

ASPECTS OF KEIYO MORPHOLOGY AND SYNTAX

BY

CHEPKOSS MIRIAM JEPKEMOI

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DECLARATION

Declaration by Candidate

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Signature: Date:

MIRIAM CHEPKOSS

SASS/PGL/O5/12

Declaration by the Supervisors

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

Signature: Date:

DR JUSTINE SIKUKU

Department of Literature, Linguistics, Foreign Languages and Film Studies
School of Arts and Social Sciences
Moi University

Signature: Date:

DR MARY LONYANGAPUO

Department of Literature, Linguistics, Foreign Languages and Film Studies
School of Arts and Social Sciences
Moi University

DEDICATION

To

Kibet
Toroitich
Rutich
Jebiwott

“Having Wisdom and Understanding is better than Having Silver or Gold”

Proverbs 16:16

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Finally, I accept responsibility for any errors of omission and/or commission that this thesis may have.

ABSTRACT

This thesis presents a description of selected aspects of morphology and syntax of Keiyo, a Southern Nilotic language spoken in Kenya. These aspects demonstrate complex patterns of inflection and derivation and motivate varied interactions between morphology and syntax that can be used to account for morphosyntactic parameters such as null subjecthood. The research problem centered on three main objectives: to identify and describe the form and relevance of selected inflectional and derivational processes in Keiyo; to describe the structure and interaction of morphology and syntax within phrasal and clausal categories in Keiyo, and to describe and explain the classification of Keiyo in a specific null-subject system. The study adopted the Principles and Parameters framework to account for the structure and variations in the language. A descriptive design was adopted and the data used was largely self generated based on native speaker intuitions on the structure of Keiyo morphology and syntax. The data was also checked against the intuitions of eight adult native informants who were selected through purposive sampling. Analysis was done using descriptive techniques where it was established that inflectional morphemes affix to major word categories to express particular inflectional values. Number and definiteness morphemes are suffixed to the noun, whereas gender marking is done through prefixation. As a marked nominative language, Keiyo marks case using tone. Also, adjectives adjust their forms to agree with the number value of the head noun; while verbs attach morphemes to indicate number/person values, past/non-past tense, perfective/imperfective aspect, negation and mood. The processes used in deriving new lexemes in Keiyo include affixation, compounding, base modifications, reduplication and borrowing. Furthermore, morphological operations like the applicative, the causative, the reflexive, the stative and the passive can change the valence of a verb by either increasing or reducing the number of the verb's arguments. The study evinced that Keiyo is both a head-initial and a head-marking language and that the morphological and syntactic structures are dependent due to the complexities of the Keiyo verb morphology. Lastly, Keiyo portrays the classical properties that define a consistent null subject language. The study recommends further investigation especially on the application of the Minimalist Program on the structure of phrasal categories other than the nominal and verbal categories that were analyzed in the present study.

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DEFINITION OF TERMS

The following terms are used in this thesis.

- Affix** - A bound morpheme that is attached to a root. A prefix is attached to the beginning while a suffix attaches to the end of the root.
- Agglutinative language** - A language that ‘glues’ together different morphemes.
- Argument-** Verb Phrase bearing grammatical or semantic relations to a Noun Phrase.
- Derivation** - the process of forming a new word from an existing word, often by adding a prefix or suffix.
- Inflection** – variation in the form of a word, typically by means of an affix, that expresses a grammatical contrast which is obligatory for the stem's word class in some given grammatical context.
- Keiyo** - The language spoken by the Keiyo people
- The Keiyo people
- Morpheme** – the smallest grammatical unit of speech
- Parameters** - Specific characteristics of a language that make the language unique.
- Principles** – linguistic universals, or structural features that are common to all natural languages; hence, they are part of the child's native endowment.
- Pro-drop** - a language in which certain classes of pronouns may be omitted when they are in some sense pragmatically inferable.
- Tense** - Temporal status of an event.

ABBREVIATIONS

1	first person
2	second person
3	third person
ABS	absolute
ACC	accusative
ADJ	adjective
ADV	adverb(ial)
AGR	agreement
ANTIP	antipassive
APPL	applicative
+ATR	advanced tongue root
-ATR	retracted tongue root
ART	article
AUX	auxiliary
BEN	benefactive
CAUS	causative
COMP	complementizer
DEF	definite
DEM	demonstrative
DET	determiner
DIR	directional marker
DP	determiner phrase
FUT	future
FV	final vowel
GEN	genitive
IMP	impersonal marker
IND	indicative
INDF	indefinite
INF	infinitive
Infl	inflection
INS	instrumental
INTR	intransitive

IPFV	imperfective
LOC	locative
N	non- (NPST non-past)
NEG	negation, negative
NMLZ	nominalizer/nominalization
NOM	nominative
NSP	null subject parameter
OBJ	object
PART	particle
PASS	passive
PFV	perfective
PL	plural
POSS	possessive
PP	prepositional phrase
P&P	Principles and Parameters
PRED	predicative
PRF	perfect
PRS	present
PROG	progressive
PST	past
RECP	reciprocal
REFL	reflexive
REL	relative
S	subject
SG	singular
Spec	specifier
STAT	stative
SVO	subject verb object
TR	transitive
TNS	tense
VP	verb phrase
VSO	verb subject object
*	ungrammaticality falling tone or rising tone

CHAPTER ONE

INTRODUCTION TO THE STUDY

1.0 Introduction

This thesis presents a descriptive account of the selected aspects of morphology and syntax of Keiyo, a Nilo-Saharan language spoken in Kenya. The thesis gives a comprehensive description of the selected inflectional and derivational process in Keiyo as well as detail how the said processes interact with syntax. It also presents the features that identify Keiyo as a null subject language. The thesis is divided into six chapters where chapter one gives a general introduction about the people and the language, followed by a discussion of the main tenets of the Principles and Parameters framework under which the analyses of this investigation are based on. The literature that is of benefit to this investigation is outlined in the second part of chapter two while the third chapter gives the methodology adopted by the study. This is followed by an in-depth examination of inflectional and derivational aspects of Keiyo in chapter four. Chapter five describes the morphology and syntax of phrasal and clausal categories in Keiyo with the final chapter giving a summary of the main findings before putting forward the conclusion and recommendations of the study.

The first chapter is organized as follows: the first section places the study in context by giving the linguistic classification and historical background of Keiyo. This information is important since it provides insights into the linguistic and social situation of the research area relevant to this study. It will be followed by a presentation of the problem statement that this inquiry seeks to address. The aim, objectives, research questions, justification, and significance of the study are given in sections 1.3 to 1.6. The chapter ends with a brief explanation of the scope and limitations of the study.

1.1 Linguistic Classification of Keiyo

Keiyo is a southern Nilotic language whose entry code in the Ethnologue is '639-3' and symbolized as 'eyo'. It is categorized as 6a (vigorous) meaning that it is used for face-to-face communication by all generations. On the authority of Prah (1998) Nilo Saharan languages of Africa broadly branch out into Sudanic and Nilotic. The Nilotic group comprises three language families: Western, Eastern, and Southern where Keiyo is located alongside Nandi, Kipsigis, Tugen, Marakwet, Sabaot, Pokot, and Kony. Keiyo is grouped with other mutually intelligible languages which are commonly known as Kalenjin. Tarus (1994) mentions that there are cultural, historical, and linguistic connections between all these languages. Although these languages are all supposedly mutually intelligible, speakers of one language often have difficulty understanding speakers of another. Kipkorir and Welbourn (1973) also indicate that the term 'Kalenjin' is not only a coinage but also artificial and political in its origin because the people of Kenya who are now known as Kalenjin did not have a common name and that there is no language called Kalenjin.

Figure 1.1 shows the position of Keiyo in Prah's Nilo-saharan family of languages.

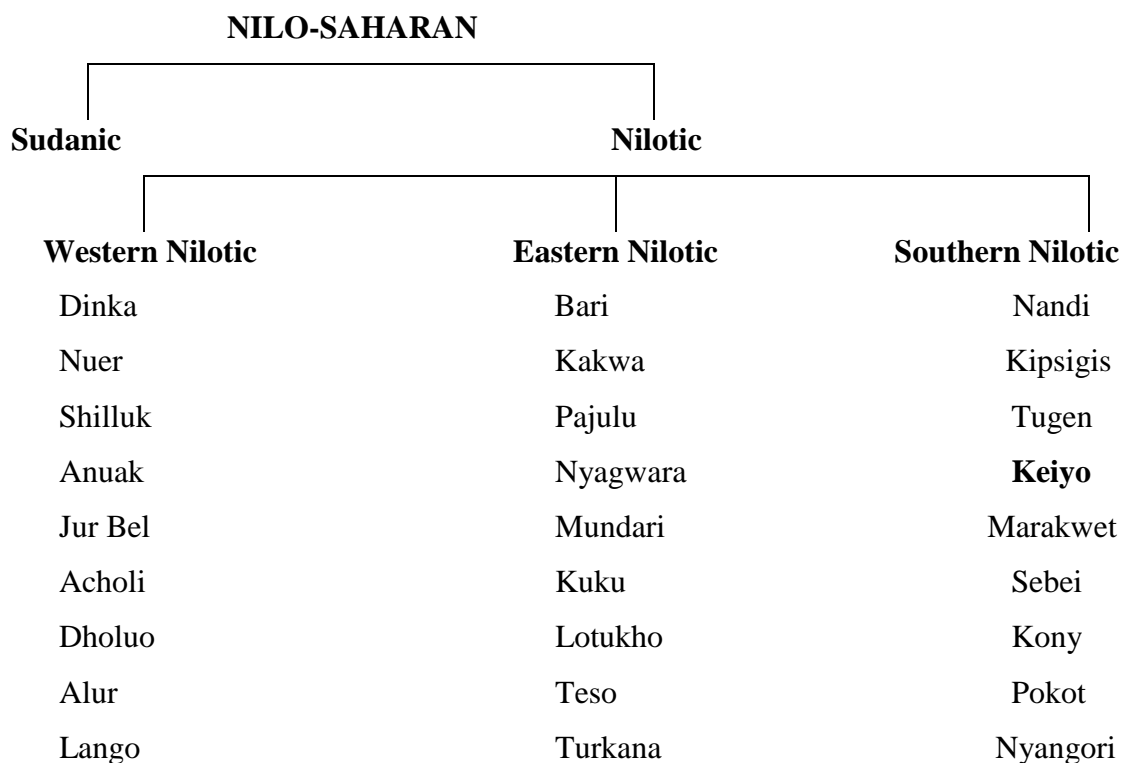


Figure 1.1: The position of Keiyo in Prah’s Nilo-Saharan family of languages.

Source: Adapted from Prah (1998)

Changach (2011 a) identified three Kalenjin dialect clusters: one comprised of the Sabaot, along with the Sebei and Kony; another is made up of Pokot, northern Marakwet and northern Tugen; and the third dialect includes the Nandi, Kipsigis, Keiyo, Terik, Southern Tugen and Marakwet.

1.1.1 Historical Background of Keiyo

The central focus of this study is ‘Keiyo’, a term that has several meanings in this work. The designation refers to both the language that belongs to the Kalenjin language group and to the area where the language is spoken. The speakers of this language also refer to themselves as Keiyo or as Elgeyo. This thesis adopts the name Keiyo for consistency purposes and also owing to the act that the people presently refer to themselves by this name. The origin of the name ‘keiyo’ is unclear and different schools of thought have

varied explanations. According to Tarus (1994) one group is of the persuasion that the name was given to them by Nandi women who were sterile and were able to conceive when they migrated to Keiyoland. They then referred to Keiyoland as the place of *Kip-Keiyo* intimating that it is a place where one goes to give birth. The second school of thought believes that the people now known as the Keiyo were self-centered people living singly on the escarpment ledges. Consequently, their neighbours who are the Tugen and the Nandi referred to them as the *Kip-Keiyya* (singular) or *Kipkeiiniik* (plural) insinuating that they are solitary people. These references were corrupted over time to read 'Keiyo'. Another version as to the origin of Keiyo indicates that the name is as an alteration of the former accurate name *keisyo* 'the practice of milking' which arose from the Uasin-Gishu Maasai who was the neighbours of the Keiyo in the mid 19th century.

The Keiyo continued to live in the Kerio Valley when the other Kalenjin languages moved to their current homes. Keiyo is mainly spoken in Elgeyo Marakwet County and in parts of Uasin Gishu County in Kenya. Elgeyo Marakwet County, which covers a total area of 3029.6 square kilometers, borders Uasin Gishu to the West, Baringo to the East, West Pokot to the North and Trans Nzoia to the North West. The county has four sub-counties namely Keiyo North which covers a total of 541.0 square kilometers, Keiyo South that has 899.7 square kilometers, Marakwet East covering 784.3 square kilometers and Marakwet West which has 804.6 square kilometers. Besides Keiyo, the other tribes found in the county are Sengwer and Marakwet. Within the county, the Keiyos are predominantly found in Keiyo South and Keiyo North Sub-counties. According to KNBS (2019), Elgeyo Marakwet County has a total population of 454,480 (Male 227,317, Female 227,151, intersex 12) while the country's total population is 47,564,296 which gives the county approximately 1% of the total Kenyan population. The annual population growth rate in the County is 3.5%. Some members of the Keiyo

community have gradually moved and settled in urban areas like Eldoret in Uasin Gishu County and the other neighboring counties. Figure 1.2 is the map of Elgeyo Marakwet County.

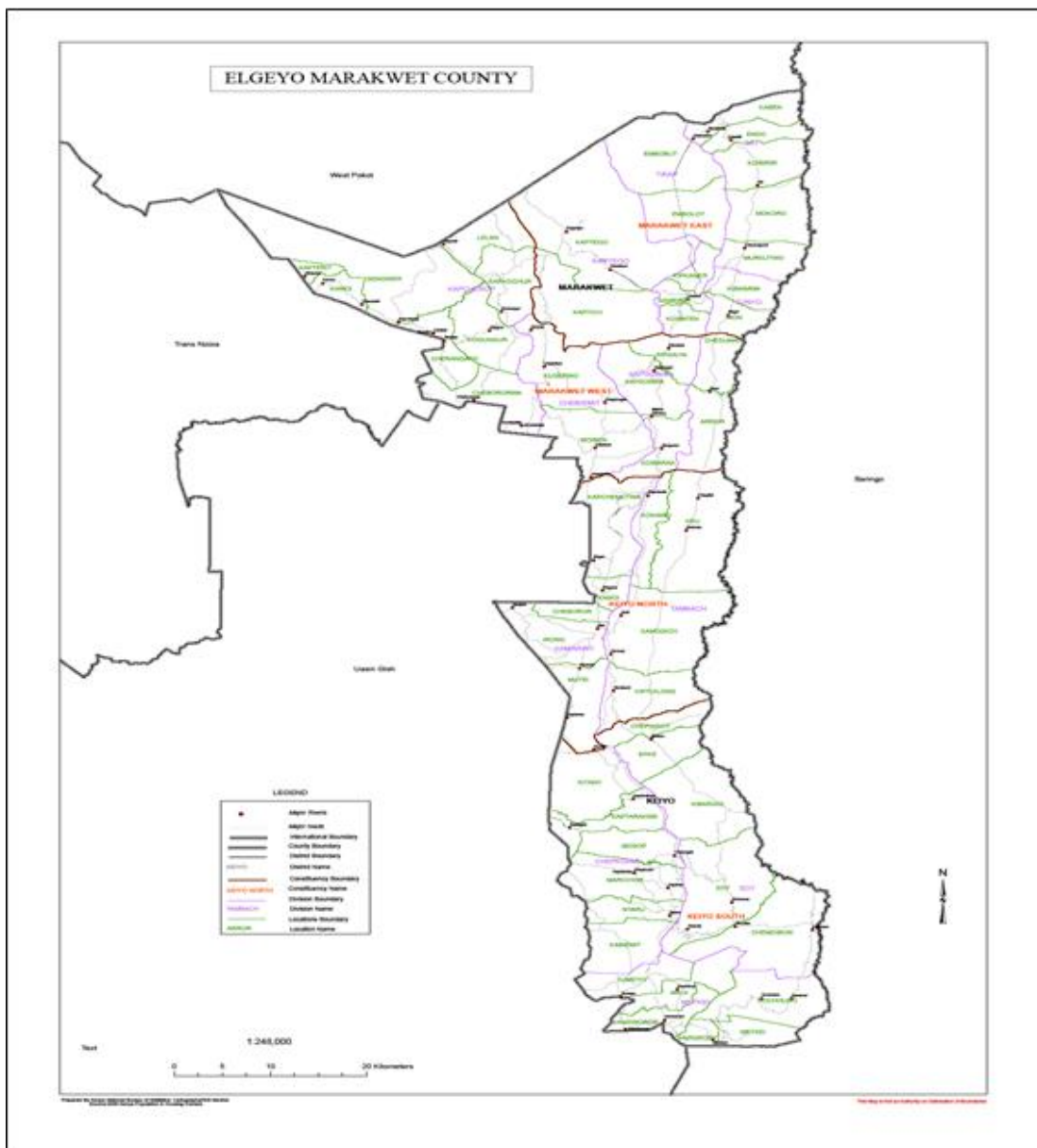


Figure 1. 2: Map of Elgeyo Marakwet County

(Map credit: KNBS, 2009 National Population and Housing Census, and IEBC Reports)

Elgeyo-Marakwet County is one of Kenya's 47 counties located in the former Rift Valley Province whose capital and largest town is Iten. The county is divided into 4 sub-counties, 20 county assembly wards, 68 locations and 199 sub-locations. The sub

counties are Marakwet East, Marakwet West, Keiyo North and Keiyo South. Keiyo North has 4 county assembly wards while Keiyo South is made up of 6 wards namely: Chepkorio, Kaptarakwa, Soy North, Soy South, Kabiemit and Metkei. Chepkorio Ward borders Uasin Gishu County to the West, Kabiemit Ward to the South, Soy North to the North East and Soy South to the South West. The Ward covers an estimated area of 93.7 square kilometers which is approximately 3.2% of Elgeyo Marakwet County's total area. Its population is estimated to be 23,349 according to KNBS. The ward comprises 2 locations namely Nyaru and Marichor. Nyaru has 3 sub-locations: Kipsaina, Mwen and Kapchptek. Sitienei (2018) indicates that Keiyo is divided into four sub-dialects which are mutually intelligible. These sub-dialects are Marichor, Metkei, Mutei and Irong. The map of Keiyo South Sub County is shown in figure 1.3.

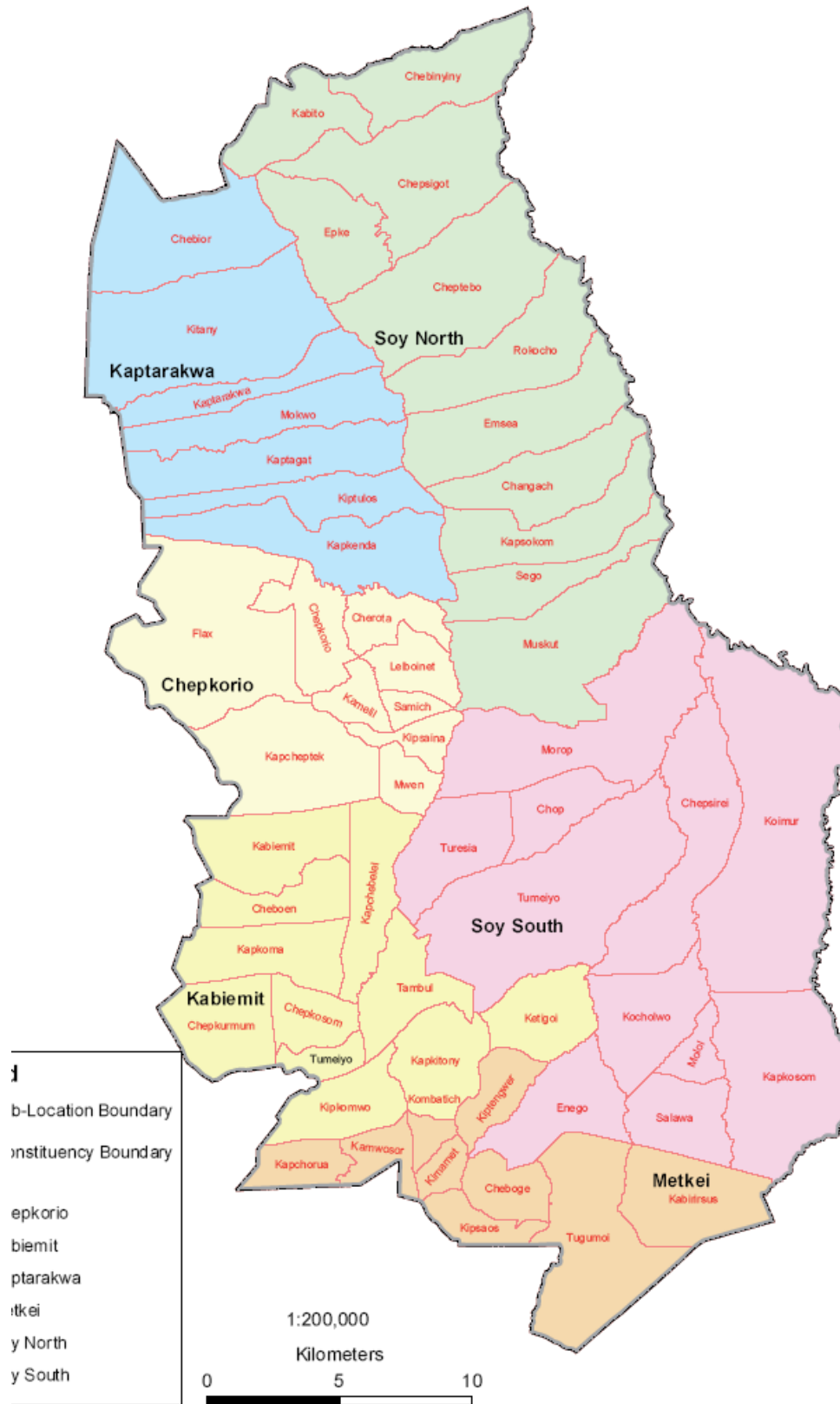


Figure 1.3: Map of Keiyo South Sub County

Keiyo has been influenced by English, Kiswahili and the other languages of the Kalenjin group resulting from the population's access to education, urbanization and their day-to-day interactions with the neighboring counties. Apart from being the official language, English is also used as the medium of instruction in all schools in Kenya; while Kiswahili is both the official and the national language. Several loan words from these donor languages adjust their roots and fit within the language's morphological system. Furthermore, many speakers of the language often intersperse words of English and Kiswahili into Keiyo. It is only very old persons who do not speak at least some English.

1.1.2 Linguistic Aspects of Keiyo

Generally, linguists all over the world have aspired to describe various aspects of a language as a contribution to the understanding of the nature of human languages. Carnie et al (2005) worked on diverse verb-initial languages from a wide variety of theoretical perspectives. Similarly, Gordon (1986) described several topics in Maricopa Syntax while Round (2013) presents an account of the complex inflectional morphology of Kayardild, a rapidly disappearing language of Australia. Nilo-Saharan languages have also received attention from linguists like Dimmendaal (1982, 1983a, 2009) and Moodie (2019) among others. Apart from documenting the world's endangered languages, language research equally presents the complexity of the structure that languages possess. Just like other natural languages, Keiyo has complex morphological and syntactic structures which are described in this study.

The next sections present the general linguistic features of Keiyo.

1.1.2.1 Overview of Keiyo Morphology and Syntax

The morphology of a language shows a large set of meaningful elements which combine to express an even larger set of meanings. Inflectional morphology endows a language with the mechanism for combining lexical and grammatical information. For example, the single Keiyo word *bikyo* ‘our people’ conveys grammatical information of plurality and possession alongside the lexical one (people). Of all word categories, the Keiyo verb has a highly productive system of inflectional and derivational morphemes that can be attached by way of prefixation, suffixation and reduplication of the root morpheme, Sitienei (2018). They inflect for grammatical features like tense, negation, aspect, person, voice, mood, number and case. Consider the structure in (6) which marks some of these features.

(6) Ki-ma- a- kweer- e- nen keetit ne koi
 PST-NEG-1SG- hit- INS- 2SG.OBJ stick REL long
 ‘I did not hit you with a long stick.’

Two basic morphological tenses: past and non-past forms, exist in Keiyo. The ‘non-past’ refers to present and future time and is marked by the insertion of the suffix *-e* or *-ei* at the verb final position as shown in (8a). In addition, a future-time adverbial like *nguuno* ‘now’, *raani* ‘today’ and *karoon* ‘tomorrow morning’ has to be added to the relevant verbs of the non-past form as a way of marking the future. The past form is divided into the immediate, recent and distant. These are represented by the prefixes *ka-*, *ko-* and *ki-* respectively, on the verb. The prefixes are placed right in front of the verb as indicated in (7) where the immediate past morpheme *ka-* heads the structure.

7) Ka - a - mwa ng'al
 PST-1SG-say PL-INDF-word
 ‘I said words.’

