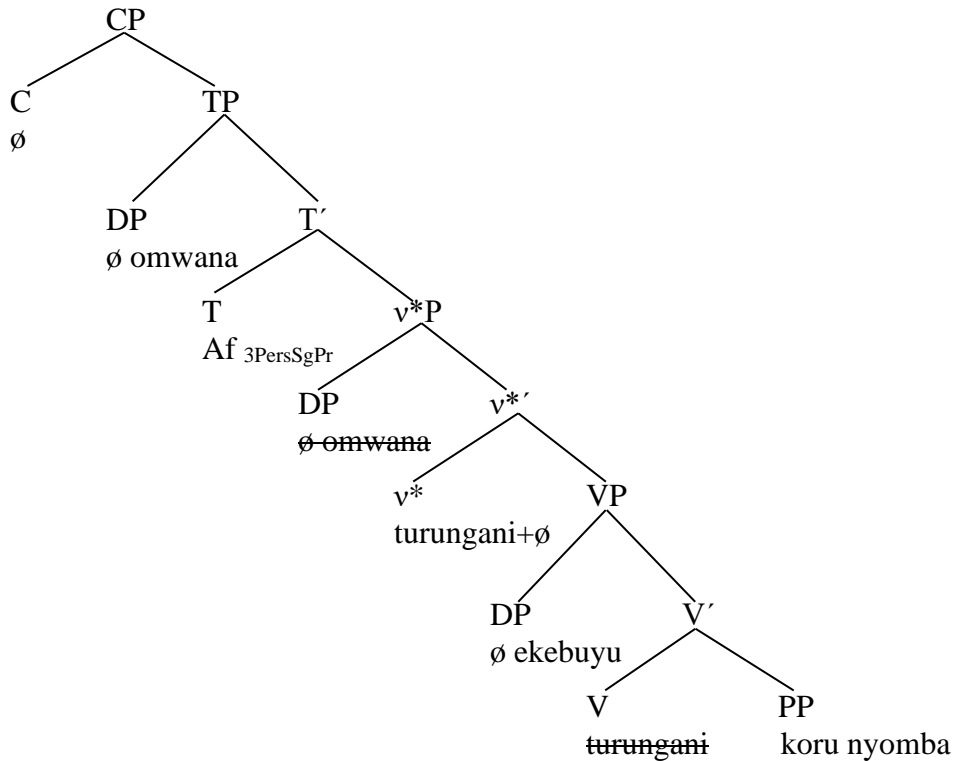
1.7.2.1.7 Transfer Operation

Transfer operation applies at phase level to the "narrow-syntactic derivation" (Chomsky 2004, p. 107) after the operations Merge and Agree have applied to the SO. Transfer, therefore, removes features (morphological or phonological) of lexicon and uninterpretable features that have received values, preventing the derivation from crashing at semantic interface. The SO is then shipped to the PHON, which informs the SM, and to the SEM, which in turn informs the C-I interface. According to Chomsky (2004, p. 119), transfer has a "memory of phase-length". Consequently, it must be cyclic, that is, there should be handing over of the domain of the phase head at the end of each phase and of the elements of the periphery after the overall phase (Radford, 2009, p. 383), for purposes of computational efficiency. In (12) above, a v*P phase has been formed and the complement of its head (i.e. the VP) undergoes transfer to PHON and SEM at that point in accord with (7) above. Likewise, the structure in (13) is a complete CP phase and the complement of its head (i.e. the TP) also undergoes a transfer operation at that point.

1.7.2.1.8 Spell-Out (S-O)

This is the last operation in the syntactic computation process, which applies at the strong phase level subsequent to the valuation of the [*uf*]. The operation seeks formal [*uf*] that have been checked (assigned values) and removes them from the NS as the SO is transferred to the PHON (Chomsky, 2008). If S-O happens at a point when values have not been assigned to [*uf*], the D crashes. S-O must be strongly cyclic for purposes of computational efficiency. According to Chomsky (2001, p. 13), the effects of an operation are judged at the next higher strong phase because of the EPP-feature. The structure in (14) below shows the two phases and what undergoes S-O at the end of each phase:

(14)
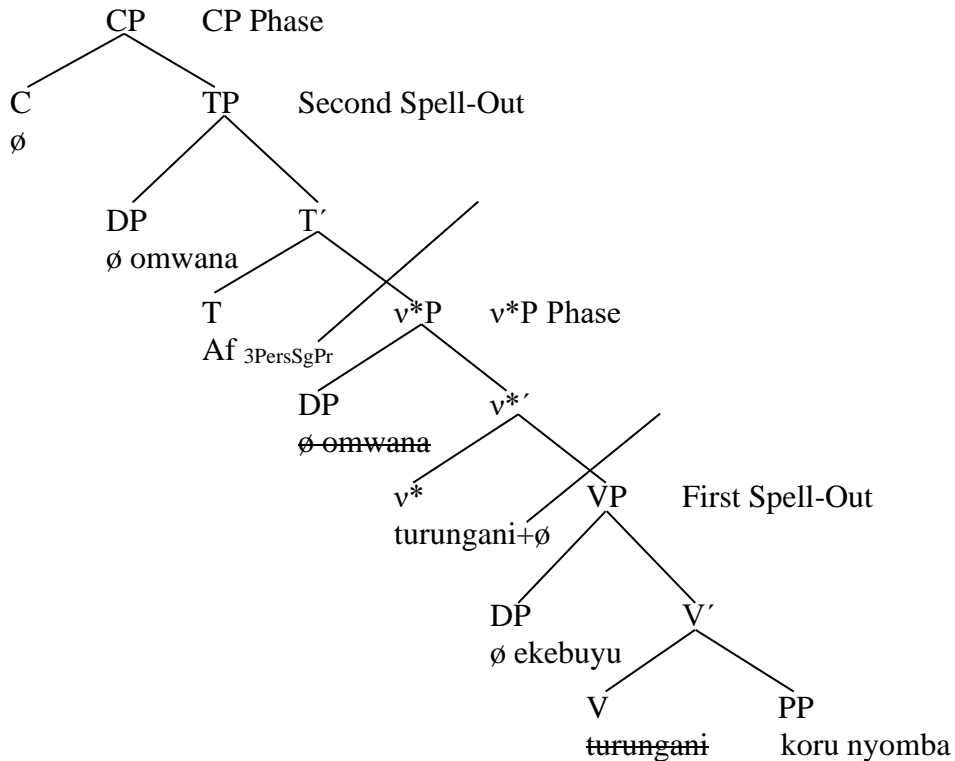
1.8 Scope and Limitations of the Study

This study was delimited to the morpho-syntactic description of the Ekegusii verb system. It examined the transitive, intransitive, negative, unaccusative, passive and infinitival structures.

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Besides, verb inflection for tense, aspect, negation and mood were discussed as well. Ekegusii being an agglutinating language, the above elements of the verb inflection (as well as those of verb derivation) are affixed onto the root verb, therefore, the study examined the verb morphology and how it operates in the computation of expressions. Furthermore, how agreement and Case assignment are induced was also explored, considering the verb (i.e. light verb v*) and Tense head (T) are functional categories that trigger Case-agreement relations.

1.9 Literature Review

In this section, I review literature on Ekegusii studies, on studies that are related to the verb system and on other studies done using Derivation by Phase theoretical framework.

1.9.1 Ekegusii and Other Studies Related to Verb System

Not an inconsiderable number of studies on Ekegusii have been done, a majority of which contribute to the ample literature from which this study draws. A review of some of them will go a long way in guiding the current study. Some of the pioneering works on Ekegusii include introductory work done by Whiteley (1960) on Ekegusii tense system. Elsewhere (1965), he identifies Ekegusii grammatical categories such as verbs, nouns, possessives and demonstratives. His work particularly on verbs forms a basis for a more elaborate description of the category, which this study seeks to do.

Osinde (1988) describes the Ekegusii morpho-phonology. What is of interest to this study is his attempt to explore concord, which this study seeks to evaluate from the point of view of DbP. Osinde's analysis of the verb, especially verb inflection for tense, aspect and mood lays foundation for this study on the elements of the verb which form an integral part of what the study seeks to delve deeper into from the proposed theoretical framework.

Mboga (1989) conducts a syntactic analysis of Ekegusii simple sentences, demonstrating the relationship of agreement between verbs and nouns. His study is relevant and forms a foundation for this study on agreement. In this study, I seek to establish how a verb and a noun

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agree in the probe-goal pair relationship, where the light verb serves as a probe and the noun as a goal.

Gesare (1992) does a structural analysis of the Ekegusii morphology and demonstrates that noun and verb forms have several substitutable, unfused and clearly segmentable morphemes. Because of the morpho-syntactic nature, the interface between morphology and syntax, of this study, Gesare's study lays a foundation on the investigation of elements (=morphemes) on the Ekegusii verb that either mark tense, an important functional category to the study, or subject-verb agreement (which has overt morphology), which forms a core part of what is investigated.

Bosire (1993) conducts a comparative study of Ekegusii dialects and establishes that the language has two dialects: *Rogoro* 'of the north' and *Maate* 'of the south', after comparing them and ascertaining that there are considerable morphological, lexical and phonological features that form a basis for their distinction. This informs this study on the major differences between the two dialects of the language under study, therefore, the study analyzes data from the *Rogoro* variety.

Basweti (2005) conducts a morphosyntactic analysis, arguably the first study of this nature in the language in question, of DP agreement in the MP. His study shows that MP is adequate in accounting for Ekegusii noun agreement with its quantifiers, determiners, possessives and adjectives. His findings also show that MP is sufficient in sentence (and even verbal) analysis, and ascertains that Movement operation is executed for purposes of agreement; nouns move for their Cases, nominative and accusative, to be checked and verbs move for their tense features to be checked. These findings on agreement are vital to this study because it also investigates how agreement holds between a verb and a noun in Ekegusii using the assumptions of Derivation by phase. In this adopted theoretical framework, a verb (light verb v^*) serves as a probe that searches for an expedient goal with which to agree and value its abstract structural Case, while a noun serves as a goal that values and deletes the uninterpretable φ-features on a probe.

Otiso (2008) carries out a morphosyntactic analysis of Ekegusii verb derivation in the MP. The study investigates how verbs are derived and it reveals that affixation is the major

morphological process through which verb derivation is achieved. Besides, the study establishes that verb derivation affects the number and type of arguments to the predicate as well as on the word order. What is more, her study concludes that the MP, given its morphosyntactic nature, adequately accounts for the Ekegusii verb derivation (because of its agglutinative nature); the derivational and inflectional features of a verb are checked upon movement to the suitable landing site, thereby triggering agreement between the verb and its arguments (valences), which also get their Cases checked. Otiso's study offers insight into how Ekegusii verb selects its arguments as well as into the verb derivation processes.

In the description of Ekegusii morphosyntax, Otiso acknowledges the fact that her study does not exhaustively delve into the analysis of verb inflection for tense, aspect and mood. For this reason, current study delves deeper into its analysis, considering tense (T), for instance, is an important functional category in the proposed theoretical framework, which serves as a probe, searching for a suitable goal within its search space in accord with the probe-goal pair relationship, thereby inducing agreement.

Otiso also recommends the carrying out of a detailed analysis of the Ekegusii verbs, and to possibly categorize them into different verb classes. The classification of the verbs is a gap that this study seeks to fill for this will be useful in analysing verbs in the syntactic derivation process. Furthermore, the theoretical framework used in the current study points out types of verbs that can assign Case and those that cannot. This is of interest particularly because Case assignment and agreement, in the probe-goal pair syntactic relation adopted in this study, are the driving force behind syntactic computations.

Another research that is important to this study is one done by Ochieng' (2017). Ochieng' investigates the phase structure of Dholuo, a Nilotic language spoken in the Nyanza region of Kenya, in Derivation by Phase theory. He ascertains that Dholuo has a phase structure as proposed by Chomsky (2000, 2001). However, the findings of the study show that the probe-goal pair framework does not fully account for the variations of the Dholuo verb; the T- constituent (tense head), for instance, bears interpretable and valued features, and, as a consequence, cannot serve as a probe contrary to what is suggested (that T serves as a probe) by Chomsky in Derivation by Phase theory. Besides, Ochieng' finds out that T does not assign the nominative Case to its subject, again contrary to what is proposed (that T assigns NOM Case to its subject)

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by Chomsky. The analysis of the light verb ($v*$) and how it assigns the accusative Case to its object, however, is found to be applicable and in accord with what the theory adopted for this study asserts. Ochieng's study is important to this study because it uses the same theoretical framework, and both languages of study are agglutinative though they belong to different language families. Therefore, it would be interesting to see how things play out in the analysis of Ekegusii.

1.10   Methodology

In this section, I look at the data collection techniques used to obtain data for the study and how the data collected is analysed in the quest to achieve the objectives of the study.

1.10.1 Data Collection

This was a qualitative research. The researcher's native speaker intuition and competence in the language of study offered primary data. This involved generation of Ekegusii sentences, clauses and phrases for the study. However, a study of this nature makes it inevitable for constant consultations with other members of the speech community. Therefore, the data was verified by other native speakers who were randomly identified in order to avoid distortion and possible misinterpretations. Furthermore, secondary data from previous Ekegusii studies, other internet and library sources formed a core part of the data that was investigated.

1.10.2 Data Analysis

The researcher used the descriptive strategies and assumptions of DbP, a feature-based theory of syntax propounded by Chomsky (2000, 2001, 2004, 2007, 2008), in examining the Ekegusii verb and sentences. The verb, for instance, was analyzed in terms of how it selects its arguments, and, it being the head of a phase (i.e. transitive $v*$), circumstances under which it serves as a probe were also examined as well as how it probes within its search domain to find a goal with which to agree and delete its uninterpretable features, valuing the goal's abstract

structural Case in return, thereby inducing agreement. Other aspects of the verb such as Tense (T) and Aspect were also analyzed in accord with the probe-goal pair relationship. For example, finding out how T-constituents (i.e. φ-complete T, φ-defective T, finite T, or infinitival T) in Ekegusii serve as probes and trigger agreement (by getting their φ-features valued and by valuing the structural Cases of their matching goals in return).

CHAPTER TWO

EKEGUSII VERB ANALYSIS

2.1 Overview

In this chapter, I focus on the analysis of the Ekegusii verb system. I start in 2.2 by looking at the morphological composition of the Ekegusii verb. In 2.2.1, I identify the pronominal subjects marked on the main verb. In 2.2.2, I discuss pronominal subject marking on the Ekegusii main verb. In 2.2.3, I explore Ekegusii subject-verb agreement. In 2.2.4, I reflect on claims that Ekegusii shows object-verb agreement. In 2.2.5, I discuss Ekegusii tense in which I examine how the past tense, the present tense and the future time are marked. In 2.2.6, I identify the elements of the Ekegusii main verb that mark Aspect and discuss the various kinds of Aspect they express. In 2.2.7, I look at mood and explore its various kinds marked on the Ekegusii main verb. In 2.2.8, I focus on Focus and identify the elements that mark the grammatical category on the Ekegusii main verb. In 2.2.9, I investigate negation in Ekegusii and identify the morphological elements that mark the category on the main verb. In 2.2.10, I look at Ekegusii infinitive. In 2.3, I explore the argument structure of the Ekegusii verb by outlining the various valence-changing operations. In 2.4, I classify the Ekegusii verbs into various verb types. In 2.5, I give a summary of the issues discussed up to that point.

2.2 Morphological Composition of the Ekegusii Verb

Ekegusii is a highly agglutinative language with a fairly rich morphology, and its elements perform various grammatical functions. The Ekegusii verb root derives its meaning from the affixes attached onto it. These elements include pronominal subjects and objects, subject-verb agreement affixes, focus, tense, aspect, mood, negation, the infinitive and elements of valence changing operations.

The Ekegusii stem form of the verb contains a suffix that is a final vowel. The final vowel is [-*a*], which changes depending on mood, negation, tense and aspect. For example, the final vowel becomes [-*i*] when indicating negation; [-*e*] when indicating subjunctive and

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conditional moods, tense and aspect; and remains [-*a*] when indicating indicative and imperative moods. I return to mood in 2.2.7 below.

2.2.1 Pronominal Subject Marking on the Ekegusii Verb

Pronominal subject marking on the Ekegusii verb is achieved through prefixation: person and number prefixes are attached to the verb root. In the event there is a nominal in a sentence, the prefixes serve to mark agreement in φ-features between the verb and its nominal subject. Besides, Ekegusii grammaticalizes a tripartite relationship between tense and the pronominal subject affixes: the prefixes vary depending on tense. The examples in (1) below show subject marking across all persons in singular and plural in the present tense (SM as abbreviated in this chapter stands for Subject Marker, and should not be confused with SM for Sensorimotor interface in chapter 1):

(1)　　(a)　　*Na-ch-ir-e.*

　　　　　　　1SgSM-come-ASP-FV

　　　　　　　'I have come.'

　　　 (b)　　*Twa-ch-ir-e.*

　　　　　　　1PlSM-come-ASP-FV

　　　　　　　'We have come.'

　　　(c)　　*Gwa-ch-ir-e.*

　　　　　　　2SgSM-come-ASP-FV

　　　　　　　'You have come.'

　　　(d)　　*Mwa-ch-ir-e.*

　　　　　　　2PlSM-come-ASP-FV

　　　　　　　'You have come.'

　　　(e)　　*O-ch-ir-e.*

　　　　　　　3SgSM-come-ASP-FV

　　　　　　　'S/he has come.'

(f) *Ba-ch-ir-e*

3PlSM-come-ASP-FV

'They have come.'

Table 2.1 Summary of Pronominal Subject Markers on the Ekegusii Main Verb in the Present Tense

Person	Singular Prefix	Plural Prefix
1st	{*na-*}	{*twa-*}
2nd	{*gwa-*}, {*kwa-*}	{*mwa-*}
3rd	{*o-*}	{*ba-*}

In showing the subject marking on the verb in person and number for the past tense paradigm, I ignore the past tense distinctions such as remote past, immediate past, etc. and focus on the past tense as a whole because the prefixes for all the past tense distinctions only differ in person but not in the type of past tense expressed. I return to the past tense distinctions in section 2.2.5.1 below. With that said, I can now look at the illustrative examples on the past tense subject marking on the verb root in (2) below:

(2) (a) *I-na-ch-et-e.*

FOC-1SgSM-come-ASP-FV

'I came.'

(b) *Twa-ch-et-e.*

1PlSM-come-ASP-FV

'We came.'

(c) *Gwa-ch-et-e.*

2SgSM-come-ASP-FV

'You came.'

