A SEMANTIC ANALYSIS OF DHOLUO ANAPHORS IN SIMPLE DECLARATIVE SENTENCES: THE MINIMALIST PROGRAM PERSPECTIVES

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DECLARATION

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DEDICATION

I dedicate this work to my husband Francis Opiyo, my children, Lisa Kwe and Lenny Ng'uono for being the source of encouragement and strength.

ACKNOWLEDGEMENT

My sincere gratitude goes to my immediate family to whom I cherish and preserve the best. To my dear husband Francis, I say thanks for the moral and financial support. This dream would not have been achieved without your positive comments and encouragement, and the common slogan, 'burn the midnight oil, sweet'. To my children Lisa and Lenny, I deprived you an opportunity to be always with you. Your patience and smiles were a source of inspiration to me, thanks so much.

To God be the glory!

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DEFINITION OF KEY CONCEPTS

In this section, some key concepts that form the basis of the study are defined:

Adjuncts- Emphatic elements in a sentence, not subject (noun phrase)

Agreement- The grammatical features like person, number, gender and case of (subject) in a sentence determines the morphological shape of another element (verb)

Argument- The subject and object in the sentence

C-command- Deals with dominance relations between nodes in a tree diagram such that x C-commands y if neither dominates the other and the first branching node above x also dominates y.

Co-indexing- Assigning similar indices to two or more co-referential elements in structure.

Co-referential- When two or more expressions refer to the same real-world entity.

Feature checking- The process of ensuring that the syntactic derivation has no uninterpretable features.

Governing category- The governing category of x is (roughly) the minimal clause containing x and its governor.

Head- Basis of phrasal projection: lexical elements such as V,N,A,P are lexical heads.

Interpretability- (of features) referring to essential properties of morphosyntactic objects used to license them in the course of the derivation.

Pronominal Argument Languages- These are languages with no subject- object asymmetry with respect to agreement, and both subject and object are always represented by some overt pronominal element.

ABSTRACT

This study investigated the binding theory and theta theory within the Government and Binding theory and its application to Dholuo simple declarative sentences. The study further interpreted the binding principles and theta role assignment within the Minimalist Program. The Minimalist Program's checking theory and the Principle of Full Interpretation were elaborated in chapter one.

The investigation revealed that Dholuo was as a pronominal argument language with no overt noun phrases. In addition, it was established that overt noun phrases were adjuncts and not arguments referred in pragmatic terms as topic and focus, and that they could not be assigned any theta role. This idea of topic and focus brought the mapping between pragmatics and syntax in the study.

Finding shows a modification in the binding principle B, and that Dholuo has two types of personal pronouns: independent and incorporated. The independent pronouns occurred as overt pronoun and are referential expressions which were interpreted as free satisfying the binding principle C. This study argued that incorporated pronouns violated the binding principle B as they were bound within the domain of the word. In fact, it was noted that the independent pronouns served to emphasize the subject being spoken about and was interpreted in pragmatic terms as topic and focus. In checking the lexical items for grammaticality and consistency within the Minimalist Program, the study found that the independent pronouns and incorporated pronouns were interpretable. Further analysis revealed that the referential expressions in Dholuo included the nouns and independent pronoun which satisfied the binding condition C of the Government and Binding theory, and were also interpretable within the Minimalist Program.

Moreover, a modification in the binding principle A was noted in this present study. Dholuo anaphors were bound within the word domain, unlike in English where it occurred in the sentence domain. The study revealed that reflexive

occurred as a bound morpheme on the verb. This idea of domain then brought about contrast on parametric variation in languages on the domain of binding. The difference between reflexives and reciprocals was illustrated to be established through the context of the use by the Dholuo speaker.

It was argued that Dholuo words do not move because as a language it has no agreement and therefore there was no projection for the agreement to be created. This study further revealed that the binding principles and theta theory were in the lexicon where they are checked at the logical form for consistency and grammaticality to satisfy the Principle of Full Interpretation in the Minimalist Program.

It was concluded that the data from Dholuo falsified the claims of the Minimalist Program, and that not all the principles of the MP apply in the analysis of Dholuo such as the merge and move processes. This is because Dholuo a pronominal argument has no overt arguments in A positions, that includes the fact that it has no case checking that entails there is no merge because there are no interpretable number and person features and uninterpretable case features to be merged. The verb had the arguments incorporated so no case checking takes place on phonological level. The morphemes which occurred as incorporated arguments could not be case marked. Therefore a logical type of case checking was done because features for case checking are not licensed. It is recommended that a detailed study analyzing pragmatics in simple declarative sentences would shed more light on the boundaries between semantics and pragmatic in Dholuo sentences.

LIST OF ABBREVIATIONS

Pst-   Past

Ag- Agent

Go- Goal

Ben- Benefactor/Benefactive

Exp- Experiencer

DP- Determiner Phrase

NP- Noun Phrase

VP- Verb Phrase

GB- Government and Binding

MP- Minimalist Program

CT- Checking Theory

PFI- Principle of Full Interpretation

PA- Pronominal Argument

SG- singular

1PS- First person singular

1PP- First person plural

2PS- Second person singular

2PP- Second person plural

3PS- Third person singular

3PP- Third person plural

PF-Phonetic Form

LF-Logical Form

CHAPTER ONE

1.0 Introduction

This study will focus on the semantic analysis of simple declarative sentences in Dholuo using the theta theory and binding theory modules in the Government and Binding theory (GB) and the logical form (LF) in spell out a computational process in the Minimalist Program. GB and the Minimalist Program are generative approaches to the study of linguistic meaning. This chapter contains the introduction which includes: the background knowledge of the language under study (Dholuo), the statement of the problem, the objectives of the study, the hypotheses, rationale and the scope and limitations of the study as well as the theoretical framework, literature review and the research methodology.