Nouns also inflect to express grammatical contrasts such as number, definiteness and gender. Number and definiteness are expressed via suffixation as illustrated in (8a-d),

while gender morphemes are prefixed on people's names. Males' names mostly begin with the prefix *kip* like in Kipkemoi, Kimutai while females' names start with the morphemes *Jep-* as in Jebet, Jepkemoi, Jemutai.

- 8 (a) Keet (tree) singular indefinite
 (b) keet-in (trees) plural indefinite
 (c) keet-it (tree) singular definite
 (d) keet-ik (trees) plural definite

Derivational morphology offers a language the means of forming new lexemes. Affixation is the commonest rule for the derivation of new words and word forms. Nouns, verbs and adjectives attach various affixes to form new lexemes. The Keiyo noun *tookset* 'invitation' is formed from the verb *taach* 'invite' by way of suffixing the derivative morpheme *-set* and changing the quality of the vowel. Furthermore, there exist many words in Keiyo which have been borrowed from other languages. Zwarts (2004) observes that most Kalenjin languages have borrowed extensively from Swahili and English. These loan words fit into the regular system for nouns since they inflect for definiteness and number, just like the standard nouns. Suffixes are added to the indefinite to turn them into definite nouns as exemplified by the English word 'computer'. After appropriate inflection, the resultant forms are *kompyuta* 'singular indefinite', *kompyuta-in* 'plural indefinite', *kompyuta-it* 'singular definite', and *kompyuta-isiiek* 'plural definite'.

Also, Keiyo has pronouns that may occur either as independent word forms or as agreement markers that attach to the verb stems. Examples of these pronouns are given in (9a-c).

- 9 a) Personal pronouns: *anee* 'me', *inyee* 'you' and *icheek* 'them'
 b) Interrogative pronouns e.g *ng'o* 'who', *ano* 'where', *ingiro* 'which' and *nee* 'what'
 c) Demonstrative pronouns e.g *ni* 'this', *noo* 'that', *chuu* 'these' and *choo* 'those'

Zeller (2015) posits that the basic order of constituents in a language is defined by the position of the subject (S), verb (V), and object (O) in declarative, affirmative and active main clauses which are morphologically and pragmatically unmarked. Furthermore, Cysouw (1998) observes that the split between the Eastern and Southern branches on one hand and the Western branch of Nilo-Saharan languages on the other is found in the basic word order pattern. Almost all Eastern and Southern Nilotic languages are quite straightforward VSO. Keiyo being a member of the Southern Nilotic group has VSO structure in unmarked constructions as seen in (10a) where subject affixes are used and in (10b) which has a lexical argument. The verb comes initially in both cases and the postverbal pronominal argument in (10 a) is optional. The VOS order is also present as seen in (10c).

(10 a) A-kon- u (ane) amitwogik.
 1SG-provide-FV (I) food
 ‘I will provide the food’.

(b) Ka- ko- nyo lakw- et.
 PST-PFV-come child-DEF
 ‘The child has come.’

(c) Ser- ei kitabu-t Jerono
 Write- IPFV book-DEF Jerono
 ‘Jerono is writing a book.’

From the data given in (10), it is evident that Keiyo has a rich inflectional system; a property that facilitates the dropping of subject arguments (the pro-drop parameter) since most or all of the information about it can be recovered from the inflection. Haegeman (1994) points out that when the verb inflection is rich in a language, we can recover the subject by inflection. In such languages, inflections on the verb usually mark agreement with the subject NP. Syntactic information like person and number will be shown in the inflections. This, in effect, constitutes recognition of the role of the morphological component operating within the syntax.

Chomsky (1981) outlines and explains all the properties of the pro-drop parameter. In his illustration, he makes a comparison between Italian, English and French. A pro-drop language permits the omission of certain pronouns. The phenomenon is also referred to as zero or null subject parameter. Radford (2006) opines that the parameter is binary under having two alternative settings. Every language can either have or not have pro-drop properties. The null subject parameter (NSP) derives from the idea that all languages must have a subject. Languages that lack subjects have null versions and he further proposes that a primary typological distinction among NSLs is whether the verbal paradigm displays overt person and number morphology or not. In (11), the Keiyo verb *ee* ‘drink’ demonstrates how it can be inflected to mark agreement features. The Keiyo verbal agreement has a gap in the third person, where the subject markers are covert. Some scholars like Koeneman (2006) refer to this aspect as partial pro-drop.

- 11) a-ee ‘I drink’
 i-ee ‘you drink’ (singular)
 ki-ee ‘we drink’
 o-ee ‘you drink’ (plural)
 ee-i ‘he/she/it/they drinks’

1.2 Statement of the Problem

Inquiry into the structure of natural languages has been the focus of many types of research over time. Even so, relatively few investigations exist on Keiyo, and even fewer present a description of the inflectional and derivational patterns of the lexical categories, their interactions and on null subjecthood aspect of the language. Some of the investigations that can be mentioned here include studies by Chelimo (2010) which analyzes the relationship between plural suffixation and tone and Sitienei (2018) that describe the Keiyo verb. A structured description of a language empowers it for public use and also preserves it for reference. This study, therefore, sets out to describe Keiyo, an under-studied southern Nilotic language.

Keiyo is a unique language with numerous and interesting morphological, syntactic and morphosyntactic features which are evident in the patterning of affixes, case marking strategies, the order of constituents within a phrase, and in null subject-hood among other aspects. The gaps in the areas of morphology and syntax of the language are glaring and the present study will hopefully fill the gap and increase awareness of the unique properties of Keiyo.

Many studies have been carried out on the form and meaning of affixes in various languages and results have demonstrated that affixes are not placed haphazardly. Keiyo is a highly agglutinating language whose words contain different morphemes which introduce grammatical or lexical meaning. The Keiyo verb is highly productive since it marks several grammatical meanings. Similarly, the noun carries unique features like definiteness, number and gender. Besides this, possession is marked in nouns by the use of strategies which include attaching the particle (*-ab*) ‘of’ to the stem among others. Similarly, pronouns take up certain suffixes to denote possession. Consequently, all the major word classes in Keiyo use some affixes to communicate varied senses. This study aspires to describe the nature of Keiyo affixes and to determine their relevance.

Keiyo has rich agreement morphology and tends to allow null subjects more freely. Within the Principles and Parameters (P&P) framework, licensing of null subjects has a close relationship with the agreement system of a language. The agreement markers in Keiyo facilitate the recovery of the content of the null pronoun. While analyzing the Morphological Uniformity Hypothesis (MUH), Jaeggli and Safir (1989), Cook and Newson (1996) observe that null subjects are allowed in languages like Spanish, and Persian owing to their morphologically uniform inflection. Their proposal links

uniform morphological agreement paradigm with null subjects. In cases where morphologically complex and morphologically simple forms coexist, the paradigm is non-uniform and the language in question should be non-null. English has both simple and complex forms as demonstrated by the verbs ‘speak’ and ‘speaks’. Languages whose forms are never morphologically complex, like Chinese, will also allow null subjects.

In contrast, Keiyo has both derived and simple forms. First and second person paradigms are derived, while the third person is bare. According to this hypothesis (MUH), a language with both simple and complex forms is predicted to be non-null. Keiyo verbal agreement has syncretism of the third person and it appears to differ with this prediction in that it is a null subject language that permits all pronouns to be optionally null. Following these contrasts, the study seeks to identify and account for the classification of Keiyo in a specific null-subject system.

1.3 Aim

The present study aims to describe selected aspects of Keiyo morphology and syntax, with a focus on patterns of morphology, phrasal and clausal syntax.

1.4 Research Objectives

This study was guided by the following objectives:

1. To identify and describe the form and relevance of selected inflectional and derivational processes in Keiyo.
2. To describe the structure and interaction of morphology and syntax within phrasal and clausal categories in Keiyo.

3. To identify and account for the classification of Keiyo in a specific null-subject system.

1.5 Research Questions

This study was guided by the following questions:

1. What is the form of affixes and how are they distributed in selected morphological processes in Keiyo?
2. How do the selected aspects of morphology and syntax influence the behavior of phrasal and clausal categories in Keiyo?
3. Which features account for the classification of Keiyo as a null subject language?

1.6 Justification and Significance of the Study

Keiyo has not been sufficiently described, yet it is a language that is used by its speakers in their day-to-day engagements. The Ethnologue (2016 edition) classifies Keiyo among the undocumented world languages. This study, therefore, seeks to make a significant contribution towards documenting this language.

Keiyo has a limited role in education even though the Ministry of Education in Kenya made public a policy that was to see lower primary children learn in their mother tongue. According to the Sessional paper 14 of 2012, teachers are expected to teach children below eight years in the language of the catchment area. This policy was widely criticized to the effect that most schools use English as the medium of instruction right from the time a child is enrolled in a school. Also, the use of Keiyo in mass media is only seen in entertainment when Keiyo songs are aired. Moreover, vernacular radio and television stations that broadcast in the Kalenjin languages use any among these languages. It is very common to hear a presenter mixing these languages. This scenario

endangers the existence of these languages and if no effort is made to document and preserve the language, it may face extinction.

In addition, studies have been carried out on aspects of morphology and syntax in Nandi, Tugen and Kipsigis, but there is little research on Keiyo. Although these languages belong to the Kalenjin group, each one of them is unique in its way and needs to be studied and documented. Chelimo (2010) conducted a study on *The Relationship between Plural Suffixation and Tone in the Keiyo Nouns*, where he recommended that further research should be done on various aspects of the language.

Zwarts (2004) observes that published material on the Kalenjin dialects relates to Nandi, Kipsigis and Pokot. This has resulted in an imbalance of research work in Kalenjin. Further, Lodge (1994) says that the literature on southern Nilotic languages is scanty and that, regardless of the existence of a written form for the Bible, prayer books and stories, there is no conventional form.

Furthermore, Ochwaya (1992) notes that a people's culture is rooted in their language; therefore, if such indigenous languages are not preserved, they will die together with the cultural identity.

Due to urbanization, many native Keiyo speakers have moved to urban areas like Eldoret in search of work and better educational facilities for their children. This has led to contacts that have endangered the language and therefore the need to document it. This study will hopefully make a step in the effort to meet this need.

The present study examines the aspects of morphology and syntax of Keiyo. I hope that it will fill some of the above-mentioned gaps and partly contribute to knowledge in morphology and syntax, thereby expanding existing knowledge in understanding

African linguistics. The inquiry will be invaluable to Keiyo speakers and other Kalenjin-speaking people as well. This is because a majority of the population is fast losing contact with its mother tongue in the absence of its use in various domains of day-to-day life. It will also be an invaluable guide on the grammar of Keiyo. Finally, the study offers carefully worked out research that will be of great value to linguists and general readers who may want information on linguistic features of the language.

1.7 Scope and Limitation

The objective of this research is to describe the aspects of the morphology and syntax of Keiyo. In doing so, the researcher analyzed inflectional and derivational morphology and assessed their structure concerning the role they play in the construction of meaningful constituents. The study also described the aspects of morphology and syntax in phrasal and clausal categories in Keiyo; where among other features, the properties of Keiyo as a null subject language are presented.

This study lies within the boundaries of words and sentences. Both simple and complex words and simple and embedded sentences were analyzed because the objectives of the study are attained by analyzing these.

The thesis has not delved into a detailed description of the phonology of the language. Only, a brief mention of the phonemic inventory was necessary because certain phonological processes are morphologically relevant in Keiyo.

The main limitation to this study ensues from the observation that it was difficult getting literature since little has been done on the Keiyo language in general. Consequently, resources from other Nilotic languages had to be used. The researcher also reviewed literature in other Nilotic languages.

The target population for the study is native Keiyo speakers of the Keiyo South sub county. The data was generated by the researcher and thereafter subjected to other native speakers for verification. This approach ensured that only the required data is collected.

1.8 Chapter Summary

The preceding sections in this chapter have placed Keiyo into perspective by unveiling the language's linguistic classification, historical background and some of its general linguistic aspects. This is followed by a lucid exposition of the statement of the problem that this investigation seeks to explore, the aim and objectives of the research, justification and significance of the inquiry, its scope and limitations. The upcoming chapter discusses the theoretical framework and the reviewed literature.

CHAPTER TWO

THEORETICAL FRAMEWORK AND LITERATURE REVIEW

2.0 Introduction

This chapter sets up the framework within which the current study is conducted. It is divided into two sections with the first part detailing the approach adopted in the study, followed by a review of related literature.

2.1 Theoretical Framework

This study employs the analytical tools of Principles and Parameters Theory (P&P) to not only describe the aspects of morphology and syntax of Keiyo but also justify why these specific aspects are the way they are. P&P which developed out of Noam Chomsky's work of the early 1980s deals with the universal properties of natural language grammars. The framework proposes that language knowledge consists of principles universal to all languages and parameters that vary from one language to another. Accordingly, knowledge of a particular language consists of knowledge of the settings of a finite number of parameters that define exactly how the universal principles need to be applied to construct a grammatical sentence in the language. P&P Theory is therefore a way of thinking about knowledge of the language as consisting of certain fixed and constant elements and some highly restricted variable elements, Cook and Newson (2007). The P&P approach is able to draw a difference between invariant and changing properties of the language faculty. It allows linguists to investigate core properties of Universal Grammar by making abstraction of cross-linguistic variation.

Within P&P, the syntactic acquisition is reduced to fixing the values of parameters based on exposure to the grammar of a specific language. Acquiring a natural language, therefore, amounts to assigning values to these open parameters. Despite large

variations, languages have many common properties on an abstract level, which explains why children learn languages easily, even though languages are often complex. Common properties of languages are present, only variations need to be learned; therefore, a child needs to learn the values of language relevant parameters to acquire the grammar of their native language. The main proposition of P&P is that a person's syntactic knowledge can be fashioned with two formal mechanisms. The first mechanism is a finite set of fundamental principles that are common to all languages, for example, the principle that a sentence must always have a subject, even if it is not overtly pronounced. Secondly, a finite set of binary parameters that determine syntactic variability amongst languages.

The goal of syntactic research is to establish the parameters present in Universal Grammar (UG) and their possible values in individual languages. This is the case with the present study which aims to describe patterns of Keiyo morphology and syntax. Keiyo is one language that has a very intricate system of morphology and syntax. This fascinating pattern is seen in the way various constituents interact with different affixes to express certain meanings like affixes, the order of constituents within a phrase and clause, among other unique features. Unlike languages like English whose constituent order can tell the grammatical function of a category, Keiyo relies on the speaker's tone to identify the grammatical function. Furthermore, the tone is critical as it is used in contrasting lexical items. The basic word order in Keiyo tensed clauses is verb-initial. The nominative subject follows the verb, and the accusative object follows the subject if the verb is transitive. In the declarative clauses in (8), the verb phrase is not continuous since it has been interrupted by the subject, a situation that challenges syntactic theories. This is illustrated in (8a), where the noun *lakwet* is the subject and in (8b) which has a null subject.

8a) Wend-i lakw-et sukul.
 3SG.go-IPFV child-DEF school
 'The child goes to school.' (VS adv)

b) Ka- geer \emptyset boiyo-t.
 PST.1SG-saw \emptyset man-DEF
 'I saw the man.' (VSO)

Keiyo has rich agreement morphology, where both the verb and the noun convey several grammatical meanings. The verb can be marked for tense, aspect, mood, number/person features, among others. Similarly, the noun carries unique features like definiteness, number and gender. Besides these, possession is marked in nouns in some ways; one is by way of attaching the particle –ab 'of' to the stem. Also, pronouns take up suffixes to denote possession. So, all the major word classes in Keiyo use several affixes to communicate varied senses.

As mentioned earlier, Principles and Parameters is a theory of the predetermined linguistic mechanisms where principles are rigid, and define what does not vary while parameters define a space of variation. Ouhalla (1991) observes that within P&P, language variation is accounted for in terms of variation in the values of parameters. This implies that parametric variation scales down to differences in the lexical properties of the functional categories involved. These properties are shown to interact with the general principles of Universal Grammar, giving rise to clusters of surface phenomena that may be instantiated inside the same language or across language types. When these parameters are fixed, the grammar of a particular language is obtained.

For one to learn or acquire the grammar of a language like Keiyo, the person has to set the correct values of relevant parameters from a predetermined class of possibilities. Some of the parameters that exist include Null subject Parameter (NSP), Nominal mapping parameter, Head-directionality parameter, Topic Serial verb parameter, Polysynthesis parameter, Verb attraction parameter among others, Chomsky and

Lasnik (1993). The NSP which determines whether or not the subject of a sentence must be overtly pronounced is described in this investigation. Keiyo is a null subject language where all pronouns may be omitted when they are pragmatically inferable. In analyzing the structure and interaction of elements of morphology and syntax within clausal categories, this study describes the null subject parameter in Keiyo under the diagnostic features provided by the P&P framework. The P&P framework was adequately used in the study to describe the language-specific variations that make Keiyo unique.

To adequately describe patterns of Keiyo morphology and syntax, the current study uses aspects of the Minimalist Programme (MP) as a general analytical tool. The MP was suitable since it clearly outlines the relationship between morphology and syntax affirming that syntax depends on morphology. The theory is polished in its presentation of the generation of structures by employing optimally efficient derivations. In addition, MP seeks to have explanatory adequacy in the description of human language. The language under analysis directs the theory; therefore, what emerges in the analysis is what is licensed by that particular language.

2.1.1 The Minimalist Program

The Minimalist Program (MP), which was pioneered by Noam Chomsky in the early nineties, builds on assumptions already present in the P&P. The main area of inquiry of the program regards the optimality of design of the language faculty. As a program, Minimalism is used in analyzing specific inquiries. This thesis uses it to analyze data from Keiyo with the intent of describing its morphology, syntax and interactions. Jung (2011) notes that the MP assumes that parametric differences among languages reside in the lexicon, where the featural properties of functional heads are instantiated. This

suggests that variations among languages should be thought of in terms of varying properties of corresponding items of the lexicons of the languages in question. In the following sections, we address the derivation of the sentence followed by an explanation of how morphology is handled within MP.

2.1.1.1 Syntactic Derivation

The Minimalist Programme emphasizes the economical description of the grammar of a language in that it motivates the economy in its representation and derivation. The language faculty includes a generative procedure that generates a pair of representations: the Phonetic Form (PF) which is interpreted at the articulatory-perceptual interface and the Logical Form (LF) interpreted at the conceptual-intentional interface. Such a generative procedure consists of the lexicon and the computational system. The lexicon contains lexical items with their idiosyncrasies while the computational system constructs syntactic objects from these lexical items and syntactic objects previously formed. Syntactic objects are combined with other syntactic objects to form new ones. This is done by the operation Merge, by which two syntactic objects are combined to form a new object. Kartini (2013) observes that PF and LF are universal components that are found in all, natural languages and are connected to the Intentional Conceptual System; a system that handles the semantic interpretation of the language and the Articulatory Perception System which handles the interpretation of sounds in the language.

The linguistic expressions are generated by what Chomsky (1995) refers to as 'Optimally efficient derivations.' This means that sentences in the language must satisfy the conditions that hold at the two levels of linguistic representation. All syntactic conditions express properties of these Interface levels, thereby reflecting the

interpretive requirements of a language, and also keeping to very restricted conceptual resources. Derivations are assumed to 'converge' at an Interface level, meaning that the structure is interpretable at that level. If not, it 'crashes' or is deemed to be ungrammatical. A derivation must 'converge' at LF and PF separately.

Chomsky (1995) suggests that the process of generating syntactic structures starts with a numeration (N), understood to be a set of items (LI). A set of lexical entries enriched with features that represent various properties of those entries are selected from the lexicon. The numeration underlying the derivation of the structure in (9 a) must contain one instance of each of LI as exemplified in (9 b).

- 9a)** Am-ei boiyo-t amitwog-ik
 eat-IPFV man-DEF food-PL.DEF
 'The man eats food.'
(b) N={ame-i, boiyo-t, amitwog-ik}

After numeration, the computational system accesses its lexical items via the operation select, which pulls out an element from N. The computational system may, for example, select amitwok then the plural definite marker *-gik*, yielding the reduced numeration N' as illustrated in (9c). The selected items are merged in a step-wise, (bottom-up) fashion by specific operations to produce a syntactic object. The two lexical items merge, forming a DP, as shown in (9d). Further applications of Select will exhaust the numeration and successive applications of Merge yield the structure corresponding to (9a), as illustrated in (9e). A computation is taken to be a derivation only if the numeration has been exhausted, which means that, a derivation must use up all the lexical items of its numeration. Merge operation was applied in this study since phrases and clauses in Keiyo are formed by selecting and combining (merging) lexical items and functional categories as exemplified.

- 9c)** $N' = \{ \text{ame-i, amitwog-ik, } \}$
 Boiyo + -t (merge)
9d) $N' \rightarrow [\text{DP boiyot}]$
9e) $N'' = [\text{IP} [\text{VP ame-i} [\text{DP boiyot} [\text{DP amitwogik}]]]]$

The need for formal Checking of features on lexical items motivates the movement of any syntactic element. Lexical items are stored in the lexicon with the specification of their phonological, semantic and formal properties. Some features are intrinsic to the lexical and are specified in the lexicon or determined by other properties listed in the lexicon. Other features are optional and are added arbitrarily to the items when selected to enter N. The addition of optional features is required by Universal Grammar (UG), Goria (2004). Features contain 'strength' whereby strong features are checked before Spell Out otherwise they will make the derivation crash. Strong features are checked and eliminated via overt movement. Related to the Checking Theory is also the notion of Interpretability. Interpretable features are categorial feature and agreement features of nominals, while other features, like Case features in general and agreement features of verbs, are uninterpretable. The former features are visible at LF, hence need not be checked unless they are strong. If checked, interpretable features are visible at LF, so that they are not erased and remain accessible to the computational system. Non-interpretable features must be made invisible before LF and are expunged immediately after checking, becoming inaccessible for the computation.

Feature checking is the driving force for the operation Move. 'Move' takes a structure formed by applications of 'merge', and then moves one of the elements of that structure into another position in the tree. Chomsky (1995) observes that movement is always leftwards since heads and specifiers, which are the only positions to move to, are always to the left in the tree. Operation 'Move' builds structures in a bottom-up and the moved tree is accommodated in the tree that was built. The operation leaves a trace in the

original spot. This operation was applied in this study to derive the heads of the various phrasal categories. In addition, 'Move' plays a central role in accounting for the grammatical function and distribution of the lexical and functional categories. The following figure illustrates movement operations for the structure in (9e).

Figure 2.1: Movement Operation

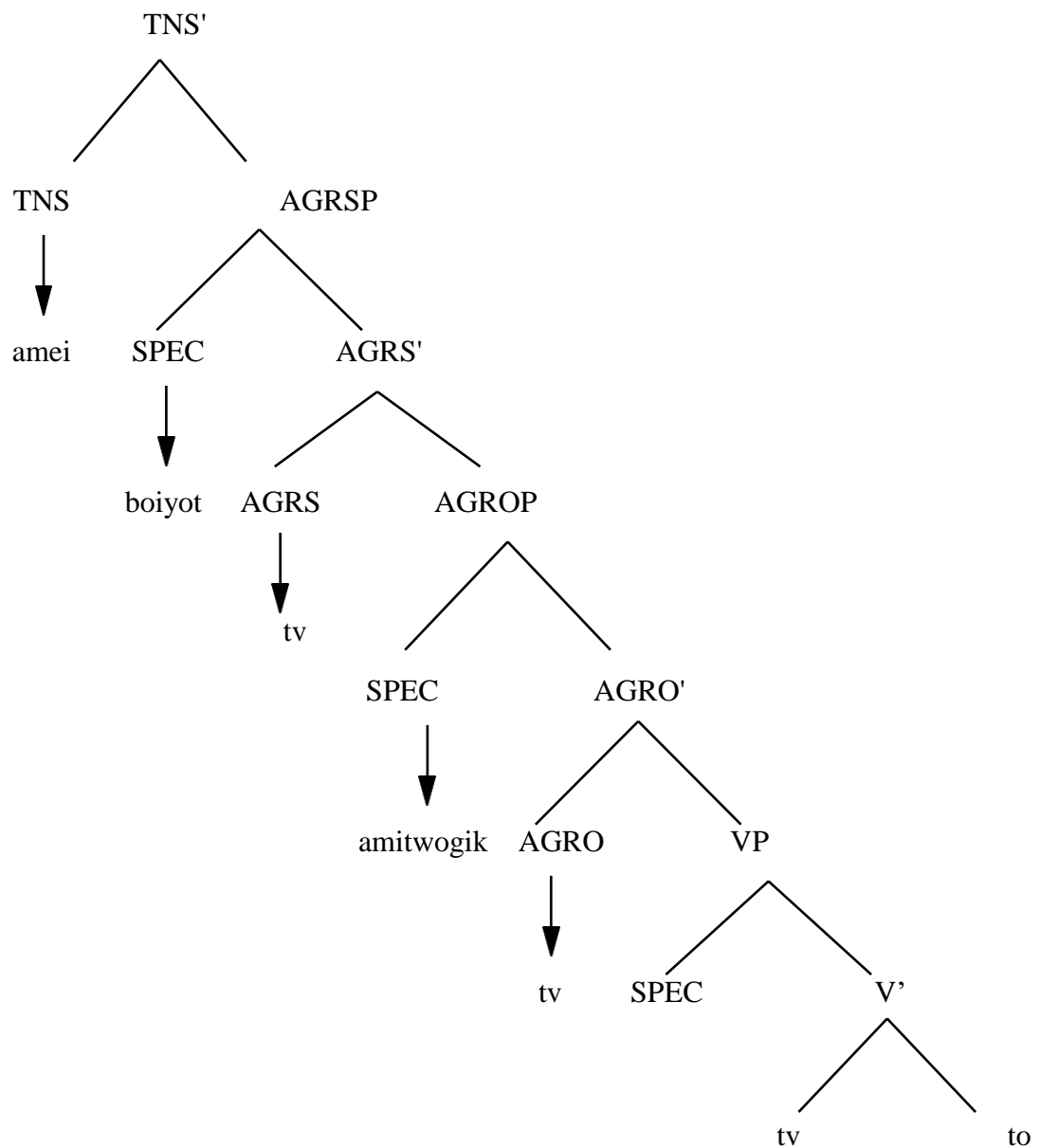


Figure 2.1: Movement Operation

The heads in the structure are ordered from the top to bottom as follows: TNS', AGRS', AGRO' and then V'. The tense features are the ones that begin the sentence followed by the agreement features. They also head the verb morphology, followed by the agreement subject features. All these are found within the verb and therefore reflecting on the verbal morphology, the sentence in the language is headed by the tense. In the 'Principle of Economy' syntactic movement should take place only when necessary for Case Checking. As per the structure, the features of the subject are checked before tense features. The verb moves from the VP to AGRO to check for AGRO' features, then check agreement subject features in AGRS' and lastly to TNS for tense features. The subject moves from SPEC/VP to SPEC/AGRSP to check for nominative case features. The object moves from the VP to SPEC/AGROP for accusative case checking.