(d) *Mwa-ch-et-e.*

2PlSM-come-ASP-FV

'You came.'

(e)   *A-ch-et-e.*

3SgSM-come-ASP-FV

'S/he came.'

(f)   *Ba-ch-et-e.*

3PlSM-come-ASP-FV

'They came.'

In the past tense, the subject marking prefixes are the same as those of the present tense in both singular and plural for the first and second persons as well as in the third person plural. The third person singular, however, shows the tripartite relationship in person, number and tense; the subject marker is {*o-*} in present tense and {*a-*} in past tense.

The second person singular subject marker in both present and past tense can also be {*kwa-*} depending on the phonetic features of the first segment in the verb root: if the initial sound in the verb root is a voiceless segment, the prefix {*gwa-*} is used; if it is a voiced one, the prefix {*kwa-*} is used. The choice of either {*gwa-*} or {*kwa-*} is a form of voice dissimilation that is consistent with Dahl's law in (3) on affixation in Bantu languages.

(3)   Dahl's law: "a voiced stem initial segment requires a voiceless consonant in the prefix and a voiceless stem initial segment requires a voiced consonant in the prefix" (Katamba, 1989, p. 95).

This can be illustrated by the examples in (4) and (5) below:

(4)   *Kwa-rug-ir-e (?)*   (present tense)

2SgSM-cook-ASP-FV

'You have cooked/Have you cooked?'

which can be a statement, or a question depending on the tone borne by the vowels in a given utterance.

(5)   *Kwa-rug-et-e.*   (past tense)

2SgSM-cook-ASP-FV

'You cooked.'

The pronominal subject marking on the verb root in the future tense is shown in (6) below:

(6)　　(a)　　*Ng'i-ch-e.*

　　　　　　1SgSM-come-FV

　　　　　　'I come.'

　　　(b)　　*To-ch-e.*

　　　　　　1PlSM-come-FV

　　　　　　'We come.'

　　　(c)　　*O-ch-e.*

　　　　　　2SgSM-come-FV

　　　　　　'You come.'

　　　(d)　　*Mo-ch-e.*

　　　　　　2PlSM-come-FV

　　　　　　'You come.'

　　　(e)　　*A-ch-e.*

　　　　　　3SgSM-come-FV

　　　　　　'S/he come.'

　　　(f)　　*Ba-ch-e.*

　　　　　　3PlSM-come-FV

　　　　　　'They come.'

It is important to note that the 1PersSg subject marker in the future tense can also be {*in-*}, which is phonetically conditioned and it has the allomorph |*im-*|. Delving into the discussion on the phonetic environments where {*in-*} occurs would be extraneous to this study. I just illustrate with an example of its occurrence in (7) and that of its variant in (8) below:

　　　(7)　　*In-dik-e*　　　　　*rirube.*

1SgSM-write-FV letter

'I write a letter.'

(8)   *Im-bar-e.*

1SgSM-count-FV

'I count.'

Table 2.2 Summary of Pronominal Subject Markers on the Ekegusii Main Verb in Future Tense.

Person	Singular Prefix	Plural Prefix
1st	{*ng'i-*}, {*in-*}, |*im*|	{*to-*}
2nd	{*o-*}	{*mo-*}
3rd	{*a-*}	{*ba-*}

In the future tense, the subject markers on the root of the verb show a tripartite relationship in person, number and tense. However, the 3Pers singular and plural subject markers are the same as those marked in the past tense, and present tense in third person plural.

2.2.2 Pronominal Object Marking on the Ekegusii Verb

Ekegusii verb root allows pronominal object marking through prefixation. The object markers are only present in the absence of an overt pronominal or nominal object in a given sentence. Therefore, object marking on the base of the main verb in Ekegusii is not obligatory. Consider the examples in (9) below from the stem verb *tuka* 'investigate':

(9)   (a)   *O-n-tuk-er-e.*

2SgSM-1SgOM-investigate-BEN-FV

'You investigate for me.'

(b)   *A-to-tuk-er-e.*

3SgSM-1PlOM-investigate-BEN-FV

'S/he to investigate for us.'

(c)   *Ba-go-tuk-er-e.*

   3PlSM-2SgOM-investigate-BEN-FV

   'They investigate for you.'

(d)   *A-ba-tuk-er-e.*

   3SgSM-2PlOM-investigate-BEN-FV

   'S/he to investigate for you.'

(e)   *To-mo-tuk-er-e.*

   1PlSM-3SgOM-investigate-BEN-FV

   'We investigate for him/her.'

(f)   *Ba-ba-tuk-er-e*.

   3PlSM-3PlOM-investigate-BEN-FV

   'They investigate for them.'

The first person singular object marker in Ekegusii is {-*n*-}. It has two allomorphs |-*m*-| and |-*ng'*-|, which are phonetically conditioned: |-*m*-| is used in the environment preceding a voiced bilabial fricative, which is strengthened to a voiced bilabial plosive in the environment following the underlying first person singular object marker; |-*ng'*-| is used when the initial sound segment in the verb root is a vowel. The two variants of {-*n*-} are illustrated in (10) and (11) below:

(10)   *Ba-m-but-er-e.*

   3PlSM-1PersSgOM-dismiss-BEN-FV

   'Dismiss them for me.'

(11)   *Ba-ng'-e-er-e.*   *ekerogo.*

   3PlSubj-1PersSgOM-give-BEN-FV   chair

   'Give them a chair for me.'

The second person singular object marker can also be {-*ko*-}. The choice of either {-*go*-} or {-*ko*-} is informed by the phonetic properties of the initial sound segment of the root of the verb: the prefixes dissimilate in voice with the initial sound segment of the verb root along the lines suggested by Dahl's law in (3) above. It is also worth noting that the voice dissimilation,

consistent with Dahl's law, is a phenomenon observed only in the 2PersSg object marking (and subject marking). The second person singular object marking with {-ko-} is illustrated in (12) below:

(12)   *In-ko-rug-er-e.*

       1SgSM-2SgOM-cook-BEN-FV

       'I cook for you.'

Table 2.3 Summary of Pronominal Object Markers on the Ekegusii Main Verb

Person	Singular Prefix	Plural Prefix
1st	{-n-}, |-m-|, |-ng'-|	{-to-}
2nd	{-go-}, {-ko-}	{-ba-}
3rd	{-mo-}	{-ba-}

2.2.3 Subject-Verb Agreement in Ekegusii

Ekegusii has obligatory subject-verb agreement markings on the main verb through prefixation for the 1&3Pers in both Sg and Pl. For the second person, marking of subject-verb agreement may or may not occur; it is optional – Ekegusii verb stem is understood as an imperative statement made to the 2pers Sg and Pl. As I observed in section 2.2.1 above, Ekegusii shows a tripartite relationship between tense and subject-verb agreement in person and number. This agreement is in the 3PersSg present tense and in 1&2Pers Sg and Pl in future tense. In (13) below, I illustrate subject-verb agreement for person and number in the future tense with the Ekegusii stem verb *suk-a* 'move-FV':

(13)   (a)   *In-suk-e.*

           1SgAGRs-move-FV

           'I move.'

     (b)   *to-suk-e.*

           1PlAGRs-move-FV

'We move.'

(c)   *o-suk-e.*

    2SgAGRs-move-FV

    'You move'

(d)   *Mo-suk-e.*

    2PlAGRs-move-FV

    'You move.'

(e)   *A-suk-e*

    3SgAGRs-move-FV

    'Him/Her move.' (literally)

(f)   *Ba-suk-e*

    3PlAGRs-move-FV

    'They move.'

The stem verb *suka* 'move' is a one-word sentence which is an imperative statement and can be understood to be addressing both the 2Pers Sg and Pl. The verb can optionally be preceded by the pronouns *aye* 'you', for a singular reference and *inue* 'you', for a plural reference, as shown in (14) and (15) below:

(14)   *(Aye)   suk-a.*

    You (Sg) move-FV

    'You move.'

(15)   *(inue)   suk-a.*

    You (Pl) move-FV

    'You move.'

As I noted earlier, pronominal subject markers on the Ekegusii main verb are the same as those that mark subject-verb agreement whenever there is a nominal subject in a given sentence. Therefore, in Table 2.4 below, I give a summary of the subject-verb agreement prefixes in person, number and tense:

Table 2.4 Summary of Subject-Verb Agreement Markers in Person, Number and Tense.

Person	Singular Agreement Prefix			Plural Agreement Prefix		
	Past Tns	**Present Tns**	**Future Tns**	**Past Tns**	**Present Tns**	**Future Tns**
1st	{*na-*}	{*na-*}	{*ng'i-*}, {*in-*}, |*im-*|	{*twa-*}	{*twa-*}	{*to-*}
2nd	{*gwa-*}, {*kwa-*}	{*gwa-*}, {*kwa-*}	{*o-*}	{*mwa-*}	{*mwa-*}	{*mo-*}
3rd	{*a-*}	{*o-*}	{*a-*}	{*ba-*}	{*ba-*}	{*ba-*}

2.2.4 Object-Verb Agreement

Pronominal object marking on the main verb in Ekegusii has, on many occasions, been misconstrued to mean object agreement marking. If Ekegusii main verb allowed object agreement markers, as has been posited by Otiso (2008) and others, we then would have the sentence in (16) as a grammatically correct utterance.

(16)   *O-mo-ng'-e-er-e*   *omorwaire eriogo*.
       2SgSM-3SgOM-1SgOM-give-BEN-FV patient   medicine
       *'You give him/her the patient medicine for me.'

Since Ekegusii main verb does not allow object-verb agreement marking, the object marker {*-mo-*} present with the overt indirect object *omorwaire* 'the patient' renders the sentence in (16) ungrammatical. Object affixes such as {*-mo-*} are only marked as pronominal objects on the main verb in the absence of an overt object. The corrected version of sentence (16) in (17) below is grammatical because there is no object marker {*-mo-*} on the main verb, owing to the presence of the overt indirect object:

(17)   *O-ng'-e-er-e*   *omorwaire eriogo.*

2SgSM-1SgOM-give-BEN-FV patient   medicine

'You give the patient medicine for me.'

When the pronominal object is marked on the main verb, there is no inclusion of an overt object in the same sentence. For example, the sentence in (18) below is understood to be produced by the first person singular to the second person singular subject, making reference to an object (i.e. recipient) in the third person singular:

(18)   *O-mo-ng'-e-er-e*   *eriogo.*
        2SgSM-3SgOM-1SgOM-give-BEN-FV medicine
        'You give him/her medicine for me.'

The ungrammatical sentence in (16) showing object marking on the main verb with an overt object, the grammatical sentence in (17) without object marking on the main verb due to the presence of an overt object and the sentence in (18) without an overt indirect object but with pronominal object marking on the main verb, are pieces of empirical evidence that lend support to my conclusion that Ekegusii does not grammaticalize object-verb agreement, but rather what is marked on the main verb are the pronominal object affixes.

2.2.5 Tense.

Payne (1997) defines tense as "the grammatical expression of the time of an event to some reference point in time, usually the moment the clause is uttered" (p. 236). The three common tense systems are past, present and future tenses.

2.2.5.1 Ekegusii Past Tense

The past tense in the Ekegusii language can be distinguished into three different tenses, namely, the immediate past, recent past and the remote past, as discussed below:

2.2.5.1.1 The Immediate Past

This kind of past tense distinction marks actions and events that take place within the same day from a few moments after the action or event up to a few moments leading to the time of speech. Example (19) below illustrates this type of past tense:

(19)   *Ongeri n-a-ch-a.*
        Ongeri FOC-3SgAGRs-come-FV
        'Ongeri came.'

The time of occurrence of an action or event in this type of tense can be specified using time adverbials such as *maambia* 'in the morning', *mobaso* 'at noon', *chisa ibere chiaetire* 'two hours ago', and so on.

2.2.5.1.2 The Recent Past

The recent past in Ekegusii denotes activities and events whose occurrence ranges from yesterday, to the day before yesterday, to a few days ago, and to the previous week. The example in (20) below represents an event that took place in the recent past, whose time of occurrence can be specified using time adverbials such as *igoro* 'yesterday', *moisonde* 'day before yesterday', *amatuko ane aetire* 'four days ago', *eiki yaeta* 'last week', and so on:

(20)   *Oyori na Mokeira   m-ba-ch-et-e.*
        Oyori and Mokeira FOC-3PlAGRs-come-ASP-FV
        'Oyori and Mokeira came.'

The verbs expressing this type of past tense and those expressing the remote past have the same orthographical shape and are only distinguished by the tone borne by the vowels in the said verbs. The tone borne by the vowels of the verb in (20) above can be represented as shown in (21) below:

(21)   *M-bá-ch-ét-è.*

FOC-3PlAGRs-come-ASP-FV

2.2.5.1.3 The Remote Past

The activities and events in the remote past involve those that took place from two weeks ago, to one month ago, to a year ago and to infinite regress. However, the time of occurrence of these events and activities can be specified using time adverbials such as *chiiki ebere chiaetire* 'two weeks ago', *omwako orio oeta* 'previous/last year', and so on. I illustrate this type of tense with the example in (22) below:

(22)   *I-na-ch-et-e.*
        FOC-1SgSM-come-ASP-FV
        'I came.'

As I noted in 2.2.5.1.2 above, the distinction between the recent past and the remote past is achieved through varying the tone of the vowels of the verbs expressing the events and actions in the two respective forms of the past tense. Therefore, in (23) below I represent the tone borne by the vowels of the verb in (22) above, distinguishing it from its counterpart in (21) (given (20) and (22) are different examples, I consider only the tone of the vowel of the element expressing ASP and the FV to bring out their distinction):

(23)   *I-nà-ch-ét-é.*
        FOC-1SgSM-come-ASP-FV

Otiso (2008, p. 38) observes that Ekegusii past tense can be marked by the morphemes {-*ka*-} and {-*ga*-}, which vary depending on the phonetic features of the initial sound segment of the verb root in line with Dahl's law in (3). I illustrate with {-*ka*-} in (24) and with {-*ga*-} in (25) below:

(24)   O*rina a-ka-rwan-a*   *igoro.*
        Orina 3SgAGRs-PT-fight-FV yesterday
        'Orina fought yesterday.'

(25)   *In-ga-sab-a*   *emetienyi ebere yaetire.*
         1Sg-PT-pray-FV months   two   passed

'I prayed two months ago.'

In marking the past tense using the morphemes {-*ka*-} and {-*ga*-}, there is no distinction between the recent past and the remote past, and the morphemes cannot be used to mark the immediate past.

2.2.5.2 Ekegusii Present Tense

This type of tense denotes activities and events taking place at the moment of speech, making thinner the distinction line between this type of tense and the progressive aspect. Comrie (1985) presents an argument that seldom does a situation coincide with the present moment, and if it does, it only locates the situation temporarily (p. 37). In Ekegusii, there are utterances, such as the one in (26) below, that are exactly commensurate with the present moment.

(26)   *O-ch-ir-e.*

          3Sg-come-ASP-FV

          'S/he has come.'

If, for example, I was expecting Moraa to come to my party and upon turning my head I see her entering the gate to my house and I utter the sentence in (26) above, my utterance and the action of coming described by the verb coincide with the present time. Therefore, my utterance is said to be simultaneous with the action or event being described in terms of the location of the action or event at the present time.

Comrie (1985) describes a more characteristic use of the present Tns in which it is used to denote "[…] states and processes which hold at the present moment, but which began before the present moment and may well continue beyond the present moment […]" (p. 37). Let me consider the Ekegusii example in (27) below, in which the action of writing described by the verb is not restricted only to the present moment:

(27)   *I-nko-rik-a in-de*

          FOC-PROG-write-FV 1Sg-AUX

          'I am writing.'

In this regard, Comrie argues that the present tense only locates an action, state, or event at the present moment, saying nothing beyond that. Put differently, present tense does not specify that the action of writing in (27) does not continue beyond the present time, nor does it deny that the writing started in the past. In this connection, Comrie concludes that "[…] the present tense refers only to a situation holding at the present moment, even where that situation is part of a larger situation that occupies more than just the present moment" (Comrie, 1985, p. 38).

2.2.5.3 Future Time Marking in Ekegusii

Future time in Ekegusii is determined by the specificity of time of an occurrence, certainty on the occurrence of an event or state and distance from the present into the future: from a few minutes to come to an unspecifiable time in the future. This can be illustrated by the examples in (28 – 32) below:

(28)   *Na-ch-ir-e.*
         1Sg-come-ASP-FV
         'I am coming.'

It should be noted that there is a difference in meaning between example (28) and the one used in (1a) above. The latter expresses an action that has just happened and therefore it is in the present tense while the former expresses an action that is yet to occur.

Example (28) above means the speaker will come at any unspecified time from the time of speech, but within the same day. It shows that it is a matter of (a) minute(s) and they will come. Besides, it gives an impression that the speaker is very near where s/he was going. The time of coming made reference to by the speaker can be specified through the use of the time adverbial *bono iga* 'right now', so that we have *nachire bono iga* 'I am coming right now'.

(29)   *Ngo-ch-a in-de.*
         PROG-come-FV 1Sg-AUX
         'I am coming.'

Example (29) above means the speaker is coming any minute, hour, day, or week from the time of speech. The speaker's time of coming can be specified by use of time adverbials such as *edageka eyemo/isano*(etc.) *koru bono* 'one/five minute(s) from now', *ensa eyemo/isato*(etc.) *koru bono* 'one/three hour(s) from now', *mambia* 'tomorrow', and so on.

(30)   *Ni-ng'i-ch-e*
       FOC-1Sg-come-FV
       'I shall come.'

In (30) above, the speaker is certain s/he shall come, but the time, day, week, month, or year of coming is indefinite: when the speaker will be coming is unspecifiable and nor can it be specified by a time adverbial. However, the indefinite word *mosuko* 'someday' can be used to show that the speaker will come in future, but this future is not the following day or any near future. It gives an impression that a long time will pass before the speaker comes.

(31)   *Ninche ng'i-ch-e.*
       Will   PersSg-come-FV
       'I will come.'

In (31) above, the speaker is certain s/he will come. However, the time of coming is indefinite but could be any day from the following day. To specify the time of coming, the speaker can use time adverbials such as *mambia* 'tomorrow', *eiki egocha* 'the following week', and so on.

(32)   *Nabo in-dach-e.*
       May 1PersSg-come-FV
       'I may come.'

The speaker in (32) is uncertain of coming and when to come is unspecified. The time of coming ranges from within a few hours from the time of speech within the same day, to the following day, to the day after the following day, to the following week, to the following month and to the following year. The time can, however, be specified using time adverbials such as *morogoba* 'in the evening', and so on.