1.1 General Background to the Language

Dholuo will be the language of this study. The speakers of Dholuo are known as Luos. Luos are believed to have migrated from Sudan, their cradle land, and settled in Kenya and Uganda (Okoth 1982). According to Cohen (1974), the Luo started settling in the Nyanza region at around 1500-1550 AD. According to Greenberg (1966:85), Dholuo belongs to the Western Nilotic branch, a sub-branch of the Eastern Sudanic family. Some of the languages in this group include: the Luo, Acholi, Lang'o, Alur, and Padhola of Uganda (Stafford 1967). Other related languages include Anuak, Bor, Jur and Shilluk of Southern Sudan (Omondi 1982). This is illustrated in figure one below:

Western Nilotic Languages

Burun   Dinka-Nuer   Lwoo

Northern   Southern   Northern   Southern

Mayak   Mabaan   Dinka   Shilluk   Luo

            Jumjum   Nuer   Anywa   Adhola
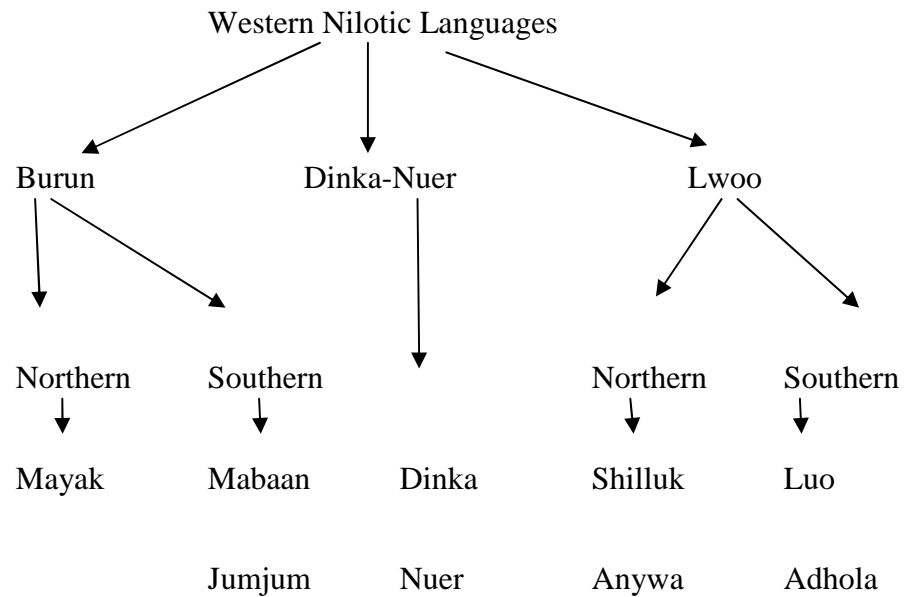
Figure 1: Tree diagram of Western Nilotic Languages.
(Source: researcher)

The Kenyan population census of 2009 revealed that the total number of Dholuo speakers in Kenya was four million, forty four thousand four hundred and forty (4,044,440). The majority of the Luo speakers live in central, southern, and northern Nyanza. Some of the speakers of the language are also found in the Northern part of Tanzania. The remaining few are scattered in the other parts of Kenya. The Luo language has also been adopted by the Abasuba an originally Bantu speaking community (Ayot, 1979 cited in Oduor 2002:2).

A recent study by Odhiambo (2011:1) reveals that there are two dialects of Dholuo. The Kisumu-South Nyanza dialect (KSN) which is spoken in a wider geographical area including the whole of Bondo except Yimbo area, Central Nyanza(Yala), Maseno, Kisumu and South Nyanza (Mbita, Ndhiwa, Migori,

Oyugis and Kendu Bay).Oduol states that this dialect is also the standard dialect as it is used in print and as a medium of instruction.

The other dialect is the Boro-Ukwala dialect (BU) which is spoken in a smaller region in Yimbo, Alego, Ugenya, and parts of Gem. This study adopts the Kisumu-South Nyanza dialect as it is spoken in a wider geographical area and it is the standard dialect.

1.2 Statement of the Problem

Scholars who have studied Dholuo grammar include Omondi (1982) focusing on the Syntactic Structures of Dholuo and Okoth (1997) focused on a Functional Approach to Dholuo grammar. Earlier studies on generative grammar by Chomsky left out the role of semantics since syntax was held to be autonomous (Lyons 1977:409). Katz-Fodor's (1964) proposal to integrate syntax and semantics were taken over by Chomsky (1965) in his standard version of the Chomskyan transformational –generative grammar. Jackendoff (1990:1) points out Chomsky's words that the formal study of grammatical structure requires a syntactic framework to support a semantic analysis. This indeed is reflected in Chomsky's Government – Binding (GB) Theory where great reliance is placed on the theta criterion and the projection principle. Semantics in GB is also reflected in the D-structure, logical form and in the Binding theory.

Within the Minimalist Program, the D-structure level and its related principles such as the projection principle, the theta-criterion and binding theory are eliminated from syntax. Therefore, the present study sets out to answer the question, how is the theta-criterion and Binding principles handled within the Minimalist Program? (Chomsky 1995).

In particular, the study seeks to answer the following research questions:

1) How are the Dholuo R-expressions and personal pronouns interpreted in the Minimalist Program?

2) How are the Dholuo anaphors interpreted in the Minimalist Program?

3) How are theta roles assigned in the Minimalist Program?