2.1.1.2 Morphology in the Minimalist Programme

Within MP, Inflectional Morphology is assumed to be present in the lexicon, thus fully inflected words are derived in the lexicon showing that the morphological module is incorporated in the lexicon itself. This distinct morphological component attaches affixes and generates reduplicated forms of words. To ensure that the lexicon does not over-generate words, the Checking theory provides a filter, which contains all the paradigmatic relations of a genuine Morphological component.

In this model, every lexical entry is presumed to minimally consist of a semantic-feature set (LF), a phonological-feature set (PF), and a syntactic-feature set. Therefore, a PF representation must provide instructions to the Articulatory Phonetic (A-P) system specifying how a particular lexical item is pronounced, to be interpreted when PF representations are submitted to the A-P system. Similarly, the system must provide instructions regarding the semantic properties of lexical items. In addition to

phonological features and semantic features, a lexical item is assumed to have syntactic features like categorial features (Noun) and n-features (including person, number, and gender) identifying its syntactic status and providing instructions to the syntactic combinatorial system itself.

All words in a language belong to a restricted set of grammatical categories that share a common set of grammatical properties, Radford (1999). A specific type of inflection attaches only to a specific category of a word. For instance, the English words: cat, tree and house all belong to the category of nouns because they mark number by taking the plural marker '-s'. Similarly, in Keiyo lakwa 'child', chepyoso 'woman' and mbaar' land' are categorized as nouns because they all inflect for definiteness, among other grammatical functions, as illustrated in (10a-c):

- 10a)** Lakw-et (child) definite
- b)** chepyos-et (woman) definite
- c)** mbar-et (land) definite

In the same way, information from the derivational morphology of a language must be used to understand the processes by which words are derived from words of other categories. In most cases, the attachment of a particular affix to a particular base is sensitive to syntactic, semantic, morphological, and phonological information in the base. Aronoff (1976) exemplifies this with the attachment of the adjectival prefix un- in English, which derives adjectives from other adjectives. Because un- forms contrary negatives, it will attach only to adjectives that have contraries like fit and unfit. This demonstrates that particular derivational affixes can only be attached to words belonging to a specific grammatical category.

When this prefix is attached to a verb stem, the resultant meaning reverses the action designated by the stem. It does not contain any syntactically observable negative

element. To illustrate this, the verb 'tie' can take the prefix *un-* resulting in 'untie', which is not the same as 'not to tie'

This shows that derivational affixes, too, have categorical properties. As in the English example, the prefix *un-* signifies different meanings when added to different word categories. Similarly, in Keiyo the derivational morphemes *-in* is used when deriving a noun from a verb. For instance, we can derive the noun *choorin* 'thief' by adding this suffix *-in* to the verb *choor* 'steal'.

The Checking theory reviews words already generated in the lexicon and compare the affixes with the conditions the language imposes on the occurrence of these affixes. These conditions will appear as features in the projection above it. This theory also distinguishes lexemes from grammatical morphemes as well as distinguishing affixation from the conditions on affixation.

Within the Feature-Checking approach, the licensing of the inflectional features of affixes is achieved when a lexical stem raises and adjoins, overtly to various functional heads, thereby 'checking-off its features, until none remains. Chapter four of this thesis will provide an in-depth analysis of the form, and relevance of selected inflectional and derivational affixes in Keiyo.

As observed earlier, different categories have different morphological and syntactic properties. Therefore, both the morphological and syntactic properties of a word must be considered to determine its categorization. The morphological properties of a word provide a guide to its inflectional and derivational properties. We cannot rely solely on morphological evidence in determining the categorical status of a word. Rather, we should use morphological criteria in conjunction with information relating to the range of positions that words can occupy within phrases and sentences. Analyzing the

structure and interaction of morphological elements and their distribution within phrases and clauses provide a detailed way of describing the interplay between morphology and syntax in Keiyo.

2.2 Literature Review

Although this study focuses on aspects of Keiyo morphology and syntax, it is not intended to present a comprehensive description of Keiyo grammar. However, it seeks to describe the selected morphological process in Keiyo by establishing the forms and relevance of affixes. It further demonstrates how morphology interacts with phrasal and clausal categories to establish whether a relationship exists between morphology and word order. To adequately answer the research questions, it is important to assess what other scholars have done in the field of derivational and inflectional morphology and its relationship to syntax.

This section is organized as follows: the first part reviews the general studies on morphology-syntax, followed by a presentation of some previous studies on selected morphological processes and how they interact with syntax. A review of studies on the morphology and syntax of Nilotic language groups will be assessed; thereafter, the chapter concludes by looking at some research on Kalenjin morphology and syntax. The researcher chose to review work on other Kalenjin languages as opposed to those done on Keiyo, because of the scarcity of the latter. This review cites both published and unpublished works.

2.2.1 General Studies on Morphology-Syntax Interaction

The theoretical context for this study is a model developed out of Noam Chomsky's work in the 1970s, which provides a framework for describing knowledge of a language as an interacting set of sub-theories that consist of principles and parameters. This

construct simplifies knowledge of a language to variations in a small number of properties that distinguish one language from another. Chomsky (1986) answers complex matters relating to UG and language acquisition, where he asserts that language is understood as an innate property of the brain, a biological endowment for all human beings which underlies and determines the use and understanding of language. According to the book, the Principles and Parameters approach of UG offers an adequate model for language acquisition at its different stages and it is, therefore, suitable for this study.

Even though several scholars have dedicated their works to morphology and the interaction between syntax and morphology, there is still no agreement in the literature as to whether morphology should be differentiated from syntax, or subsumed under it. In her view, Trias (2010) considers that the two needs to be distinguished as they constitute two distinct sub-modules. She argues that if word-formation processes like compounding and affixation could entirely be accounted for by syntactic principles, a simplification of the grammar would result: there would be no need for a morphological component because syntax would explain both words and phrases. Further, she observes that only words (as opposed to phrases) can delimit the boundaries of vowel harmony. If words and phrases are dealt with by the same module, such diverging behaviour concerning vowel harmony is not expected. Another reason for separating morphology from syntax is that, unlike syntactic rules, morphological rules may need to refer to the phonological structure of the word before they can apply. Chomsky (1970), Bresnan & Mchombo (1995) have noticed that parts of words seem to be invisible to syntactic principles and have called such a property lexical integrity, which, if correct, signals a major difference between syntactic objects and morphological objects. Syntactic rules cannot access the internal structure of words, with the result

that a morphologically complex word and a morphologically simple word behave the same with respect to syntax.

However, Baker (1988) views morphological processes in terms of syntactic function. Baker analyzes noun incorporation in terms of syntactic movement into the verb where he continues with the incorporation of verbs and prepositions. According to him, all these incorporation processes are function-changing and are dealt with as the movement of lexical heads, mostly into the verb. Baker says that it is the morphology that determines whether the result of incorporation is grammatically acceptable in a given language or not. Baker advances the Mirror Principle which states that contrastive affix orders directly correlate with the order of syntactic operations. While there are differing viewpoints relating to the interface between morphology and syntax, this study comes in to hopefully fill the gap through the analysis and description of morphological processes Keiyo and how they interact with syntax.

Rice (2009) observes that many languages allow a sequence of affixes and that various factors are involved in their ordering. Thus, the factors that can be involved in determining the ordering of affixes could be phonological, syntactic, semantic, or morphological. Each language presents unique factors; therefore, a specific language needs a careful study to see which of these factors are involved and how they interact with one another. Rice's proposal leaves a gap on the determinants of affix order, which the current study aims to contribute to by looking at the nature of selected derivational and inflectional affixes in Keiyo.

The studies mentioned in this section provide the needed background information on the descriptive and explanatory power of the Principles and Parameters approach when

applied to empirical data of Keiyo. The reviewed material provides a reference for this study.

2.2.2 Studies on Nilotic Morphology and Syntax

Many studies on Nilotic languages exist. One such is provided by Dimmendaal who has extensively researched Nilo-Saharan languages. His contributions are mainly in the areas of phonology, morphology, syntax and sociolinguistics. Dimmendaal and Storch (2014) edited a book that centers on number marking in some African languages. In their book, they state that number is not only expressed on nouns, but also verbs and other word classes. They observe that various languages provide unique means of coding number. In their collection, they analyze various languages including Maasai which is a Nilotic language. This text serves to extend knowledge on language structure variations and also contributes to interpreting the grammar of any spoken language. The present study differs substantively because it provides useful information on derivational and inflectional processes in Keiyo; where in addition to describing nouns, it also looks at the other major word categories. Nonetheless, the text provided much-needed information on the various ways of marking number in Nilotic languages.

Dimmendaal (1983) investigates the status of the high front vowel /i/ in Nilotic languages where two morphological verb classes are attested. The study gives a morphological class distinction between the Southern and Northern Nilotic group of languages, where there is a division of verb stems with an initial high front vowel (class 2) and another class that lacks it (class 1). Within Kalenjin, the prefix functions as a causative marker. The work acted as a reference for this study especially on verb classes since there is scanty literature on Keiyo.

Suleh (2013) undertook a study where she examines the content of the verb phrase and the role of tone in providing clear meaning in ambiguous structures in Dholuo. She affirms that Dholuo is a tonal language that exhibits grammatical and lexical tone and that its speakers differentiate between the meanings of words depending on the context in which they are used. Both the current and Suleh's work have adopted the Minimalist Programme as the analytic tool. Although the languages described in these studies are Nilotic, the current one differs in that it focuses on the structure and interaction of morphological and syntactic elements in Keiyo and establishes the relationship between these operations. The tone is very important in interpreting meaning in Keiyo and this study describes its role and relevance in both syntactic and morphological processes.

Schroder (2002) concentrates on word order questions in Toposa language. The dissertation provides the general language features, among which it is observed that Toposa is a consistent head-first language. In her analysis, the noun phrase, relative constructions, adjectives, demonstratives, and numerals all follow the head noun in unmarked contexts and agree with it in number and gender. Toposa does not have any adjectival or adverbial phrases, but all adjectives, except a closed class of colour terms, are derived from verbs, so that adjectives as a separate independent word category do not exist. Adjectives are modifiers of the noun and agree with it in gender and number. Just like other Eastern and Southern Nilotic languages (see Creider 1989), Toposa has the VSO as its unmarked word order. Apart from providing a comparative study with Keiyo, this particular study serves as a reference, especially with the word order issues.

2.2.3 Kalenjin Morphology and Syntax

This section evaluates written works from studies conducted on the Kalenjin languages. Keiyo is among the languages in this family and although they are mutually intelligible,

speakers of one language often have difficulty understanding speakers of another, Roberts (2015). In his research, Simotwo (2011) aims to identify directional affixes and lexical items which indicate the direction in Nandi. He also discusses the co-occurrence phenomenon involving directional affixes and some derivational affixes, namely, the benefactive, the comitative, and the reflexive. The findings of this study identified three main affixes of direction in the Nandi language: the ventive, the itive, and the ambulative. This article provides reference especially concerning affixes, as the current study seeks to establish the distribution of affixes and what determines their order.

Jerono (2012) presents an elaborate description of Tugen language. In her work, she majorly focuses on Tugen word order where the underlying and the marked word orders are given. She also presents diverse sentence structures that are possible in the language. The work presents a thorough description of Tugen word order in various clause-types. It also identifies the argument- increasing and decreasing devices. The two studies differ in their area of specialization because Jerono (2012) mainly focuses on word order, while the current one examines some morphological processes and how they influence word order. Nonetheless, this study largely uses the work as reference material.

Randich, (2014) provides an analysis of the argument structure of the Kipsigis verb phrase. Her thesis focuses on the effect of affixation on the case and theta role assignment in the language and how the argument structure is affected. Although this study was used as a reference for the current one, it should be noted that its focus was mainly on the affixes which alter the argument structure namely: the reflexive, reciprocal, impersonal, applicative, stative and causative affixes. The present study focuses on some selected inflectional and derivational affixes.

Another study on Kalenjin morphology and syntax was done by Jeptoo (2014). Her work sought to analyze the DP in Naandi using the Minimalist Program. The study was guided by four objectives: to identify and describe the elements that make up the DP, to identify the linear ordering of elements within the DP, to investigate the DP-internal agreement and to apply MP's Agree, Move and Merge operations in the analysis of the DPs in Naandi. The study informs the present one on its approaches and methodology, particularly in MP's operations: Merge, Move and Agree in the analysis of the Naandi DP, and in the descriptive research design adopted. Jeptoo's findings are extremely relevant in so far as they provide an account of the Nominal elements and agreement features subsumed under the NP and DP structure of Kalenjin languages; however, it does not address any of the objectives of the current study.

The available materials on Keiyo include unpublished works by Chelimo (2010) and Sitienei (2018). Chelimo (2010) analyzes the phonological and prosodic processes that Keiyo nouns undergo when inflected for number. It argues that different nouns select different suffixes for pluralization and that the process is largely dictated by phonological factors. The phonological realizations in Keiyo are attained through an organized system, where plural morphemes are predictably attached to nominal roots. Various realizations are systematically patterned at the segmental and non-segmental levels. The interplay between the various affixes that were identified in the study and tone assignment provides a glimpse of the morphological processes that take place in Keiyo. The study is significant to the present one in so far as it provides background information on Keiyo nouns and on the nature of affixes that they attach to present diverse grammatical meanings.

Sitienei (2018) conducted a study on the morphosyntax of the Keiyo verb, where she identified and described the inflectional and derivational morphemes in the Keiyo Verb, the patterns of affix ordering and the morphosyntactic constraints that affect the patterning of these affixes. Despite the effort made in the studies, a glaring gap still needs to be filled because there are some morphological and syntactic processes and interactions in Keiyo that need to be described. This is so because all the major word categories in Keiyo attach inflectional and derivational morphemes that affect each other. Both functional and lexical items interact at various levels, exhibiting interesting outcomes that are presented in the study. This study describes aspects of Keiyo morphology and syntax, with focus on selected morphological processes and how they interact with phrasal and clausal syntax. It also establishes the features that identify Keiyo as a null subject language.

In a conclusion, some studies have been conducted on various aspects of morphology and syntax of the Kalenjin language group and are significant to the present study in so far as they provide some background information on the position of Keiyo within the Kalenjin language family. Although the languages are to some extent mutually intelligible, an in-depth study of Keiyo is needed as this area has been overlooked by previous research. Finally, to the best of our knowledge, no study has been done to analyze selected morphological processes and their interaction with phrasal and clausal categories in Keiyo, within the Principles and Parameters framework. The present investigation is an attempt to test the theoretical assumptions of this framework using data from Keiyo, thereby contributing to aspects of general linguistic theory.

2.2.4 Chapter Summary

The chapter introduced the Principles and Parameters Theory (P&P), which is the main framework that guided this investigation. According to the theory, knowledge of language is based upon a core set of principles embodied in all languages and the minds of all humans. The variations between languages amount to a limited choice between a certain number of variables known as parameters. The second part of the chapter concentrated on the reviewed literature relevant to the study. This scrutinized literature was organized into: general studies on morphology and syntax interaction, studies on Nilotic morphology and syntax and finally, studies on Kalenjin morphology and syntax.

CHAPTER THREE

RESEARCH DESIGN AND METHODOLOGY

3.0 Introduction

A research methodology is a systematic procedure that the researcher undertakes to carry out the study. It aims to give a work plan of research that enables a researcher to identify suitable methods concerning the research methodology for the chosen problem, Crotty (1998). This chapter covers the research approach, site of study, sample size and sampling techniques, data collection and analysis methods and ethical considerations.

3.1 Research Approach

Qualitative research is a very useful methodology when existing investigations about a phenomenon are limited. This is because the purpose of the research is to discover new ideas and insights. Mertens (2010) states that the nature of the research question itself can lead a researcher to choose qualitative methods. This study was in quest of establishing and describing the selected aspects of the morphology and syntax of Keiyo language. Keiyo has not received as much attention as the other languages in the Kalenjin family. For this reason, the qualitative approach adequately facilitates the exploration and description of the uniqueness of this language. Because this study concerned itself with characterizing native speakers' internalized linguistic knowledge, the approach enabled the researcher to gather the information for the study based on her own and other native speakers' intuition about the (un)acceptability of the structures provided.

3.2 Research Site

This study was carried out in Nyaru Location, Chepkorio Ward of Keiyo South Sub-county, Elgeyo Marakwet County. This site was chosen because it is a place where the

language is used by a majority of the population as its mother tongue. It was therefore possible to get the necessary data.

3.3 The Target Population and Sampling Procedure

The target population of this study consisted of all Keiyo speakers. Most of the corpus used in this study was generated through introspection following my intuitions. This approach ensured that only the required data is availed for the investigation. For authenticity purposes, this data was subjected to eight literate adult native speakers who have spent most of their entire lives in Keiyo South Sub-county. According to Milroy (1987), an in-depth investigation using some reliable speakers is advised. She also notes that language tends to be more homogenous than other types of behavior and requires less data since too much of it will exhibit repetitive characteristics and increase data handling problems. Further, Labov (1996) observes that a linguistic trait does not require a massive number of subjects for it to be noticed or traced. Using large sample sizes in language surveys tends to be impractical, redundant and on the whole, unnecessary. The eight respondents were therefore sufficient for this study since the researcher believed that this sample was representative enough and would therefore give accurate and appropriate data.

A purposive sampling technique was employed to pick these subjects who authenticated the generated data. In selecting them, the researcher first made a list of all the potential respondents and settled on eight. The literate adults were suitable for the study because they were in a position to read the generated data, verify the acceptable ones and/ or provided alternative structures.

3.4 Data Collection

In the collection of data, this study used different methods specifically introspection, a review of relevant literature and consultation of native speakers. These methods supplemented and complemented each other, consequently enhancing the quality and validity of the collected information. Cohen et al. (2000) suggest that no single research technique is self-sufficient in the collection of information. Therefore, the use of more than one specific method enables the researcher to strengthen the data, thereby ensuring reliability. According to Merriam (2002), it is useful to utilize more than one method of data collection since multiple methods add to the validity of the research findings.

The researcher relied on her grammatical competence and proficiency in Keiyo to identify and compile essential examples of lexical items and sentences relevant to the study. I was, therefore, eligible to generate eighty morphologically simple and complex words across the word classes, in addition to fifty sentences. Horrocks (1987) observes that almost all linguists today are prepared to accept that the data of linguistics should include the introspective judgments of native speakers following Chomsky's great achievement of extending the scope of the subject of linguistic research to include native speakers' judgments of structure, relatedness, ambiguity, acceptability and so on. Furthermore, Featherston (2007) and Sikuku (1998) defended the significance of a native speaker's competence in the self-generation of syntactic data. The approach was also time-saving because only the relevant data was generated.

The purposive sampling technique was used in collecting the data and was carried out in two stages. First, the researcher obtained twenty items for each of the open class categories (nouns, adjectives, verbs and adverbs) and listed the ones from the closed class. In addition, fifty sentences that vary in their structure were generated. The fifty

sentences were in different forms depending on their structure, which included: simple transitive, ditransitives, interrogative sentences and copulative constructions. Fifty distinct phrases were drawn out from these sentences, based on the different verbal and nominal affixes as these are the main parts that form a clause.

The researcher had to consult other native speakers of Keiyo to obtain their judgments on the acceptability of the lexical items and the sentences. This was done to establish the extent to which the structures compiled for the investigation sound 'good' or 'bad'. Besha (1989) states that language practitioners have noted that no speaker uses all the different forms and constructions available in his or her language, and for that reason, the dormant part needs to be activated by other native speakers. Also, Labov (1972) opines that it is inadequate and undesirable to rely entirely on introspection. This assertion stressed the importance of engaging other competent native speakers of Keiyo in forming decisions about the acceptability judgments of the generated structures compiled by the researcher. A questionnaire listing the generated data was availed to the respondents who were required to tick in the checkbox if the linguistic structure is acceptable in Keiyo or provide an alternative structure where the structure was regarded as unacceptable. This measure restrained any instances of bias or subjectivity.

3.5 Data Analysis

The acceptable lexical items, which are listed in the appendix section, were grouped based on the morphemes they attach to. Thereafter, the sentential constructions were categorized according to the various parameters which included; simple transitive constructions, copulative constructions, interrogative structures and ditransitive constructions. Under phrasal syntax, the various phrases were identified; analyzed and

described. This provided enough bases for the analysis and description of aspects of Keiyo morphology and syntax.

The categorized data was then analyzed and coded according to the objectives of the study. First, the complex words were investigated according to the type of affix they have, the root they attach to and the role they play. They were then described based on their form, distribution and relevance within the structure. Furthermore, expressions of the number, person, case, tense and other agreement features of the lexical items were analyzed based on their regularity and effect on the syntactic structure of the language, to establish their syntactic relevance. The researcher's intuitive knowledge was used in identifying the underlying phrasal and clausal constructions that have been collected, to describe the internal order of elements within the structure of phrases and clauses in Keiyo. Thirdly, the researcher interrogated the coded data to establish the features that account for Keiyo as a null subject language using the Principles and Parameters theory. Subsequently, the researcher formulated conclusions and findings regarding inflectional and derivational processes of the major word categories in Keiyo and how they interact with syntactic processes.

3.6 Ethical Considerations

The present study took account of the relevant ethical considerations conscientiously. As stated in subsection 3.4, the inquiry involved consultation with Keiyo native speakers on the acceptability judgments of the generated structures. However, before incorporating them in the verification activity, the researcher had to obtain their authorization which was well-informed and volitional. The researcher had to clearly outline to the consultants that the study was undertaken for academic purposes. This action enhanced our working relationship and trust.

3.7 Chapter Summary

The chapter has outlined the research design, site and sample population of the study. In addition, it has highlighted the sample size, sampling technique, data collection, data analysis procedures and the ethical considerations embraced in the research.

CHAPTER FOUR

INFLECTIONAL AND DERIVATIONAL PROCESSES IN KEIYO

4.0 Introduction

This chapter seeks to meet the first objective of the study which is to identify and describe the form and relevance of selected inflectional and derivational processes in Keiyo. The data is discussed based on this objective using aspects of the Principles and Parameters framework. Within this framework, functional categories determine grammatical processes as well as parametric variation. This analysis is carried out by assuming that the expression of morphological features takes place in different modules of grammar and by maintaining that the Checking Theory reviews words already generated in the lexicon and compares the affixes with the conditions the language imposes on the occurrence of these affixes. These conditions will appear as features in the projection above it. This theory also distinguishes lexemes from grammatical morphemes as well as distinguishing affixation from the conditions on affixation. During affixation, morphological processes involving the affixes closer to the verb are first applied as the verb moves upwards in succession to check for other morphological features contained by the morphemes. These processes are cyclic since the morphological process applies to a given word one at a time in a well-defined order from the inside out.

Subsections 4.1 discusses nominal inflections followed by adjectival inflections in 4.2 then verbal inflections in 4.3. The second part of the chapter analyzes the derivational processes in Keiyo.