It is important to note that in example (32) above, the first person marker {*in-*} can be realized as [*n-*] in rapid speech. Besides, the initial consonant sound in the root of the verb in (32) above gets strengthened from [*r-*] (the underlying form) into [*d-*] in the environment following the nasal sound [n]. This liquid strengthening is a result of physical articulatory mechanism: it is fairly difficult to articulate [n] and then [r], given that they are realized at the same articulatory region, alveolar ridge.

Thus far, the analysis of the three tense systems: past, present and future, in Ekegusii lead to my crucial claim that Ekegusii does not mark tense through its inflectional morphology: there are no specific morphemes affixed onto the Ekegusii verb root that mark the three tenses except for the past tense in which {*-ka-*} and {*-ga-*} are used, but do not make the past tense distinction as I noted in 2.2.5.1.3 above. Ekegusii, therefore, expresses tense through suprafixation (i.e. use of tone), through use of calendrical units such as *omwaka oeta* 'previous year', *eiki egocha* 'following week' and through use of diurnal span vocabulary such as *maambia* 'in the morning' and *morogoba* 'in the evening' to locate the situations in the three tense systems, as evidenced in the examples used throughout section 2.2.5.

2.2.6 Aspect

Payne (1997, p. 238) argues that "aspect describes the internal temporal shape of states or events". He draws a distinction between tense and aspect: whereas tense marks the sequence of events in real time, aspect is associated with the internal temporal structure of a situation (p. 233-234), with little or no consideration to time. He identifies three categories of aspect, namely, perfective, imperfective and perfect. Ekegusii gramaticalizes all the three types of aspect, as discussed below:

2.2.6.1 Perfect Aspect

This type of aspect refers to a situation in the past "[…] where the event is seen as having some present relevance", according to Crystal (2008, p. 356)". Ekegusii marks this aspect by using the morpheme {*-et-*}, with a change of the final vowel from [*-a*] to [*-e*], and as I noted in

2.2.5.1.2 above, the element marking this aspect is distinguished in the recent past and the remote past forms by varying the tone of the vowel in the element. I illustrate the marking of this aspect with the recent past form of a verb in (33) and with its remote past counterpart in (34) below:

(33)　　*N-kwá-rúg-ét-è*　　　　*igoro.*
　　　　FOC-2Sg-cook-ASP-FV yesterday
　　　　'You cooked yesterday.'

(34)　　*N-kwà-rúg-ét-é*　　　　*omotienyi oeta.*　　.
　　　　FOC-2Sg-cook-ASP-FV month　　previous
　　　　'You cooked the previous month.'

2.2.6.2 Perfective Aspect

In this type of aspect, "a situation is seen as a whole, regardless of the time contrasts which may be part of it", argues Crystal (2008, p. 356). Ekegusii marks this type of aspect by using the morpheme {-*ir*-}, and just like the perfect aspect, there is a change of the final vowel from [-*a*] to [-*e*], as illustrated by the example in (35) below:

(35)　　*Na-rug-ir-e.*
　　　　1Sg-cook-ASP-FV
　　　　'I have cooked.'

2.2.6.3 Imperfective Aspect

Payne (1997, p. 239) argues that a situation in the imperfective aspect "is viewed from 'inside' and as an ongoing process". Payne identifies two categories of this type of aspect: habitual and progressive aspects (*ibid*.). Ekegusii grammaticalizes these two categories of the imperfective aspect, as discussed below:

2.2.6.3.1 The Progressive Aspect

Leech & Svartvik (1975) define the progressive aspect as the type of aspect that "refers to activity in progress [and that is] […] of limited duration" (p. 52). Ekegusii progressive aspect is marked on the main verb by the morpheme {*ngo-*} or {*nko*}. {*nko-*} has the allomorph |*nkwa-*|, whose environment of occurrence I ignore here. The choice of either {*ngo-*} or {*nko-*} depends on the phonetic features of the initial sound segment of the verb root: if the root initial sound is voiced, {*nko-*} is used; if voiceless, {*ngo-*} is used. This is a phenomenon of voice dissimilation which is consistent with Dahl's law on affixation in (3) above. What follows are illustrative examples with {*ngo-*} in (36) and {*nko-*} in (37), with those of its variant |*nkwa-*| in (38) below across all persons:

(36)   (a)   *Ngo-ch-a in-de.*
             PROG-come-FV 1Sg-AUX
             'I am coming.'

       (b)   *Ngo-ch-a to-re.*
             PROG-come-FV 1Pl-AUX
             'We are coming.'

       (c)   *Ngo-ch-a o-re.*
             PROG-come-FV 2Sg-AUX
             'You are coming.'

       (d)   *Ngo-ch-a mo-re.*
             PROG-come-FV 2Pl-AUX
             'You are coming.'

       (e)   *Ngo-ch-a a-re.*
             PROG-come-FV 3Sg-AUX
             'S/he is coming.'

       (f)   *Ngo-ch-a ba-re.*
             PROG-come-FV 3Pl-AUX
             'They are coming.'

(37)　(a)　*Nko-rug-a in-de.*
　　　　　PROG-cook-FV 1Sg-AUX
　　　　　'I am cooking.'

　　　(b)　*Nko-rug-a to-re.*
　　　　　PROG-cook-FV 1Pl-AUX
　　　　　'We are cooking.'

　　　(c)　*Nko-rug-a o-re.*
　　　　　PROG-cook-FV 2Sg-AUX
　　　　　'You are cooking.'

　　　(d)　*Nko-rug-a mo-re.*
　　　　　PROG-cook-FV 2Pl-AUX
　　　　　'You are cooking.'

　　　(e)　*Nko-rug-a a-re.*
　　　　　PROG-cook-FV 3Sg-AUX
　　　　　'S/he is cooking.'

　　　(f)　*Nko-rug-a ba-re.*
　　　　　PROG-cook-FV 3Pl-AUX
　　　　　'They are cooking.'

(38)　(a)　*Nkwa-bus-a in-de*
　　　　　PROG-sweep-FV 1Sg-AUX
　　　　　'I am sweeping.'

　　　(b)　*Nkwa-bus-a to-re.*
　　　　　PROG-sweep-FV 1Pl-AUX
　　　　　'We are sweeping.'

　　　(c)　*Nkwa-bus-a o-re.*
　　　　　PROG-sweep-FV 2PersSg-AUX
　　　　　'You are sweeping.'

(d)   *Nkwa-bus-a mo-re.*

        PROG-sweep-FV 2Pl-AUX

        'You are sweeping.'

(e)   *Nkwa-bus-a a-re.*

        PROG-sweep-FV 3PersSg-AUX

        'S/he is sweeping.'

(f)   *Nkwa-bus-a ba-re.*

        PROG-sweep-FV 3Pl-AUX

        'They are sweeping.'

2.2.6.3.2 Habitual Aspect

Habituality is a situation that can be prolonged, or iterated for a number of times over a period of time. Payne (1997) argues that "[…] habitual aspect expresses an assertion that a certain type of event […] regularly takes place. [However,] it does not imply that an instance of the event is taking place now" (p. 241). Habitual aspect in Ekegusii can be subdivided into the past habitual and present habitual. The past habitual, on the one hand, is expressed through the use of the auxiliary morpheme {-re} together with an infinitive form of a verb. The present habitual, on the other, is expressed through the use of the morphemes {-go-} and {-ko-}, the same morphemes that express the infinitive only that in this case they are used after a pronominal subject marker (they are used verb initially when expressing the infinitive). The morpheme {-ko-} forms a glide when followed by certain vowels in the initial verb root position onto which it is affixed, producing |-kw-| as its variant in such phonetic environments, which I ignore here. The choice of either {-go-} or {-ko-} has a bearing on the phonetic features of the initial sound segment in the root: if voiceless, {-go-} is used; if voiced, {-ko-} and its variant are used. What follows are examples that illustrate the past habitual in (39) and those of the present habitual in (40):

(39)   (a)   *Ba-re ko-nyw-a.*

              3Pl-AUX INF-drink-FV

'They used to drink (alcohol).'

(b)   *Mwa-re kw-a-a   echae.*
        2Pl-AUX INF-pluck-FV tea
        'You used to pluck tea.'

(c)   *Twa-re go-ch-a.*
        1Pl-AUX INF-come-FV
        'We used to come.'

(40)   (a)   *A-go-tenen-er-a   abasae.*
                3Sg-HAB.ASP-take charge/represent-BEN-FV youths
                'S/he takes charge of/represents the youth.'

        (b)   *Mo-ko-ib-a.*
                2Pl-HAB.ASP-steal-FV
                "You steal"

        (c)   *In-kw-obo-a.*
                1PersSg-HAB.ASP-fear-FV
                "I fear"

2.2.7 Mood

This category is also referred to as mode. Payne (1997, p. 234) defines mood/mode as an operation that "[…] relates the speaker's attitude toward [a certain] situation or the speaker's commitment to the probability that [a certain] situation is true". Mood as a property of a verb signals semantic and syntactic alternative paradigms. That is, it signals the speaker's attitude toward a certain utterance, e.g. possibility, vagueness, doubt, or uncertainty, in respect of the semantic domain. In the syntactic domain, the alternatives in the preceding line are expressed through verbal inflection or use of auxiliaries, according to (Crystal, 2008, p. 312). Crystal identifies three categories of mood signaled by alternative paradigms of the verb, namely, imperative, subjunctive and indicative, the unmarked form. Ekegusii signals the aforementioned

types of mood through change of its verbal final vowel. As I noted in 2.2 above, the Ekegusii final vowel is [-*a*]. In respect of mood, it changes to [-*e*] when indicating subjunctive and conditional moods and remains [-*a*] when indicating indicative and imperative moods. What follows in (40 – 43) are illustrative examples for the four alternative paradigms of mood in Ekegusii:

(40)   *Ko-ra-som-e.*   (Conditional)
       INF-COND-read-M
       'If you read…'

(41)   *N-a-som-a.*   (Indicative)
       FOC-3PersSg-read-M
       'S/he did read.'

(42)   *Som-a.*   (Imperative)
       Read-M
       'Read.'

(43)   *O-som-e.*   (Subjunctive)
       2Sg-read-M
       'You read.'

2.2.8 Focus

In my approach to focus here, I adopt Payne's (1997) third approach to focus in which focus is viewed as describing "[…] a condition of some pragmatically marked clauses[, in which] other clauses can be focus neutral or unfocused" (p. 267). Focus in Ekegusii is not obligatory and when marked indicates emphasis. It is marked on the root of the verb by the prefixes {*i-*, *in-*, *n-*, *m-*, *ni-*}. The prefix to be attached varies considerably in respect of person, number and tense. However, there is no focusing in all persons on the verbal clauses that express the present tense that denotes a just concluded situation. These verbal clauses are those whose aspect is marked by the element {*-ir-*} such as *na-ch-ir-e* 'I have come'. I, therefore, illustrate focus in Ekegusii across all persons in past and future tenses, in (44 – 49) below:

(44)   *I-na-ch-a.*

      FOC-1Sg-come-FV

      'I came.'

(45)   *In-gwa-ch-a.*

      FOC-2Sg-come-FV

      'You came.'

(46)   *N-a-ch-a.*

      FOC-3Sg-come-FV

      'S/he came.'

(47)   *Ni-ng'i-ch-e.*

      FOC-1Sg-come-FV

      'I shall come.'

(48)   *N-o-ch-e.*

      FOC-2Sg-come-FV

      'You will come.'

(49)   *M-ba-ch-e.*

      FOC-3Pl-come-FV

      'They will come.'

2.2.9 Negation

Crystal (2008) defines negation as "a process or construction in grammatical and semantic analysis which typically expresses the contradiction of some or all of a sentence's meaning" (p.323). Negation in Ekegusii is expressed morphologically through prefixes which vary considerably depending on person and number. The prefixes are {*ti-*}, {*to-*} and {*ta-*}: {*ti-*} marks negation in 1PersSg, 2PersPl, 2PersSg in past tense and 3PersPl; {*to-*} marks negation in the second person singular present and future tenses; and {ta-} marks negation in the third person singular. I look at negation across persons in (50 – 52) below:

(50)   *Ti-many-et-i.*
      NEG-know-ASP-FV
      'I do not know.'

(51)   *To-many-et-i.*
      NEG-know-ASP-FV
      'You do not know.'

(52)   *Ta-many-et-i.*
      NEG-know-ASP-FV
      'S/he does not know.'

It is worth noting that in the examples in (50), (51) and (52) above, the subjects are understood to be the 1PersSg, 2PersSg, and 3PersSg, respectively, without being marked on the root of the verb. Equally important to note is that the negating morpheme {*ta-*} also indicates negation when following the infinitive marker {*-go-*}, in which case it does not indicate person nor number. Furthermore, the negating morpheme {*-te-*} also appears in the similar and only in such an environment, as illustrated in (53) and (54), respectively:

(53)   *Go-ta-som-a.*
      INF-NEG-read-FV
      'Not reading.

(54)   *Go-te-sik-a.*
      INF-NEG-respect-FV
      'Not respecting oneself.'

Negation is also marked by the final vowel [*-i*], especially in the 1PersPl present tense, as illustrated in (55) below:

(55)   *N-to-many-et-i.*
      FOC-1Pl-know-ASP-FV/NEG
      'We do not know.'

Tone is another negation-marking operation that is used to differentiate between affirmative and negative verbal clauses: it depends on varying the tone of the vowels of the verbal clause. I illustrate the phenomena with an affirmative verbal clause in (56) and that of its negative counterpart in (57) below:

(56) *N-twà-mány-ét-é.*
      FOC-1Pl-know-ASP-FV
      'We knew.'

(57) *N-twá-mány-ét-è.*
      FOC-1Pl-know-ASP-FV
      'We did not know.'

Additional examples of tone-based distinction between affirmative and negative verbal clauses are given in (58) and (59) below:

(58) *M-bá-bút-à.*
      FOC-3Pl-dismiss-FV
      'They dismissed.'

(59) *M-bà-bút-á.*
      FOC-3Pl-dismiss-FV
      'They should not dismiss'

Table 2.5 Summary of Negation Morphemes in Person and Number

Person	Singular Negation Affix	Plural Negation Affix
1st	{*ti-*}	Present Tns= final [-*i*] Past Tns= tone
2nd	Present Tns= {*to-*}, Past Tns= {*ti-*}	{*ti-*}
3rd	{*ta-*}	{*ti-*}

2.2.10 Infinitive

This category is a non-finite form of a verb. It is marked morphologically in Ekegusii. The morphemes that mark this category on the Ekegusii main verb are {*ko-*} and {*go-*}, which are prefixes and the choice of either of them depends on the phonetic features of the initial sound segment in the root of the verb. That is, the prefix dissimilates in voice with the root's initial sound along the lines suggested by Dahl's law in (3). An example of {*ko-*} in (60) and that of {*go-*} in (61) below will help fix the ideas:

(60)   *Ko-minyok-a.*
       INF-run-FV
       'To run.'

(61)   *Go-suk-a.*
       INF-move-FV
       'To move.'

Otiso (2008, p. 23-24) observes that there is a phonological process that leads to the formation of a glide when {*ko-*} is used preceding certain vowels in the initial position of a root verb, so that we have the morpheme realized as |*kw-*|, as in (62) below:

(62)   *ko-er-a*   →   *[kw-er-a]*
       INF-winnow-FV
       'To winnow.'

However, the morpheme {*go-*} does not allow glide formation when preceding any vowel in the initial position of a verb root.

2.3 Ekegusii Argument Structure

Payne (2006) defines argument structure as the "alignment of semantic roles [(such as Agent, Patient, Experiencer, Recipient, Goal, Instrument, Force and Theme)] and grammatical relations in a clause" (p. 107). For example, the Ekegusii verb *sibia* 'wash' requires two participants – the person who washes and what is washed. Consequently, any sentence with the

verb *sibia* 'wash' requires two noun phrases (NP(s)), the subject and the object. In the Ekegusii language, these syntactic roles (i.e. subject and object) can be lexicalized (in which grammatical roles are assigned based on the word order), or marked morphologically on the main verb through verbal extension processes.

As I mentioned in section 2.2 above, Ekegusii main verb (apart from marking the elements of the inflectional morphology) hosts elements of the derivative morphology called valence changing devices (or verbal extensions) that alter the argument structure of the Ekegusii verb, changing its syntax and semantics. These valence changing devices are twofold: those that alter the argument structure of the host verb by increasing the arguments (i.e. valents) and those that decrease the arguments to the verb. These valence-adjusting devices are morphosyntactic processes. Payne (2006, p.240) identifies reciprocals and reflexives, as those processes that reduce the participants into a single one; passives, as those that downplay the Agent; and causatives and applicatives (e.g. benefactive, locative and instrumental), as those that add participants and improve auxiliary participants, respectively. I illustrate these processes below in examples (63 – 69):

(63)   *To-sib-an-i.*

       1PlSM-wash-RECIP-FV

       'We wash each other.'

(64)   *I-ng'-e-sib-i.*

       FOC-1SgOM-REFL-wash-FV

       'I wash myself.'

(65)   *N-a-sib-i-gw-a.*

       FOC-3SgOM-wash-CAUS-PASS-FV

       'S/he was indeed washed.'

(66)   *Moraa o-n-sib-i-r-i*   *chianga.*

       Moraa 3SgAGRs-1SgOM-wash-CAUS-AUX-FV clothes

       'Moraa has made me wash clothes.'

(67)   *ba-mo-sib-er-i*   *egekombe.*

1SgSM-3SgOM-wash-BEN-FV cup

'They wash for him/her a cup.'

(68)   *Nyaboke a-sib-er-i*   *omwana nyomba.*
       Nyaboke 3SgAGRs-bath-LOC-FV child house
       'Nyaboke bathed the child in the house.'

(69)   *Momanyi a-sib-er-i*   *eburasi chianga*
       Momanyi 3SgAGRs-wash-INST-FV brush   clothes
       'Momanyi washed clothes with a brush.'

In example (63) above, the Agent and the Theme are doing to each other the action denoted by the verb. In (64), the Agent and Theme are the same entity. In (65), the Agent is omitted, decreasing the arguments to the predicate. The passive in Ekegusii is also expressed through the morpheme {-*w*-}. In (66), the verb is causativized by introducing the Agent, *Moraa*, which increases the arguments to the predicate. The causative marker {-*i*-} requires that the Theme, the first person singular object, has a causer Agent within the clause. In examples (67), (68), and (69), the peripheral participants are upgraded through their markings on the main verb, increasing the arguments to the predicate. The locative and instrumental are also marked on the verb by the morpheme {-*e*-}, and to distinguish between the two, one needs to state the instrument used for an action and the location of the action denoted by the verb within the same clause.