1.3 Objectives

In relation to the research problems, the objectives of the study are:

1. To investigate how Dholuo R-expressions and personal pronouns are interpreted in the Minimalist Program**.**

2. To analyze how Dholuo anaphors are interpreted in the Minimalist Program.

3. To examine how the theta-roles are assigned within the Minimalist Program.

1.4 Hypotheses

1. Dholuo R-expressions are free and personal pronouns are free and bound in the Minimalist Program.

2. Dholuo anaphors are bound and checked within the domain of word in the Minimalist Program.

3. The theta-roles are in the lexicon and are not checked in the Minimalist Program.

1.5 Rationale of the Study

Following the background on the ignorance of the role of semantic in Chomsky's generative grammar and his attempt to include Katz and Fodor proposals which also ran into problem as it interpreted both active and passive sentences the same way, this study will seek at using Chomsky recent theories GB to give a background on how it interpreted semantics using the Binding Theory and the Theta Theory and to investigate how the Binding Theory and Theta roles are assigned in the Minimalist Program.

Several studies have been done in Dholuo semantics including Attoh (2002) that examined Dholuo nouns using Semantic Field approach and Achola (2011) which focused on Semantic analysis of Dholuo prepositions using the Cognitive Semantics theory.

So far, to the best of my knowledge and from the studies already done in Dholuo by different scholars, there has never been any study carried out on semantic analysis of Dholuo simple declarative sentences using the Minimalist Program. It

is therefore my belief that a study in this area will give an insight into the semantic analysis of simple declarative sentences. When a theory is tested against a language without any genetic relationship to the language which was first used to advance the theory, then the findings from this second language are very important in the evaluation of the theory (Achola2011:5). The study therefore sets out to test GB concepts of Theta and Binding Principles in the MP and also check how the data from Dholuo can verify or falsify the claims of the MP.

1.6 The Scope and Limitations

The study will give an overview of Dholuo sentence structure with ref erence to the referential expressions, and also try to establish how these sentences will be assigned thematic roles. A paradigmatic account of Dholuo pronouns will be given in order to account for the sentence structure in Dholuo.

The focus will be on the logical form and LF relation where the semantic interpretation is assigned in GB and the deep structure and try to explain the principle of full interpretation in the MP after the elimination of the deep structure.

The scope will not cover all the modules of GB like the Empty category, Case theory, NP movement and WH movement, but will look at only two modules: the Theta Theory and Binding Theory.

The scope will not also cover the aspect of marking tone, even though Dholuo is a tonal language. This is because the absence of tone marks allows a wide range of readers to give a written text their idiosyncratic or regional tonal features as they read. And also the fact that as Okoth (1997:20) points out that tone does not seem to have a role in determining Dholuo constituent order, unless in cases where there is need to show aspect. Moreover, this study will be based on semantics with some emphasis on morphology in order to understand the interpretation of the simple sentences.

1.7 Literature Review

This section is divided into covering a discussion on the literature on Dholuo grammar and the literature of the theories being used.

1.7.1 Literature on Dholuo Grammar

Several studies and books have been written in Dholuo. Some of the books have been written on Dholuo grammar to help individuals learning the language. Such books include*: An Elementary Luo Grammar* (Stafford 1967), *Dholuo without tears* (Malo 1952) and *Elementary lessons in Dholuo* (Hunting ford 1959). Serious linguistic studies based on modern theoretical approaches to language description have been done. The linguists include Omondi (1982) who examined Dholuo syntax within Chomsky's Standard Transformational Generative Theory (1965) which is beneficial to this study. This is because it gives us the basis to syntactic

structures which are reflected in Chomsky's GB S-structure and D-structure. Okoth (1997) on the other hand examined Dholuo syntax using Simon Dik's (1978) in his book "a Functional grammar of Dholuo". This work is beneficial to this study as it will help in identifying the different declarative sentences in Dholuo.

Other works on Dholuo include Odhiambo (1981) which gives a detailed account of Dholuo Phonology; Okoth's (1997) which complements Odhiambo's work by adding a tone dimension to it; and Oduor's (2002) work on syllable weight and phonology; Okoth (1982) which attempt to explains the morphophonemic processes from a synchronic and diachronic points of view. Ochola (2003) gives a morphsyntactic analysis of Dholuo verbal system which presents information on Dholuo verbs; Odhiambo (2011) gives a functional analysis of Dholuo constituent order using Van Valin (1997) Role and Reference Grammar. In addition there are other numerous papers/ articles and dissertations written on various aspects of the language.

1.7.2 Literature on the theory

Among the relevant literature related to the problem to be reviewed include: Haegeman (1994) Introduction to Government and Binding; Chomsky (1957, 1965, 1981, 1993, 1995).These books by Chomsky gives us the background to generative grammar on the autonomy of syntax and how semantics was interpreted which is beneficial to this study on trends by Chomsky to incorporate semantics in

his work; Haegemann on the other hand explicitly explains the GB theory and gives an introduction to the Minimalist Program which is the focus of this study.

It is worth noting that Chomsky in his book *Syntactic Structures* (1957) introduced the notion of generative grammar and rewrite rules, arguing for a separation between phrase structures and transformations which later . In his book *Aspects of the Theory of Syntax* (1965), he developed the notion of deep structure and surface structure, the later derived from the former by transformations. He also introduced the distinction between competence and performance. This model was later named "The Standard Theory". Later, this theory underwent significant changes, which were conceptualized in GB theory, described in *Lectures on Government and Binding* (1981). This new approach, also known as "Principles and Parameters" became necessary as more data were brought into the research program and forced the theory into parametrisation. This model is still phrase- structure based and retains the concept of deep structure and surface structure, but additionally it develops autonomous and interrelating modules such as X-bar theory, Ө-theory, case theory, binding theory, bounding theory, control theory, and government theory.