4.1 Nominal Inflection

Inflection is a grammatical process which alters the form of words to produce the alternative grammatical shape of words expressing grammatical distinctions. The different inflectional formations are said to be expressing inflectional values or inflectional feature values, Haspelmath (2010). In Keiyo, for instance, the category of nouns has a feature 'definiteness' which is capable of taking values. A noun can either be definite or indefinite as demonstrated by the noun *lakwa* 'a child' can be altered by the addition of the suffix *-et*, to get an alternative word *lakwet* 'the child'. The definite form does not represent a lexical item fundamentally different from the indefinite form, it is simply an inflectional variant of the same word.

Inflection accords a morpheme which is needed to ensure that the word has a form that is appropriate for the grammatical context in which it is used. It is therefore motivated by syntax, without which the construction is ill-formed. Inflectional processes assign certain grammatical properties to produce a grammatical word that can fit in a given syntactic slot as illustrated in (11).

11a) *a-mach-e ngor-oik ne kararan
 1SG-want-FV dress- PL.DEF REL nice.SG
 'I want the nice dresses.'

The structure (see 11a) is ill-formed because the structure of the sentence demands that the adjective *kararan* inflects for number to agree with the head noun which is already in the plural. The ungrammaticality of the structure is corrected by inflecting the adjective appropriately as indicated in (11 b).

11 b). A-mach-e ngoro-ik che kororon
 1SG-want-FV dress-PL.DEF REL nice.PL
 'I want the nice dresses.'

Further, Haspelmath (2010) notes that different languages vary in the amount of inflectional complexity that their words exhibit. Some languages have no inflectional feature values while others have values for many features. In his work, Haspelmath notes that features belong to the same dimension if they share a semantic or functional property and are mutually exclusive. In Keiyo, a feature like tense has the values past and non-past. A verb can only have a single value for the tense feature at a time, making tense features mutually exclusive.

Keiyo nouns inflect prominently for number, definiteness and case; gender marking is limited to proper nouns that name people to distinguish feminine from the masculine. Keiyo marks case by way of tone, just as Mpaayei and Tucker (1955) observe about Nilotic languages that have post-verbal subject nouns in transitive and intransitive predications. The following subsections describe these nominal inflectional features.

4.1.1 Definiteness

A Keiyo noun may be positively specified for the definiteness or may be entirely unspecified for it. This feature is morphologically expressed in a noun or NP by way of suffixing the definitive morphemes on the nouns or noun phrases. Definiteness closely interacts with number in that the type of definite marker that is attached to a given noun is determined by whether the corresponding noun is singular or plural. Regular nouns inflect by attaching the definite morphemes *-t* for singular and *-k* for plural. Before attaching the definite marker, the base may undergo certain changes which include the addition of a vowel, a change in the vowel quality, or deletion of some sounds. A base that ends with a consonant will add one or two vowels depending on the nature of the word. Table 4.1 illustrates how Keiyo nouns that end with consonant sounds mark definiteness.

Table 4.1: Definiteness in Nouns that end with Consonants

INDEFINITE		DEFINITE		GLOSS
Singular	Plural	Singular	Plural	
Met	Metowoi	Metit	Metowoik	Head
Ngok	Ngokai	Ngokiet	Ngokaik	Hen
Mbar	Mbaren	Mbaret	Mbarenik	Land
Ser	Serun	serut	Serunek	Nose

Each of the nouns that ends with a consonant sound must add a vowel before attaching the definiteness morphemes. On the other hand, indefinite nouns that have a final vowel sound can inflect for definiteness by simply adding the morpheme or by first changing vowel quality as illustrated in table 4.2. Even loan words like kompyuta 'computer' are inflected for definiteness.

Table 4.2: Definiteness in Nouns that end with Vowels

INDEFINITE		DEFINITE		GLOSS
Singular	Plural	Singular	Plural	
Kaina	Kainai	Kainet	Kainaik	Name
Koo	Koorin	Koot	Kooriik	House
Ei	Eun	Eut	Eunek	Hand
Pandia	Pande	Pandiat	Pandek	Maize
Kompyuta	Kompyutain	Kompyutait	kompyutainik	Computer

Furthermore, there are several irregular Keiyo nouns that mark definiteness in irregular ways. This irregularity is seen in singular nouns which attach the suffixes *-do* or *-ta/-to*, unlike the regular ones that take the suffix *-t*. The plural form retains the morpheme *-k* as illustrated by the data in table 4.3.

Table 4.3 Definiteness in Irregular Nouns

INDEFINITE		DEFINITE		GLOSS
Singular	Plural	Singular	Plural	
Kel	Kelyen	Keldo	Kelyek	Leg
Piny	Pany	Pendo	Panyek	Meat
Ibin	Ibinua	Ibindo	Ibinwek	Age set
Koi	Koin	Koita	Koik	Stone

Definiteness in Keiyo is marked fairly consistently by suffixing the definitive morpheme *-t* for regular singular nouns and *-k* for plural regular nouns. Most nouns that end with consonants attach a vowel before affixing the definitive morphemes.

4.1.2 Number

This feature can take one of two values: singular and plural. The marking of number on nouns in Keiyo is complex. Dimmendaal (2000) states that Nilotic and other Nilo-Saharan languages have rich number marking systems and it has been difficult to establish what rules might govern these systems. Nouns in Keiyo are grouped under distinct classes based on how they form plurals in the indefinite form. Generally, in many languages, a distinction can be made between count and non-count nouns. In Keiyo, mass nouns are inherently either singular or plural from the fact that some nouns like *pei* 'water', *koroti* 'blood', *mursiik* 'sour milk', *suus* 'grass' among others, take plural agreement, whereas *koris* 'wind' takes singular agreement. In example (12a) the mass noun *mursiik* (sour milk) takes a plural relative marker, whereas *koristo* (wind) (12b) takes a singular one. The variation in the treatment of mass nouns is attributed to the etymological origin of each particular term rather than to any semantic conceptualization, Dimmendaal (2000).

- 12a)** A-mach-e mursi- ik che bun-u gaa.
 1SG-want-IPFV sour milk-DEF REL come-PRES home
 'I want the sour milk from the village.'

- b) Mi koris-to ne i- lul-i ket-iik.
 There's wind-DEF REL 3SG-bend-PRES tree-PL.DEF
 'There is the strong wind that bends trees.'

Nilo-Saharan languages have a tripartite number marking system, Dimmendaal (1983). The tripartite pattern comprises singulative, plurative and replacement marking. The next sub-sections describe and illustrate each of these patterns.

4.1.2.1 Plurative Number Marking

According to Dimmendaal (2000), plurative marking is seen when the plural form has a morphological marker and the singular form is the unmarked base or root. Most nouns in Keiyo follow the plurative system while marking number. Different suffixes attach to both the indefinite and definite nouns to convert them into their plural forms.

Suffix *-i*

The suffix *-i* is added to the indefinite singular nouns to form the indefinite plural. Most of the nouns in this class end in *-a*, or *-o*, which are often dropped and *-oi* or *-ai* added. This is illustrated in (13a-e).

- 13) a. Siya-SG.INDEF Siy-**et**-SG.DEF Siy-**oi**-PL.INDEF Siy-**ok**-PL.DEF
 'Nail'
 b. Anwa-SG.INDEF Anw-**et**-SG.DEF An-**oi**-PL.INDEF An-**ok**- PL.DEF
 'Rope'
 c. Chepyoso-SG.INDEF Chepyo-**set**-SG.DEF Chepyoso-**i**-PL.INDEF
 Chepyoso-**k**-PL.DEF 'Woman'

Suffix *-n*

These nouns add *-n* to the indefinite singular to form the indefinite plural. Most of them are disyllabic and can either end in a vowel or in a consonant sound in the singular. A noun that has a final vowel simply suffixes *-n* while the one that ends with a final consonant in its singular form can take *-an* *-en*, *-in*, *-on*, or *-un* in forming the indefinite plurals (see 14a-f).

14) SG.Indef	SG.Def	PL.INDF	PL.DEF	Gloss
a. Moso	Moset	Moso- n	mosonik	Monkey
b. Koo	koot	Koor- in	koorik	House
c. Sesia	sesiat	Ses- in	sesinik	A type of tree
d. Toposuo	toposuet	Tapas-on	tapasonik	A type of tree

Suffix –ua

This suffix can have various forms depending on the structure of the word. The monosyllabic nouns take up –*tinua* when forming their plurals. The other form is –*usua*, consider:

	SG.INDF	PL.INDF	Gloss
15 a)	Or	Or-tinua	Route
b)	Ng'ot	Ng'ot-ua	Spear
c)	Kut	Kutu-sua	Mouth
d)	Kat	Kati-sua	Neck

Suffix –sio/ -sia

The nouns in this category form their indefinite plural by adding –*sio/ -sia* to the singular indefinite form. Most of these nouns end in vowel sound (s). They include:

	Singular (Indefinite)	Plural (Indefinite)	Gloss
16a)	Oino	Oino- sio	River
b)	Kametit	Kameti- sia	Mothers
c)	Kwan	Kwani- sia	Fathers
d)	Beet	Beetu- sio	Day

4.1.2.2 Singulative Number Marking

Singulative marking is where the singular form has a morphological marker and the plural form is the unmarked base. In Keiyo, these nouns were first known as collective nouns but have come to obtain a singular form by suffixing various suffixes like –*o*, –*da*, –*ia* to the singular indefinite form. The indefinite plural form is usually the root form as exemplified in (17a-g) These suffixes are distributed based on a particular lexical item's idiosyncrasies.

Singular (Indefinite)	Plural (Indefinite)	Gloss
17a) Sok- o	Sok	Leaf
b) Pol- da	Pol	Cloud
c) Solop- cho	Solop	Cockroach
d) Keri- cho	Kerich	Medicine
e) Pun- yo	Pun	Enemy
f) Mur- ia	Mur	Rat
g) Kwen- do	Kwen	Firewood

4.1.2.3 Replacement Number Marking

Replacement marking occurs where both the singular and the plural forms have a morphological marker and the base is a bound morpheme. In Keiyo, such nouns form their plural forms irregularly and include those that have two or more phonetically distinct roots for different forms of the same word as illustrated in (18).

Singular (Indefinite)	Plural (Indefinite)	Gloss
18a) Tany	Tich	Cow
b) Chii	Biich	Person
c) Warwa	Ware	Lamb
d) Ara	No	Goat
e) Tarit	Torit	Bird

Still, others form their plural in other irregular ways like tonal modification, having an advanced or retracted tongue root among other features where the shape of the base is changed without adding segmentable material. Data in (19) lists examples of these nouns and their plurals.

Singular (Indefinite)	Plural (Indefinite)	Gloss
19a) Kog`el	Kog`el	Star
b) Ket (+ATR)	Ket (-ATR)	Tree
c) Moi (+ATR)	Moi (-ATR)	Calf

As stated above, Keiyo nouns mark number in very complex ways. This study has established that the forms of plurative, singulative and replacement marking in Keiyo are present and some plural suffixes were identified. The most productive plural suffixes in Keiyo are: *-i*, *-n*, *-ua* and *-sia/-sio*. These suffixes combine with other sounds depending on the selectional properties of the root. A root may take up other vowels (s)

before adding the plural; similarly, roots may delete their final vowels before adding the plural morpheme. Still, others suffix the morpheme without causing any changes to the stem.

4.1.3 Case

This feature, which is marked by way of tone, refers to a category of morpho-syntactic properties which distinguish the various relations that a noun phrase may bear to a governing head. Keiyo, just as other Southern Nilotic languages, is identified as a marked nominative. In his 2014 paper, Dimmendaal explains that in this case system, the subject inflects for case and leaves the corresponding object unmarked. The post verbal subject nouns are inflected for case by way of tone; therefore, the subject following the verb is in the nominative case. All nouns in Keiyo are specified for either the absolute or the nominative case. The absolute case is functionally unmarked and default which is used in the widest range of functions. It covers nouns when said in isolation or for those used as the object of a verb. The tone tells us which noun is the subject and which is the object resulting in situations where the sentential noun is flexible. A noun may precede or succeed its object as illustrated in (20a-d).

- 20) a. Chaam-ei Chemutai laakw-et
 like-IPFV Chemutai.NOM child-DEF.ABS
 'Chemutai likes the child.'
- b. Chaam-ei laakw-et Chemutai
 like-NPST child-DEF.ABS Chemutai.NOM
 'Chemutai likes the child.'
- c. Chaam-ei laakw-et Chemutai
 like-IPFV child-DEF.NOM Chemutai.ABS
 'The child likes Chemutai.'
- d. Chaam-ei Chemutai laakw-et
 like-NPST Chemutai.ABS child-DEF.NOM
 'The child likes Chemutai.'

In (20a-b), Chemutai is the subject in both structures even though it appears in different positions where it follows the verb in (20a) and is placed after the object in (20b). Similarly, the subjects in (20c-d) are the same though they occur in different positions. Although the structures in (20a, d) and (20b, c) are identical in structure, the said pairs of sentences vary in meaning since the noun phrases perform distinct roles. This disparity emanates from the diverse tonal inflections marked on the noun phrases.

4.1.4 Keiyo Pronominal System

In African languages, pronouns may occur as independent word forms or as weak pronouns, which are typically realized as clitics or affixes Zeller (2015). Keiyo has independent pronouns and affixes that are often analyzed as subject or object agreement markers. Pronouns in Keiyo only have person and number distinctions but do not have gender variance. The pronouns that exist in Keiyo are: personal, interrogative, demonstrative, reflexive, possessive and relative.

4.1.4.1 Personal Pronouns

According to Cysouw (1998), the independent pronouns in the Southern Nilotic languages all have a classic six form paradigm. These pronouns are used regularly, but they can be elided. The reason that is presented for this elision is the presence of a prefixal pronominal inflection.

As is with the other Southern Nilotic languages, Keiyo has lexical pronouns for all the three persons which refer to specific persons and change their form depending on the agreement features. The language uses the same set of pronouns for subject and object. As will be demonstrated in chapter five, the use of null subjects is noted in Keiyo where the subject pronoun is optionally null. The first- and second-person pronouns are rarely used since their meaning is communicated by the pronominal affixes within the verb.

Third person pronouns are used when the referent is not common to both the speaker and listener. The Keiyo data in (21) illustrates the observations made by Zeller (2015) where (21a) the independent pronoun *inendet* is used in the sentence, while in (21b) the structure is well-formed even without a lexical subject because of the presence of the first-person singular marker *a-* in *a-nyoni*. The ambiguity of using both the lexical pronoun and the subject marker in the same structure is demonstrated in (21 c), where the entire meaning of the pronoun is contained in the pronominal affix, therefore making the lexical pronoun redundant.

- 21 a)** Nyo-nei inendet beet.
 3SG.Come-IPFV he/she day
 'He/she will come during the day.'
- b)** A- nyo-ni beet
 1SG-come-IPFV day
 'I will come during the day.'
- c)** A-nyo- ni anee beet
 1SG-come-IPFV I day
 'I will come during the day.'

Keiyo has a rich system of personal pronouns which are distinguished in the features of number and person, but do not show any gender distinction. Table (4.4) summarizes the pronouns.

Table 4.4: Personal Pronouns in Keiyo

Person	Number	Pronoun	Paradigm of verb <i>al</i> 'to buy'
1 st	Singular	Anee 'I'	A-al-e 'I'll buy.'
2 nd	Singular	Inyee 'you'	I-al-e 'You'll buy.'
3 rd	Singular	Inee 'he/she'	Al-ei 'He/She will buy.'
1 st	Plural	Acheek 'we'	Ki-al-e 'We'll buy.'
2 nd	Plural	Okweek 'you'	O-al-e 'You'll buy.'
3 rd	Plural	Icheek 'they'	Al-ei 'They'll buy.'

4.1.4.1.1 Subject Markers

Cysouw (1998) notes that all Eastern and Southern Nilotic languages (except Bari) have pronominal prefixes which refer to the subject. The general structure with different prefixes for the first and second person markers are found in all Kalenjin languages, with the third person having a zero-prefix realization.

There is some morphological resemblance between the overt pronouns and agreement morphemes in Keiyo (see table 4.3). The subject affixes for the first and second person singular *a-* and *i-* are similar to the initial morphemes of the corresponding lexical pronouns, i.e. *anee* 'I' and *inyee* 'you'. Only the second person plural affixes resemble *o-/okweek*. Third person subject markers have a zero-phonological realization. The fact that these pronouns begin with the prefix *i-*, seems to suggest that the agreement marker was deleted to prevent duplication with the second person singular marker. The absence of third person agreement markers is compensated by tonal variation. The first and second person are pronounced with a high tone, while the third person is articulated with a low tone.

Jerono (2012) observes that the second person prefix *-í-* is also shared by the third person. This agreement morpheme already appears as the second person singular agreement affix and cannot be taken up by the third person again. This marker can be found only in specialized contexts for example before certain verbs beginning with /r/, /y/ or /g/ like *I-yan-in* 'He/She trusts you';

I-ruotyí-nin 'He/She dreams about you.' Example (22) illustrates the verb *igat* 'greet' being used in the first, second and third person.

- 22 a) A-gat-in.
 1SG-greet-2SG.OBJ
 'I greet you.'

b) I-gat.
 2SG-greet
 'Greet him/her.'

c) I- gat- in
 3SG-greet-2SG.OBJ
 'He/ She greets you.'

Keiyo verbs that begin with the rest of the sounds have a zero-agreement affix for the third person as seen in structures like *cham-in* 'He/She loves you', *kon-in* 'He/She will give you' among others as demonstrated by the data in the appendix 1. The subject agreement which appears after the tense morpheme is obligatory in the verbal structure, thus regardless of the presence or absence of the lexical noun, its agreement must appear in the verbal morphology as illustrated in (23).

23a) Bend-i biik Amerika
 3PL-go-IPFV people America
 'People are going to America.'

b) A-wend-i Amerika
 1SG-go-IPFV America
 'I am going to America.'

4.1.4.1.2 Object Markers

All Southern Nilotic languages have suffixed pronouns for pronominal objects reference. Table 4.5 lists Keiyo object suffixes using the paradigm of the verb *konu* 'to give'. These suffixes vary depending on the inflectional feature values of person and number of the object. As seen in table (4.5), object markers are suffixed to the verb, unlike subject markers which are prefixed on the verb.

Table 4.5: Object markers in Keiyo

Person	Singular	Plural
1 st	-o Kono 'give me'	-ech Konech 'give us'
2 nd	-n Konin 'give you'	-ok Konok 'give you'
3 rd	-chi Kochi 'give him/her'	-chi Kochi 'give him/her'

4.1.4.2 Interrogative Pronouns

They take the place of unnamed nouns in questions and can be used to introduce main clause questions as in the data in (24). They include *ng'o* 'who/whom' *nee* 'what' *au* 'when' *ngiro* 'which' *bo ng'o* 'whose', *ano* 'where'(SG) and *anjo* 'where'(PL). These pronouns come after the verbs in (24a-c), but appear in the sentence-initial position in (24d-f). In this latter group, the auxiliary (be) combines with the interrogative pronoun. The form and distribution of these pronouns depend on the meaning of the pronoun and its grammatical function in the sentence. The pronouns that refer to the subject and object of the clause are placed after the verb as seen in (24a). An attributive interrogative follows the subject and is placed after the relative pronoun *ne* (see 24b). It can also be placed sentence initially as in (24b). in this case however the meaning changes slightly as indicated (see 24c). Interrogative possessor is placed in the first position of the clause together with the possessive particle *bo* (see 24e). When these interrogatives are used as determiners, they precede the noun phrases they qualify as illustrated (24e-g). Most of these pronouns do not take any inflections, except *ano*-SG and *anjo*-PL 'where' which marks number.

- 24a) *Wend-i ano rani?*
 Go-IPFV who today
 'Who will go today?'
- b) *Kwe- al kari-t ne u nee?*
 PFV.2SG-buy car-DEF REL type what
 'What type of car did you buy?'
- c) *U nee kar-it ne kwe-al*
 type how car-DEF REL PFV.2SG-buy
 'How is the car that you bought?'
- d) *I-nyo-ni ou?*
 2SG-come-IPFV when
 'When are you coming?'
- e) *Bo ngo' ni?*
 whose this
 'Whose is this?'

- f) Ingiro koo-t?
 which house-DEF
 'Which is the house?'
- g) Ano ngorie-nyu?
 where dress-POSS
 'Where is my dress?'
- h) Anjo ngor-oik- chu?
 Where-PL dress-PL.DEF-POSS
 'Where are my dresses?'

4.1.4.3 Demonstratives

Demonstratives signify pointer words as termed by Leech and Svartvik (2013). In Keiyo, the demonstrative morphemes can attach to nouns or can stand alone as pronouns where they point out nouns. These pronouns not only inflect for number, but their usage also depends on how close or far the referent is. They include: *ni* 'this', *chuu* 'these' *noo* 'that' and *choo* 'those' as seen in the data (in 25 a-f), they are not sensitive to person feature, but inflect for number. Consider:

- 25a) Lakwa-ni
 Child-DEM
 'This child'
- b) Lago-chuu
 child.PL-DEM
 'These children'
- c) Lakwa-noo
 child.SG-DEM
 'That child'
- d) Lago-choo
 child.PL-DEM
 'Those children'
- e) Chekwook-choo
 Yours.PL-those
 'Those are yours.'
- f) Chi-tab ore-nyu ni
 relative-POSS clansman-my this
 'This is my relative.'

4.1.4.4 Relative Pronouns

These pronouns relate a subordinate clause to the rest of the sentence. Keiyo uses *ne* (singular) and *che* (plural) for this purpose as exemplified below. Relative pronouns inflect for number as demonstrated in (26a-b).

- 26) a. Nyor-u kobelis-iet labatin-det ne chobe-gei.
 get-PRES win-DEF athlete-DEF REL practice-REF
 'The athlete who practices wins the race.'
- b) Nyor-u kobelis-iet rwoiik che chobe-gei.
 get-PRES win- DEF athlete.PL.DEF REL practice-REF
 'The athletes who practice win the race.'

4.1.4.5 Reflexives and Intensives

This set of pronouns is marked by suffixation where the suffix *-gei* (-self/-selves) is added to the pronoun. The reflexives must have antecedents as exemplified in (27a) and unlike in English, the reflexive is optionally null in Keiyo. The intensive or emphasizing pronouns may be omitted from the sentence without affecting its grammaticality (27b). These pronouns are specified for the features of number and person. The pronominal suffix *-gei* has one form which attaches to the appropriate personal pronoun. A complete list of reflexive and emphasizing pronouns is given in table 4.6.

- 27a) Ko-i- uun- e-gei lago-k (ichegei).
 PERF-3SG-wash- FV-REF child-PL (themselves)
 'The children washed themselves.'
- b) Ko-i- bu bii-k ichegei tugu-k
 PERF-3SG-bring people-PL.DEF themselves thing-PL.DEF
 'People brought these things themselves.'

Table 4.6: Reflexive/Emphasizing Pronouns in Keiyo

Person	Singular	Plural
1 st	Ane-gei 'Myself'	Ache-gei 'Ourselves'
2 nd	Inye-gei 'Yourself'	Okwe-gei 'Yourselves'
3 rd	Ine-gei 'Himself/Herself/Itself'	Iche-gei 'Themselves'

4.1.4.6 Possessive Pronouns

A possessive pronoun ascribes ownership to someone or something. Like any other pronoun, a possessive pronoun in Keiyo substitutes a noun phrase and can prevent its repetition. For example:

- 28) a. Neng-'ung' mbar-et
 POSS-2SG land-DEF
 'The land is yours.'
 b) Cheguu-k mbar-enik.
 POSS-2PL land-PL.DEF
 'The lands are yours.'

In the example, the pronoun *ne-ng'ung'* 'yours' in (28a) stands for the noun phrase 'your land'. It, therefore, replaces the noun phrase. These pronouns have inflectional values for number and person in that the form of the pronoun changes depending on whether both the possessor and the possessee are in singular or in the plural; and also, whether the pronoun refers to the first person, second person or the third person. The complete list of Keiyo possessive pronouns is encapsulated in table 4.7. Further, the possessive pronoun always comes immediately before the thing possessed and varies according to its number as illustrated in (28b). The second person plural possessive pronoun *cheguk* contrasts with its singular form *neng'ung'*.

Table 4.7: Possessive Pronouns in Keiyo

Person	Singular	Gloss	Plural	Gloss
1st Singular	Ne-nyu	Mine	Che-chuu	Mine (pl)
1st Plural	Ne-nyoo	Ours	Che-choo	Ours
2nd Singular	Ne-ng'ung'	Yours	Ch-eguk	Yours (pl)
2nd Plural	Ne-ng'wong'	Yours	Che-kwook	Yours
3rd Singular	Ne-nyi	His/ Hers/Its	Ch-echi	His/ Hers/Its (pl)
3rd Plural	Ne-ng'wai	Theirs (sg)	Ch-ekwai	Theirs

Aside from possessive pronouns, possession in Keiyo is also marked by the use of possessive adjectives. These are discussed in detail in section 5.1.1.3.