2.4 Ekegusii Verb Types

Ekegusii verbs can be classified depending on certain parameters. They include classification of verbs according to their valency: the number of arguments the verbs take e.g. monovalent, taking a single argument; divalent, having two valances; trivalent, taking three arguments; or polyvalent, taking multiple valances. These verbs are well illustrated in section 2.3, with the examples in (63 – 69).

A second parameter of classifying Ekegusii verb types is one guided by whether or not a verb takes a direct object. This category of verbs is classified into transitive and intransitive

verbs. On the one hand, transitive verbs such as *sibia* 'wash', *siba* 'tie' require there to be an item to be washed as well as an item to be tied within the same clause in which they are used, respectively. Intransitive verbs, on the other, do not require a direct object. For example, base form intransitive verbs such as *ruga* 'cook' is understood as cooking *ugali*. Therefore, it would be needless for one to specify with the object *ugali*, given that other food items are steamed or boiled. Other verbs which are understood without including the object include *ara* 'spread' which is understood to mean making the bed. Intransitive verbs also include the agreement-inflected verbs such as *osekire* 'S/he has laughed'.

A third classification parameter that can be used is one according to inflection of the verbs for agreement affixes in person and number. This category includes the infinitive and finite verbs. Starting with infinitive verbs, Ekegusii does not inflect this type of verbs for agreement with the subject of the sentence in which they are used. The main verbs in the infinitive forms in Ekegusii carry only the infinitive markers, which are {*go-*} and {*ko-*}, with the allomorph |kw-|, as I discussed in 2.2.10. Therefore, the morphological structure of an infinitive Ekegusii verb is: infinitive marker + base form of the verb. Ekegusii finite verbs, on the other hand, inflect for agreement in person, number and even in tense with the subject of the sentence by marking the agreement affix on the main verb, as I discussed in 2.2.3. In this connection, such Ekegusii finite verbs have the morphological structure: agreement affix + root + aspect + final vowel.

Another category of Ekegusii verbs are the auxiliary verbs. They are marked morphologically: the morpheme {*-re*} is used following morphemes that inflect for person and number depending on the subject of a sentence. This morpheme is an equivalent of the English auxiliary verb *be*. In (70) below, I illustrate the occurrence of the morpheme {*-re*}, which serves as the Ekegusii auxiliary:

(70)   (a)   *In-de.*

          1SgPr-AUX

          'I am.'

       (b)   *To-re.*

          1PlPr-AUX

          'We are.'

(c) *O-re.*

     2SgPr-AUX

     'You are.'

(d) *Mo-re.*

     2PlPr-AUX

     'You are.'

(e) *A-re.*

     3SgPr-AUX

     'S/he is.'

(f) Ba-re.

     3PlPr-AUX

     'They are.'

The examples in (70) above are in the present tense, therefore, it should be noted that the pronominal subject markers in Ekegusii vary considerably depending on tense, which forms a tripartite agreement in person, number and tense, as I argued in 2.2.1 above. For example, if reference is made to the 1Pers in the past tense, the person and number markers would change to {*na-*} and {*twa-*}, as shown in (71) below:

(71) (a) *Na-re.*

     1PersSgPT-AUX

     'I was.'

(b) *Twa-re.*

     1PersPlPT-AUX

     'We were.'

2.5 Summary

I began this chapter in section 2.2 by looking at the morphological composition of the Ekegusii verb in which I identified elements that are affixed onto the root verb in order to derive

meaning. These elements include pronominal subjects, subject-verb agreement affixes, focus, tense, aspect, mood, negation and elements of valence changing operations. In 2.2.1, I identified the pronominal subjects marked on the Ekegusii main verb and observed that they are the same elements that depict agreement whenever there is an overt nominal subject in a given sentence. In 2.2.2, I analysed the pronominal object markers and ascertained that Ekegusii marks pronominal objects on the main verb in the absence of an overt nominal object. For this reason, it is not obligatory. In 2.2.3, I discussed subject-verb agreement markers (in person and number) and argued that their marking on the root verb is obligatory in finite clauses except for the second person singular and plural. In 2.2.4, I reflected on claims that Ekegusii shows object-verb agreement and came to a plausible conclusion, supported by empirical evidence, that there is no object-verb agreement in Ekegusii but rather what is marked on the main verb are pronominal object affixes. In 2.2.5, I looked at tense and began the discussion with the past tense in which I ascertained that Ekegusii makes three past tense distinctions, namely, immediate past, recent past and remote past, with tone playing a major role in distinguishing between the recent past and the remote past. I went further and looked at the present and future tenses and came to a crucial conclusion that tense in Ekegusii is best expressed through suprafixation, use of calendrical units and diurnal span vocabulary, given that there is no inflectional morpheme marking tense on the Ekegusii main verb. This is with the exception of the past tense that is expressed through the affixes {-ka-} and {-ga-}, in which no distinction is made between recent past and remote past and cannot be used to talk about a situation in the immediate past. In 2.2.6, I examined Ekegusii aspect and established that this grammatical category is marked morphologically on the main verb, with the prefixes {-et-} and {-ir-} marking the perfect and perfective aspects, respectively. Besides, I found out that Ekegusii expresses the imperfective aspect, realized through the progressive and habitual aspects. The progressive, on the one hand, is marked through the morphemes {ngo-} and {nko-}, which are phonetically conditioned and the latter prefix has an allomorph |nkwa-|. The habitual aspect, on the other, is marked through the prefixes {-go-} and {-ko-}, which are also phonetically conditioned and the latter prefix forms a glide in the environment preceding certain vowels in the initial position of a root verb. These prefixes mark the present habitual aspect. The past habitual aspect is marked through the auxiliary morpheme {-re} together with an infinitive form of a verb. In 2.2.7, I explored mood and discovered that Ekegusii signals mood through change of the verbal final vowel. In 2.2.8, I discussed about

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negation and identified a number of prefixes that mark this category on the main verb. These prefixes vary considerably in respect of person, number and tense. They include {*ti-*}; {*to-*}; {*ta-*}, which, when following an infinitive marker, indicates negation without showing person and number; and {*-te-*}, which only indicates negation in the environment following an infinitive marker. Furthermore, negation is indicated through the final vowel [*-i*] and through tone. In 2.2.9, I identified {*ko-*} and {*go-*} as the prefixes that express the infinitive. These prefixes dissimilate in voice with the initial sound segment of the verb root onto which they are affixed along the lines suggested by Dahl's law on affixation. {*ko-*} forms a glide, |*kw-*|, when preceding certain vowels occurring at the initial position of the root of the verb. In 2.3, I described the argument structure of the Ekegusii verb in which I found out that the verb hosts valance elements, which alter the argument structure of the verb either by increasing or decreasing the number of participants. In 2.4, I analyzed Ekegusii verbs and categorized them according to their valency, whether or not they take direct objects and whether or not they inflect for agreement with subject. Besides, I analyzed the Ekegusii auxiliary verbs and found out that they are marked by the morpheme {*-re*}, preceded by a subject-agreement affix.

CHAPTER THREE

THE PHASE STRUCTURE OF THE EKEGUSII VERB SYSTEM

3.1 Overview

In this chapter, I look at Derivation by Phase (DbP) analysis of the structure of the Ekegusii verb system. I begin by outlining the DbP structural design of expressions. I then go on in reviewing the idea of DbP that the VP "should be split into two types of projections: outer shell and inner core" (i.e. VP-shell). I illustrate the VP-shell by analysing Ekegusii transitive, intransitive, unaccusative, negative, passive and infinitival structures. In the remainder of the chapter, I summarize the issues discussed up to that point.

3.2 DbP Syntactic Structural Design of Expressions

Derivation by Phase theory operates through two syntactic operations: Merge and Agree (Chomsky 2000, 2001, 2004, 2007, 2008). These operations are executed through two syntactic relations: "set-membership", achieved through Merge and "probe-goal pair relationship" (Chomsky, 2008 p. 141) through which the derivation and structure building process of expressions proceed. The phase based theory of syntax assumes structure (1) below as a standard structure for all types of clauses:

(1)

```
                    CP
                  /    \
             SPEC       C′
                      /    \
                    C       TP
                          /    \
                     SPEC       T′
                              /    \
                            T       v*P
                                  /    \
                             SPEC       v*′
                                      /    \
                                    v*      VP
                                          /    \
                                     SPEC       V′
                                              /    \
                                            V       COMP
```
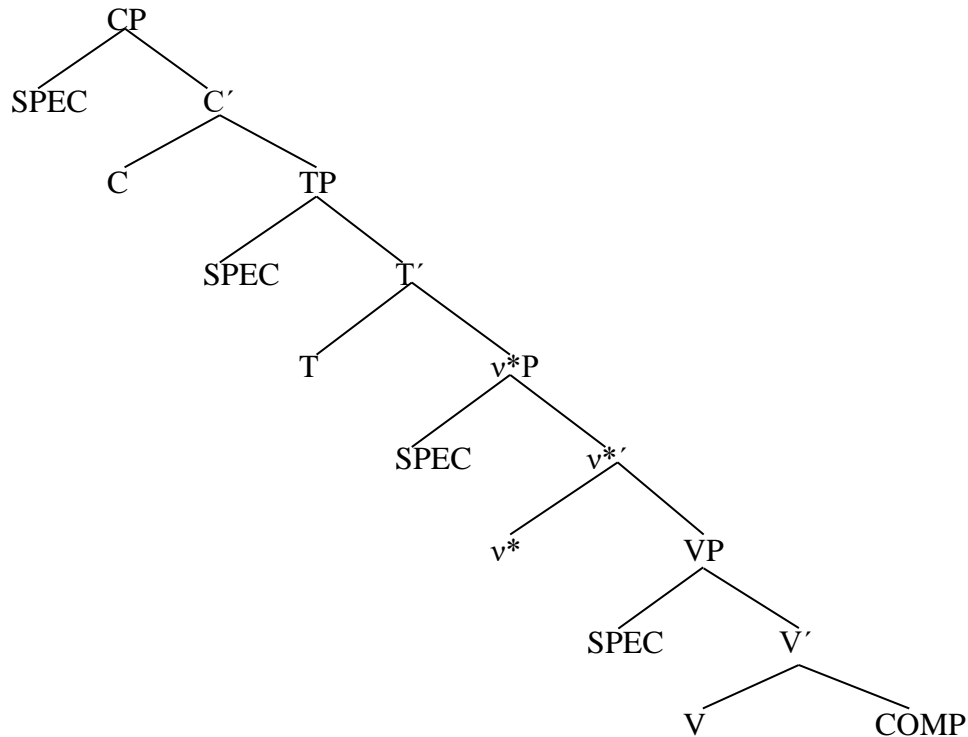
Radford (2009) posits that all types of clauses, including, main, complement, finite, infinitive and non-finite are analysed as CPs except for defective clauses, which are TPs that lack a CP projection.

3.3 Ekegusii VP-Shell

In the adopted theoretical framework, a VP can "be split into two separate projections: an outer shell and an inner core" (Radford, 2009, p. 369). The former projection headed by an abstract light verb (i.e. v*) and the latter headed by a lexical verb (i.e. V). The light verb is headed by a form of a causative verb (*ibid.*). For example, the verb in sentence (2) below (in section 3.3.1) can be given a causative interpretation as o*yeiyeiri* 's/he has caused/made it to drop'. To put the discussion on a concrete footing, let me consider the derivation of the transitive expression in (2).

3.3.1 Derivation of Ekegusii Transitive Structures

(2)   *Mokaya o-iyeir-i-e*   *enyundo koru kerama.*
        Mokaya 3SgAGRs-drop-CAUS-FV hammer   from roof
        'Mokaya has dropped the hammer from the roof.'

Chomsky (2007) assumes a bottom-up approach to the syntactic derivation of expressions. Accordingly, structure (2) above is derived by merging the lexical verb (=V) *iyeria* 'drop', in its uninflected form (following Chomsky (2000, p. 100) that features of lexical items are introduced in the course of the derivation), with its PP complement *koru kerama* 'from the roof' (which is itself formed by merging the DP *ø kerama* with the preposition *koru*) to form the V-bar *iyeria koru kerama*, merging the V-bar with the object, *ø enyundo* 'hammer', derives the VP *ø enyundo iyeria koru kerama*. The merger of the verb first with its PP complement and then later with its internal argument (the DP *ø enyundo* – originates internally within VP) is in accord with Radford's (2009, p.358) "merger condition" which requires that the last element to be merged with a verb is a (pro)nominal (i.e. the DP object in (2)) in the event a verb contains two complements, as in the case of the verb in derivation (2) above. The VP formed thus far is shown in structure (3) below:

(3)
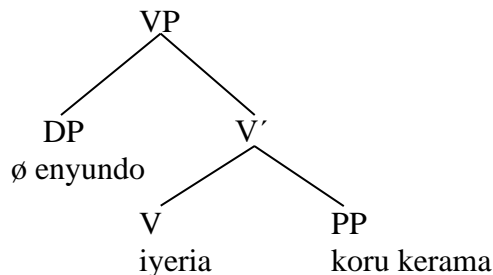
At this point in the derivation, the VP in structure (3) will be merged with an abstract light verb (=v*). According to Radford (2009, p. 348), the abstract light verb is strong and affixal. Accordingly, it will attract the lexical verb, V, to raise and adjoin it, forming the v*-bar *iyeria+ø ø enyundo iyeria koru kerama*. The v*-bar formed is then merged with the external argument (EA) DP *ø Mokaya* to form the v*P *ø Mokaya iyeria+ø ø enyundo iyeria koru kerama*. The DP, same case with *enyundo*, is headed by a definite null determiner of some sort, along the lines of Radford's (2009) DP hypothesis which suggests that every definite nominal "is a DP

headed by a null definite determiner" (p. 130), considering that the two nominals, *Mokaya* and *enyundo*, are referring to a specific person and a specific object, respectively. Structure (4) below shows the v*P formed (with the ~~strikethrough~~, to be adopted throughout this chapter and the other remaining chapters to show copies of raised elements, showing the copy of the raised verb):

(4)

```
              v*P
           /       \
        DP          v*′
      ø Mokaya     /    \
              v*          VP
           iyeria+ø    ø enyundo ~~iyeria~~ koru kerama
```
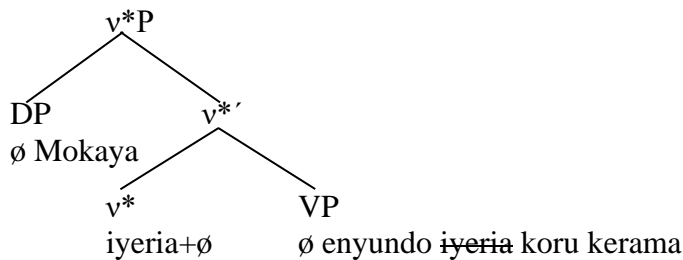
The verb in sentence (2) above is a transitive one, with an external argument, *Mokaya* (which originates at SPEC position of v*P as opposed to an internal argument which originates at the SPEC position of VP and then raises to become a SPEC of a higher head, namely, v* or T). Chomsky (2008, p. 143) posits that a transitive verb with an EA is a phase, v*P. Therefore, structure (4) above is a phase. Considering Chomsky's (2001, p. 13) "phase impenetrability condition (PIC)" which requires the COMP of a phase head (i.e. its domain) to undergo transfer to relevant components for processing once a phase has been formed, the COMP of v*, the VP, is transferred to the PHON[ological] component and to the SEM[antic] component for processing and is subsequently Spelled-Out, with the lower copy (i.e. trace) of the lexical verb receiving a null Spell-Out. The transferred elements, therefore, become inaccessible for movement by higher phase heads from this time on; only the head (i.e. v*) and its specifier *ø Mokaya* are accessible.

The derivation proceeds again by merging the v*P with the tense head T, carrying the affixes (Af) third person singular present tense (3PersSgPr). This forms the T-bar *Af ø Mokaya iyeria+ø ø enyundo ~~iyeria~~ koru kerama.* Chomsky (2004, p.112) argues that a head such as T has an EPP-feature that makes its SPEC position available. In the example here, The EPP-feature on T creates the SPEC position and triggers the raising of the DP *ø Mokaya* from being the specifier of v* to becoming its specifier [i.e. SPEC, T].

Chomsky (1995) presents an argument that all heads in a given derivation must play a role in the semantic interpretation of an expression. Therefore, T being a head, just like all other heads, is required to play a role in the derivation of expression (2) above. In languages like English, the head T position is occupied by an auxiliary verb, which carries tense. Being different from English, Ekegusii marks its tense on the main verb through affixation. The Ekegusii verb in structure (2) above has the morphological structure subject-agreement (in person and number)+root+tense affix. If I follow Radford's (2009, p. 103) assumption that the tense head T, as its label suggests, is the source of tense-agreement affixes, it is plausible to posit that a tense affix originates in the head T position of TP. Since Ekegusii transitive verbs (like the one in structure (2)) agree with their subjects in φ-features, I can suppose that the Ekegusii T carries the affixes of person, number and tense.

At the TP stage of the derivation of expression (2), the Af will either be lowered onto the appropriate verb to host it (in this case the main verb because there is no auxiliary to host the affixes), or the main verb raises to adjoin the Af at T. Radford (2009, p. 157) suggests the possibility that a tense affix is strong in languages with a rich subject-agreement system, causing the main verb to raise to host the Af, where there is no auxiliary to host the Af at T. Ekegusii verb carries rich subject-agreement inflections, that is, it carries a wide spectrum of agreement affixes such as person and number like in structure (2) above. Along the lines suggested by Radford, the verb should therefore raise to T to host the Af. However, there is a caveat: if the verb raises to T then nothing will stop it from raising further to C (Radford 2009). T-to-C movement is not executable in expression (2). I therefore suppose that Ekegusii verb does not raise to T despite it having rich subject-agreement inflections. Accordingly, the tense and subject-agreement inflection affixes get lowered onto the stem verb in the PHON through a morphological process that Radford (2009, p. 104) calls "Affix Hopping" (also known as Affix Attachment). The verb *iyeria+φ+Af3PersSgPr* is therefore appropriately Spelled-Out as *oyeirie*.