Other works on semantics can be seen in Fodor's (1977) *Semantic: Theories of Meaning in Generative Grammar.* This book gives an overview of different scholar's treatment of semantics. This book is important because it complements

Jackendoff's work on semantic structures which is vital to this study; Jackendoff (1990) *Semantic Structures* is important for this study because it gives us an insight on how theta roles are assigned and how binding is handled in semantics through coindexation; Cook (1988) *Chomsky's Universal Grammar* gives a general overview of the Principles of the Universal generative grammar by Chomsky. This book is beneficial to this study because it tries to explain how GB fits within the framework of Principles and Parameters Lastly, Chomsky (1995) *The Minimalist Program* is important for this study because it highlights the weaknesses in the GB like the concept of the theta theory which turned out to be difficult and replaced it with the principle of full interpretation in the MP and elimination of the deep structure where semantic interpretation was given. These new inventories in the Minimalist Program are the main focus of this study.

Another important book is by Radford (1997) *Syntactic theory and the structure of English-A Minimalist Approach* gives an overview about the Minimalist theory from a syntactic approach. This book is important in this study because it explains the checking theory, logical form, and the Principle of Full Interpretation which are the key areas of focus in this study.

Other contributions on the role of semantics can be traced by focusing on the works of Katz and Fodor. Lyons 1977:210 says that Katz-Fodor theory is formalized within the framework of Chomskyan generative grammar. This theory

played an important role in the development of *Standard theory* of transformational generative grammar, outlined in Chomsky's*Aspect*(1965).The Katz –Fodor theory was the first presented in 1964 with a slightly modified version of the earlier, *Syntactic Structures* (1957),a model of transformational generative grammar.

Lyons amongst many other Semanticists has pointed out the fact that when Chomsky first put forward his theory of generative grammar, he had little to say about the possibility of integrating phonology, syntax and semantics within a unified model of a language-system. Lyons points out that the illustrative partial description of English that Chomsky used in his earliest work did not contain any rules for the Semantic interpretation of sentences; and that Chomsky took the view that the grammatical rules could be established and formalized without any difference of meaning or to any other semantic notion. In this respect, Lyons observes that **grammar was held to be autonomous and independent of Semantics** (Lyons 1977:409).

There was the increasing dominance of syntax which led to the questions such as the *relation between syntactic and semantic ambiguity, the issue of whether transformations preserve meaning and "what meanings are"*.

The first explicit proposals for the integration of syntax and semantics within a Chomskyan framework were made by Katz and Fodor (1963). There proposals were further extended by Katz and Postal (1964) and later taken over by Chomsky

(1965) in the construction of what has now come to be called **the standard version of Chomskyan transformational-generative grammar** (Lyons 1977:410). The proposal led to the formulation of a hypothesis that:

> Only the syntactic information contained in the underlying phrase markers is relevant for the semantic interpretation of sentences, while only the syntactic information contained in the final derived phrase marker is relevant for their phonetic interpretation.'(Ruwet 1973:276)

1.8 Theoretical Framework

The study will focus on two theories: Government and Binding Theory and Minimalist Program. GB has been used as a background to the MP This is because the MP developed from GB and therefore we want to know the points of departure in relation to semantic roles.

1.8.1. Government and Binding Theory

GB is a universal grammar which is a natural development of earlier versions of generative grammar initiated by Noam Chomsky. Universal Grammar (UG) is the system of principles, conditions and rules that are elements or properties of all human languages… the essence of human language (Chomsky,1964).All human beings share part of their knowledge of language; regardless of which language they speak. UG is their common inheritance (Cook 1988:1). The current theory couches UG in terms of three proposals advanced in Chomsky's model known as

Government and Binding (GB) Theory first synchronized *in Lectures on Government and Binding (Chomsky,1981).*Cook 1981:1says that UG is a theory of knowledge, not of behavior, its concern is with the internal structure of the human mind.UG theory holds that the speaker knows a set of principles that apply to all languages, and parameters that vary within clearly defined limits from one language to another (ibid). Acquiring a language means learning how these principles apply to a particular language and which value is appropriate for each parameter.

According to Chomsky (1981:5) UG consists of interacting subsystems, which can be considered from various points of view. From one point of view, these are the various sub-components of the rule system of grammar. From another point of view, we can isolate subsystems of principles.

Chomsky (1991) referred to this theory as the' Principles and Parameters Theory which is a term used in a recent development in the generative framework referred to as the Minimalist Program (Chomsky, 1995). According to Chomsky (1981) every grammar of a specific language has to meet the conditions for an adequate grammatical model; observation adequacy, that is, the grammar must be able to distinguish those strings of words which are sentences of the language in question; descriptive adequacy, that is, the grammar should contain the general principles and processes that interpret the sentences in his language and decide on the

acceptability of sentences; and explanatory adequacy achieved by providing good reasons for the rules of the grammar.

1.8.1.1 Parameters and Universal Grammar

Human beings are born equipped with some internal unconscious knowledge of grammar: UG. UG is a set of universal principles of language, some of which are rigidly fixed, some of which parameterized. The acquisition process is triggered by the exposure, the child's linguistic experience.

According to UG, languages vary with respect to word order parameter: SVO, VSO. Languages therefore opt for one setting of the parameter or another. English for instance exhibit SVO word- order.

(1)   Billy bought a pen.

'Billy' is the subject, 'buy' verb and 'pen' object.

In UG acquiring a language means learning how these principles apply to a particular language and which value is appropriate for each parameter. The importance of UG is its attempt to integrate grammar, mind, and acquisition at every moment.