4.2 Adjective Inflections

In Keiyo, adjectives modify the head noun in a noun phrase as exemplified in (29a). They are controlled by the head noun in that they must agree in number and person as will be demonstrated in the discussion that follows. In (29a) the adjective *korooron* 'nice' describes the plural noun *ng'echerook* 'chairs' while in (29b) the adjective *kaaraaran* 'nice' has a modified form because it describes a singular noun *ng'eecheeret* 'chair'

- 29a)** Chob-ei Kipchirchir ng'echerook che koorooron.
 Make-IPFV Kipchirchir chair-PL.DEF REL nice
 'Kipchirchir makes nice chairs.'
- b.** Chob-ei Kipchirchir ng'echereet ne kaaraaran.
 Make-IPFV Kipchirchir chair-SG.DEF REL nice
 'Kipchirchir makes a nice chair.'

In a marked order, both the adjective and the object occur at clause initial position, followed by the verb and subject thus:

- 29c)** Kororon ng'echerok che chob-ei Kipchirchir.
 Nice-SG chair-PL.DEF REL make-IPFV Kipchirchir
 'Kipchirchir makes nice chairs.'

The word *kororon* 'nice' modifies the noun *n'gecherok* 'chairs'. Besides this morphological role, adjectives in Keiyo have some morphological properties that make them stand out. These features will be discussed in the sections that follow. Jeptoo (2014) states that there are no true adjectives as in the English sense in Naandi language. All the words that are used in adjectival sense are active third person single-word sentences as illustrated by the examples (30a-b).

- 30a)** Pirir
 Red 3rd per (S/he/it is red)
- b) Nerat
 Fat 3rd per (He/she/it is fat)

Although the above assertion counts in other senses, it is significant to note that Keiyo adjectives also act as noun modifiers particularly when they are used attributively or predicatively. Attributive adjectives occur post-nominally (31a) whereas predicative adjectives occur pre-nominally (31b).

31a) Boiyot ne yos
 Man-DEF REL old
 'The old man'

b) Tui lakweng'ung'
 Black child-POSS
 'Your child is black.'

4.2.1 Number

Keiyo adjectives have number inflections and must agree with the head noun as shown in (32a-b) where a singular noun *ng'echeret* is used. Both the relative marker *ne* that and the adjective *kararan* 'nice' are controlled by the noun *ng'echeret* 'chair'. In this particular example, the vowel quality of the adjective changes from *kararan* 'nice-SG' to *kororon* 'nice-PL' in line with the plural head *ng'echerook* 'chairs'. Other adjectives form their plurals in many ways as explained.

32a) Chob-e-i Kipchirchir ng'echeret ne kararan.
 Make-IPFV-FV Kipchirchir chair-SG REL nice
 'Kipchirchir makes a nice chair.'

b) Chob-e-i Kipchirchir ng'echerok che kororon.
 Make-IPFV-FV Kipchirchir chair-PL REL nice
 'Kipchirchir makes nice chairs.'

Adjectives form their plural in several ways. First, some add the suffix *-en* to the singular form, for instance:

33a) pirir 'red' (sing.)
 Piriren red (pl.)

b) Nyigis 'heavy' (sing.)
 Nyigisen 'heavy' (pl.)

Secondly, monosyllabic adjectives that end in *-i* drop this final sound before adding the suffix *-en* to form their plural form. For example:

34a) koi 'tall' (sing.)
Koen 'tall' (pl).

b) Tui 'black' (sing.)
Tuen 'black' (pl).

Other adjectives change the vowel sound *-a* occurring within the word into *-o* in forming their plural form. The suffix *-en* plural morpheme may or may not be suffixed to these adjectives. Monosyllabic adjectives take up *-ch* before adding the plural morpheme *-en*.

35a) Kararan 'nice/good' (sing.)
Kororon 'nice/good' (pl.)
b) paraa 'wide' (sing.)
poroen 'wide' (pl.)

Furthermore, the adjectives that end in *-t* form their plural by adding the suffix *-in* and also changing the vowel sound *-a* occurring within the word into *-io*. For example:

36a) Nunat 'rotten' (sing.)
Nuniotin 'rotten' (pl.)
b) Ilat 'broken' (sing.)
Iliotin 'broken' (pl.)

Finally, there are adjectives that mark number irregularly. These adjectives may or may not take *-en* as illustrated in (37)

37) a. Sorin-SG Sorin-PL 'Ugly'
b. Oo-SG Eechen-PL 'Big'
c. Mining'-SG Mengechen-PL 'Small'

4.2.2 Person

Keiyo adjectives can take person/number inflections where the agreement markers are prefixed to the adjective. This is because all the adjectives can be used as active single

word sentences. The following table illustrates this aspect using a paradigm of the adjective *baibai* 'Happy'. Note that the third person has covert agreement markers.

Table 4.8: Adjective *Baibai* 'Happy' declension

Person	Number	
	Singular	Plural
1 st	A-baibai 'I am happy.'	Ki-boiboen 'We are happy.'
2 nd	I-baibai 'You are happy.'	O-boiboi 'You are happy.'
3 rd	Baibai 'He /she/it is happy.'	Boiboi 'They are happy.'

4.3 Verb Inflections

In Keiyo, a verb can inflect for different features such as agreement (i.e. for person and number) tense, aspect and mood. Each of these inflectional features and their values are discussed in the next sections.

4.3.1 Agreement

The nominal features such as person and number, which identify a subject NP, can appear on a verb in Keiyo. It is important to note that gender is only marked in a small fraction of nouns; therefore, it does not surface in verb inflections. A Keiyo verb distinguishes three types of person namely; first person, second person and third person. The first and second person is also distinguished in terms of number. The first person is marked by the morpheme *-a-* in the singular form and by the *prefix -ki-* in the plural paradigm. The second person is marked by the prefixes *-i-* and *-o-* in singular and plural forms respectively. The agreement of the subject appears after the tense morpheme as seen in table 4.9 where the first person SG morpheme *-a-* follows the verb. The same situation is replicated by the second person agreement markers.

Tone assignment in the verbal system is significant in marking the third person, which has a zero morpheme. The following table (4.9) shows the agreement markers both in the singular and plural forms, using the paradigm of the verb *al* 'buy' in the perfective aspect.

Table 4.9: Agreement markers in Keiyo

Person	Number	
	Singular	Plural
1 st	Ki- a -al. 'I bought.'	Ki- ki -al. 'We bought.'
2 nd	Ki- i -al 'You bought.'	Ki- o -al. 'You bought.'
3 rd	Ki-al 'He/ she bought.'	Ki-al. 'They bought.'

As is evident from table (4.9), Keiyo has an obligatory subject-verb agreement in that in a sentence, a verb must agree with its corresponding subject NP in number and person. This is indicated by bound affixes attached to a verb. From the table, the verb *al* 'buy' has all the bound affixes which are necessary for it to agree with the corresponding subject NP. Thus, the nominal bound affixes on a verb behave like grammatical agreement markers, despite that the said structures do not have overt syntactic subjects. This phenomenon is referred to as pro-drop or the null-subject parameter. Languages that exhibit such features are known as pro-drop languages or null-subject languages. Keiyo is, therefore, one of the pro-drop languages because as shown in table (4.9) the verb can be used as a complete sentence without the overt subject pronoun. This aspect will be discussed further in the next chapter.

Object agreement in Keiyo is suffixed to the verb stem. The lexical object can be omitted from construction because its reference is recoverable from the agreement morpheme as (38a) illustrates. Table 4.5 gives the complete list of the Keiyo object markers.

- 38a)** A-cham-in
1SG-love-2SGOBJ
'I love you.'
- b)** A-cham-e ineendet
1SG-love-IPFV him/her
'I love him/her.'

4.3.2 Tense and Aspect

The normal Keiyo verb is marked for tense and aspect (TA). The tense system comprises the typical past and non-past type found in many African languages that can only distinguish between past and non-past, while the aspect structure makes a distinction between perfective and imperfective aspects. The TA position in Keiyo is occupied by both tense and aspect, but the tense morphology normally occurs first, followed by aspect. Jerono (2014) states that tense in Southern Nilotic is distinguished between past and non-past. She stresses that the past is represented, depending on how far or near it is from the reference time. The morpheme *ki-* is used for the distant past while *ko-* represents the near past and *ka-* for the immediate past. The past prefix precedes the other prefixes. Consider the examples below.

- 39a)** Ki-a- go- chi chepkond-ok.
PST-1SG-give-APP money-PL.DEF
'I gave him/her/them money.' (Distant past)
- b)** Ko-a- go- chi chepkond-ok.
PST-1SG-give-APP money-PL.DEF
'I gave him/her/them money.' (Near past)
- c)** Ka-a- go- chi chepkond-ok.
PST-1SG-give-APP money-PL.DEF
'I gave him/her/them money.' (Immediate past)

The past tense directly coincides with the perfective aspect and refers to completed actions only. Although the past tense is denoted by the suffixes *ki-*, *ko-* and *ka-* as indicated previously, the perfective aspect remains morphologically unmarked.

The non-past coincides with the imperfective aspect and refers to actions in present or future context which signals an ongoing activity or state. It is expressed by way of

suffixes where the morpheme *-e* is suffixed to the verb for the first and second persons while the third person makes use of the morpheme *-ei*. Keiyo does not distinguish between present and future imperfectives since the same morpheme is used. This can be observed from the following example which has both present and future interpretations.

- 40a)** A-al- e ngor-iet.
 1SG-buy-IPFV cloth-SG.DEF
 'I will buy the cloth.'
- b)** A-al- e ngor-iet.
 1SG-buy-IPFV cloth-SG.DEF
 'I am buying the cloth.'

From the foregoing, it is clear that Keiyo presents an intriguing structure of TA. It was noted earlier that the tense system has distinct morphemes and is divided into the past and non-past. The past, on one hand, has three forms namely the immediate past *ka-*, the near past *ko-* and the distant past *ki-*. Each of these forms is morphologically marked through prefixation. The non-past, on the other hand, remains unmarked. The aspectual system comprises the perfective and the imperfective. The perfective is not marked while the imperfective is signified by the suffix *-e* for the first and second persons and *-ei* for the third person.

4.3.3 Negation

In Keiyo, negation is encoded by the morpheme *ma-* while the prefix *me-* is used for the second person singular. Both morphemes are prefixed on the verb. The perfective and imperfective negative conjugations of the verb *al* 'buy' are given as illustrative examples in table 4.10.

Table 4.10: Negation Morphemes in Keiyo

Person/Number	Perfective (negative)	Imperfective (negative)
1 st singular	Ma- ´al 'I did not buy.'	Ma- al-e 'I will not buy.'
1 st plural	Ma- ki-al 'We did not buy.'	Ma- ki-al-e 'We are not buying.'
2 nd singular	Me- al 'You did not buy.'	Me- al-e 'You are not buying.'
2 nd plural	Mo- al 'You did not buy.'	Mo- al-e 'You are not buying.'
3 rd singular	Ma- `al 'He/she did not buy.'	Mo- al-ei 'He /she will not buy.'
3 rd plural	Ma- `al 'They did not buy.'	Mo- al-ei 'They will not buy.'

It should be noted here that tone is critical in differentiating between the first and third person verbs in the perfective aspect. The verb *ma´al* 'I didn't buy' has a high tone while the third person ones having a low tone *ma`al*.

4.3.4 Mood

In Keiyo, imperative and optative moods are expressed morphologically as discussed in the sections that follow.

4.3.4.1 Imperative

The imperative is morphologically encoded by the morphemes *o-* which is prefixed to the verb and *-e/-ie* which is suffixed to mark the plural. The singular one takes the base form of the verb as exemplified.

41)	Singular	Plural	Gloss
	Ui	o-ba	go
	Riir	o-rir-ie	cry
	Rorii	o-ror-ii	laugh
	Ru	o-ru-ie	sleep

To mark the negative imperatives, the prefix *ame-* is attached to the verb for singular and *amo-* for plural. The negation morpheme precedes the imperative marker as demonstrated.

42)	Singular (negated) Ame-we Ame-riir Ame-rorii Ame-ru	Plural (negated) amo-be amo-riirie amo-rorii amo-ruie	Gloss Do not go. Do not cry. Do not laugh. Do not sleep
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4.3.4.2 Optative Mood

In Keiyo, the optative and the imperative moods are in complementary distribution with each other; therefore, the optative can only occur in the first and third person. It is marked by the prefix *ng-* followed by the agreement marker then the verb root. See the examples below.

43)	1st person Singular Nga-amis 'Let me eat.' Nga-sa 'Let me pray.' Nga-tien 'Let me sing,'	1st person plural nge-amisie 'Let us eat.' nge-saa 'Let us pray.' nge-tien 'Let us sing.'	3rd person (sg/pl) ngu-omis 'Let him/ her/ it/ them eat.' ngo-sa 'Let him/ her/ them pray.' ngo-tien 'Let him/ her/ them sing.'
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The negative of the optative is formed by using the derived word *amekany* which translates to 'let not' and attaching the appropriate agreement marker to the verb. Consider the following examples.

44)	Amekany aamis Amekany awo Amekany koamis Amekany kwo	'Let me not eat' 'Let me not go.' 'Let him/her/ them it not eat.' 'Let him/ her/ them it not go.'
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4.4 Section Summary

Discussion in this section identified and described the forms of inflectional morphology in Keiyo. Under nominal inflection, the study showed that Keiyo nouns have the inflectional features: number, definiteness, case and a bit of gender marking which identifies masculine and feminine names. Number marking follows a tripartite system;

where we have the singulative, plurative and replacement marking. Definiteness that interacts with number is marked by suffixation of the definitive morpheme; while the case is marked by way of tone. Keiyo identifies the absolute and the nominative cases where the absolute case is default and unmarked. It is used in the widest range of functions like in nouns said in isolation and N or NPs used as objects. The nominative case is marked and occurs in post-verbal subjects.

Keiyo pronouns were described according to their type and inflectional features. As explained, some pronouns inflect for number and person. Adjectives are sensitive to the number and person features of the head and therefore have inflections based on the appropriate values. The section ended with an exposition of the verb inflections whereby the inflectional features namely: tense, aspect, negation and mood were explained. The section that follows explores derivational morphology in Keiyo.

4.5 Derivational Morphology

Derivational morphology deals with the formation of new words from others. In Keiyo, nouns can be derived from verbs, adjectives and other nouns. Adjectives can be formed from verbs, while verbs can be formed from other verbs. Several morphological processes are involved in word-formation. The major strategies include compounding, base modifications, reduplication, borrowing and affixation. In the next section, each of these processes is discussed.

4.5.1 Compounding

According to Booij (2005) compounding consists of the combination of lexemes into larger words that tend to function as single words grammatically. Compounds have heads; the element that serves to determine both the part of speech and the semantic kind denoted by the compound as a whole. In Keiyo, the base that determines the part

of speech of compounds such as *oormarich* (crossroad) or *ketkel* (lower part of a tree) does not have a fixed position, unlike other languages like English where the base is always the second one. The noun *oor* (road) and the adjective *marich* (narrow) combine to form the new lexeme which is a noun. In *ketkel*, both elements are nouns, but it is the initial one *ket* 'tree' that determines the category of the derived word while the non-head one acts as a modifier of the head.

Lieber (2009) divides up compounds into the root (also known as primary) and synthetic (also known as deverbal) compounds. Synthetic compounds are composed of two lexemes, where the head lexeme is derived from a verb, and the non-head is interpreted as an argument of that verb. The English words 'dog walker' and 'hand washing', are examples of synthetic compounds. Keiyo has synthetic compounds like *sortum* (one who gets initiated before his time), *chep-kel-bai* 'one who roasts grains', *ki-peel-bany* 'one who feeds warriors', *murot tai* 'south'. The second and third compounds in the list are composed of three elements namely: a feminine name prefix *chep-* masculine prefix *kip-*, a verb and a noun. *Sortum* comprises the verb *sor* and noun *tum*, while *murot tai* is made up of the deverbal adjective *murot* and the noun *tai*.

Root compounds are made up of two or more lexemes, which may be nouns, adjectives, or verbs; the second lexeme is typically not derived from a verb. The interpretation of the semantic relationship between the head and the non-head in root compounds is quite free as long as it is not the relationship between a verb and its argument as seen in the words *lelmet* 'whitehead' and *tuikong* 'black eye'.

4.5.2 Base Modification

Apart from adding affixes or combining bases to form new words, some languages derive words by changing the quality of an internal vowel or consonant of a base, root,

or stem. Ablaut is a morphological process that affects the quality, quantity, or tonal patterns of vowels. This process is seen in Keiyo words where those with similar spelling are distinguished by aspects such as vowel length, tonal pattern and ATR, as demonstrated by the data in (46-51).

46a) Tor´et 'to assist'
b) Tor`et 'warthog'

47a) t´um 'to give birth'
b) T`um 'a ceremony'

48a) p´eet 'to lose'
b) p`eet 'daytime'

49a) p´ol 'to shout'
b) p`ol 'clouds'

50a) k´ut 'to blow'
b) k`ut 'mouth'

51a) k`et 'trees'
b) k´et 'to herd'

Further, reduplication is a morphological process in which all or part of the base is repeated. This process is seen mainly in adjectives as shown by the examples given in (52).

52a) Chepchep 'quick'
b) Nyumnyum 'easy'
c) Perper 'silly'
d) Chirchir 'to be in a hurry'

4.5.3 Borrowing

The other major strategy of forming new words in Keiyo is borrowing. Borrowing involves obtaining a word from another language with little or no transformation. Keiyo has borrowed extensively from English and Swahili in order to match the new objects and experiences the speakers have encountered. For effective loaning of words, the borrowing language and the source language come in contact with each other. Speakers of the borrowing language must learn at least some minimum of the source language

for the borrowing to take place. It is critical to note that most of the borrowed words are nouns; although there could be some verbs and adjectives. Delahunty and Garvey (2010) observe that a borrowed word never remains a perfect copy of its original because it is made to fit the phonological, morphological, and syntactic patterns of its new language. Similarly, Keiyo has rules that govern the formation of such words because they must fit into the system of the language by attaching the necessary affixes either as nouns, verbs or as adjectives. The following examples of loan words in Keiyo are in the singular indefinite form (see table 4.11). They attach appropriate inflectional affixes to convert to the definite and plural forms.

Table 4.11: Examples of loan words in Keiyo

Loaned Word	Original word	Donor Language	Gloss
Makatia	Mkate	Kiswahili	Bread
Siling'	Shilling	English	Shilling
Simo	Simu	Kiswahili	Phone
Kompyuta	Computer	English	Computer
Kari	Gari	Kiswahili	Car
Paibol	Bible	English	Bible

4.5.4 Affixation

Affixation consists of adding derivational affixes to roots and stems to form new words. For example, if the suffix *-ndo* is added to the word *tilil* 'clean' the word *tililindo* 'cleanliness' is created. Affixation is a very common and productive morphological process in Keiyo because words of different categories can be formed through affixation.

4.5.4.1 Nouns Derived from Nouns

Noun derivation is a productive process in Keiyo considering that they can be formed from other nouns, adjectives and verbs. In Keiyo, nouns can be derived from noun bases

by suffixation of the morpheme *-ndii* to the base form to derive abstract nouns. This process is very productive in the language. The definite form is further formed by adding *-t* to the abstract noun as illustrated in (53).

53) Base (N)	Gloss	Derived (Indef)	Derived (Def)	Gloss
a) Chorwa	Friend	Chorwandii	Chorwandiit	Friendliness
b) Lakwa	Child	Lakwandii	Lakwandiit	Childishness
c) Tilya	Relative	Tilyandii	Tilyandiit	Relationship
d) Suyo	Mean	Suyondii	Suyondiit	Meanness

Proper nouns are also derived from other nouns by prefixing *kip-* and *chep-* to the base noun. Naturally, the morpheme *kip-* forms masculine names, whereas *chep-* is used for feminine names although there are instances of unisex names (see examples in 54).

54) Base (N)	Gloss	Derived (masc)	Derived (fem)
a) peet	Daytime	Kibet	Chebet
b) Rop	Rain	Kiprop	Cherop
c) Too	Visitors	Kiptoo	Cheptoo
d) Kemoi	Nighttime	Kipkemoi	Chepkemoi
e) Kemei	Drought	Kipkemei	Chepkemei

Other than the proper nouns, other common nouns which describe the entity referred by the noun can also be formed in this way. A word like *chepkericho* ‘a doctor’ is derived from *kerich* ‘medicine’. The word can inflect for definiteness and number just like the other nouns see example (55).

55) Kerich	chepkericho	chepkerichot
Medicine.INDEF	doctor.INDEF	doctor.DEF

4.5.4.2 Deverbal Nominalization

In Keiyo, nouns that are derived from verbs undergo various processes including suffixation, pre-fixation and zero derivation or tonal modification. The process is very productive in the language as discussed in the sections that follow

4.5.4.3 Agentive/Experiencer Nouns

The agentive nouns in Keiyo are derived from action verbs. The derived nouns have a meaning such as doer or experiencer of the action specified by the verb. Indefinite singular nouns that denote agents are derived by suffixing *-in* to the verb. Orthographically, the indefinite plural form is similar to the verb from which it is derived except for a change in the tonal pattern since there is the lengthening of a vowel sound in between. The definite form of nouns under this category is formed by adding the suffixes *-det* in singular and *-ik*, as illustrated in (56). Other nouns that denote agents acting as an experiencer and having *i-* as its initial sound are formed by prefixing *ka-* to the verb and suffixing *-in* and *-det* in the singular and *-ik* in the plural to the verb to form indefinite singular, definite singular and definite plural respectively. The initial *i-* the sound of the verb is dropped as illustrated in (56b).

56) Verb	Gloss	Sing (indef)	Sing (def)	Plura (def)	Gloss
a) ee	drink	eiin	eindet	eik	one who drinks
b) neet	teach	konetin	konetindet	konetik	teacher
c) am	eat	amiin	omindet	omiik	one who eats
d) kwer	hit	kweriin	kwerindet	kweriik	one who hits
e) labat	run	labatin	labatindet	rwoiik	runner

4.5.4.4 Gerundive Nouns

Indefinite singular gerunds are derived from verbs by suffixing the nominalizers *-o*, *-yo*, *-so*, and *-isio* to the verb. The indefinite plural is formed by adding the affix *-sio* to the indefinite singular form. To get the definite form, the suffix *-yet*, *-et* or *-iet* is added for the singular word while and *-ek* is used in the plural. The final *-o* in singular and plural indefinite forms is changed to *-e* before adding *-t* and *-k* when forming the definite singular and plural forms respectively.

57) Base(v)	gloss	Noun (INDEF)	DEF	Gloss
Al	buy	alisio	alisiet	buying
Am	eat	amisio	amisiet	eating
Choor	steal	choorso	choorset	stealing
Meny	live	meng'isio	meng'isiet	living

Other nouns which are derived from action verbs by the addition of the suffix *-et* can only occur in the definite singular form. They include:

57) Base (v)	Gloss	Noun	Gloss
Labat	run	labat et	run
Geer	see	geer et	view
Teech	build	teke et	building
Cheeng'	search	cheeng' et	searching

Nouns that denote the result of the action of the verb are derived from verbal bases by suffixing the morpheme *-et* or *-ek*. Consider:

58) Base (v)	Gloss	Noun	Gloss
Nai	know	na et	knowledge
Chup	insult	chupis iet	insult (n)
Nerech	to get angry	nere gek	sadness

Besides the affixation strategy we have seen so far, nouns in Keiyo could be formed by way of tonal inflection. This means that orthographically, the noun and the verb from which it is derived are the same except for the change in the tonal pattern. The verb is pronounced with a falling tone whereas the noun is pronounced with a high tone. The word *koonyit* to respect and *koonyit* 'respect' illustrate this category.

Some proper nouns can be derived from verbs by prefixing either *kip-* 'masculine' or *chep-* 'feminine'. Others have both prefixation and suffixation on the same noun.

Consider:

59) Base (v)	Gloss	Noun (feminine)	Noun (masculine)
Rute	visit	Cheruto	Kipruto
Ru	sleep	Cheruiyot	Cheruiyot
Tanui	faint	Cheptanui	Kiptanui

4.5.4.5 Deadjectivalised Nouns

In Keiyo, nouns can be generated by adding the morpheme which derives abstract nouns. The adjectives attach affixes *-yo* and *-yet* to extract indefinite and definite nouns

respectively. In the definite form, the final *-o* sound changes to *-e* before the definite affix *-t* is added to the indefinite form of the derived noun. Also, there is a change in the vowel quality so that the sound *-a* in the adjective changes into *-o* in the derived noun as exemplified in (60).

60) Base (adj)	Gloss	Noun (Indef)	Def	Gloss
Ya	bad	yoityo	yoitiet	badness
Baibai	happy	boiboiyo	boiboyet	happiness

Other abstract nouns are derived by adding *-in* and *-do* particle affixes which act as the nominalizer to the adjective. The definite form is formed by adding the definite article affix *-do* to the indefinite form of the derived noun. The following examples reveal this pattern.