The resulting TP *φ Mokaya Af ~~φ Mokaya~~ oyeirie+φ φ enyundo ~~iyeria~~ koru kerama* merges with a null declarative complementizer to form the CP, deriving structure (5) of expression (2) above (with the solid arrows showing the movement of lexical items and the ~~strikethrough~~ lower copies of moved elements that receive a null Spell-Out):

(5)
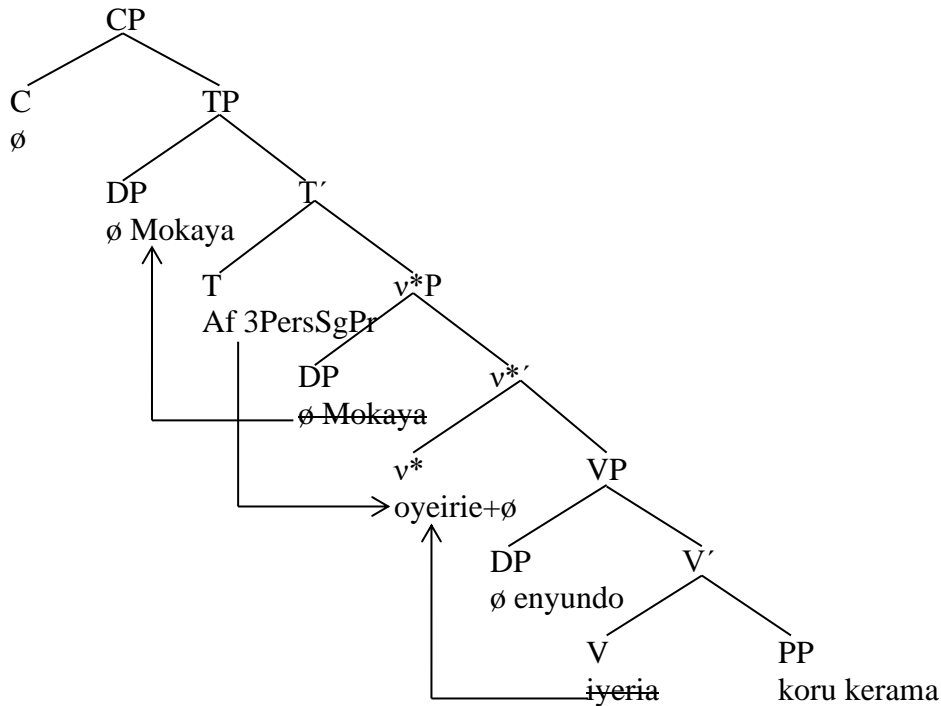
In structure (5) above there are two phases: v*P and CP. In the same way the complement of the head of v*P underwent a transfer operation, the COMP of the phase head C of CP, TP, undergoes a transfer operation to the PHON and to the SEM in line with Chomsky's PIC which requires there to be a transfer of a phase head's complement once a phase is formed. The remaining constituents, the edge of TP, also undergo transfer because CP is the overall phase. Transfer of the edge elements (i.e. the specifier of T and T itself) of the TP occurs at the end of the overall CP phase (Radford 2009, p. 383).

3.3.2 Ekegusii Intransitive Structures

(6) *Mama   o-sek-ir-e.*

Mother 3SgAGRs-laugh-ASP-FV

'Mother has laughed.'

The verb *osekire* 'she has laughed' in (6) is an intransitive one. For that reason, it does not need a complement (i.e. object or adverb of manner etc.): the action of the subject, mama, can be understood. The derivation of (6) proceeds as follows: the base verb *seka* 'laugh' merges

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with its DP specifier *ϕ mama* 'mother' (considering the DP hypothesis) to form the VP *ϕ mama seka.* The VP subsequently merges with an abstract light verb which attracts V to move and adjoin it at *v**, forming the *v*P seka+ϕ ϕ mama* ~~seka~~. This *v*P* formed is not a phase, considering Chomsky's (2008, p.143) postulation that a *v*P* that is a phase is one with an external argument. The *v** of the *v*P* in question lacks an external argument: it does not have a specifier originating in the SPEC, *v**. Consequently, there will be no transfer of the VP, its complement, into PHON and SEM. Therefore, the specifier of the lexical verb, *ϕ mama*, will be accessible in the syntax for movement by a higher head, namely, T.

The syntactic computation proceeds by merging the resulting *v*P* with a tense head T carrying the affixes (Af) third person singular present tense (3PersSgPr). This forms the T-bar *Af seka+ϕ ϕ mama* ~~seka~~, deriving the skeletal structure in (7) below:

(7) $[_T Af]$ $[_{v*P} [_{v*} seka+ø]$ $[_{VP} ø$ mama ~~seka~~$]]$

The derivation in (7) above goes a level higher by the EPP-feature on T attracting the DP *ϕ mama,* an argument which originates VP-internally as the SPEC of the lexical verb and raises to become the SPEC of T (i.e. SPEC, TP), forming the TP. The raising of the DP *ϕ mama* to [SPEC, T(P)] conforms pretty closely to Radford's (2009, p. 268) VP-Internal Subject Hypothesis (VPISH) which asserts that arguments to the predicate are generated within the VP, as either specifiers or complements, and then raise to become specifiers of higher heads.

The TP formed is afterwards merged with a null declarative complementizer and marks the expression declarative in force. At this point in the derivation, the overall CP phase has been formed. Accordingly, the COMP of the phase head C, the TP, undergoes a transfer operation to the PHON and SEM to be assigned phonetic form and appropriate semantic representation, respectively. According to Radford (2009), in the phonological component, the affixes carried by T, subject-verb agreement affix (in person and number) and tense, undergo a morphological operation of "Affix Hopping" (as seen in section 3.3.1 above) through which they get lowered onto the appropriate main verb, *seka+ϕ*, for hosting. Ekegusii main verb is the host of the subject-verb agreement and tense affixes. The verb *seka+ϕ* Af3PersSgPr is ultimately Spelled-Out as a correctly inflected form *osekire*. The structure in (8) below shows the overall structure of the intransitive expression in (6) (with the downward arrow from T-to-*v** showing the

morphological operation of "Affix Hopping": lowering of the 3PersSg present tense affixes (3PersSgPr) onto the verb for hosting):

(8)

```
                    CP
                   /  \
                  C    TP
                  ø   /  \
                    DP    T´
                   ø mama /  \
                        T     v*P
                    Af3PersSgPr / \
                          v*      VP
                    →osekire+ø   ø mama seka
```
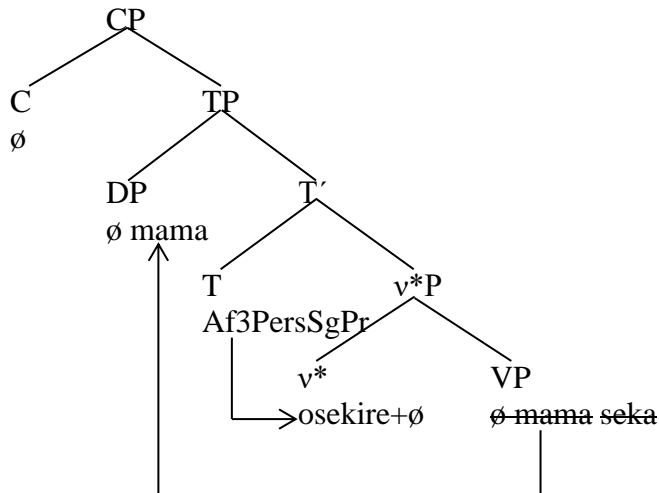
3.3.3 Ekegusii Unaccusative Constructions

An unaccusative construction contains an unaccusative predicate. This type of predicate occurs in a verb phrase (VP) that contains no specifier, the subject, but contains a complement instead. The complement of such an unaccusative predicate is the one that finally raises to become the structural subject and the specifier of a higher head, namely SPEC-TP, in order to meet its EF. This is particularly so following Chomsky's (2007, p. 21) VPISH, which holds that arguments, specifiers and complements, originate internally within the VP and then, in the subsequent derivation process, raise to become specifiers of higher heads. Therefore, an unaccusative construction is an expression, a VP to be specific, which contains "a verb, [used intransitively], and a complement but no specifier", according to Radford (2009, p. 249). I now take this discussion further by considering the derivation of the Ekegusii verb phrase in (9), containing unaccusative intransitive predicate:

> (9)   *Amarwaire amange a-atek-ir-e.*
>   Diseases   many   3Pl-break out-ASP-FV
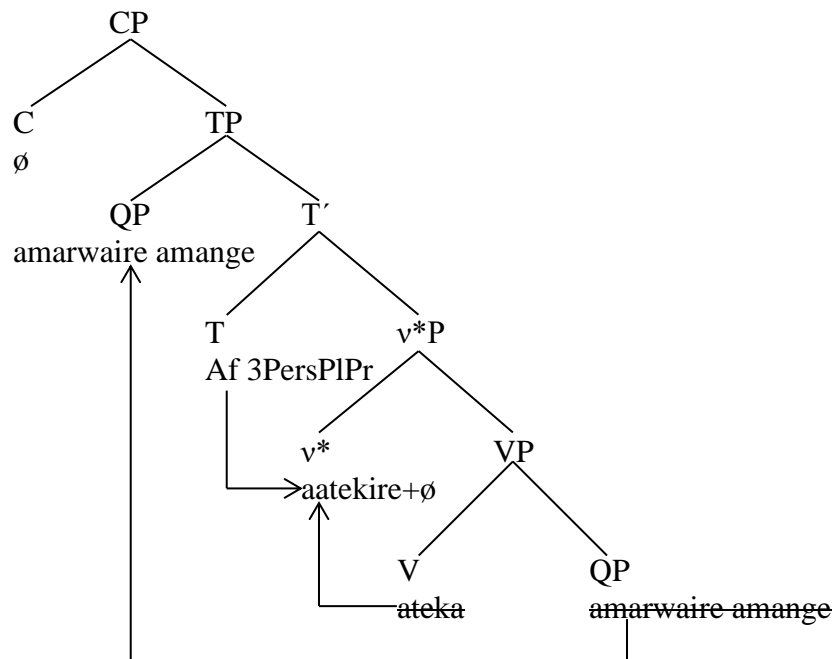>   'Many diseases have broken out.'

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The syntactic merger operation of the expression in (9) begins with the base form of the verb *ateka* 'break out' getting into the derivation and merging with its QP complement *amarwaire amange* 'many diseases', which is itself formed by merging the DP *ϕ amarwaire* 'diseases' (considering Radford's DP hypothesis discussed in 3.3.1 above) with its adjectival complement *amange* 'many', to form the VP a*teka amarwaire amange*, as the structure in (10) below illustrates:

(10)   [VP [V ateka] [QP amarwaire amange]]

In view of the VP-shell hypothesis, the VP in (10) merges with a light abstract verb v* to form the v*P by attracting raising of V from the VP head position to occupying the head v* position of v*P thus forming *ateka+ϕ* ~~*ateka*~~ *amarwaire amange*. The v*P subsequently merges with the tense head (i.e. T) carrying the third person plural present tense affixes (3PersPlPr if the QP is analysed as *ayio* 'those') to form the T-bar *Af ateka +ϕ* ~~*ateka*~~ *amarwaire amange.* T carries an EPP/EF requiring it to project a SPEC position which is occupied through movement, A-movement (i.e. Argument Movement) to be exact, of the QP from the COMP position within the VP to becoming the specifier of the head T, forming the TP *amarwaire amange Af ateka +ϕ* ~~*ateka amarwaire amange*~~. The derivation proceeds one more time. This time the TP merges with a null declarative complimentizer, forming the CP and marking the expression in (9) declarative in force.

Thus far, a CP phase has been formed, and in accord with Chomsky's PIC, transfer to relevant components has to take place in addition to other numerous syntactic processes, among others, Case assignment, deletion, affix-hopping which also occur at the phase level. Consequently, the COMP of the head C (i.e. its domain), the TP, undergoes transfer to PHON and SEM for processing. At the phonological component, morphological and phonological processes take place. The affixes (i.e. 3PersPlPr) on T undergo a morphological process of "Affix Hopping" in which they get lowered onto the verbal host, giving the verb of the sentence in (9) its appropriately inflected form as *aatekire*. Structure (11) below represents the derivation of (9) after all the syntactic operations have taken place:

(11)

CP
├── C
│   ø
└── TP
    ├── QP
    │   amarwaire amange
    └── T′
        ├── T
        │   Af 3PersPlPr
        └── v*P
            ├── v*
            │   aatekire+ø
            └── VP
                ├── V
                │   ateka
                └── QP
                    amarwaire amange

The characteristic property of unaccusative verbs is that they do not "assign [structural] accusative case to their complement, but rather [NOM] Case", argues Radford (2009, p. 250). It is in this respect that unaccusative verbs differ from their transitive counterparts (which assign ACC case to their complements and NOM Case to their specifiers). We return to Case assignment in chapter four. In structure (11) above, the Ekegusii unaccusative verb does not assign structural ACC Case to its QP complement, *amarwaire amange* 'many diseases': it is initially merged in the postverbal position as the COMP of the verb *ateka* "break out" and then raises to occupy the specifier position, which is associated with NOM Case, within the TP higher up in the tree diagram. One more thing to note about unaccusative structures is that their predicates lack external arguments, those that originate in SPEC, v*P; as a result, their v*Ps are not phases. It is for this reason the VP *ateka amarwaire amange* of the structure in (11) does not undergo transfer for processing thus making the QP *amarwaire amange* accessible for movement by the higher head T.

3.3.4 Ekegusii Negative Constructions

Radford (2009) outlines an analysis to negation which assumes that the category is contained in a Negation Phrase (NEGP) projection. His outline of the category takes the negating element to be the "specifier of NEGP" and notes that some linguists take the negating element to be the "head NEG constituent of NEGP" (p. 164). In my outline of negation here, I adopt Radford's approach on posting that the negating element is the specifier of NEGP. In my analysis of negation in Ekegusii (in chapter two section 2.2.9), I observed that the category is morphologically marked on the main verb with the morphemes {*ti-*, *ta-*, *to-*, *-te-*}, besides tone and the final vowel [-*i*]. For my illustration, I consider the derivation of the Ekegusii negative structure in (12) below:

(12)   *Michieka ta-sib-et-i*   *gekombe.*
       Michieka 3SgNEG-wash-ASP-FV cup
       'Michieka did not wash the cup.'

I suppose that the syntactic merger operations have taken place as before to a point where the structure in (13) is formed, with a NEGP projection between the *v*P and the T-bar:

(13)

Given Chomsky's PIC, structure (13) has to undergo transfer to the PHON and SEM for processing because the CP phase has been formed. In the phonological component, morphological and phonological processes take place. Since negation in Ekegusii is a morphological process, the negating affix (i.e. Af NEG) in (13) should undergo "Affix Hopping" through which it will get lowered onto the stem verb in v* for hosting. Similarly, the 3PersSgPT affix on T should as well undergo "Affix Hopping" onto the stem verb for hosting in order to give the host verb its appropriately inflected form as captured in the expression in (12) above. However, this does not happen because it would work in violation of Radford's "Head Movement Constraint (HMC)", which he characterizes as:

(14)   "Head Movement Constraint: Head movement is only possible between a given head and the head of its complement" (Radford, 2009, p. 157).

To begin with, the lowering of the affixes on T onto v^* would involve the head of TP (i.e. T) into the head v^*P (i.e. v^*). Such a movement would contravene the head movement constraint because there is an intervening head position NEG (i.e. null NEG) which would be bypassed. However, lowering the affixes on T through NEG onto v^* would still not be executable. This according to Radford (2009) is because such a movement would pose problems because NEG does not "seem to be the kind of head which is an appropriate host for the [affixes on T]" (p. 167). What is more, the affixes need to attach "to an overt verb, since NEG is neither overt [(NEG in structure (13) above is null)] nor a verb" (*ibid*.).
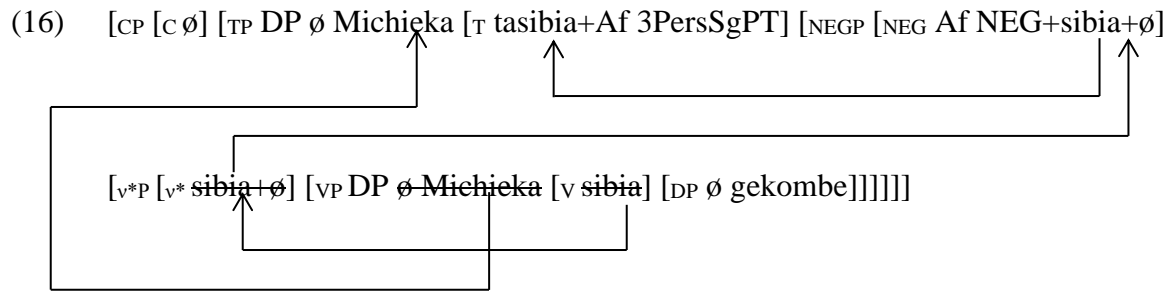
Another movement in structure (13) that is barred is one involving the lowering of the negating affixes on the specifier position of NEGP (i.e. Af NEG) onto the verb in v^*. This is so because the movement operation would violate the UG principle: "Strict Cyclicity Principle (SCP)", which Radford characterizes as:

(15)   "Strict Cyclicity Principle (SCP): At a stage of a derivation where a given projection is being cycled/processed, only operations involving the head (H) of HP and some other constituent c-commanded by H can apply" (Radford, 2009, p. 167).

The lowering of the negating affix onto v^* would be anticyclic and hence in violation of SCP because the movement (i.e. Af NEG-to-v^*) does not involve T, given that T is the head of TP and TP being the complement of the CP phase which undergoes processing in accord with Chomsky's phase impenetrability condition. An additional violation of Af NEG-to-v^* lowering is that the movement is from a specifier position into a head position, which in derivation by phase theory is not allowed: movements allowed are head-to-head, specifier-to-specifier and complement-to-specifier. Furthermore, even if the verb in structure (13) were to raise through NEG to T, the negating affix would be bypassed at Af NEG (SPEC, NEGP) and cannot go through the SPEC position. The approach to negation adopted here wrongly predicts that the negative expression in (12) is ungrammatical.

Adopting the alternative approach to negation which posits that the negating element to be NEG constituent of NEGP, would still violate the HMC and SCP, already discussed. The approach can, however, be adopted and yield a plausible possibility if I suppose that the Ekegusii head NEG carrying the negating element is a strong head position with a V-feature (allowing it

to host a verbal element), and so is T in Ekegusii negative structures. Along this line of argument, the strong affix in NEG and T will attract the stem verb to raise through the head NEG and then settle at the head T: at the head NEG, the verb will take the negating element and raise further to T where it will receive the appropriate inflections (person, number and tense), giving the verb its appropriately inflected form as *tasibeti*. This approach to negation in Ekegusii satisfies the HMC outlined in (14). In (16) below, I give the new analysis of the negative structure in (12) above:

(16)   [CP [C ø] [TP DP ø Michieka [T tasibia+Af 3PersSgPT] [NEGP [NEG Af NEG+sibia+ø]

[v*P [v* ~~sibia+ø~~] [VP DP ~~ø Michieka~~ [V ~~sibia~~] [DP ø gekombe]]]]]]

3.3.5 Ekegusii Passive Constructions

Passive structures contain passive predicates. The sentence in (17i) below is in active voice, whereas the one in (17ii) is in passive voice:

(17)   (a)   *Nyamoita n-a-rik-a   Nyamweya.*
              Nyamoita FOC-3SgAGRs-employ-FV Nyamweya
              'Nyamoita employed Nyamweya.'