GB theory incorporates the X-bar syntax and aims to express generalizations about the phrase structure of all human languages rather than features that are idiosyncratic to one part of language or to a single language. According to

Chomsky, heads are either last in the phrase or first in the phrase. The variation between languages can be expressed in terms of whether heads occur first or last in the phrase; this is the head parameter.

1.8.1.2 Theta Theory

Ѳ- theory is a theory that handles the relationships that sentences have such as who is doing the action and who or what is being affected by the action. They are part of the contents of the lexical entry for an item, which get assigned to a relevant NP in the sentence; the semantic properties assigned by heads are called thematic roles (Ѳ- roles). The lexical entry for a verb needs to specify the Ѳ-roles that go with it (Cook 1988:111).The relationship between verbs and their arguments are referred to in terms of thematic roles or theta roles. The component of the grammar that regulates the assignment of thematic roles is called **theta theory**.

(2)   Ann killed Ben.
          Kill: verb; 1   2
                    NP   NP

The verb 'kill' takes two arguments NPs Ann and Ben, which stand in different semantic relationships with the verb. The argument NP Ann in the subject position refers to the entity that is the AGENT of the activity killing. The argument NP Ben, the direct object, expresses the PATIENT of the activity. The different thematic roles are summarized in the table below :

SEMANTIC PROPERTY	MEANING
Agent/Actor	The one who intentionally initiate the action expressed by the predicate
Patient	The person undergoing the action expressed by the predicate
Theme	The person ore thing moved by the action expressed by the predicate
Experiencer	The entity that experiences some (psychological) state expressed by the predicate
Benefactive/Beneficiary	The entity that benefits from the action expressed by the predicate
Goal	The entity towards which the activity expressed by the predicate is directed
Source	The entity from which something is moved as a result of the activity expressed by the predicate
Location	The place in which the action or state expressed by the predicate is situated

Table 1: overview of thematic roles

These thematic roles can be illustrated in Dholuo with the examples below:

(3)   Milly ong'ieo-n-e mama chiemo.
            AG   BEN/GO   THEME
            '*Milly has bought food for the mother*'

(4)   Ben ong'ielo mpira kochimo Apidi.
                AGTHEME   GO
                '*Ben rolled the ball towards Apidi*'

(5)   Mpira ong'ielore kochiko abila.
                    THEME   GO
                    '*The ball rolled towards the cowshed*'

(6)   Adoyo niloka America.
                THEME   LOC
                '*Adoyo is in America*'

The information as to the semantic relationship between the predicate and its arguments is part of the lexical knowledge of the native speaker and should hence also be recorded in the lexicon. Rather than merely specifying the number of arguments of a predicate, one may envisage a representation which specifies the type of semantic roles of these arguments. In GB Theory this is represented by means of a thematic grid or theta grid which is part of the lexical entry of the predicate. This can be illustrated by the Dholuo example below

(7)   Ann onego gweno.
        '*Ann has killed a chicken*'

The verb 'nego'-kill assigns two thematic roles (AGENT and PATIENT). The verb is a two- place predicate' which requires two arguments to which these roles can be assigned. This can be represented in a grid as shown below:

Nego: verb

AGENT	PATIENT
NP	NP

One criterion for judging whether a sentence is grammatical is that the thematic roles associated with its predicate(s) must be assigned to arguments; these arguments must be structurally realized. Conversely, the referring NPs in the sentence must bear some semantic relation to a predicate. This semantic relation can be established via the assignment of thematic roles.

In the example containing the predicate 'nego', nego assigns the thematic roles of AGENT and PATIENT, hence it requires two arguments. When the theta roles can be assigned to arguments we say that they are **saturated** and we mark this by checking off the theta role in the thematic grid of the predicate. In order to identify the assignment of the respective thematic roles to the corresponding arguments, NPs are identified by means of an index, a subscript. Then they enter the index of the argument to which the thematic role is assigned in the appropriate slot in the theta grid.

Ann$_i$onego gweno$_j$

Nego: verb

AGENT	PATIENT
NP	NP
I	J

The requirement that each thematic role of a predicate must be assigned to a NP and that there must be no NPs that lack a thematic role is summed up in the theta criterion.

Theta criterion

> a. Each argument is assigned one and only one theta role.

> b. Each theta role is assigned to one and only one argument.

> (Haegeman 1994:54)

Jackendoff (1990:43) developed a theory called Conception Semantics, from which one can derive the information carried by a list of thematic roles. He proposes two tiers in the conceptual structure, a thematic tier, which contains information about themes, sources, goals, and locations and an action tier, which contains information about who (or what) is acting upon what (or whom).

The thematic tier contains predicates such as GO and BE, path functions such as FROM, TO, TOWARDS, VIA, UP, and DOWN, place functions such as IN, ON, and AT, and the predicate CAUSE. The action tier contains the predicate ACT, which may or may not be further specified by the feature VOL, meaning volitionally, or on purpose. The representation for 'Ann hit Ben with a stick' is shown below

> [CAUSE (ANN, [GO (STICK, [(BEN)])])]

> [ACT (ANN, BEN)]

1.8.1.3 Binding Theory

The Binding theory is concerned with connections among noun phrases that have to do with such semantic properties as dependence of reference, including the

connection between a pronoun and its antecedecent' (Chomsky 1988:52). These binding principles can be applied in Dholuo as shown below:

(8)   a.Auma o-her-e.
           'Auma he/she loves him/her.'

        b. i-her-o-ri.
            'You love yourself.'

        c. Juma paroni o jaber.
            'Juma thinks that she is attractive.'