61) Base (adj)	Gloss	Noun (Indef)	Def	Gloss
Ui	hard	uin	uindo	hardness
Pirir	red	piririn	piririndo	redness
Anyiny	sweet	anyinyin	anyinyindo	sweetness

Besides the affixation strategy, nouns in Keiyo could be formed by compounding. Two or more nouns can be combined to form compound nouns, most of which are used as proper nouns. They include *sortum* ‘one who gets initiated before his time’, *chep-kel-bai* ‘one who roasts grains’, *ki-peel-bany* ‘one who feeds warriors’ and *murot taai* ‘south’.

4.2.4.2 Derivation of Adjectives

In Keiyo, other than the standard ones, adjectives can be derived from verbs by attaching the derivational affix morpheme either *-at* or *-ot*. Consider the following examples (62)

62) Verb	Gloss	Adjective	Gloss
Nun	rot	nunat	rotten
Il	break	ilot	broken
Ner	become fat	nerat	fat
Chul	straighten	chulat	straight

4.2.4.3 Verbal Derivations

Bauer (2002) opines that mostly, verbs are derived from other verbs and that denominal and deadjectival verbs are much less widespread than deverbal verbs. Nevertheless, Keiyo has several causative verbs derived from adjectives. Their derivation involves attaching the prefix *i-* to the adjective stem and suffixing *-it* at the word-final position. Those adjectives that end in *s* do not attach the suffix as illustrated in the table, but they lengthen their final vowel sounds. The derived verbs are causatives which express the meaning of 'to cause or to make somebody do something, or to cause something to become something different,' Mutaka (2000). Table 4.12 gives examples of these verbs.

Table 4.12: Examples of Verbs Derived from Adjectives

Adjective	Derived Verb	Gloss
Ng'om	I-ng'omiit	Cause to be clever
Nwach	I-nwagiit	Shorten
Koi	I-koiit	Lengthen
Kiim	I-kimiit	Strengthen
Lit	I-litiit	Straighten
Nyigis	I-nyigiis	Cause to be heavy
Samis	I-samiis	Cause to smell
Tustus	I-tustuus	Soften
Wisis	I-wisiis	Lighten

Apart from those derived from adjectives, verbs can be derived from other verbs by way of distinct morphological operations which may change the number of its arguments. Haspelmath (2010) remarks that morphological operations may change the valence of a verb resulting in either valence-decreasing or valence-increasing categories. Verbs in Keiyo, as in other Kalenjin languages, can take suffixes that extend their meaning and may modify the syntax of a sentence by altering the arguments that the verb can have. There are many affixes that can either decrease or increase the arguments of a verb. In Keiyo, the argument increasing processes are the applicative

and the causative, while argument reducing ones include the passive, the reciprocal, the reflexive and the stative.

In the Minimalist Program, the argument-increasing and decreasing devices are functional terms that are interpreted as case-bearing affixes which receive a head for feature-checking, because they are licensed morphologically and as a result build a specifier-head relationship for case-checking of the newly created argument. The valency-increasing and valency-reducing affixes in Keiyo will be discussed in detail in section 5.2.1.

4.6 Chapter Summary

This chapter identified and described the form and relevance of selected inflectional and derivational processes in Keiyo. It began with an exposition of the inflectional feature of nouns, pronouns, adjectives and verbs. Some affixes involved in inflectional processes like the marking of number, person, definiteness, gender, tense and aspect, mood, negation and agreement were identified and described. The last section discussed derivational morphology where the major word-formation processes in Keiyo were established. Compounding, base modification, borrowing and affixation were highlighted. Nominal, adjectival and verbal derivation were examined. Under verb derivation, the study identified how affixes interact with verb stems to increase or decrease the arguments that the verb can take.

The next chapter examines the structure of phrasal and clausal categories in Keiyo and shows how morphology interacts with syntax.

CHAPTER FIVE

PHRASAL AND CLAUSAL SYNTAX

5.0 Introduction

In the preceding chapter, the lexical categories of Keiyo along with their inflectional and derivational behavior were described. When lexical items are grouped based on grammatical structure, they convey larger meanings. To understand how these meanings come about, it is important to identify the structure of a phrase and a clause in terms of the elements they are composed of. Discussions in the present chapter, therefore, move from the study of individual words to the study of the sequences of words that form the structure of sentences. This is done in line with the second and third objectives of this study namely: to describe the morphology and syntax of phrasal and clausal categories in Keiyo, and to identify and account for the classification of Keiyo in a specific null-subject system. First, the study examines the Keiyo phrases in 5.1 where the elements within a noun phrase are identified and set out. The Keiyo verb phrase is also described. This is followed in 5.2 by the analysis of the basic clause in Keiyo. The sub-sections here include the non-verbal predicates in Keiyo and the properties of Keiyo as a null subject language. Complex clauses come up in section 5.3. Question formation and the construction of subordinate clauses in Keiyo are the operations that are further explored in the section. The chapter then ends with a summary in 5.4.

5.1 The Keiyo Phrase

This sub-section considers the internal structure of the noun and verb phrases in Keiyo. This is because these two phrases are critical to the structure and meaning of a sentence. The Keiyo phrase consists of the head of the phrase and its dependents. Tallerman (2011) observes that the head of any phrase is the most important word in the phrase

since it bears the semantic information and therefore determines the meaning of the entire phrase. Each of the word categories in Keiyo can project a phrase. Therefore, the word class of the head determines the category of the entire phrase and is the one that bears the central semantic information in the phrase. It is normally obligatory while other material in the phrase may be optional. Heads select dependent phrases of a particular word class which are sometimes obligatory (complements) and also often require their dependents to agree with some or all of the grammatical features of the head, such as gender, number, or person. For example, the noun *oinet* in (63c) is the complement of the preposition *eng'*; it is therefore obligatory. On the other hand, the adverb *mutyo* in (d) is not essential to the verb *bendi* as it only modifies the action denoted by the verb.

- 63a)** Ngor-iet-ab lakwet
 cloth-DEF-GEN child
 'The child's cloth'
- b)** Nwaach miising
 short very
 'Very short'
- c)** Eng' oin-et
 PREP river-DEF
 'In the river'
- d)** Bendi mutyo miising
 TNS.3PL.go slowly very
 'They are going very slowly.'

Languages present parametric variation depending on the position of the head in relation to its complements. There is a strong tendency for the head to occur in a fixed position with regard to its complements and for this order to be the same across all phrases within a language. In head-initial languages, the head precedes its complements, while in head-final languages the head follows its complements (Tallerman, 2011).

Another feature that creates parametric variation cross-linguistically is whether the headword or its dependent(s) is marked in some way to signal the syntactic relationship between them. Either the head or the dependent(s) (or sometimes both) will occur in some special form, either by taking an affix or exhibiting some other change in word form. Considering the data in (63a) the headword *ngor-iet-ab* bears the possessive marker *-ab* and the definiteness affix *-iet*, while *lakwe-t* has definiteness marking only. Because this is a genitive construction, possession is critical and expressed by the head. In (63d) the head of the VP *bendi* also bears the tense (non-past) and agreement features; in this case, it is 3rd person plural. Keiyo is typically a head-marking language since it has extensive agreement such that heads, like verbs and nouns, are marked to agree with the grammatical properties of their dependents in number, person and definiteness. The covert subject of (63d) must be in 3rd person plural because of the marking in the head verb; thus, any other subject leads to ungrammaticality as shown in (63e-f). The ungrammaticality in (63e) results from the lexical noun that did not match the agreement feature of the complex verb.

- (63e) *Bendi boiyot mutyo miising
 TNS.3PL.go man-SG.DEF slowly very
 f) Bendi bois-iek mutyo miising
 TNS.3PL.go man-PL.DEF slowly very
 'The men are going very slowly.'

The next section considers the noun and verb phrases in Keiyo.

5.1.1 The structure of the Keiyo Noun Phrase

A Keiyo noun phrase typically consists of the head, modifiers and determiners. The head can be a lexical noun, a pronoun or an agreement marker within a verb phrase in the cases of a null subject. Modifiers provide additional information about the head while determiners define it. Each of these elements is described in the next sections.

5.1.1.1 Determiners

Determiners refer to a set of constituents that determine the reference of a noun phrase in its linguistic or situational context, Bhatt (2015). In Keiyo, there are distinct categories that function as determiners, specifically: quantifiers, definite and indefinite markers, demonstratives, possessives and numerals. Because the language under study is highly agglutinative, most of these determiners are suffixed to the noun as can be seen from the data in (64) where the possessive markers attach to the nouns. The definite and indefinite morphemes which are also suffixed to the nouns can be seen in the noun *lakwet* 'child' used in (64). The demonstratives that are present are *ni* (this), *noo* (that), *chu* (these) *choo* (those) and *niin* (over there). Possessive determiners are likely to occur as suffixes that attach to the entity being owned also known as possessum. The data in (64) illustrates possessive determiners in Keiyo using the declension of the noun *lakwa* 'child'. From the data, the possessive marker varies depending on the number and person features of the possessor. Note that the 3rd person plural possessive determiner has two forms, marked by the suffix *-nywa* which are used for a singular head, and the *suffixes* *-wak* and *-wai* for a plural head. These forms can be used interchangeably.

64	1 st person (sg)	lakwe-nyu	'my child'	lagook-chu	'my children'
	1 st person (pl)	lakwe-nyo	'our child'	lagook-cho	'our children'
	2 nd person (sg)	lakwe-ng'ung'	'your child'	lagook-uk	'your children'
	2 nd person (pl)	lakwe-ng'wong'	'your child'	lagook-wok	'your children'
	3 rd person (sg)	lakwe-nyi	'his/ her child'	lagook-chi	'his/ her children'
	3 rd person (pl)	lakwe-ngwai	'their child'	lagook-wai	'their children'

The lexical words functioning as quantifiers in Keiyo are *tugul* 'all', *ng'ering'*, 'few' *tutikiin* 'little' and *chaang'* 'many'. Another type of determiners found in Keiyo are numerals, which present themselves as either the cardinals or ordinals. As seen in table 5.1, the ordinals are introduced by the relativizer *ne* and the particle *bo* or *ne* for singular and *che bo* or *che* for plural. These translate to 'that is/are'. It is possible to have the

cardinal as well as ordinal numeral occurring within a single NP in Keiyo. In such a case, the ordinals generally precede the cardinals and they must agree with the head noun in number. Consider;

- 65) Tibii-k che tai angw'an
 girls-DEF REL ORD CARD
 'The first four girls'

Table 5.1 illustrates cardinal and ordinal numerals in Keiyo.

Table 5.1: Examples of Cardinal and Ordinal Numerals in Keiyo

Cardinals	Gloss (Figures)	Ordinals	Gloss (Series)
Agenge	1	Nebo tai (netai)	First
Aeng'	2	Nebo aeng'	Second
Somok	3	Nebo somok	Third
Angw'an	4	Nebo angw'an	Fourth
Muut	5	Nebo mut	Fifth
Lo	6	Nebo lo	Sixth
Tisap	7	Nebo tisap	Seventh
Sisit	8	Nebo sisit	Eighth
Sokol	9	Nebo sokol	Ninth
Taman	10	Nebo taman	Tenth

5.1.1.2 Modifiers of the NP in Keiyo

The categories of words that function as modifiers within Keiyo NP include attributive adjectives and relative clausal modifiers. Both the standard (66b) and derived adjectives (66a) are expressions commonly used to modify a noun. The adjective modifier can appear alone with the head noun, in which case it will be positioned after the relative pronoun, or can co-occur with determiners as seen in (66c) where the adjective comes last in the NP. Consider;

- 66a) Tugu-k che ung'otin
 things-DEF REL hidden
 'Hidden things'

- b) Koo-t ne o
 house-DEF-COMP big
 'The big house'

- c) Tugu-k chu chu tugul che ung'otin
 things-DEF POSS DEM QUA REL hidden
 'All these things of mine which are hidden'

Keiyo speakers can make use of relative clauses to modify a head noun. These clauses can stand alone as in (67a) or can co-occur with other determiners and adjectives. These relative clauses follow the NP head and tend to fall at the end of the NP as seen in (67b).

- 67a)** Boiyo-t ne ka- ib-wech logoi-ywek
 man-DEF REL PST-bring-1PL.OBJ news-DEF
 'The man who brought us the news'

- b)** Boiyo-t agenge ne nwach ne ka- ib- wech logoi-ywek
 man-DEF NUM REL short REL TNS-bring-OBJ new-PL.DEF
 'One short man who brought us the news'

As illustrated earlier, any modifiers within a Keiyo noun phrase come after the phrasal head they modify. It is also possible to have determiners and modifiers within a single NP and when this happens, the unmarked order is NP + Determiners + modifiers.

Before making a summary of the internal structure of the elements that form the NP in Keiyo, it is crucial to state that various genitive constructions are employed as NP modifiers. The next bit examines the distinct ways of marking possession in Keiyo.

5.1.1.3 Possessive Constructions in Keiyo

Syntactic possession is a universal category expressed across many (if not all) languages. However, each language system encodes the notion of 'possession' in diverse ways which could be within a noun phrase or a clause. Both clausal and nominal ways of marking possession are present in Keiyo. Nominal possession involves the use of: the possessive marker *-ab* possessive pronouns and possessive determiners. These constructions are post-nominal in Keiyo. Clausal genitive constructions express possession using a clause where a relationship is established between the possessor and the possessum. The verbs *tinye* 'have' and *bo* 'belong' are used in clausal genitive

constructions. Possessive pronouns can combine with the copula *ne* (be.SING) and *che* (be.PL) to express genitive relations. Each of these ways is discussed below.

5.1.1.3.1 Nominal Possession

This kind of possessive marking is formed by attaching the genitive morpheme *-ab* to the possessed item as in (68a) where the noun *koot* 'house' attaches the suffix *-ab*. In this type of marking, the possessor must be a lexical noun that usually follows the possessum. It is also prudent to indicate that this marker does not change form even when both the items and the owners are in the plural as exemplified in (68b).

- 68a)** *Koot-ab Chepkemoi*
 House-GEN Chepkemoi
 'Chepkemoi's house'
b) *koo-rik- ab Chepkemoi*
 house-PL-GEN Chepkemoi
 'Chepkemoi's houses'

A combination of the verb *bo* 'belong' with the relativizer *ne* (SG) and *che* (PL) can be used to join the possessee noun to the possessor phrase as illustrated in(68c), which is a repeat of (68b). Used this way, the expression decodes the meaning 'belonging to/ of'.

- 68c)** *koor -ik che bo Chepkemoi*
 house-PL.DEF REL belong Chepkemoi
 'The houses of Chepkemoi'

Interestingly, Keiyo speakers have a propensity of clipping words that have this particular suffix as displayed in the table (5.2).

Table 5.2: Examples of Clipping Possessive Words

Possession marking	Clipped form	Gloss
Kotap Chemutai	Koop Chemutai	Chemutai's house
Teretap koko	Terep koko	Grandmother's pot
Kukoitap Kibet	Kukop Kibet	Kibet's grandfather
Ketitap Cypress	Ketip Cypress	Cypress tree
Weritap sianjo	Werip sianjo	Someone's son

5.1.1.3.2 Possessive Marking using Possessive Determiners

As pointed out in the previous chapter, Keiyo has possessive pronouns which correspond to all persons in both singular and plural. According to Sikuku & Wanyonyi (2018), this pronoun consists of two parts: the first being an initial form, usually a consonant which varies according to person and number of both the possessor and the possessum. When the possessum is singular, *-ny-* is used for all persons except the second person which takes *-ng'* just as all the other plural forms. On the other hand, when the possessum is plural, *-ch-* is selected for first person plural and all the singular forms, except the second person. All the other plural forms take *-k-*. The second part of the possessive pronoun is an agreeing final form that changes according to person and number regardless of the number feature of the possessum. These pronouns are attached to the noun possessee as demonstrated in (69) where the paradigm of the noun *koo* 'house' is used.

69) Person	Singular	Gloss	Plural	Gloss
1 st	<i>koo-nyu</i>	my house	<i>koo-nyo</i>	our house
2 nd	<i>koo-ng'ung'</i>	your house	<i>koo-ng'wong'</i>	your house
3 rd	<i>koo-nyi</i>	his/her/its house	<i>koo-ng'wai</i>	their house

The suffix *-ab* attaches to the owned object and is followed by the possessor. The examples in (69) illustrate how this suffix is used.

69) Koot-ab Chemutai
 house-POSS Chemutai
 'Chemutai's house'

5.1.1.3.3 Clausal Genitive Constructions

The verb *tinye* 'have' is transitive whose subject would be the possessor while the object would be the possessee as seen in (70a) where the subject is the second person singular (you) while the object is the what is owned *koot* (house). The subject can either be null

(70a) or overt as shown in (70b). also, this verb can occur with both definite (see 70a) and indefinite subjects (see 70b).

- 70a)** I-tinye koo -t
 2SG-have.IPFV house-SG.DEF
 'You have the house.'
- b)** Tiny-ei Kiprono koo.
 Have-IPFV Kiprono house
 'Kiprono has a house.'

The verb *bo* 'belong' can also be used with both overt and null subjects as indicated in (71). In (71a) the 1SG marker *a-* is prefixed to the verb, while the lexical subject *lakwet* 'child' is used in (71b).

- 71a)** A-bo Kiptoo
 1SG-belong Kiptoo
 'I belong to Kiptoo.'
- b)** Bo lakw-et ngor-iet
 belong child-DEF cloth-DEF
 'The cloth belongs to the child.'

Possessive pronouns are used in Keiyo genitive constructions. These pronouns are placed before the possessee in ordinary constructions as illustrated (71b-c). The complete list of Keiyo possessive pronouns is given in section 4.1.2.8.

- 71c)** Nenyoo koo -t
 1SG.GEN house-SING.DEF
 'The house is ours'
- d)** Chechoo koo -rii -k
 1PL.GEN house-PL-DEF
 'The houses are ours'

In this section, the study discussed ways in which Keiyo encodes the 'possessive' notion where it was established that both nominal and clausal possession are available. Nominal possession encompasses the use of the genitive marker: *-ab* and a combination

of the relativizer *ne* and verb *bo* 'belong' and by using appropriate possessive determiners. Clausal possession is marked using verbs *bo* 'belong' and *tinye* 'have'. Possessive pronouns can be used too.

5.1.2 The Keiyo Verb Phrase

The verb phrase in Keiyo is headed by the verb. The head verb has an internal structure made up of inflectional affixes that mark tense, negation, mood, aspect, person, and number (refer to data in section 4.1.3 for illustration). The verb can be followed by a complement and an adjunct. A complement is selected by the head, and hence has a close relationship with the head; while adjuncts only provide optional, extra information, and do not have a close relationship with the head. In the data that follows (see 72), the verb *ki-am-ei* is inflected for 3rd person singular subject, which normally has a zero affix; the past tense which is represented by the prefix *ki-* and the imperfective aspect, marked by suffix *-ei*. This verb is followed by the complement *kimny-et* 'food' which is obligatory since it is required to complete the meaning of the verb. The adjunct is introduced by the preposition *eng'* 'from' and it only serves to provide additional information about the location where the action was done.

72a) *Ki-am-ei lakw-et kimny-et eng' saang'*
 PST-eat-IPFV child-DEF food-DEF PREP outside
 'The child was eating food from outside.'

72b) *A-teb-e- gei ngot a- nyor-u rabiin-iik*
 1SG-ask-NPST-REF COMP 1SG- get-FV money-PL.DEF
 'I ask myself whether I will get the money.'

Keiyo verbs can be classified according to their argument structures. Different predicates can have a different number of arguments. Transitive verbs must be followed by an object which can either be a noun phrase (see 72a) or a clausal argument as

illustrated in (72b). The clause (bolded) acts as the object of the verb *teb* 'ask' in *a-teb-e-gei* 'I ask myself.'

World languages employ specific strategies to indicate the relationship between core NPs and the VP. English, for example, has fixed positions for each NP in the clause and therefore uses constituent order to indicate these relationships. The position of 'the child' (see 73a) informs that we are dealing with a subject NP, while that of 'food' identifies it as the object NP. By contrast, the position of core NPs in a Keiyo clause cannot be reliably used to determine relationships within the clause. This is because subject and object NPs can easily interchange their positions resulting in VSO/VOS constituent orders. This is illustrated using data in (73a) which is modified and repeated here as (73a).

73a) *Ki-am-ei lakw-et kimny-et*
 PST-eat-IPFV child-DEF food-DEF
 'The child was eating food.'

b) *Ki-am-ei kimny-et lakw-et*
 PST-eat-IPFV food-DEF child-DEF
 'The child was eating food.'

Other than altering the order of NPs in a Keiyo clause to alter the order of NPs as in (73b) it is possible to retain the same order of elements, but alter the tone to mark the relations between the arguments of the verb. Tonal modification marks certain grammatical roles including case assignment. In (74a-b) the order of constituents is similar, but the difference in meaning between the structures has been occasioned by the tonal variation. As explained in section 4.1.1.3, Keiyo is a marked nominative system.

74a) *Ko – i- tryaar sikiry-et pus-it*
 TNS-3SG-kick donkey-SG.DEF.NOM cat-DEF.ABS
 'The donkey kicked the cat.'

- b) Ko-i- tryaar sikiry-et pus-it
 TNS-3SG-kick donkey-SG.DEF.ABS cat-NOM
 'The cat kicked the donkey.'

The relationship between a head verb and its dependent NPs in Keiyo is morphologically indicated by agreement or cross-referencing. A head verb is formally marked to reflect various grammatical properties of its NP arguments; for example, a verb might be marked for second person singular when its subject is a singular NP, and second person plural when its subject is a plural NP. The Keiyo verb cross-references more than one of its arguments as it cross-references both the subject and the object. In (75) these markers are shown in bold type where the complex verb has the subject 1SG marker *a-* which is prefixed to the verb stem and the object marker *-wok*, which attaches as a suffix. In this example, both the subject and object are null and only referenced because the bound affixes alone serve to indicate both a subject and the object.

- 75) A-al- wok kweon-ik che kororon
 1SG-buy-3PL.OBJ shoe-PL.DEF REL good
 'I will buy you good shoes.'

5.2 The Keiyo Clause

All languages of the world have syntactic structures, in that, a language does not just consist of strings of words, but that the words group together to form phrases, and the phrases group to form larger phrases and clauses. The words are ordered in a special way that is particular to a given language. Ouhalla (1991) observes that the typological word order differences can be accounted for in terms of minimal parameteric differences involving the lexical properties of certain functional categories. In this regard, the order of AGR and TNS in a derived verbal complex differs from one language group to another so that languages tend to divide into two typological groups depending on whether AGR is inside or outside TNS. As illustrated in (76a) AGR in

Keiyo is inside TNS shown by then 3SG agreement marker. The word order in basic clauses in Keiyo is VSO where the verb occupies the clause-initial position followed by the subject argument while the object argument occurs next to the subject argument in the clause-final position. Consider the following sentences.

(76a) Am-ei lakw-et kimy-et.
eat-3SG.IPFV child-DEF food-DEF
'The child is eating the food.'

Other than this basic order, it is possible to front a phrase from its usual position so that it becomes more prominent. Such an operation in Keiyo involves the use of the licensing particle *ko* as exemplified in the data (see 76b), both the subject and object of the clause can be fronted. The original meaning of the structure in (76a) is retained in the structures in (76b-c).

(76b) Lakw-et ko am-ei kimy-et.
child-DEF PART eat-IMP food-DEF
'The child is eating food.'

76c) Kimy-et ko am-ei lakw-et.
food-DEF PART eat-IPFV child-DEF
'The child is eating food.'

Although Keiyo is a VSO language it still allows a VOS word order as a marked clause structure, as illustrated in (76d)

(76d) Am-ei kimy-et lakw-et
eat- 3SG.IPFV food-DEF child-DEF
'The child is eating food.'

Further, Keiyo distinguishes a set of clause types that are characteristically used to perform different kinds of speech acts as exhibited in the data in (77). Each type of clause serves a specific function: for example; declarative makes a statement, interrogative asks a question, exclamative makes an exclamatory statement, and imperative issues a directive.

- (77a). Declarative
 Nyon-ei lakwet
 3SG-come-IPFV child-DEF
 'The child is coming.'
- (b) Interrogative
 Nyon-ei ng'o?
 3SG-Come-IMPV who
 'Who is coming?'
- (c) Tos nyon-ei lakwet?
 AUX 3SG-come-IPFV child-DEF
 'Is the child coming?'
- (d) Exclamative
 Uu nee korook!
 EXC how wonderful
 'How wonderful it is!'
- (e) Imperative
 Ui sang'
 Go out
 'Go out.'

5.2.1 Complex Clauses in Keiyo

Generally, speakers manipulate sentences in all sorts of ways when they are trying to convey a different meaning. They do so by altering the basic word order of a sentence, use affixes that increase or reduce arguments of a verb, emphasize or downplay a particular phrase, ask a question or even group words together in different ways to modify the meaning. All these manipulations result in complex clauses.

Most natural languages have a way of changing the valency of a verb by promoting or demoting NPs resulting in unfixed grammatical relations between a verb and its arguments. Several affixes can either decrease or increase the arguments of a verb. In Keiyo, the argument increasing process is applicative while argument reducing ones include the impersonal constructions, the reciprocal, reflexive and the stative. Each of these processes is discussed next.