        (b)   *Nyamweya n-a-rik-w-a   na Nyamoita.*
              Nyamweya FOC-3SgAGRs-employ-PASS-FV by Nyamoita
              'Nyamweya was employed by Nyamoita.'

Ekegusii main verb in passive sentences contains the suffixes {-*w*-} and {-*gw*-} (as I observed in chapter two section 2.3). The passive in Ekegusii is a valence decreasing operation whose marking on the verb allows for the omission of the Agent argument. In this respect, it differs from its active voice counterpart. Besides the passive-markers on the passive verbs, Ekegusii active structures can be distinguished from passive structures in a number of properties. One is that in the active sentence, for example, in (17a), *Nyamoita* is the subject and plays the role of

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the Agent argument, while in (17b) it serves as the COMP of the preposition *na* 'by'; however, it plays the same thematic role of Agent argument. Second is that *Nyamweya* serves as the COMP of the active verb in (17a), but surfaces as the structural Subj of the PASS verb in (17b). However, in both sentences it serves the same role of Theme argument. Another difference is that the passive structure in (17b) may contain the *na*-phrase 'by-phrase'.

In what follows, I consider the derivation of the passive structure in (17b) above, setting aside the *na*-phrase, *na Nyamoita* 'by Nyamoita', because it is not obligatory. Let me suppose that the syntactic merger operations have taken place as before, but this time round with a projection of the passive (i.e. PASSP) between the v*P and the T-bar, and we have the structure in (18) below:

(18)
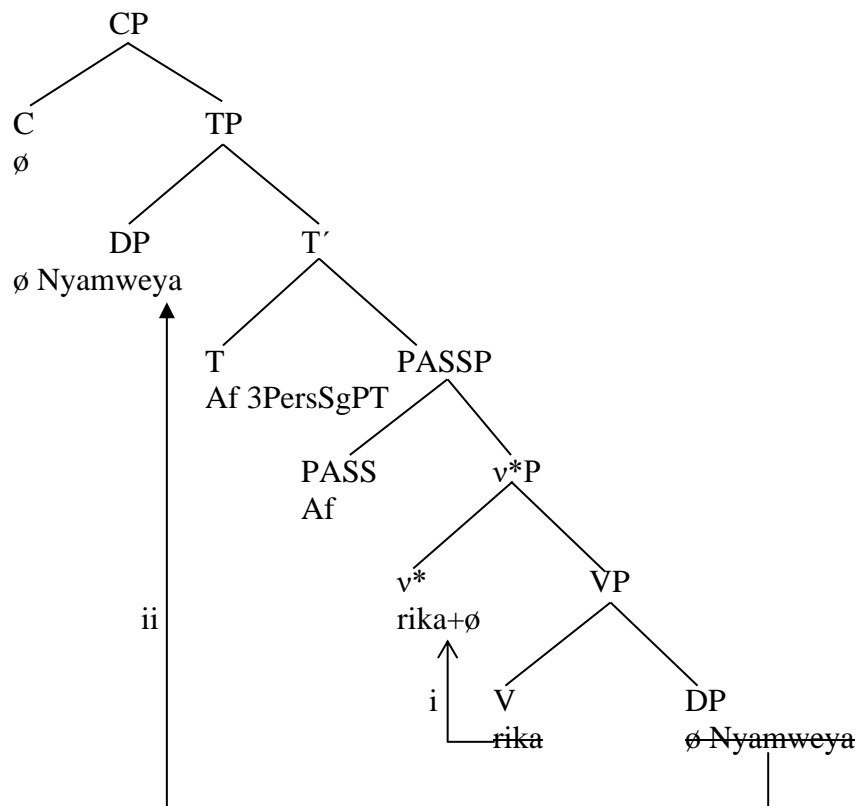
The DP *ø Nyamweya* is first merged as the thematic COMP of the stem verb *rika* 'employ' in the active sentence in (17a) and moves, through A-movement operation to be specific, out of the COMP position into the SPEC position in TP in the PASS sentence, as

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illustrated by arrow (ii) in structure (18) above. In this respect, passive predicates resemble unaccusative predicates discussed in 3.3.3 above: their arguments first merge into complement positions of the VP and in the subsequent stages of the derivation raise to occupy SPEC positions within the TP and become structural subjects of the predicates.

In structure (18) above, the CP phase has been formed and the domain (i.e. TP complement) of its head (i.e. C) should undergo a transfer operation to the PHON and SEM to be assigned appropriate phonological and semantic representations, respectively, in accord with Chomsky's PIC. When the TP in structure (18) is handed over to the phonological component, two operations take place: morphological and phonological processes. In this connection, the derivational affix on the head PASS of PASSP should undergo a morphological process of "Affix Hopping" through which the derivational passive affix should get lowered onto the stem verb for hosting, and so should the inflectional affixes on the heads T of TP. If the affix on PASS were to be lowered onto v^*, that would violate the UG principle SCP outlined in (15) above, because the lowering operation would not involve T but rather would involve PASS and v^*. In the similar vein, if the inflectional affixes on T were to be lowered directly into v^*, that would violate the HMC outlined in (14) above because the affix lowering operation would bypass the head PASS, and it would not pass through PASS because PASS is not a verb hence not an appropriate host for the inflectional affixes. This wrongly predicts that the expression in (17b) is ungrammatical. A plausible suggestion to make at this point, therefore, is that T and PASS in Ekegusii passive structures have V-features (i.e. they can host a verb). In this connection, the stem verb in v^* (in (18) above) raises to T through PASS: the verb first settles at PASS and takes the derivational affix and then raises further and settles at T where it hosts the inflectional affixes, thus giving the verb its appropriate inflectional and derivational shape as *narikwa,* as captured in the expression (17b). Such an analysis satisfies the head movement constraint, which requires that movement to a head position should go through the subsequent head positions.

3.3.6 Ekegusii Infinitival Constructions

In the analysis of the Ekegusii infinitive (in chapter two section 2.2.10), I observed that the category is marked on the main verb by the prefixes {*go-*} and {*ko-*}. The latter prefix forms

a glide (i.e. |kw-|) in certain vowel environments. The infinitive markers dissimilate in voice with the verbal root initial sound. For my illustration of infinitive clauses in Ekegusii, I consider the derivation of the bracketed clause in (19) below:

(19)   *Mokeira namanyete [go-tor-a echae].*

Mokeira knows   [INF-pluck-FV tea]

'Mokeira knows how to pluck tea.'

Radford (2009, p. 110) posits that "[…] all infinitive clauses are TPs headed by an infinitival T […]". The bracketed clause in (19) above is an infinitival clause that is a TP. The derivation of the clause proceeds by the stem form of the verb *tora* 'pluck' getting into the derivation and merging with its DP complement *ø echae* 'tea' to form the VP *tora ø echae*. Given the VP-shell analysis, the lexical verb raises to adjoin the abstract verb at v*, hence forming the v*P *tora+ø tora ø echae*. Radford (2009, p. 309) posits that a to infinitive is a T-constituent. Accordingly, the v*P merges with the T constituent carrying the infinitive affix to form the TP *Af tora+ø tora ø echae*. The TP derived is represented by the structure in (20) below:

(20)   [TP [T Af INF] [v*P [v* tora+ø] [VP [v ~~tora~~] [DP ø echae]]]]

3.4 Summary

I began this chapter in section 3.2 by looking at the structural design of expressions in Derivation by Phase theory and followed Radford's (2009) line of argument that all types of clauses, including, main, finite, complement, infinitive and non-finite are CPs except for defective clauses, which are TPs that lack a CP projection. In section 3.3, I adopted the split VP-hypothesis to the analysis of the Ekegusii VP-shell, which holds the view that VPs are split into two separate projections: an outer shell with an abstract light verb as its head and an inner core with a lexical verb as its head. In subsection 3.3.1, I took the discussion of the Ekegusii VP-shell a stage further by examining the derivation of the Ekegusii transitive expression *Mokaya oyeirie enyundo koru kerama* 'Mokaya has dropped the hammer from the roof' and found out that

Ekegusii transitive expressions with external arguments are v*P and CP phases, an argument that is in favour of Chomsky's (2008, p. 143) point of view that transitive constructions with external arguments are phases. In subsection 3.3.2, I outlined an analysis of an Ekegusii intransitive expression *Mama osekire* 'Mother has laughed', which revealed that Ekegusii intransitive constructions are not v*P phases. In 3.3.3, I discussed Ekegusii unaccusative structures and found out that such structures are verb phrases that contain complements but no specifiers. Unaccusative predicates merge their structural subjects first as their complements, and then in the course of the derivation, the complements raise to become specifiers of higher heads, namely, T. In 3.3.4, I looked at Ekegusii negative structures and observed that Ekegusii marks negation on the main verb by the morphemes {*ta-*, *ti-*, *to-*, *-te-*}, besides tone and the final vowel [*-i*]. I illustrated negative structures with the example *Michieka tasibeti gekombe* 'Michieka did not wash the cup' and ascertained that negation takes a projection on the tree diagram. In analyzing the negative structure, I adopted Radford's approach that takes the negating element to be the specifier of the NEGP. This approach was problematic for it violates the principles of UG: HMC and SCP, during the morphological process of Affix Hopping. For this reason, I adopted the alternative approach that projects the negating element in the head NEG position of NEGP. This approach allows for the positing of a plausible possibility that Ekegusii head NEG contains a strong V-feature (i.e. it can host a verb), hence attracting raising of the verb through it and then the verb raises further to settle at T: at head NEG, the verb takes the negating element and then raises to T where it takes the inflectional affixes for person, number and tense, giving the verb its appropriately inflected form. This analysis satisfies the HMC. In 3.3.5, I analysed Ekegusii passive structures. The analysis revealed that Ekegusii marks its passive on the main verb by the morphemes {*-w-*, *-gw-*}, allowing for the omission of the Agent argument (for the example in 17b). Besides, I observed that the structural subject of the active sentence surfaces as a complement of *na* 'by' in the *na*-phrase but performs the same thematic function of Agent argument (as in 17b). On the flip side, the object or complement of the active sentence serves as the structural subject of its passive counterpart. Furthermore, the Ekegusii passive is projected as PASSP on the tree diagram, with the passive element occupying the head PASS of PASSP. The analysis of Ekegusii passive structures seems to be problematic when it comes to the lowering of the derivational affix on PASS and inflectional affixes on T: the Affix Hopping operations would violate the UG principles of HMC and SCP. To bypass the problem, I suggested a plausible

possibility that Ekegusii heads, PASS and T, in passive structures contain V-features which allow them to host verbs. In this connection, the verb at v* raises to T through PASS: at PASS the verb takes the passive affix and at T the verb takes the inflectional affixes, satisfying the HMC and hence yielding a grammatical structure. I ended the chapter in 3.3.6 where I analysed Ekegusii infinitival structures. In the analysis of infinitive clauses, I observed that Ekegusii infinitive is marked on the main verb by the prefixes {*go-*} and {*ko-*}, with the latter affix forming a glide in certain vowel environments. Besides, I followed Radford's argument that infinitival clauses are TPs headed by a to-infinitive T-constituent. I concluded that the Ekegusii T-constituent of the infinitive clause carries the infinitive marker which gets lowered from T into the verb for hosting in the course of the derivation.

CHAPTER FOUR

AGREEMENT, STRUCTURAL CASE ASSIGNMENT AND INTERNAL MERGE

4.1 Overview

In this chapter, I explore agreement (Agree), structural case assignment and internal Merge (IM) (Move/movement) in Ekegusii. I begin by examining the nature of agreement and explore how it holds between the Ekegusii probes and goals. I then move on to look at how structural case is assigned to the arguments to the predicate once an agreement relation has been established between a goal and a probe. In the remainder of the chapter, I discuss the operation Move for which agreement and case-checking are precursors. In this connection, I particularly look at V-to-v*, V-to-T, T-to-C, A-movement and wh-movement. I then conclude the chapter by summarizing the issues discussed up to that point.

4.2 Agreement

In DbP, agreement holds between a probe, a member of the Core Functional Categories (CFCs) (=Complimentizer (C), Tense Head (T) and light verb (v*)), and a goal, a substantive category such as a noun. For a probe, its φ-features (person and number) must be uninterpretable; for a goal, its abstract structural case must be unvalued but carry a full complement of φ-features (Chomsky 2000, 2001, 2004, 2007, 2008). The probe searches within a restricted search space (i.e. its c-command domain, in order to minimize search (Chomsky, 2004, p. 115)) seeking for a goal of an appropriate kind, that is, a goal that is φ-complete (with both Pers and Num features) and that can value and delete the φ-features on the probe. If a probe and a goal get into an appropriate relation of agreement, the probe and the goal get their uninterpretable φ-featatures and unvalued abstract structural case (i.e. Nominative or Accusative) valued and deleted from the narrow syntax (NS), respectively. This feature valuation and deletion operations cause the derivation to converge. Chomsky (2007, p. 17) posits that all syntactic operations, including, agreement, case assignment, feature-valuation, movement and feature-deletion apply at the phase level save for external Merge (EM), and according to Radford (2009, p. 290) all these operations occur simultaneously, in line with the "simultaneity condition" that operations involving a

probing head all occur concomitantly. However, the valued φ-features on the probe are transferred to the phonological component because they may have phonetic effects. Let us now run these claims through the derivation of expression in (1) below:
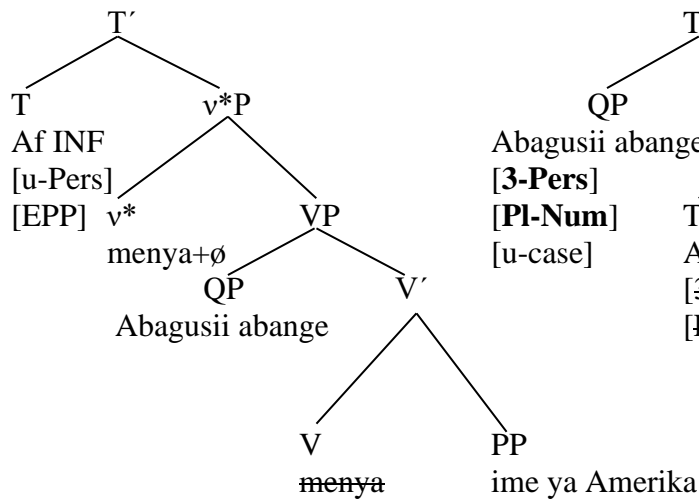
(1)   *Abagusii   abange m-ba-kageir-e   ko-menya ime ya Amerika.*
        Kisii people   many   FOC-3PlAGRs-thought-FV INF-stay inside of America
        'Many Kisii people are thought to stay inside of America.'

The Ekegusii sentence in (1) above contains two verbs: the infinitival verb *komenya* 'to stay' and the finite verb *mbakageire* 'are thought'. The verb *menya* 'stay' (in its base form, following Chomsky's (2000, p. 100) assumption that features of lexical items are introduced in the course of the derivation) gets into the derivation first and merges with its PP complement *ime ya Amerika* 'inside of America' (which is itself formed by merging the DP *ø Amerika* headed by a null determiner, given Radford's (2009) DP analysis discussed in chapter 3, with the PP *ime ya* 'inside of') to form the V-bar *menya ime ya Amerika.* The V-bar is merged with the specifier QP of the lexical verb *Abagusii abange* 'many Kisii people' to form the VP *Abagusii abange menya ime ya Amerika.* The resulting VP is merged with a light abstract verb, which attracts the lexical verb to raise and occupy the head ν* position. This forms the ν*P *menya+ø Abagusii abange* ~~*menya*~~ *ime ya America,* which merges with T carrying the infinitival affix {*ko-*} to form the T-bar *Af menya+ø Abagusii abange* ~~*menya*~~ *ime ya Amerika.*
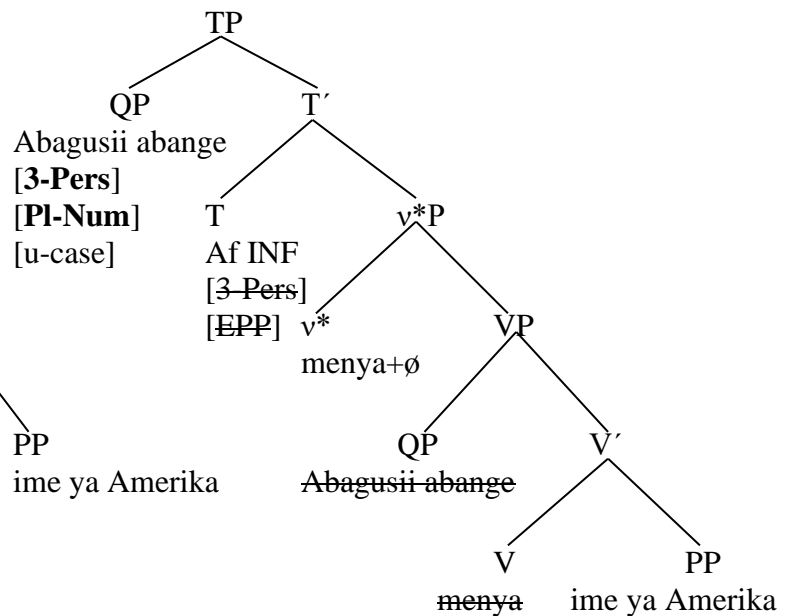
Radford (2009, p. 309) argues that infinitive *to* is a T-constituent that carries an EPP-feature and uninterpretable person feature but not number. If we pursue this line of argument and suppose that the Ekegusii T (a *to* infinitive) carries an EPP-feature (as I assumed in chapter 3 for the Ekegusii T carrying tense, aspect and subject-verb agreement inflections) and a person feature, the EPP-feature and uninterpretable person feature on T will probe within its c-command domain (i.e. search space within the ν*P) and locate the QP *Abagusii abange* 'many Kisii people' (which is active because of its unvalued structural Case) as its goal which will value and delete its person feature and satisfy its EPP requirement by moving from [SPEC, V] to occupy [SPEC, T], forming the TP *Abagusii abange Af menya+ø* ~~*Abagusii abange*~~ ~~*menya*~~ *ime ya Amerika*. T that is a *to* infinitive is not a case assigner, argues Radford (2009, p. 310). Consequently, the abstract structural case of the QP *Abagusii abange* will not be valued at this stage in the derivation. It remains active and to be valued by a higher head with which it will

strike a case-agreement relation. Structure (2) below shows the T-bar formed before movement to [SPEC, T], with the features on the probe [T$_{Af}$] – T carrying the infinitival affix (Af INF) – and those on the goal – the QP – shown in square brackets before valuation of the features on T. Structure (3) shows the TP formed after movement to [SPEC, T], with the features on the probe (T) valued and deleted (u below stands for uninterpretable/unvalued and I adopt Radford's (2009) use of bold print to show the interpretable features on lexical items):