Three types of NPs are distinguished: full noun phrases such as Juma; pronouns such as o-,i-, etc.; and reflexive elements such as –r 'self'. In (8c) there is some entity in the real world to which Juma may be used to refer; the noun Juma relates a piece of language to a postulated piece of the world. This person is not otherwise mentioned directly in the sentence. To know who is being talked about means knowing which person called Juma is referred to from other information than that contained in the sentence. The same applies to *him* known as a pronominal; another person is being talked about who is not mentioned.

Pronouns do not select a referent from the universe of discourse. Therefore Auma in example (8a) above and him do not refer to the same person. The use of the full NP indicates that there is, or is thought to be, an entity which is identifiable by the NP.A lexical NP is able to select a referent by virtue of its inherent properties. It is a referential expression. Auma is an R-expression.

In (8a) –re 'herself 'refers to Auma and it is a reflexive. The reflexive picks up reference from the subject NP Auma.The NP on which a reflexive is dependent for its interpretation is the antecedent of the reflexive. We use coindexation to indicate that –re /herself and o- have the same referent:

(9)   Auma o_i-her-o-re_i

The reflexive and its antecedent must agree with respect to the nominal features of person, gender and number. This is because the reflexive depends for its interpretation on the antecedent, that is, the reflexive and its antecedent share their referent.

Binding Theory needs to specify the structural area within which Binding may or may not take place according to the category of word employed; this area within which the Binding Principles apply is called the **local domain**. This means that the antecedent must be found in some local domain, the binding domain. The reflexive must be **locally bound**.

There are three Binding Principles that helps in the interpretation of sentences, they include:

Principle A: An anaphor (reflexives and reciprocals) must be bound in its governing category.

Principle B: A pronoun must be free in its governing category.

Principle C: An R-expression must be free everywhere.

In Example (8c) 'Juma paroni o jaber', the pronoun 'o' refers to either Juma or somebody else (R- expression). Principle B applies because 'o' a pronoun is free in its governing category. Principle C requires that the R- expression 'Juma' refers to someone outside the sentence.

(10)   Bob owacho (ni o-chwo-re).
        '*Bob said (he stub himself)*'

By Principle A the anaphor *himself* is bound to 'o-' *he* within the embedded sentence:

 (11)   Bob owacho(nio$_i$-chwo-re$_i$).

With Principle B the pronominal–o- is free and so may corefer with Bob outside the embedded sentence or with someone else not mentioned.

GB Theory integrates the principles with the lexical specification. The principles depend upon a knowledge of which words are anaphors, and which are pronominal. The lexical entries in the speaker's lexicon must indicate which category each item belongs to, effectively yielding a list such as:

>   Anaphors: [+anaphor, -Pronominal]
>
>   Pronouns: [-Anaphor, +Pronominal]
>
>   R-expression: [-Anaphor, -Pronominal]
>
>   **(Source: Haegemann 1994:241)**

According to Heim and Kratzer (1998:263), every syntactic binding relation must correspond to a semantic binding relation, and vice versa. They further introduced the notion of "semantic binding", which relates two DPs. It says:

> A DP α semantically binds a DP β (in the derivative sense) iff β and the trace of α are(semantically) bound by the same variable binder.

1.8.2 The Minimalist Program

The Minimalist Program is presented as a program rather than a theory. MP aims at answering the question why language has the properties it has. Chomsky (1995:167) says that the human brain provides an array of capacities that enter into the use and understanding of language (the language faculty); these seem to be good part specialized for that function and a common human endowment over a very wide range of circumstances and conditions. One component of the language faculty is a generative procedure (an I- language, henceforth language) that generates structural descriptions (SDs), each a complex of properties, including those commonly called "semantic" and "phonetic". These SDs are the impressions of the language. The theory of a particular language is its grammar. The theory of languages and the expressions they generate is Universal Grammar (UG); UG is a theory of the initial   state S_0 of the relevant component of the language faculty.

Transformational grammar has evolved through several stages from its fundamental principles as noted in (Chomsky, 1957; 1965).This evolution has been marked by the exposition of more general principles of syntactic combination

and syntax-semantics interfacing with a goal of elucidating the computational system within the mind/ brain of the language user (I- language) as opposed to the rules of specific natural languages (the E- language approach).The phrase – structure rules of the syntactic component were generalized in X-bar theory (Chomsky, 1957;1965) and PF and LF and their roles as interfaces with other cognitive systems were introduced in GB (Chomsky, 1981). The Principles and Parameters approach was a key development toward showing how natural language variation could be traced to a more fundamental linguistic capacity via the setting of parameters .The only way of uncovering the only undispensable aspects of phrase- structure rules is manifested in Chomsky's Minimalist Program.

Chomsky (1993:5) as quoted in Schroeder (2008) says that GB is driven by the interaction of rules and modular principles unlike the Minimalist Program which is reduced to principles which guarantee that a linguistic expression is well represented at interface level only. The interface level contains the phonological form (PF) and the logical form (LF).

The Minimalist design is a theory of language that takes a linguistic expression to be nothing other than a formal object that satisfies the interface conditions in the optimal way. MP assumes that a derivation converges if it converges at PF and at LF; convergence is determined by independent inspection of the interface levels.