5.2.1.1 Valence-Increasing Operations

These morphological operations fall into two types with the first one having the verb supplied with a direct object; while a new agent/subject is introduced for the second type. The former type is applicative and the latter being known as causative.

a) The Applicative Suffixes

Applicatives apportion the status of a direct object to oblique roles of different kinds. Applied objects are frequently translated into English as prepositional arguments (with, for, on). The morphological applicative in Keiyo comprises the benefactive, the instrumental and the directional. Both processes restructure the verbal root and license an additional object for the sentence.

According to Bii et al (2014) benefactive describes a valence-increasing operation that brings a peripheral participant onto center stage by making it a direct object which generally becomes the beneficiary of the action denoted by the verb. The benefactive morphemes in Keiyo are *-ch* and *-w-* introduce an NP argument as illustrated by the following:

78a) Ki-al boiyo-t tapt-ok
 TNS-Buy man-SING.DEF flower-PL.DEF
 'The man bought flowers.'

b) Ki-al- ch- i boiyo-t chepyos-et tapt-ok.
 TNS-Buy-BEN-3SGOB man-SING.DEF woman-SING.DEF
 flower-PL.DEF
 'The man bought flowers for the woman.'

The transitive verb al 'buy' has the applicative *-ch* suffixed to the verb stem and is thus transformed into a ditransitive construction, now taking the beneficiary (woman) as an additional third argument. The intransitive root *riir* (cry) can be made transitive by the applicative affixes. See the examples below.

79a) Ka-riir lakwet
 TNS-cry child-DEF
 'The child cried.'

b) Ka-riir- ch- o lakw-eet.
 TNS.3SGcry-BEN-1SG.OB child-DEF
 'The child cried for me.'

The argument that correlates with the benefactive in the English gloss has gained the status of a direct object as is evidenced by the preposition 'for' as indicated in (80b) and (80b). In (80) the benefactive suffix *-w-* introduces another argument which is the beneficiary of the action of the verb *ibu* 'bring'.

80 a) Ib-u rotwet
 IPFV.bring knife-SING-DEF
 'Bring the knife.'

b) Ib-wo rotw-et
 IPFV.bring-BEN.ISG.OB knife-SG.DEF
 'Bring me the knife.'

In English clauses, instrumentals are indicated by the phrases beginning with words like *with*, *by*, or *using* followed by a noun that denotes the instrument itself. In Keiyo, the instrumental morpheme (*-e*) is suffixed to the verb and introduces a broad range of semantic roles. First, it indicates a location in or near which an action takes place. In (81 b) the affix *-e*, makes it possible to introduce another argument which was missing in (81 a).

81a) Ki-a-bet.
 TNS-1SG-lose
 'I got lost.'

b) Ki-a-bet-e siro.
 PFV-1SG-loss-LOC market
 'I got lost in the market.'

This affix can also be used to express a notion of 'by means of or instrument. Consider:

- 82)** Mas-e kirokto ne koi
 IPFV.hit-INST stick REL long
 'Hit it with a long stick.'

Directional applicative is an argument-increasing device marked in Keiyo by the affix *-y-*. It licenses the addition of an argument that denotes the direction of the implied object or 'thing' from the speaker. It is illustrated in (83a-c) where the verb *riikyi* (get close) takes up the suffix *-y-* which implies the direction to which the argument is moving towards. The ending of the verb changes depending on the agreement features of the new argument.

- 83a)** Ka-ko- riik toondet
 PFV-TNS- close visitor
 'The visitor has come close.'
- b)** Ka-ko- riik- y- o too-ndet
 PFV-TNS-close-DIR-1SG.OB visitor-SG.DEF
 'The visitor has come close to me.'
- c)** Riik- yi Jehova
 IMP-Close-DIR Jehova
 'Be close to Jehova.'

From the discussion, the applicative morpheme transitivizes an intransitive verb (see 83b), providing it with a direct object. A transitive verb can be extended by an applicative resulting in a ditransitive construction. The instrumental and the directional morphemes also extend the valence of verbs in Keiyo.

b) The Causative

The causative is an argument-introducing morpheme that typically introduces agent causer or instrument-causer, which instigates the event denoted by the verb. Causation in Keiyo is expressed lexically using the verb *yai* 'make/cause to' as shown in (84).

- 84) Ke- yai lakw-et ko- riir.
 TNS.2SG-make child-SG.DEF PART-cry
 'You have made the child cry.'

5.2.1.2 Valence Decreasing Operations

Mchombo (2004) defines valence decreasing operations as processes that reduce core participants to an oblique status or eliminate them, in this case, a derivation suffix either decreases or omits some arguments of a verb. Keiyo has morphological ways of reducing the valence of a verb which include: the reflexive, the stative and the passive as explained.

a) Reflexive

This morphological process reduces the valence of the sentence by specifying that there are not two separate entities involved. Two grammatical relations collapse into one syntactic constituent as there is a relationship between the antecedent subject and the reflexive object. In Keiyo, the reflexive morpheme –gei takes on the role of the object and is incorporated into the verb as illustrated.

- 85a) Ka-til chepyos-et eu- nyi
 PST-cut woman-DEF hand-POSS
 'The woman cut her hand.'

- b) Ka- til- gei chepyos-et.
 PFV-cut-REFL woman-SG.DEF
 'The woman cut herself.'

Sentence (85a) is divalent with two arguments chepyoset 'the woman' and the internal argument eunyi (her hand). The suffixation of the reflexive morpheme –gei conveys the idea that the hand that the agent cut is hers. The reflexive morpheme inflects on object/patient in the derived sentence (85b). The subject and the object have therefore been merged into one argument where chepyoset the woman is playing both the subject and object role.

This process is argument decreasing in that the number of participants has reduced. Logically, the action is performed by the woman and is also reciprocated by the same woman. Therefore, the suffix makes it possible to reduce the number of arguments. This suffix is very productive in Keiyo.

Besides being used in the reflexive process, the suffix-gei is also used in reciprocal operations. Reciprocal operations are the constructions in which two or more participants act upon each other. Consider the sentences below.

- 86a)** Pir-ei Kimutai Kipkorir.
 Beat-IPFV Kimutai Kipkorir
 'Kimutai beat Kipkorir.'
- b)** Pire-gei Kimutai ak Kipkorir
 Beat-REF Kimutai and Kipkorir
 'Kimutai and Kipkorir beat each other.'

In (86a) the verb *pirei* 'beat' has two arguments: the subject (Kimutai) and the object (Kipkorir). The derived verb *piregei* 'beat each other' makes it possible to have a combined (plural) subject (86b). Hence, this suffix is valence reducing.

b) Stative

In Keiyo, the stative morpheme *-ksei* signals a given condition or a state of being without a reference to the semantic roles of an agent or actor. It shows that whoever or whatever is concerned can receive an action irrespective of whether there is a subject or not. Consider:

- 87a)** Am-ei Kiprono kimyet
 eat-IPFV Kiprono food
 'Kiprono ate the food.'
- b)** Am-a- ksei kimyet
 eat- IPFV-STAT ugali
 'The ugali is eatable.'

The construction in (87a) has two arguments: the subject (Kiprono) which performs the action of eating and the object kimyet (food) which suffers the action of the verb. But in the derived sentence, the subject Kiprono has been eliminated. In its place, we have kimyet which does not occasion any action. It is just the subject of the stative sentence. The suffix –ksei is therefore valence reducing.

c) Passives

Keiyo has a morphological passive which is marked through the passive prefix ki- on the verb. Passive in Keiyo always produces a sentence with less than one argument, the subject is never mentioned. This type of passive is also called agentless passive' (Dixon 1994) and is therefore argument reducing because the subject is suppressed thus:

88a) Ki- on- a lago-ok
 PFV-chase-1SG.OB child-PL
 'The children chased me.'

b) Ki-ki- on- a.
 PST-PASS-chase-1SGOB
 'I was chased.'

The subject lagook 'children' in (88a) has been suppressed in the passive sentence (88b). Also, the impersonal marker (ki-) is prefixed to the verb as opposed to other forms of verbal extensions which use suffixes. The position of the suffix is specifically before the verb root but after the tense morpheme. Bii et al (2014) posit that in Kipsigis (one of the languages of the Kalenjin Group) impersonal constructions, the NP in the theme position moves to the position normally occupied by NP agent while the agent is demoted.

Besides the use of arguments that alter the noun arguments of a verb, complex clauses can be formed by coordination of simple clauses (see series a-b). The simple clauses are conjoined using the conjunctions ak 'and' (see 89c) aanan 'or' as in 90c).

- 93a).** Ki-nyo Jemutai.
PST-come Jemutai
'Jemutai came.'
- b.** Ko-piir Jemutai lakw-et.
PST-beat Jemutai child-DEF
'Jemutai beat up the child.'
- c.** K-inyo Jemutai ak ko-piir lakw-et.
PST-come Jemutai CONJ PST-beat child-DEF
'Jemutai came and beat up the child.'
- 94a).** Taar boisi-et.
NPST-complete task-DEF
'Complete the task.'
- b.** I-wek-wo chepkond-ok-chu
2SG-refund-1OB money-PL-POSS
'Refund me my money.'
- c.** Taar boisi-et anan i- week-wo chepkond-ok-chu
NPST-complete task-SG.DEF CONJ 2SG-refund-1OB money-PL-POSS
'Complete the task or refund me my money.'

In the data (89-90) the simple clauses in (a & b) are independent. They are linked using coordinating conjunctions (in bold) to produce the resultant compound sentences in (c). Each clause could stand alone as an independent clause and has equal syntactic status, meaning that no clause is dependent on the other.

5.2.2 Subordination in Keiyo Clauses

As mentioned above, simple clauses can be conjoined to yield a compound sentence where all the clauses have equal syntactic status. In this section, the discussion moves on to an examination of subordinate clauses which are illustrated in (91).

- 91a).** Mwa- wo [ole i- mak-tai]
tell-NPST-1OB COMP 2SG- want-NPST.APP
'Tell me what you want.'
- b.** Mach-ei [koba ngunoo]
want-IPFV go now
'They want to go now.'
- c.** Ka-a-nyoo mutyo [amu am-o kely-ek.]
PFV-1SG-come slowly COMP pain-1OB leg-PL
'I have come slowly because my legs pain.'

Each of the sentences above has two clauses: the main (matrix) clause and the subordinate one (bracketed). The clauses do not have equal syntactic status as the subordinate clauses depend on the main clause since they are semantically and grammatically incomplete. The subordinate clauses in (91a-b) are the obligatory argument of the verb in the main clause. They have therefore complemented clauses while the one in (91c) is an optional modifier because it is not essential to the verb. This adjunct clause can be omitted without loss of grammaticality. In Keiyo, subordinate clauses naturally follow the verbs that select them. The complement clauses are introduced by complementizers like *ngo* 'who', *-le* 'that', *ngot* 'if/whether' whilst the subordinate clauses are initiated by subordinating conjunctions like *amu* 'because', *ye* 'when' and *agoi* 'until'. The *complementizer -le* 'that' has number and person inflections which are listed in (92).

- 92) 1SG ale 'that'
 1PL kele 'that'
 2SG ile 'that'
 2PL ole 'that'
 3SG/PL kole 'that'

This section has introduced two subordinate clauses in Keiyo: complement and adjunct clauses. In the section that follows, we demonstrate that Keiyo has ways of moving phrases around within the clause without changing their grammatical relations. We begin with a discussion of how questions are formed in Keiyo, followed by an exposition of another type of subordinate clause known as relative clauses.

5.2.2.1 Question Formation in Keiyo

Questions in Keiyo fall into two kinds; one requires yes/no responses while the other type begins with a wh-expression in English. When forming yes/no questions in Keiyo,

the interrogative component *tos* is placed in front of a declarative clause, thus converting its structure. Consider the examples in (93).

93a) A- wend- i siro
 1SG-IPFVgo-FV market
 'I am going to the market.'

93b) Tos a- wend- i siro?
 INT 1SG-IPFVgo-FV market
 'Am I going to the market?'

Alternatively, the statement can be converted into a question by changing the intonation of the statement from a falling to a rising one thus:

93c) A- wend- i siro
 1SG-IPFVgo-FV market
 'Am I going to the market?'

Questions which require information (wh-questions) in Keiyo, are formed by the use of the appropriate interrogative word, which could be: *nee* 'what', *ng'oo* 'who', *ingiro* 'which', *bo* ng'oo 'whose', *ano* 'where' *amu nee* 'why' and *au* 'when'. The word that is chosen depends on the category and properties of the questioned phrase; in that some are used in asking questions about NPs which are animates, inanimates, locatives and temporals. These questioning words or phrases can be placed in two positions within the clause: at the post-verbal position or the clause-initial position. Those that occur after the verb can be placed before or after the subject.

Those that occur at the post-verbal position are positioned immediately after the verb or after the subject except for *ingiro* 'which' that is obligatorily placed after the subject (compare 94d and the ill-formed one in 94e). The flexibility of the questioning word follows from VSO/VOS word orders. Consider the examples.

94a) A-wend- i ano?
 1SG-goIPFV-FV where
 'Where am I going?'

- b)** Mach-ei nee lakw-et?
Want-IPFV what child-DEF
'What does the child want?'
- c)** Ke-geer inye ng'o?
PST-see you who
'Who did you see?'
- d)** Ke-chaam teta ingiro?
PST-like cow which
'Which cow did you like?'
- e)** *Ke-chaam ingiro teta?
PST-like which cow

A questioning component will be placed at the clause initial position and followed by either the subject or the suitable relativizer. Consider:

- 95a)** Nee ne i- mach- e?
what REL 2SG-want-IPFV
'What do you want?'
- b)** Ingiro ne ke- chaam?
Which REL PERF2SG-like
'Which one did you like'
- c)** Ano ole i-wend-i?
Where REL 2SG-go-IPFV
'Where are you going?'

Unlike in English, question formation in Keiyo does not entail movement. Rather, the phrase remains in the usual position occupied in the clause by the phrase that is being questioned as illustrated by the data in (96-97).

- (96a)** Ka-geer Kiptoo [lakwa no tiny-ei sume-ek che koen] eng' oin-eet amut.
PST-see Kiptoo[child-INDEF COMP have-IMP hair-DEF REL long-PL]PREP river-DEF yesterday
'Kiptoo saw that child with long hair in the river yesterday.'
- (b)** Ka-geer ng'o Kiptoo _ eng' oin-eet amut?
PST-see who Kiptoo _PREP river-DEF yesterday
'Who did Kiptoo see in the river yesterday?'
- (96a)** Ka-geer Kiptoo lakwa no tiny-ei sum-EEK che koen [eng' oin-eet amut].
PST-see Kiptoo child-INDEF COMP have-IPFV hair-DEF REL long-PL
[PREP river-DEF]
'Kiptoo saw that child with long hair in the river yesterday.'

- (b) Kageerchi ano Kiptoo lakwa no tiny-ei sumeek che koen _ amut?
 IPFV-see-APP where Kiptoo child-INDEF COMP have-IPFV hair-DEF
 REL long.PL _ yesterday
 'Where did Kiptoo see the child with long hair yesterday?'

In (96b), the questioning phrase is placed immediately after the verb of the sentence. The trace in (96b) shows the position that the questioned phrase formerly occupied; *lakwa no tinyei sumeek che koen and eng' oineet*. The constituent being questioned in (96b) is the object and can be seen that the questioning phrase has taken the position after the verb and before the object. The prepositional phrase is being questioned in (96b) and the interrogative word has also moved to a place after the verb. As a VSO language, Keiyo's interrogative phrase is not fronted like in Welsh, a VSO language, where the wh-expression precedes the finite element in a wh-question, during question formation, Tallerman (2011).

In structures that do not have a lexical subject, the interrogative phrase does not move at all. This is illustrated in (97) where the word *ng'o* 'who' remains in the position that was previously occupied by the object *chepto* (girl). This kind of construction where the wh-phrase does not move is technically referred to as wh-in-situ. In Keiyo therefore, the wh-words remain in situ since we have seen that these words can take the position after the verb (97-98) or sentence-final position. In languages with wh-movement to an initial position, the wh-expression precedes the material that normally occurs at the start of the clause. This does not transpire in Keiyo as the verb is still initial in both interrogative and declarative clauses.

- (97a) Ki-a- geer lakw-et.
 PST- 1SG-see child-DEF
 'I saw the child.'

- (b) Ki-a- geer ng'o?
 PST-1SG-see who
 'Who did I see?'

A look at question formation in embedded clauses shows that the complementizer precedes the *wh*-phrase in Keiyo as displayed in (98). The *wh*-phrase *ng'o*, which represents the subject of the embedded clause, follows the verb *kometo*. This case was seen earlier with the root clause where we stated that the *wh*-phrase remains in-situ.

- 98a)** A-kwong'-e ale ko-met-o ng'o ngoro-ik ko-robo-nchi?
 1SG-wonder-IPFV COMP PST-leave-FV who cloth-PL.DEF
 PST-rain-APP
 'I wonder who left the clothes out in the rain.'
- b)** Kwa- teb ale ngircho tugu-k che ko- ib lag-ook amut?
 PST.1SG-ask COMP which.PL thing-PL REL PST-bring
 children-PL.DEF yesterday
 'I enquired about the things that had been brought by the children yesterday.'

In (98b) the phrase *ngircho tugu-k* which represents the object of the embedded clause, also follows the complementizer *ale*. It can be concluded that Keiyo employs *wh*-in-situ strategies in forming ordinary *wh*-questions in both root and embedded clauses. Again, in multiple questions, all *wh*-phrases remain in-situ as illustrated in (99).

- 99a)** I-teb-e ng'o nee?
 2SG- ask-IPFV who what
 'Who do you ask what?'
- b)** Ki-al- e ano nee?
 PST-3SG.buy IMP where what
 'What is bought from where?'

This section has presented the strategies for constructing questions in Keiyo and found out that many interrogative phrases are used in asking questions depending on the properties of the noun phrase. Unlike a language like English, when constructing questions in Keiyo, there is no movement and the *wh*-phrase remains in-situ. Unlike it is topicalized, the *wh*-expression is placed after the verb even in multiple questions. In the embedded clause, the *wh*-expression follows the complementizer which introduces it. The next section examines how relative clauses are constructed in Keiyo.

5.2.2.2 Relative Clause Constructions

The relative clause in Keiyo contains a head noun and a restricting clause that modifies it. The relative clause together with the independent clause forms part of a complex sentence. The clause is introduced by the relativizer *ne* 'who' for a singular head noun and *che* 'who' for the plural one. There is a trace within the relative clause, which refers to the head noun of the matrix clause. In the data in (100a) the relative clause *che bunu gaa* 'who come from home' is introduced by the relative pronoun *che* and modifies the noun *lagook* 'children'.

- (100) **Yon-ei lag-ook che bun-u gaa**
 3SG.Chase-IPFV children-PL.DEF REL come-DIR home
 'She/He chases children who come from home.'

The relative clauses contain a gap that refers back to the head noun that is modified by the whole relative clause. The relativized position is co-referential with the head noun. This missing element can be subject, object, or even temporal and place adjunct as shown in the following set of data (see 101). The underscore () in each structure indicates the position of the missing constituent.

- (101a) **boiyo-t ne katil_ket-it**
 man- DEF REL PFV-cut tree-DEF
 'the man who cut the tree'
- (b) **wer-it ne chamei chi tugul_**
 boy-DEF REL love-IPFV body every
 'the boy that everybody loves'
- (c) **koo-t ne ki-bendi_**
 house-DEF REL IPFV-1PL-go
 'the house where we will go'
- (d) **betu-t ne ki-a-tuiye_**
 day-DEF REL PFV-1SG-meet-3SG/PL
 'the day I met him/her'

As illustrated, the relativized positions in (101a-d) are subject, object, temporal adjunct and place adjunct respectively. All the head nouns are shown in bold and we can see

that they all precede their relative clauses. As mentioned earlier, these clauses are introduced by the relative pronouns *ne* and *che*.

5.2.3 Properties of Keiyo as a Null Subject Language (NSL)

D'Alessandro (2014) identifies five typological categories of natural languages based on whether the subjects can be left unexpressed or not. These are: canonical NSL, radical NSL, partial NSL, expletive NSL and non-NSL. NSLs are very different from each other because of the kind of null subject they admit and the different structural configurations in which null subjects are allowed. Those that do not allow any form of null subjects are referred to as non-null subject languages (non-NSL). Any natural language belongs to one of these types. This subsection describes the properties that identify Keiyo as an NSL and intermittently refer to English which is a non-NSL.^[LSEP]

The null subject parameter (NSP), also known as the pro-drop parameter describes the ability of natural languages to drop the pronominal subject on the sentence level. NS parameter (NSP) is based on the idea that a pronominal subject is marked in the verb by the person-number agreement inflection on a finite verb, and as such does not require expression by an independent pronoun, Chomsky (1982). Keiyo is a null subject language since any clause can be uttered with the subject unexpressed. Consider the following structure (102a) where the subject *ane* 'I' has been omitted. However, its content is recoverable from the inflection in the verb through the agreement marker *-a-* which represents the first-person singular subject. The corresponding sentence in English is ill-formed if the subject is missing,

- 102a)** A-wend-i \emptyset gaa
 1SG-go-IMPFV \emptyset home
 *Going home.
 'I am going home.'

This parameter is independent of the type of clause since declarative sentences (see 102a), interrogatives (102b), negatives (102c) and embedded sentences (102d) can feature a null subject.

102b) I-wend-i \emptyset ano?

PRES.2SG-go-FV \emptyset where
'Where are you going?'

c) Me- wend-i gaa

NEG-PRES.2SG-go-FV home
'You are no longer going home.'

d) A- bwot-i \emptyset ale i- wend-i gaa

1SG-think-IMPV \emptyset COMP PRES.2SG-go-FV home
'I think that you are going home.'

Having the independent pronouns in the structures given in (102-103) does not cause any ungrammaticality, but could signal other senses like focus or emphasis. See the example in (103) where the pronoun *ane* 'I' is used for emphasis and contrast.

103a) A- wend-i ane, ma inye

PRES.1SG-go-FV I NEG you
'I will go, not you.'

A lexical NP can be dropped if the context of the utterance is common to the interlocutors. Consider the data in (104) which is a conversation between A and B:

104a) Wend - i lakw-et gaa

PRES.3SG.go-FV child-DEF home
'The child is going home.'

b) Wend - i \emptyset ine-gei?

PRES.3SG.go-FV \emptyset 3SG-REF
'Is she going alone?'

In Chomsky (1981) all parameters in the Principles and Parameters model (P&P) are associated with a finite set of properties. Similarly, the null subject parameter is linked to a cluster of four syntactic properties namely: (i) presence of null subjects, (ii) subject-

verb inversion, (iii) expletives (or pleonastic), and (iv) that-trace effect (or that-trace sequence). Each of these properties is discussed in the sub-section that follows.

5.2.3.1 Missing Subjects

Permitting phonologically covert subjects in the subject position of tensed clauses is necessary for a language to be considered a null-subject language. In Chomsky (1982) inflection controls the distribution of null subjects in many languages. For a sentence with an empty category in the subject position to be grammatical, the empty category must be identified and co-indexed with INFL; it can then be properly considered a *pro*. Such a language is said to be richly inflected, while those whose inflection components cannot govern an empty category are referred to as having poor inflection.

In Keiyo, rich agreement fulfills the task of governing an empty category in the subject or object position. Agreement (AGR) provides person and number features that fully identify the missing subject. It is important to note here that gender is not a distinctive feature and is therefore not contained in the agreement feature bundle. The examples in (103-104) and repeated here as (105) show that Keiyo permits null subjects in different types of clauses.

- 105a)** A- wend-i \emptyset gaa
 PRES.1SG-go- FV \emptyset home
 'I am going home.'
- b)** I- wend-i \emptyset ano?
 PRES.2SG-go- FV \emptyset where
 'Where are you going?'
- c)** Me- wend-i gaa
 NEG-IMPF.2SG-go- FV home
 'You are no longer going home.'
- d)** A- bwot- i ale i- wend-i gaa
 PRES.1SG-think-FV COMP PRES.2SG-go- FV home
 'I think that you are going home.'

Although all these sentences lack an overt subject in the subject position, each one of them is grammatical.

5.2.3.2 Free Inversion

According to Rizzi (1982), the availability of a post-verbal subject position in languages with an unmarked SVO word order in non-focus constructions is a defining property of the NSP. Camacho (2014) states that free inversion in languages allows the subject to appear on either side of the verb in any sentence. Consider the example in (106) where English, a non-NSL, is ungrammatical if the verb is placed before the subject. In other words, the verb cannot freely appear before the subject.

- 106a)** Kipkemoi called.
b) *Called Kipkemoi.