(2)

```
                T´
              /    \
           T          v*P
      Af INF         /    \
      [u-Pers]    v*        VP
      [EPP]    menya+ø     /    \
                         QP        V´
                  Abagusii abange  /   \
                                  V      PP
                               menya   ime ya Amerika
```

(3)

```
                    TP
                  /     \
              QP           T´
      Abagusii abange    /    \
         [3-Pers]     T          v*P
         [Pl-Num]  Af INF       /    \
         [u-case]  [3 Pers]  v*        VP
                   [EPP]  menya+ø     /     \
                                   QP          V´
                            Abagusii abange   /    \
                                             V      PP
                                          menya   ime ya Amerika
```

The TP in structure (3) above will merge with the finite verb (in its base form) *kagera* "think" to form another VP (the recursive property of language) *kagera Abagusii abage Af menya+ø Abagusii abage menya ime ya Amerika*. Given the VP shell, the VP will "split into an outer shell, with the head v* and an inner core, with the head V (Radford, 2009). The abstract light verb will attract raising of V to v*, thereby forming the second v*P (again the recursive property of language) *kagera+ø kagera Abagusii abage Af menya+ø Abagusii abage menya ime ya Amerika.* This v*P formed in turn merges with the T head carrying third person plural subject-verb agreement and present tense inflections (3PersPlPr) to form the T-bar *Af kagera+ø kagera Abagusii abage Af menya+ø Abagusii abage menya ime ya Amerika.* The tense head T, just like the *to* infinitive T, carries an EPP-feature in Ekegusii (as I posited in the preceding discussion and in the discussion in chapter 3). T that is a finite tense head bears interpretable tense,

following Chomsky (2007, p. 20). Having made the assumption that the finite T bears an EPP-feature, it then follows that for movement of the QP *Abagusii abange* from the lower SPEC of T into the higher SPEC of T to occur, an appropriate relation (i.e. probe-goal relationship) must be established in at least one feature on the probe (i.e. T) and a corresponding feature on the goal (i.e. the QP), following Chomsky (2000).

Chomsky's (2001) postulation on agreement between a probe and a goal hinges on the feature valuation and feature interpretability biconditional relation to the effect that a feature is uninterpretable if and only if it is unvalued (p. 5). Conversely, a feature is interpretable if it is valued. Chomsky (2000, 2001) suggests that it is unvalued features on a probe (i.e. person and number) and on the goal (i.e. structural case) which make them active. These features get valued upon the probe searching and locating an appropriate goal within its search space. Adopting Chomsky's suggestion that it is unvalued features on the probe that probe seems problematic with regard to the Ekegusii tense head T, owing to the fact that person and number features on Ekegusii verbs in tensed clauses (like the finite verb in derivation (1) above) are valued as a consequence of agreement with their subjects. Accordingly, the Ekegusii tense head T carrying the agreement inflections and tense affix will not serve as a probe in establishing a relationship with a goal in its c-command domain: the valued φ-features on T inactivate it. The QP will therefore not raise to [SPEC, TP] based on the case-agreement relation with T, but on the account of the EPP/EF-feature carried by T, consistent with Chomsky's (2000, p.102) claim that EPP is the property of T allowing it to have an extra SPEC. Chomsky (2008, p. 148) adds that C (from which T inherits its features) has two probes: the Agree-feature and edge feature (EF), which is freely available for lexical items. It then follows from this that the QP will raise to occupy the higher SPEC T position in order to satisfy the EF on T (but not its Agree-feature). This leaves us with the question: what happens to the unvalued structural Case on the QP? The structural Case on the QP remains unvalued. This according to Chomsky (2004, p. 116) will cause the derivation to crash because the unvalued Case feature on the QP will undergo a Transfer operation to semantic component without a value. This will wrongly predict that derivation (1) is ungrammatical.

4.2.1 Alternative Framework for Feature Valuation and Interpretability

Let me explore an alternative proposal on feature valuation and feature interpretability conjectured by Pesetsky & Torrego (2006). The linguists' proposal on feature-sharing differs from Chomsky's. On the one hand, Chomsky's view on feature-sharing is that the φ-features on the element serving as a goal (whose φ-features are complete and valued/interpretable) are copied onto the element serving as a probe (whose φ-features are either complete or carrying one of the features, which must be unvalued/uninterpretable) and values its φ-features once a Case-agreement relation has been established between the goal and the probe. Pesetsky & Torrego, on the other, eliminate Chomsky's feature valuation (or interpretability) biconditional in (4):

(4)   "A feature is uninterpretable iff the feature is unvalued" (Chomsky, 2001, p. 5)

and argue that the elimination of (4) "allows items to come from the lexicon with features that display two combinations of properties: (i) uninterpretable but valued; and (ii) interpretable but unvalued" (Pesetsky & Torrego, 2006, p. 269). In this view, lexical items contain four categories of features, namely, uninterpretable, unvalued; interpretable, valued; interpretable, unvalued; and uninterpretable, unvalued (*ibid*.). Chomsky's approach allows features that are interpretable, valued; and uninterpretable, unvalued, and it is unvalued features that probe. Pesetsky & Torrego adopt Chomsky's view on the category of features that probe, and within their approach, they posit that both "interpretable unvalued [and] uninterpretable unvalued may act as probes" (p. 270). As a way of illustration, they posit that interpretable unvalued features are those like T on the category Tns, which is the source of semantic interpretation of tense. They further argue that tense distinctions in some languages are made through morphological marking on the finite verb (a case in point is the language of this study: Ekegusii). In such languages, they argue, "T on the finite verb [bears] an uninterpretable feature" (*ibid*.) which takes part in an agreement relation with "T on Tns" (*ibid*.). In this connection, they posit that T on Tns serves as the probe, with an interpretable unvalued feature. In the similar vein, T on the finite verb serves as the goal, with an uninterpretable valued feature (*ibid*.). Pesetsky's & Torrego's line of argument seeks to account for the relationship between Tense and the finite verb by following, among others, Chomsky's (1957) postulation on projection of a Tns node on the syntactic tree diagram c-commanding the VP. This approach does not account for NOM Case assignment by the probe T, the phenomenon

I sought to account for. For that reason, I would not wish to pursue their approach to feature valuation and interpretability any further than this.

(5) **Feature composition of T in Ekegusii**

a. A T-constituent in Ekegusii tensed clauses carries φ-features that are valued as a consequence of the subject-verb agreement inflections on the Ekegusii main verb. However, the T carries an EPP-feature and can attract raising of a subject to its SPEC.

b. Ekegusii T that is a *to* infinitive carries a person feature and an EPP-feature. It agrees in person-feature with a matching goal in its c-command domain, and its EPP-feature attracts raising of the goal to its SPEC.

4.3 Structural Case-Assignment in Ekegusii

In DbP, the Case system taken into consideration is the NOM[inative]-ACC[usative]. Chomsky (2004, p. 115) argues that T and v* are the probes for the Case-agreement system. Structural Case is an uninterpretable feature of goals e.g. (pro)nominals, but not of probes. This Case is either NOM or ACC depending on the probe: it is NOM, if the probe is T and ACC, if the probe is v* (Chomsky, 2001). An unvalued structural Case on a goal is given a value through an agreement relation with a probe. If the goal carries φ-features that are sought out by the probe, an appropriate relation is established and the person and number features of the goal are copied onto the probe and, in a manner determined by the probe, the goal gets its Case valued. Chomsky (2001, p. 6) argues that Case is not matched but rather it deletes under matching of the person and number features. At the point when the values have been assigned under Agree, they are handed over to the PHON (p. 16) and subsequently removed from the narrow syntax (NS) by Spell-Out (p. 6), making the derivation to converge.

4.3.1 Nominative Case-Assignment in Ekegusii

This type of Case is assigned by a tense head T (Chomsky 2001, p. 6) to a matching goal within its search space. The T is selected by C and therefore φ-complete (following Chomsky 2001, p. 9). Chomsky bases NOM Case assignment on the assumption that the case assigner (T) gets into an agreement relation with its target ((pro)nominal) in terms of the φ-features carried by the goal which match those of the probe. The case assigner must be active because of its uninterpretable φ-features, which get valued and deleted upon searching within its search space and locating an appropriate goal, carrying the corresponding valued features (with or without movement, following Chomsky (2001, p. 8), to [SPEC, T). However, Chomsky (2001, p. 9) identifies a type of T-constituent found in raising/ECM (Exceptional Case Marking) constructions that cannot assign Case because it is defective (lacks person and number features), but I leave that aside here and concentrate on T-constituents that are φ-complete.

In the derivation of the sentence in (1) above, I ascertained that the T-constituent of a transitive verb in Ekegusii carries subject-verb agreement affixes and as a consequence its φ-features are valued, inactivating it. T can only get into the Case-agreement system when "it is active by virtue of its uninterpretable φ-features" (Chomsky, 2004, p. 115). Therefore, a plausible conclusion to draw from the observation is that NOM Case in Ekegusii is not assigned by T and in the manner held by Derivation by Phase theory, owing to the fact that the Ekegusii tense head T does not serve as a probe because it is inactive.

4.3.2 Accusative Case Assignment in Ekegusii

This type of Case is assigned by the ν* probe (Chomsky, 2001, p. 6) which selects V that is φ-complete, according to Chomsky (2001, p. 9). The Case assigner must be active because of its uninterpretable person and number features, which get valued and deleted once an agreement relation has been established with a φ-matching goal in its c-command domain. The goal gets its structural Case valued as ACC in return. However, Chomsky (2001, p. 9) points out a type of V-constituent (i.e. passive/unaccusative) which does not get into Case-agreement because it lacks φ-features and does not carry an EPP-feature. I leave that aside here and focus on the V constituent that is selected by ν*; one that is φ-complete. To establish the empirical efficacy of

the probe *v** assigning ACC Case to a goal in its search space, I consider the derivation of the sentence in (6) below:

(6)　　*Mokaya a-keny-a*　　　　*enyama negesire.*
　　　　Mokaya 3SgAGRs-cut-FV　　meat　with axe
　　　　'Mokaya cut meat with an axe.'

The derivation of the expression in (6) kicks off by the base form verb *kenya* 'cut' first merging with the PP complement *negesire* 'with an axe' to form the V-bar *kenya negesire*. This V-bar merges with the object DP complement *ø enyama* 'meat' to form the VP *ø enyama kenya negesire*. This syntactic merger operation that forms the VP conforms closely to the "merger condition" which requires that a nominal or pronominal complement of a verb is merged last to the verb in the event a verb contains two complements (Radford, 2009, p. 358), as is the case with the verb in expression (6) above. The two complements of the verb are the DP object *ø enyama* 'meat' and the prepositional complement *negesire* 'with an axe'. The VP formed thus far merges with a light abstract verb *v** which attracts the lexical verb *kenya* to raise and adjoin it, forming the *v**-bar *kenya+ø ø enyama ~~kenya~~ negesire*. The *v**-bar subsequently merges with the EA DP *ø Mokaya,* forming the *v**P *ø Mokaya kenya+ø ø enyama ~~kenya~~ negesire*. Structure (7) below shows the *v**P formed (I only consider the derivation up to the *v**P to be able to show how the transitive probe *v**, *kenya* 'cut', values the Case of a goal in its local space as ACC):

(7)
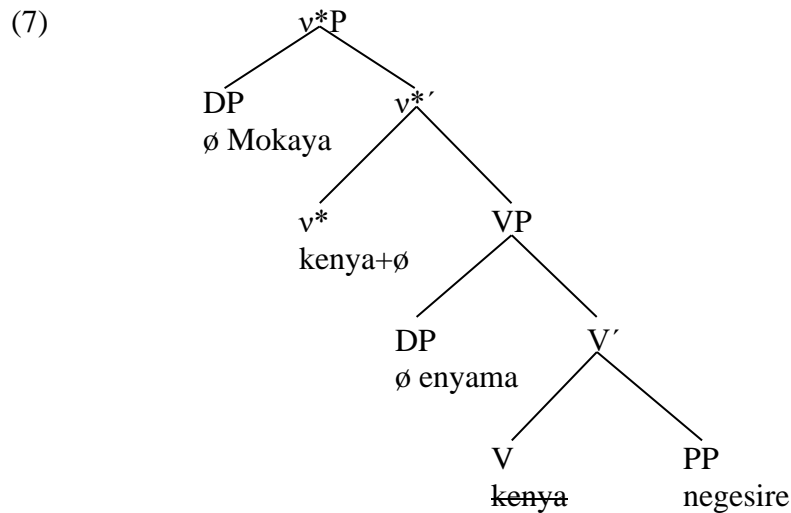
Chomsky (2007, p. 17) posits that syntactic operations such as agreement, case assignment, movement, feature-valuation, feature-deletion and transfer all take place at the phase level. In structure (7) above, a ν*P phase has been formed, given that the transitive verb has an external argument, the DP ø *Mokaya*, which originates in the specifier position of ν* (i.e. SPEC, ν*P). Accordingly, valuation and deletion of the φ-features on the probe ν* as well as the ACC Case assignment to the SPEC of the verb (i.e. ø enyama) will apply at the stage of the derivation in (7) above. The light verb *kenya+ø* is an abstract one. The verb carries uninterpretable invisible φ-features, which make it active. It searches and within its search space (i.e. within the VP) and locates the third person singular DP ø *enyama,* which is also active because it has an unvalued Case, with which it agrees and assigns ACC Case to invisibly, consistent with Radford's (2009, p. 352) argument on invisible Case assignment by a transitive abstract light verb. It is important to note that at this point in the derivation the VP, the complement of ν*, undergoes a transfer operation to the PHON and SEM for processing because the ν*P phase has been formed. This is in line with Chomsky's phase impenetrability condition which requires there to be a transfer at the end of each phase, making the VP and its constituents inaccessible to further syntactic operations.

At the stage of the derivation in (7) above, the verb is still in its base form: it has not received the subject-verb agreement inflections. This is the reason its φ-features are not yet valued; hence allowing Case-agreement relation with its c-commanded goal DP ø *enyama.* The verb will get the agreement inflections lowered onto it from T once the higher phase CP is formed and the TP (COMP of the head C of the CP phase) is sent to the phonological component in accord with the phase impenetrability condition, where the morphological process of "Affix Hopping" takes place.

A different kind of argument in support of positing that the DP ø *enyama* gets assigned ACC Case by the abstract transitive verb in (7) above is that the DP ø *enyama* can be replaced by the Ekegusii wh-words *ki* 'what' and *ng'o* 'whom' which only occupy the object position in the Ekegusii wh-echo questions, as shown in (8) and (9) below:

(8)   *Mokaya a-keny-a   ki?*
        Mokaya 3SgAGRs-cut-FV what
        'Mokaya cut what?'

(9)   *Mokaya a-keny-a   ng'o?*
        Mokaya 3SgAGRs-cut-FV whom
        'Mokaya cut whom?'

4.4 The Operation Move (=Internal Merge (IM))

This is a syntactic operation in which elements in a syntactic computation raise from lower positions to higher positions in a tree diagram during the structure building process, creating copies. This movement of elements is of various kinds. They include, head movement, A[rgument]-movement and A-bar (A′) movement. Head Movement is raising of a head from a lower head position to a higher head position such as V-to-v*, V-to-T and T-to-C. Chomsky (2007, p. 21) argues that movement from V-to-v* is obligatory but T-to-C may or may not occur. A-movement involves raising of an argument either from the complement position or from the SPEC position within the VP to becoming a SPEC of higher heads, conforming to the "predicate-internal subject hypothesis" (i.e. VPISH) which conjectures that arguments originate internally within the VP and then raise to become specifiers of higher heads (*ibid*.). Movement to [SPEC, T] is an example of A-movement that is triggered by properties of T (p. 18). A-bar movement is a kind of movement that involves object raising from the complement position within the VP through outer [SPEC, v*P] to [SPEC, CP]. According to (Chomsky, 2007, p. 24; 2008), A-bar movement is driven by phase heads (i.e. C and v*) because of their edge features (EF) which require them to project specifier positions. A perfect example of A-bar movement is wh-movement in wh-questions. By way of illustration, I look at movement that occurs during the structure building process in the derivation of Ekegusii sentences.

By way of getting started, I would like to indicate that in this section I only consider A-bar movement. The other types of movement – head movement and A-movement – involve what is reflected by the examples I derived in chapter three and in derivation (3) and (7) of this Chapter. For example, in my outline of the Ekegusii VP-shell in chapter three and in derivations (2), (3) and (7) above, I noted that the lexical verb V raises to adjoin the abstract light verb at v*. This is a kind of head movement which involves V-to-v* movement from the VP head position into the v*P head position. According to (Chomsky, 2007, p. 21), V-to-v* movement is

obligatory. Part of the reason the movement is obligatory is because the light verb is strong and affixal, attracting raising of V to v* (following Radford, 2009, p. 348).

In V-to-T movement, Chomsky (2007, p. 21) argues that it may or may not occur. In the case where there is an auxiliary verb to host the tense at T, there is no V-to-T movement. If there is no auxiliary to host a tense affix at T, Radford (2009) suggests that whether or not V raises to T, or the affixes in T get lowered onto V depends on a language's richness in subject-agreement inflections. The derivation of sentence (2) in Chapter Three demonstrated that V-to-T movement in Ekegusii is not executable in such structures. The Ekegusii T carries subject-verb agreement and tense inflections which get lowered onto the verb in the phonological component through a morphological process called "Affix Hopping" (Radford, 2009) for hosting, thereby giving the Ekegusii transitive verb its appropriately inflected form depending on the subject of the verb.

A-movement is best illustrated by the derivations in (11) and (18) of chapter three and structure (3) of this chapter: the QP *amarwaire amange* 'many diseases' in (11) raises from the VP complement position into TP SPEC position; the DP *ø Nyamweya* in (18) raises from VP internal where it is merged as the complement of the verb and raises to become the SPEC of T; and the QP *Abagusii abange* 'many Kisii people' moves from [SPEC, VP] within which it is generated into [SPEC, TP) due to the EPP-feature carried by T. This property of T is satisfied by the raising of the QP.