In a Minimalist theory, the crucial properties and relations are stated in the simple and elementary terms of X-bar theory. An X-bar structure is composed of projections of heads selected from the lexicon. The relations involve the head and they are "local": specifier-head relation of ZP to X, and the head-complement relation of X to YP.

```
              XP
             /  \
            /    \
   ZP ─────/      \───── X'
                        / \
                       /   \
                      /     \
                     X       YP
```
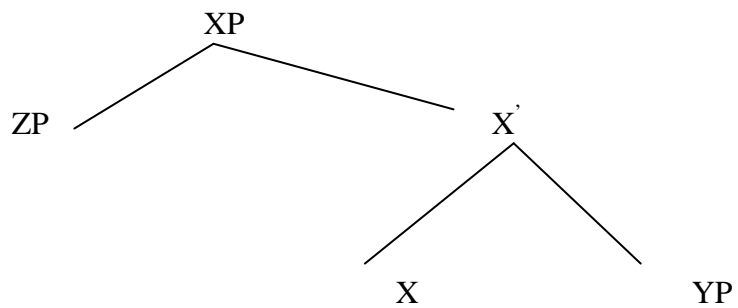
Figure 2: Head Relations

The head- complement relation is not only "more local" but also more fundamental- typically associated with thematic (Ө-) relations. Other relations include head-head relation – the relation of a verb to (the head of) its Noun Phrase complement (selection) and chain link.

In addition, the abstract inflectional features of the verb are checked for their correctness against the syntactic position in the sentence structure as shown below:
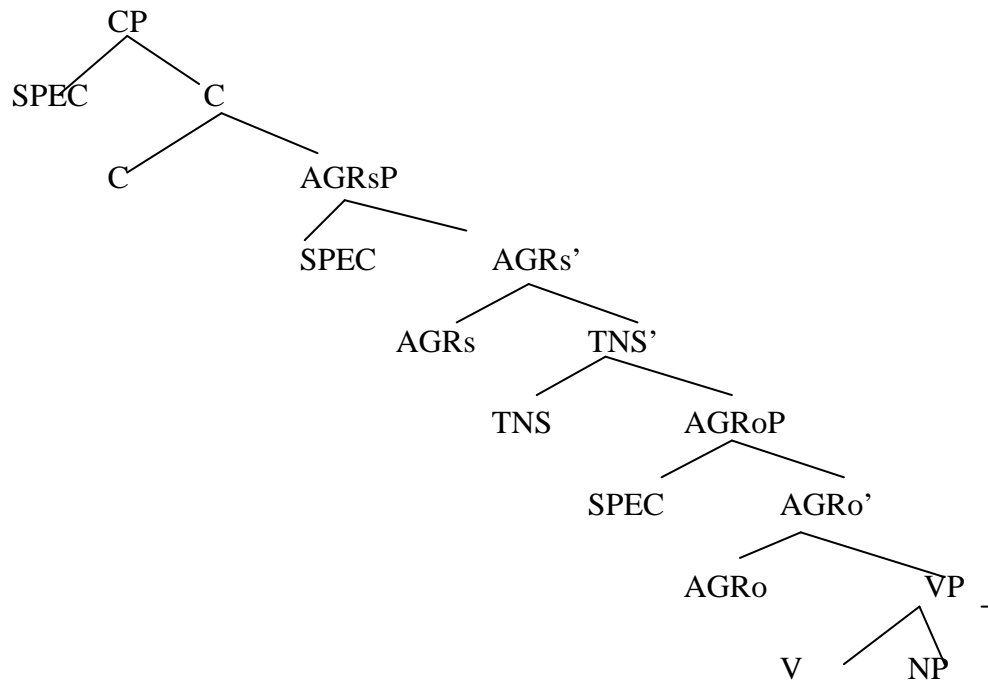
Figure 3: Sentence structure (Source: Schroeder 2008:28)

In the figure above, AGRs and AGRo are bundles containing features (gender, number, person), which distinguish the agreement-marking of the two functional roles of AGR, subject and object.

1.8.2.1 The Checking Theory (CT)

In the Minimalist framework, movement takes care of word order differences between languages. Schroeder (2008:34) points out that feature- checking requires all languages to have verb movement, that is, all languages move their verbs to the inflectional nodes, and NPs are moved to the specifier of AGRsP and AGRoP for feature checking**.**

Within the CT, the grammatical features which entail the phonetic, grammatical, semantic properties of words are checked, if the derivation is to be described in terms of sets of features. It is the nature of PF representation that they contain only phonetically interpretable features and in the nature of LF representations that they only contain semantically interpretable features. Radford (1997:174) assumes that all uninterpretable features must be checked in an appropriate checking configuration within an appropriate checking domain, and that checked uninterpretable features are erased. A head checks features of its specifier and its complement; and that all specifier-and complement features are uninterpretable, as are purely formal head-features (that is, head-features with no intrinsic semantic content)-number features are interpretable, but case-features are not in universal grammar. The interpretable features are grammatical features such as number, person and gender; while the uninterpretable features are case features of pronouns and inflectional features of non-finite verbs which must be erased in the course of the derivation (in order to ensure that they do not appear in LF representation). Radford (1997:175) further makes the following assumptions about checking:

> *The specifier-features of a head are checked against the head-features of its specifier, likewise, the complement-features of a head are checked against the head-features of its complement.*

Moreover, if there is compatibility between **checker** and **checked** in respect of a given feature, the relevant specifier- or complement-features is erased (because specifier- and complement –features are uninterpretable), and the corresponding head-feature is erased if purely formal and so uninterpretable (but is not erased if

interpretable). If there is incompatility between checker and checked in respect of some feature, the relevant feature cannot be erased from either (ibid).This requirement is imposed by the Principle of Full Interpretation (PFI) which specifies that a representation for any given sentence must contain all and only those elements, which contribute directly to its interpretation. This concept can be illustrated using Dholuo R-expression and anaphor:

(12)   'Japuonj onego dhiang'.
         '*The teacher has killed a cow'*.

The verb 'nego' merges with the NP'dhiang' to create the DP, and then assigns it roles. The DP 'dhiang'and the external NP 'Japuonj' are then merged into sentence. Thus the VP 'nego' is able to assign Ө- role to the external NP 'Japuonj' through the merge process. At the LF Ө-role assignment is checked to evaluate whether nouns nave been assigned correct Ө- roles.