However, Safir (1985) argued that there are languages that allow free inversion but not missing subjects, as well as languages with missing subjects that disallow free inversion. This observation applies to the situation in Keiyo where free inversion is more complicated because the standard word order is VS and having a free subject-verb inversion would lead to ill-formed structures as demonstrated in (106b). The subject, Kipkemoi, cannot be freely placed before the verb and still have a grammatical sentence. This can only happen when the licensing particle *ko-* is used to introduce the verb as in (107c) and it is a form of topicalization.

- 107a)** *Kuur-* in Kipkemoi
 call-IPFV-2OM Kipkemoi
 'Kipkemoi is calling you.'
b) *Kipkemoi *kuu-rin*
c) Kipkemoi *ko kuur-* in
 Kipkemoi PART call-IPFV-2OM
 'Kipkemoi is calling you.'

Even when the subject is a pronoun, free inversion is only permissible in Keiyo when the licensing particle *ko* is used. Check out data in (108)

- 108a)** Kuur- in ine
 CallIMP-2OM 3SG
 'S/He is calling you.'
- b)** Ine ko kuur-in
 3SG PART call.IPFV-2OM
 'S/He is calling you.'

Since the only necessary criterion for free inversion in languages is to allow the subject to appear on either side of the verb without introducing other derivations, this study observes Keiyo does not freely permit subject inversion.

5.2.3.3 Violation of that-trace Effect

According to Perlmutter (1971), English wh-movement obeys a constraint that relates to an asymmetry between subject extraction and non-subject extraction that interacts with the complementizer system. While wh-extraction of a non-subject from a finite embedded clause is compatible with the presence or absence of the word that introducing the clause, extraction of the subject is possible only when that is omitted, otherwise, the structure is ungrammatical. The effect of extracting an embedded subject across an overt complementizer is referred to as that That-trace trace. English, as well as other non-NSLs, obey this effect meaning that the complementizer must be deleted. On the other hand, NSLs do not show that-trace asymmetries since their structures are grammatical with the overt complementizer, as seen in (109)

- 109a)** I- bwot- i ile ko- iro ng'o Kiptarus?
 2SG-think-IPFV COMP PST-see who Kiptarus
 *Who do you think that saw Kiptarus?
 'Who do you think saw Kiptarus?'
- b)** I- bwot- i ile ko-iro ng'o?
 2SG-think-IPFV COMP PST-see who
 'Who do you think that he saw?'

In (110a-b) the *wh*-word *ng'o* 'who' relates to the embedded verb *iro* 'see'. The Keiyo structures are grammatical in both (110a-b) but the gloss of (110a) is ill-formed whenever the complementizer (that) is overt. This ungrammaticality is removed when that is deleted. However, the sentence in (1140b) is well-formed with the overt complementizer. This observation means that questions about objects are possible (as in 110b) but questions about subjects are not, as seen in (110a). English, a non-NSL, obeys the constraint while Keiyo violates the that-trace effect.

5.2.3.4 Expletive Subjects

Also referred to as pleonastic, or dummy subjects are identified by their lack of semantic content. According to D'Alessandro (2014), canonical NSLs do not feature expletive subjects because, if they can leave a referential subject position empty, then they do not require a dummy in the subject position. Keiyo exhibits rich agreement that facilitates the recovery of the content of the empty subject. English features expletive subjects as illustrated (see 111a-c) and the Keiyo translations in (111d-f) do not have expletive subjects showing that they do not exist in the language. Their absence could be due to the rich agreement witnessed in Keiyo.

- 111a)** It rained.
b) It is known that you are brave.
c) There is a song.
d) Ko-robon
 PST-rain
 'It rained.'
e) Ki-ngen kele i nyigan
 PERF-know COMP 2SG brave
 'It is known that you are brave.'
f) Mi tien
 BE song-IND
 'There is a song.'

Although Keiyo has both derived and simple forms in that first and second person paradigms are derived, while the third person is bare, it still permits NS in all clauses. According to Morphological Uniformity Hypothesis (MUH), Cook and Newson (1996) null subjects are allowed in languages that portray a morphologically uniform inflectional paradigm. However, in cases where morphologically complex and morphologically simple forms exist, the paradigm is non-uniform and the language in question should be non-null. The data in (11) which is repeated here as (112) gives the paradigm of the verb *ee* 'drink'. The first- and second-person subject markers are indicated in bold, while the third person is bare.

- 112)** A-ee 'I drink'
 I-ee 'you drink' (singular)
 Ki-ee 'we drink'
 O-ee 'you drink' (plural)
 Ee-i 'he/she/it, drinks/ they drink'

This hypothesis predicts then that a language like Keiyo should be non-null because the verbal agreement has syncretism of the third person. On the contrary, Keiyo differs from the prediction in that it is a null subject language that permits all pronouns to be optionally null.

As attested by Roberts and Holmberg (2010) consistent (canonical) null subject languages portray a set of diagnostic features: (i) the prospect of leaving the definite subject pronoun unexpressed in any combinations of person and number in any tense (ii) the rich agreement inflection on the verb. Discussion in the preceding section established that Keiyo has rich agreement inflection on the verb and that any person-number combination can be null. Following these diagnostic features, the study proposes that Keiyo is a consistent null subject language.

5.3 Chapter Summary

We have seen in the chapter that Keiyo has strategies for organizing its syntax. Words combine systematically to form phrases and clauses. Both phrases and clauses have distinct structures and the elements within them follow a specific pattern. Keiyo is head initial meaning that all the dependents follow the head. It also marks the head, unlike other head initial languages which mark the dependents. Further, the chapter highlights the properties that identify Keiyo as NSL namely: (i) null subjects, (ii) subject-verb inversion, (iii) expletives (or pleonastic), and (iv) that-trace effect (or that-trace sequence).

CHAPTER SIX

SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

6.0 Introduction

This final chapter gives the summary and findings based on the aim and objectives of this study and draws conclusions on the data collected, analyzed and represented on the aspects of Keiyo Morphology and Syntax. It also demonstrates the manner in which the analysis of inflectional and derivational morphology and their varied interactions with syntax have been handled within the modules of the Principles and Parameters theoretical framework. The discussion also makes recommendations on some critical issues that emerged from the investigation, and which need further research. The findings of the study are presented in section 6.1, followed by a conclusion based on the research objectives in 6.2. Recommendations for future research conclude the chapter in 6.3.

6.1 Findings of the Study

The purpose of this study was to describe the aspects of Keiyo morphology and syntax using the P&P Theory. It investigated the inflectional processes that Keiyo nouns, pronouns, adjectives and verbs used to express grammatical meanings. This research further described the various ways of deriving new words in Keiyo. These morphological operations motivate varied interactions between morphology and syntax that were used to account for morphosyntactic parameters such as a null subjecthood. The study was guided by three objectives given hereunder:

1. To identify and describe the form and relevance of selected inflectional and derivational processes in Keiyo.

2. To describe the structure and interaction of morphology and syntax within phrasal and clausal categories in Keiyo.
3. To describe the properties that identify Keiyo as a null-subject language.

The study, therefore, established the following:

On the form and relevance of selected inflectional processes, the study analyzed data of major word categories namely nouns, verbs, adjectives and pronouns. It indicated that:

- 1) Inflectional morphemes attach to nouns and express particular inflectional values. Nouns have inflectional features namely: number, gender, definiteness and case.
 - a. The number feature is specified for two values; singular and plural. Keiyo has a complex number marking system to the extent that the study did not determine any specific rules that govern these intricate systems. However, a tripartite number marking system, Dimmendaal (1983) was adopted. Under this system, one category of nouns (plurative) has an unmarked singular form, while the plural form takes up a morphological marker. The suffixes used in indicating number for the nouns in this category are *-i*, *-n*, *-ua* and *-sio/-sia*. In singulative number marking, the singular forms suffix *-o*, *-da*, or *-ia* while plurals remain unmarked. The third group of nouns is complex because both their singular and plural forms have a morphological marker thereby forming their plurals in irregular ways.
 - b. Gender is marked in a small class of nouns in Keiyo. When marked, it defines masculine and feminine values and is mainly indicated in nouns

that refer to people's names. The prefixes *chep-* and *kip-* mark feminine and masculine genders respectively.

- c. A noun may further be positively specified for definiteness or may be entirely unspecified for it. This feature is morphologically expressed in a noun or NP by way of suffixing the definitive morphemes on the nouns or noun phrases. Regular nouns inflect by attaching the definite morphemes *-t* for singular and *-k* for plural.
 - d. Case in Keiyo is marked by way of tone which specifies either the absolute or the nominative case. The absolute case covers nouns that are said in isolation or those used as the object of a verb. Any other noun that is not specified for the absolute case falls under the nominative which is unmarked.
- 2) A Keiyo verb can inflect for the features: agreement, tense, aspect, negation and mood.
- a. Agreement features of the verb mark person and number, where person is specified for three values namely, first, second and third. Each of these values is further specified for either of the two values of the number feature. Thus, Keiyo identifies the first-person singular using the agreement morpheme *-a-*, and *-ki-* for plural. The second person is discerned using the morphemes *-i-* for singular and *-o-* for plural. The third person has a zero morpheme and is therefore marked by way of tone.
 - b. The tense system is divided into the past and non-past while the aspect structure identifies the perfective and the imperfective. The past correlates with the perfective aspect and has three forms: immediate

past, symbolized by *ka-*; near past, represented by *ko-* and distant past denoted by *ki-*. Each of these morphemes is prefixed to the verb. The non-past category coincides with the imperfective aspect which is signified by the suffix *-e* for the first and second persons and *-ei* for the third person. The aspectual system of the Keiyo verb comprises the perfective and the imperfective. The perfective is not marked while the imperfective is signified by a suffix that attaches to the verb as indicated earlier.

- c. Morphemes that mark negation are morphological features that are constituents of the verb phrase in Keiyo. The prefix *ma-* or *me-* is prefixed on the verb depending on the subject agreement morpheme denoting person and number. The first, and third person use *ma-* followed by the appropriate number affix. The prefix *me-* is used in marking negation for the second person.
 - d. The imperative and optative moods which are marked morphologically, occur in complementary distribution. Verbs in the singular have the base forms, while the ones in plural prefix the morpheme *-o* to mark the imperative mood. The optative mood is denoted by prefixing the appropriate form of the morpheme *ng-*.
- 3) Adjectives have inflectional values for number since they must agree with the head nouns. Some adjectives form their plural by suffixation, while others do so by changing the quality of their vowels. The adjectives used as active single-word sentences have agreement markers that are prefixed to the adjective.

- 4) Some pronouns have inflectional values for number and person, while others mark number only. Personal, possessive and reflexive pronouns mark both; whereas demonstrative, interrogative and relative pronouns mark number only.

On derivation, the major processes used in deriving new lexemes in Keiyo are affixation, compounding, base modifications, reduplication and borrowing with affixation being the most productive process. Nouns that are derived from other nouns add the suffix *-ndii*, while those formed from verbs prefix *ka-* and the suffix *-n* to form a word like *konetiin* 'teacher' from *ineet* 'teach'. and adjectives. Adjectives on the other hand are derived from verbs while verbs are majorly derived from adjectives and other verbs. An adjective prefixes *i-* and attaches the suffix *-it* to derive a causation verb. The adjectives that end in *-s* simply prefix *i-*.

Morphological operations on the verb may change the number of arguments of the verb by either decreasing or increasing them in the sentence structure. The valence-increasing processes are the applicative and the causative. The applicative processes discussed here comprise benefactive, instrumental and directional; while argument reducing ones include the passive, reflexive and stative. The causative is expressed lexically in Keiyo using the word '*yai*' 'cause to' or 'make'. The morphemes *-chi* or *-w-* are suffixed to the verb stem for benefactive, *-e-* for instrumental and *-y-* for the directional. The reflexive suffixes *-gei*, the stative *-ksei*, while the impersonal passive prefixes the morpheme *-ki-* to the verb stem. These derivational morphemes can co-occur with inflectional ones.

On the patterning of elements, it was observed that affixes are either conjugated to the left or right of the verb root. The syntactic patterning of these morphemes is a parametric feature and makes affixation operations in Keiyo unique. The order of

prefixation morphemes is fixed and they occur as follows:
TNS>NEG>PERF>PER/NUM.

The second objective of the study focused on describing the structure and interaction of morphology and syntax within phrasal and clausal categories, the study established that the morphological and syntactic structures in Keiyo are dependent. This is due to the complexities of Keiyo morphology.

- i. Derivational morphology affects syntax in Keiyo. The complex words formed through derivation have different syntactic properties from those of the stem to which the morphology attaches. For instance, the verb *teech* 'construct' cannot be used in the same syntactic environment as the derived word *teekseet* 'construction'. Also, argument-changing morphemes affect the arguments of a clause in a syntactic structure by either reducing or increasing them.
- ii. Inflectional morphology is obligatory in a given syntactic formation. It, therefore, interacts with other elements of syntax to ensure that the word has a form that is appropriate for the grammatical context in which it is used.

Concerning the structure of phrases and clauses, the study found out that:

- i. Keiyo is a head-initial language since the head precedes its complements. In a NP, the head takes the initial position while the other elements of the phrase occupy a post-nominal position. For a VP, the head verb is positioned first with its complements and adjuncts taking the post-verbal locality.
- ii. Keiyo is a head-marking language since the language's rich inflectional morphology, the grammatical information of words in a phrase is attached to the head of the phrase or clause.

- i. The third objective concerned the description of properties that identify Keiyo as a null-subject language. The study established that Keiyo has properties that define it as a consistent null subject language.
 - a. The definite subject and object pronoun can remain unexpressed in any person number combination in any tense;
 - b. Subject inversion with particle *ko*
 - c. Violates that-trace effect
 - d. No expletive subjects.

The rich agreement inflection on the Keiyo verb values the missing subjects. Overt subject pronouns can be used, but with a different interpretation like focus or disambiguation. The third person agreement markers have zero realizations on the verb and consequently need a special marker unless the interpretation is definite.

6.2 Conclusion

In conclusion, the study was able to answer all the three research questions that it sought to establish. The Principles and Parameters framework was adequate in analyzing and describing the aspects of the language under study. It allowed for an economical, but the accurate presentation of Keiyo morphology and syntax because it provides an economical account of parameters that are used in undertaking linguistic typology. The minimalist Programme was applied in the analysis and description of the complex words of Keiyo. MP facilitated the incorporation of these complex morphological components into syntactic description because, according to this framework, a fully inflected word is inserted into the relevant syntactic structure. The methodology used produced data that was needed to conduct the research and therefore all of its objectives were achieved.

6.3 Suggestions for Further Study

This research set out to determine the aspects of Keiyo morphology and syntax. Although the objectives of the study were achieved, we cannot assume that the findings are entirely conclusive or indisputable. We are positive that this study will provide background knowledge for further research in the inquiry of Keiyo linguistic structures. There is a need for further investigation especially on the application of MP on languages like Keiyo that is verb initial.

The other suggestions for further research are:

- i. A study on different clause types especially on copular constructions and predication.
- ii. An in-depth study on the role of tone in Keiyo needs to be undertaken because this research indicated that tone is critical for grammatical and lexical purposes.
- iii. A research on the structure of phrasal categories other than the nominal and verbal categories that were analyzed in the present study.

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APPENDICES

Appendix 1: Researcher's Intuitive Data

Section A: Inflectional Morphology

(i) Nouns

Singular	Plural	Singular	Plural
Moorna	Moorin	Ket	Ket
Kiplengwa	Kiplengoi	Kericho	Kerich
Itit	Itin	Tum	Tumua
Taapta	Taaptoi	Chepchumbia	Chepchumbin
Or	Ortinua	Redioit	Rediosiek
Logoiyat	Logoek	Barabaret	Barabariosiek
Emit	Emit	Ng'echer	Ng'echeroi
Warwa	Ware	Ei	Eun
Poolda	Pool	Garit	Garisiek
Sumeiyo	Sumei	Kong'	Konyan
Bei	Beek	Kel	Kelyen
Simeet	Simoosiek	Kweiyo	Kweyon
Siya	Siyoi	Kokwo	Kokwon
Anwa	Anoi	Belyo	Bel

ii) Adjectives

Singular	Plural	Singular	Plural
Tui	Tuen	Talil	Talilen
Pirir	Piriren	Tamirmir	Tamirmiren
Koi	Koen	Kitikin	Kitikinoi
Leel	Leelachen	Koroom	Koroomen
Chepchep	Chepchepen	Nyumnyum	Nyumnyumen
Paraa	Poroen	Nwach	Nwopeen
Samis	Samisen	Kaitit	Kaititen
Lalang'	Lalang'en	Lebeel	Lebeelen
Tenden	Tendenen	Ng'atip	Ng'atipen

Mutum	Mutumen	Busbus	Busbusen
Ui	Uen		

iii. Verbs

Am	Ui	Chup	Yaach	Yon
Labat	Chop	Yaach	Lit	Liip
Sogor	Choor	Kwany	Ser	Iyo
Sas	Sal	Nyo	Itien	Nam
Riir	Nyei	Waach	Sa	Muite
Toben	Iun	Ibuch	Komot	Isuup

Section B: Derivational Morphology

i) Nouns

Singular	Plural	Singular	Plural
Choorin	Chooriik	Labatindet	Rwoiik
Koonetindek	Koonetiik	Kabatin	Kabatiik
Tililindo	Tililindo	Kolindet	Koliik
Sukulit	Sukulisiek	Chobindet	Chobiik
Lakwaandiit	Lakwaandiit	Aliidet	Aliik

ii) Adjectives

Verb	Singular	Plural	Singular	Plural
Il	Iloot	Ilootin	Chamat	Chamaatin
Chul	Chulaat	Chulaatin	Ripoot	Ripootin
Nun	Nunaat	Nunotin	Betoot	Betootin
Manach	Manakaat	Manakaatin	Chopot	Chopootin
Uny	Ung'aat	Ung'aatin	Tiloot	Tilootin
Takul	Takulot	Takuleen	Taraat	Taraatin
Rur	Ruroot	Rurootin	Seraat	Seratin
Bel	Belat	Belaatin	Rataat	Rataanin

iii. Verbs

Adjective	Verb	Adjective	Verb
Nyigiis	Inyigiis	Libwob	Ilibwoob
Koi	Ikoit	Tigon	Itigoon
Ng'oom	Ing'oomiit	Ui	iuit
Wisis	Iwisiis	Nyalil	Inyaliil
Saamis	Isaamiis	Baraa	Ibaraa
Nwach	Inwagiit	Tiliil	Itiliil
Litit	Ilitiit	Tenden	Itendeen
Kiim	Igimiit	Leel	Ileliit
Anyiny	Ianyiiny	Tui	Ituit
Chapai	Ichapaai	Lapkei	Ilapkei

B: Basic Clauses

- i) Amo rubet
- ii) Asere atindooniik
- iii) Kikole bandeek eng' gaa.
- iv) Koikateech amut.
- v) Kwokateech amut.
- vi) Ibu ngorietab lakwet.
- vii) Kialchi koot.
- viii) Amache sesenik.
- ix) Nwaach ngorieng'ung' misiing.
misiing.
- x) Ui sang'.
- xi) Komot.
- xii) Itinye koot?
- xiii) Tekwo koot ne kindet.
- xiv) Koiwe kootab Chepkemoi?
- xv) Bendi chepyosok mutio miising'.
miising.
- xvi) Nyonei kuko mutai.

Negated

- Maamo rubet.
 Masere atindoojiik.
 Makikole bandeek eng' gaa.
 Maikateech amut.
 Maokateech amut.
 Ameibu ngorietab lakwet.
 Maalchi koot.
 Mamache sesenik.
 Manwaach ngorieng'ung'
 Amewe sang'.
 Amekomot.
 Metinye koot?
 Ametekwo koot ne kindet.
 Moiwe kootab Chepkemoi?
 Mabendi chepyosok mutio
 Manyonei kuko mutai.

xvii) Bwonei biik mutai.	Bwonei biik mutai.
xviii) Chekwai tuga tugul.	Machekwai tuga tugul.
xix) Agere tibiik chebo tai.	Magere tibiik chebo tai.
xx) Borwo tuguuk che ung'otiin.	Ameborwo tuguuk che ung'otiin.
xxi) Ngeamisie	Amekany keamisie.
xxii) Ngesom nyotab kaat.	Amekany kesom nyoetab kaat.
xxiii) Amin rubet	Maamin rubet
xxiv) Akomotin	Makomotin
xxv) Borun tuguk	Maborun tuguk.
xxvi) Nyonjinin	Manyonjin
xxvii) Tuchin	Matuchin

C: Complex Clauses

- i. Kaiyun kameng'ung kong'ung' kokemande.
- ii. Ng'o ne ibwati ile kanyo?
- iii. Maimuchi kosoman kitabunyi amu kakoba saisiek.
- iv. Kachome atoretin nga u amiiboisiet ake.
- v. Kasip kotar korwaei ak koba gaa.
- vi. Ng'o ne kele kaibu chego?
- vii. Ang'ni karit ne kakichoor.
- viii. Nee ne ileen ibu miondo?
- ix. Ngo' ne iyani ile chamei Kimutai?
- x. Iwendi ano?
- xi. Ingiro lakweng'ung'?
- xii. Anjo lagookchu?
- xiii. Tos ingeno?
- xiv. Amu nee si isuboto?
- xv. Wendi Kimutai sukul au?
- xvi. Kiageer lakwa ne piriir ochei.
- xvii. Aibuun taptook che nyolun.
- xviii. Kosiawe komawa.
- xix. Koayaat kurkeet sikochut.
- xx. Koibelis Kamworor eng' labatet akkoek nebo aeng' Kipkemoi.
- xxi. Akwong'e ale kometo ng'o ngoroik ko-robo-nchi.

- xxii. Ametoi mbareng'ung' ak awechigei.
- xxiii. Ibu chepkondokchu anan ametaun?
- xxiv. Kikibe ole mi chumbeek.
- xxv. Keecham ingiro?
- xxvi. Koiro Kiptoo lakwa no tinyei sumeek che koen eng' oinet.

D: Possession

- ii) Kootab chepto
- iii) Koorikab chepto
- iv) Koot ne bo chepto
- v) Bo chepto koot
- vi) Koonyi
- vii) Tinyei koot
- viii) Nenyoo sukulit.
- ix) Chechoo tuga.
- x) Chekwok tuguk tugul.
- xi) Achame lagookchu.
- xii) Nyonei kameng'wong'.
- xiii) Amache kochama biikuk.

E: Valence Increasing and Valence Reducing

- i) Susegei sesenik.
- ii) Iunegei lagook.
- iii) Piregei biik.
- iv) Luchegei tuga.
- v) Kealchi kitabusiek.
- vi) Achopchini tuguuk che machei.
- vii) Ripwoo cheptonyu.
- viii) Keyai kosiirgei biik.
- ix) Alweech makatiat.
- x) Kialchi boiyot taptok.
- xi) Kariircho lakweng'wong'.
- xii) Ibuo rotwet.
- xiii) Kiabetee Mombasa.
- xiv) Amaksei ii we!

- xv) Katilgei Cherono.
- xvi) Riboksei koot yo imi gaa.
- xvii) Mase kirokto ne koi.
- xviii) Kikiona.
- xix) Kikialwech tuguk tugul.
- xx) Riikyí Jehova.

Appendix II: Verification Checklist

For each of the structures below:

(a) Tick if it is an acceptable Keiyo linguistic structure.

(b) Put 'X' in the bracket and provide an alternative structure in the space provided if the structure is NOT acceptable.

1) Nouns

Singular

- I. Met [] _____
- II. Ngok [] _____
- III. Kaina [] _____
- IV. Ei [] _____
- V. Pandia [] _____
- VI. Piny [] _____
- VII. Koi [] _____
- VIII. Tarit [] _____
- IX. Muria [] _____
- X. Kogel [] _____

Plural

- Metowoi [] _____
- Ngokai [] _____
- Kainai [] _____
- Eun [] _____
- Pande [] _____
- Pany [] _____
- Koin [] _____
- Torit [] _____
- Mur [] _____
- Kogel [] _____

2) Adjectives

- I. Nunat []

- II. Ilot []

- III. Nerat []

- IV. Chulat []

- V. Koi []

- VI. Baraa []

VII. Nwach []

VIII. Nyigiis []

IX. Wisis []

X. Koroom []

XI. Nyumnyum []

3) Phrases and clauses

I. Amei kimnyet. []

II. Kialabati keny. []

III. Kechube ng'o? []

IV. Kiamei kimnyet. []

V. Chobei konyi []

VI. Koorikab chepto []

VII. Koot ne bo chepto []

VIII. Bo chepto koot []

IX. Ripwoo cheptonyu. []

X. Keyai kosiirgei biik. []

XI. Alweech makatiat. []

- XII. Kialchi boiyot taptok. []

- XIII. Kariircho lakweng'wong'. []

- XIV. Ibuo rotwet. []

- XV. Kiabetee Mombasa. []

- XVI. Susegei sesenik. []

- XVII. Iunegei lagook. []

- XVIII. Piregei biik. []

- XIX. Luchegei tuga. []

- XX. Chechoo tuga. []

- XXI. Chekwok tuguk tugul. []

- XXII. Achame lagookchu. []

- XXIII. Mamache sesenik. []