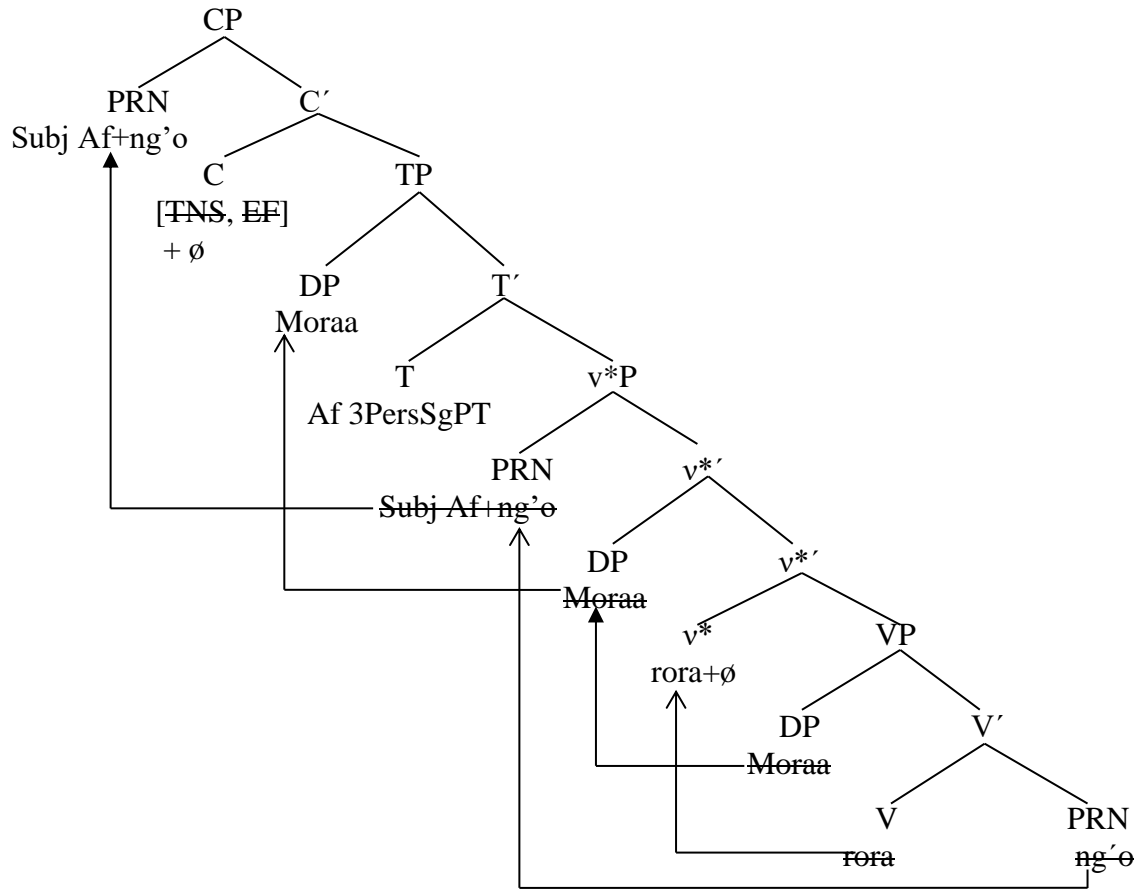### 4.4.1 Ekegusii A-bar Movement (=Wh-Movement)

(10)   *Ning'o Moraa a-roche?*

       Who Moraa   3SgAGRs-saw

       'Who did Moraa see?'

The Ekegusii wh-question in (10) above can be paraphrased (i.e. turned into an echo question) as *Moraa aroche ng'o?* 'Moraa saw whom?'. In Ekegusii, the wh-word in situ is *ng'o* 'whom', a form which it takes when it is merged in the complement position within the VP. Ekegusii makes a morphological distinction between the subjective wh-word and its objective counterpart: the subjective wh-word contains a focus morpheme {*ni-*}, which I can argue gets

attached to the wh-word once it moves into the subject position, so that it becomes *ning'o* 'who'. The derivation of the wh-question in (10) will, therefore, proceed as follows: the base verb form *rora* will merge with its complement, the wh-word, *ng'o* 'whom' to form the V-bar *rora ng'o*. The derivation proceeds again by merging the V-bar with the specifier *ϕ Moraa* to form the VP *ϕ Moraa rora ng'o*, which subsequently merges with the v* to form the lower v*-bar *rora+ϕ ϕ Moraa ~~rora~~ ng'o*. The v* is strong and affixal, according to (Radford, 2009, p. 348), and it attracts the lexical verb V to raise and adjoin it at its place. The v* has an edge feature (EF), following Chomsky's (2007, p. 11) claim that lexical items have an EF which always allows merge to the edge of a particular lexical item, which requires the projection of a specifier to meet this requirement. Consequently, the DP *ϕ Moraa* raises to occupy the SPEC position, forming the upper v*-bar *ϕ Moraa rora+ϕ ~~ϕ Moraa rora~~ ng'o*.

In order for it to be accessible to the phase head C, the wh-word *ng'o* moves to [SPEC, v*P] from the complement position within the VP to becoming an extra (outer SPEC to be exact) SPEC of v*, where it takes the focus morpheme {ni-} and becomes *ning'o* 'who'. This movement operation forms the v*P *Subj Af+ng'o ϕ Moraa rora+ϕ ~~ϕ Moraa rora ng'o~~*. The resulting v*P is merged with the T carrying the third person singular subject-verb agreement affix and a past tense inflectional affix to form the T-bar *Af Subj Af+ng'o ϕ Moraa rora+ϕ ~~ϕ Moraa rora~~ ng'o*. The EF on T triggers raising of the DP *ϕ Moraa* to [SPEC, TP], forming the TP *ϕ Moraa Af Subj Af+ng'o ~~ϕ Moraa~~ rora+ϕ ~~ϕ Moraa rora ng'o~~*. The head C carries the features [TNS, EF] and following Chomsky's (2007, p. 19) argument that uninterpretable features of C are assigned to T, it follows that the subject-verb agreement features (in person and number) and tense in T are derivative from C. Since there is no auxiliary verb to host the features at T, they get lowered onto the verb and the verb is accordingly spelled out as a third person singular past tense form *aroche*. The EF on C seeks *Subj Af+ng'o* in the outer [SPEC, v*P] and raises it to [SPEC, CP], forming the CP *Subj Af+ng'o ϕ Moraa Subj Af+~~ng'o~~ ~~ϕ Moraa~~ aroche+ϕ ~~ϕ Moraa rora ng'o~~*. This marks the derivation as interrogative in force. The structure in (11) below shows the overall derivation formed thus far (with the ~~strikethrough~~ of the features on C showing that their requirements have been met and therefore deleted from the syntax):

(11)

CP
- PRN — Subj Af+ng'o
- C′
  - C [T̶N̶S̶, E̶F̶] + ø
  - TP
    - DP — Moraa
    - T′
      - T — Af 3PersSgPT
      - v*P
        - PRN — S̶u̶b̶j̶ ̶A̶f̶+̶n̶g̶'̶o̶
        - v*′
          - DP — M̶o̶r̶a̶a̶
          - v*′
            - v* — rora+ø
            - VP
              - DP — M̶o̶r̶a̶a̶
              - V′
                - V — r̶o̶r̶a̶
                - PRN — n̶g̶'̶o̶

The CP in structure (11) above is a phase. It goes without saying that the TP complement of C, its head, will undergo a transfer operation to the PHON and SEM for processing, consistent with Chomsky's PIC. Likewise, the edge of C, its SPEC, will also undergo transfer because this is the end of the overall phase. In the phonological component, the wh-word *ng'o* undergoes affix attachment whereby it takes the focus morpheme {ni-} and thus realized as *ning'o*. The movement of the wh-word *ng'o* from being the complement of the lexical verb through the outer [SPEC, v*P] to [SPEC, CP] is an A-bar Movement.

4.5 Summary

I began this chapter in section 4.2 with a brief review of the assumptions held on agreement in Chomsky's phase based theory of syntax. I took the review on agreement a stage

further by looking at the derivation of the expression *Abagusii abange mbakageire komenya ime ya Amerika* 'Many Kisii people are thought to stay inside of America' and noted that the Ekegusii tense head T does not serve as a probe in the Ekegusii Case-agreement system because the Ekegusii T carries subject-verb agreement inflections, and, as a consequence, its φ-features are valued and hence inactivated. However, the Ekegusii T-constituent that is an infinitival agrees with a goal in its c-command domain in the person feature and its EPP-feature attracts raising of the goal to occupy [SPEC, TP]. In section 4.2.1, I explored an alternative approach to agreement suggested by Pesetsky & Torrego (2006) and found out that their approach to feature valuation and interpretability does not account for NOM Case assignment but rather accounts for the relationship between tense and the finite verb. For that reason, I did not pursue it any further. In 4.3, I outlined Chomsky's claims on structural Case assignment. In 4.3.1, I went on to look at NOM Case assignment in Ekegusii and noted that NOM Case assignment is not realized through the T-constituent because the tense head carries valued φ-features and hence it does not enter into the probe-goal pair relation. In 4.3.2, I noted that the Ekegusii transitive verb assigns ACC Case to its object in a manner that conforms pretty closely to the probe-goal pair syntactic relation. In 4.4, I took a review at the operation Move and outlined the various kinds of movement, including, head movement, A-movement and A-bar movement. In 4.4.1, I took the discussion of A-bar movement a stage further by considering the derivation of the Ekegusii wh-question *ning'o Moraa aroche?* 'Who did Moraa see', and noted that the Ekegusii wh-word *ng'o* 'whom' moves from the object position through the outer [SPEC, v*P] and finally settles at [SPEC, CP] to meet the requirement of the EF carried by C.

<p style="text-align:center">CHAPTER FIVE</p>

<p style="text-align:center">RESEARCH FINDINGS, CONCLUSION AND RECOMMENDATIONS</p>

5.1 Research Findings

What follows are the research findings presented in a manner that provides direct answers to the research questions of this study. In the outline of the VP-shell and phase structure of the Ekegusii transitive, intransitive, unaccusative, negative, passive and infinitival structures, I ascertained that Chomsky's phase structure is applicable to the Ekegusii verb system. First, Ekegusii transitive structures with external arguments (EA) (which originate at the SPEC position of $v*P$) are $v*P$ phases, a finding that is in line with Chomsky's (2008, p. 143) claim that a transitive verb with an EA is a $v*P$ phase. Second, Ekegusii intransitive structures are not $v*P$ phases because they lack an EA: their subjects originate as specifiers to the verb in the VP. In the analysis of unaccusative structures, I ascertained that unaccusative predicates first merge as their complement arguments that finally raise to become their structural subjects and specifiers of higher heads, namely, T. Their analysis conforms to the assumptions held in DbP about unaccusative structures: their complements raise to become specifiers and structural subjects of higher heads. As far as Ekegusii negative structures are concerned, I adopted Radford's (2009) approach which posits that the negating element is merged into the SPEC position of NEGP. Such an analysis of a negative structure proves to be problematic because a movement from a SPEC position into a head position is not executable in DbP. Besides, it violates two UG principles: HMC and SCP, during the morphological process of Affix Hopping. For this reason, I adopted the approach to negation that projects the negating element in the head NEG of NEGP. This approach is viable and provides room for bypassing the violation of HMC and SCP. I, therefore, argued for a plausible possibility of the head NEG containing a strong V-feature in Ekegusii. Consequently, Ekegusii stem verb in finite clauses raises into the TP head position through the head NEG, thus conforming to the HMC and SCP. The verb first moves into the head NEG, where it takes the negative affix and then raises further into the head T, where it settles and hosts the inflectional affixes, giving the Ekegusii verb in negative structures its appropriately inflected form.

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In relation to Ekegusii passive structures, I established that a PASSP is projected in the tree diagram, which contains the passive affix that is merged at the head PASS of PASSP. However, the morphological process of Affix Hopping in such structures seems to be problematic: the lowering of the inflectional affixes on T into the verb directly without involving the head PASS violates the HMC. In the similar vein, lowering the derivational passive affix on PASS into the verb violates the UG principle – SCP – because such a movement does not involve the head T. However, to bypass the violation of the two UG principles, I suggested a plausible possibility that Ekegusii heads, PASS and T, contain strong V-features (i.e. they can host a verb). In this connection, the stem verb raises into T through PASS: it first raises into the head PASS, where it takes the derivational passive affix and then raises further into T, where it hosts the inflectional affixes and gives Ekegusii passive verb its appropriately inflected form. This analysis conforms pretty closely to the HMC and SCP.

As regards the analysis of Ekegusii infinitival structures, I adopted Radford's (2009) postulation that to infinitive clauses are TPs headed by a T-constituent that is a to infinitive. I posited that Ekegusii T-constituent (that is a to infinitive) carries the infinitive marker which gets lowered onto the stem verb in the T-cycle, giving Ekegusii infinitive structures their appropriately inflected verbs. The overall conclusion on syntactic derivation of all the structures considered in this study is that Chomsky's bottom-up approach to syntactic derivation through a series of merger operations is applicable to the Ekegusii linguistic data.

The study also examined structural Case assignment and agreement. The Case system adopted is Nominative-Accusative. In DbP, case assignment is a result of agreement through the probe-goal pair syntactic relation. In the analysis of NOM Case assignment by the Ekegusii tense head T, it was observed that Ekegusii finite T (serving as a probe) does not get into the probe-goal pair syntactic relation with its c-commanded goal because the finite T head is not active. Chomsky argues that for a given element to serve as a probe, it must be active because of its uninterpretable φ-features. Similarly, for an element to serve as a goal, its Case feature must be unvalued. The Ekegusii finite T cannot serve as a probe in the Case-agreement system because its φ-features are valued as a consequence of carrying subject-verb agreement inflections. Consequently, NOM Case in Ekegusii is not licensed by the head T as held in DbP. However, Ekegusii T-constituent that is a to infinitive agrees with its c-commanded goal in person feature

and attracts the element to move to its SPEC because Ekegusii T-constituent that is a to infinitive carries uninterpretable person feature. In a bid to account for the Ekegusii NOM Case assignment by finite T, I adopted an alternative approach to feature valuation and interpretability conjectured by Pesetsky & Torrego (2006). The linguists' approach to agreement focuses on accounting for the agreement between tense and a finite verb and does not account for NOM Case assignment by T.

ACC Case, on the other hand, is assigned by a transitive light verb, argues Chomsky (2001). The ACC Case assigner must be active because of its uninterpretable φ-features. Ekegusii transitive light verb is active in respect of the features and gets into the Case-agreement relation with a goal in its local search space. Chomsky (2000, p. 100) argues that features of lexical items are introduced in the course of the derivation. For this reason, Ekegusii transitive light verb is in the stem (uninflected form in respect of the φ-features) at the ν*P phase. This makes the transitive ν* active because of its uninterpretable φ-features, allowing an agreement relation with its c-commanded goal, which results in ACC Case assignment.

5.2 Conclusion

Derivation by Phase theory is Chomsky's phase-based theory of syntax that advocates for the reduction of operative complexity in the generation of expressions. The theory's assumptions such as bottom-up approach to the syntactic tree building process, the merger operations in the computation of expressions, the processing of linguistic expressions in phases and assignment of ACC Case by a transitive light verb are all applicable concepts to the analysis of Ekegusii linguistic data. However, the theory's assumption on the NOM case assignment by finite tense head T is problematic. This is because the φ-features carried by the Ekegusii finite T are valued as a consequence of carrying subject-verb agreement affixes. For this reason, a revision to the properties of a T-constituent should be undertaken in order to accommodate other T-constituents such as that of Ekegusii because its T carries person and number inflections which inactivate it, because they are already valued as at the time T is introduced into the derivation. Furthermore, structural NOM Case assignment in Ekegusii is best captured in Chomsky's earlier theoretical framework of the Minimalist Program (MP), where there are AGR heads in which the Ekegusii

nominal of a sentence raises to the subject agreement projection AGRs where its NOM Case is checked.

5.3 Recommendations

This study was a morphosyntactic one that was delimited to the phase structure of Ekegusii verb system of transitive, intransitive, unaccusative, negative, passive and infinitival structures as well as agreement between the verb and its arguments and structural Case assignment. Therefore, for further research, I would like to recommend the following areas:

1. In the analysis of Ekegusii verb morphosyntax, I observed numerous morpho-phonological processes that are a result of inflectional and derivational morphology. I, therefore, recommend a morpho-phonological study of the processes involved in Ekegusii verb inflection and derivation to be conducted to account for the change of the shape of morphemes in certain phonetic environments.

2. The data used for analysis in this study was from the *Rogoro* 'of the north' variety of Ekegusii. Therefore, I recommend a derivation by phase analysis of the verb system of the *Maate* 'of the south' variety of Ekegusii.

3. The study analysed Ekegusii transitive, intransitive, unaccusative, negative, passive and infinitival structures. The former five are main and finite clauses and the latter (infinitival) is a nonfinite and a complement clause. I, therefore, recommend further research on other types of Ekegusii nonfinite and Complement clauses (such as *buna*-clauses 'that clauses', which are complement clauses) within the DbP.

4. In the outline of Ekegusii A-bar movement, I considered a long distance wh-movement: movement from the complement position within the VP through the outer SPEC of v* into the SPEC of C. A further study on wh-movement that is an A-movement and one that involves wh-structures with double wh-words such as *ning'o oita ng'o* 'who killed/beat whom' as well as multiple wh-structures such as *ning'o oreta ng'o na ki* 'who brought whom with what' should be conducted, within the DbP, to ascertain which wh-word moves into the SPEC of C and the type of movement involved.

5. A split CP analysis of Ekegusii complementizer phrase into topic, focus, force and definiteness projections within DbP.

6. A derivation by phase analysis of Ekegusii determiner phrase.

7. A derivation by phase analysis of the verb system of another Bantu language.

8. In DbP, adjunction is treated as a "different kind of operation from merger" (Radford, 2009, p. 349), "which extends a constituent into a larger projection of the same type". Being different from merger, which "extends a constituent into a larger type of projection" (*ibid*.), I, therefore, recommend the investigation of adjunction in Ekegusii within DbP.

9. A revision to the properties of a T-constituent assigning NOM Case in DbP in order to accommodate other T-constituents which contain valued φ-features such as the Ekegusii finite T-constituent.

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