 (13)   John no-nego-re
        '*John killed himself*'

The verb 'nego' merges the NP 'John' with the reflexive 'himself'. At the LF the checking is done to evaluate whether the reflexive is bound through the PFI.

(14)   Gi wound-o-r-e
        '*They are cheating each other'*.

The verb 'wuond'merges the NP 'gi' with the reciprocal 'each other'. At LF the checking is done to evaluate whether the reciprocal is bound through the PFI.

Within the Minimalist approach, possible movements are universal. A constituent always travel from its position of lexical insertion low in the tree to its logical form (LF) higher up. Hence we have the bottom-up position. This can be illustrated as below:

1.8.2.2 The Principle of Full Interpretation (FI)

The two independent representations of the interface are no longer represented by GBs traditional T-model, but by the following diagram:

Numeration
|
Spell-out

PF Representation
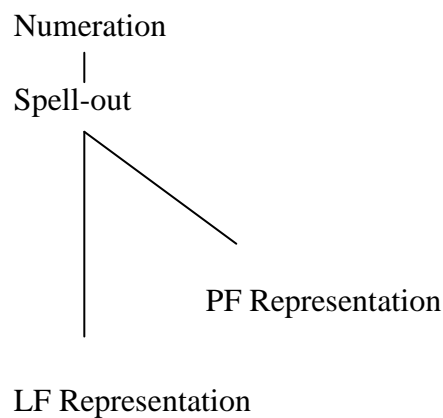
LF Representation

Figure 4: Computational process (Source: Schroeder 2008:25)

Within this new interface representation, the Principle of FI has been intergraded into the process of spell- out and is now also linked to the Principle of Economy. This principle constrains the structure-building process, so that no superfluous element appears, i.e., any element that is not licensed, either lexically or morphologically, is filteredout as the spell-out sorts out the semantic from the phonological information, spell-out is guided by the Principle of FI, so that no

unlicensed element appears on interface level. The Principle of FI replaces the Ө-criterion (Cook and Newson 1988:327), because the Ө-criterion turned out to be insufficient and arbitrary (Chomsky 1994:21), which guarantees that that the morphological elements of the verb and its syntactic relations appear at PF and LF after they have been case-assigned. Proper case-assignment takes place through the specifier-head relationship of the respective heads. Within the derivational process therefore spell-out can only take place after numeration and after the structure-building process, so that spell-out can do its sorting job according to the principle of FI for semantic and phonological information.

Schroeder (2008) notes that Chomsky's (1995) that the original thought of creating a deep structure level was that the operation Satisfy selected an array of items from the lexicon and mapped them onto deep structure level to satisfy the conditions of X-bar. Chomsky thus postulated an additional level beyond the two external levels PF and LF.Deep structure functioned as an internal interface between the lexicon and the computational system.UG principles such as the Projection Principle and the Ө-Criterion are held to apply to D-structure. The computational procedure maps the information of deep structure onto surface structure through move-α, and then branches off into PF and LF, thus producing the typical T- model of UG. Binding theory, case theory, and the pro-module apply at surface structure.

The concepts of Ө-theory turned out to be difficult in the early versions of the Principles and Parameters framework. First the D-structure raises empirical problems as postulated in Extended Standard Theory. In Lectures in Government and Binding, the problem is posed by complex adjectival constructions such as:

(15)   John is easy to please.
(16)   John is easy [cpop [IP PRO to please t]].

In this construction 'John' is occupying a non-Ө-position and hence cannot appear at D- structure level, and thus the Ө-filter is violated. Lasnik noted that LGB solution failed because an NP of arbitrary complexity may occur in place of 'John'. The NPs with multiple semantic roles violate the Ө-criterion which states that one argument can only bear one Ө-role. A typical example for one argument bearing more than one Ө-role is "John left the room angry", where John is not only the one who left the room, but he is also angry. Chomsky himself realized that linguistic expressions which have no place at deep structure level but are interpreted only at LF led to the disposal of deep structure, as it loses its "credibility" (Chomsky 1993:21). Jackendoff (1990:59-61) also working on a theory of meaning, tries to tackle the insufficiency of the roles and Ө-criterion for NPs that have more than one Ө-role or multiple NPs that hold a single Ө-role. He points out that the richness of semantic roles cannot be squeezes into such a rigid parameter as one Ө-role.

The Ө-theory and its principles turned out to be very weak, so Chomsky replaced its concepts. He retained the idea that semantic information has to be integrated into the syntactic framework, but the Ө-theory is no longer the mediator; rather, the Principle of Full Interpretation (Chomsky 1995:98) is: "Every element of PF and LF, taken to be the interface of syntax with systems of language use, must receive an appropriate interpretation- must be licensed in the sense indicated."

The principle of FI shifts the concepts of Ө-theory, like Ө-roles, into the area of the lexicon. It is in numeration that the elements are selected from the lexicon and get ready for structure -building. The semantic information previously conceptualized in the Ө-theory is now part of the lexicon. Thus transitive verbs determine the semantic role of an agent and a patient and are selected from the lexicon with their semantic characteristics. For example take the verb 'drink'; it has the following structure: agent-drink-patient. When 'drink' is selected from the lexicon' it determines that the subject of the sentence can only have the semantic role of an agent and the object role of a patient. The disposal of surface structure eliminates a lot of unsolved problems in binding theory; hence the binding conditions are left to apply at LF without any structural principle.

In summary, in the MP, the transfer of information from lexicon to interface to PF and LF deletes the deep structure level, the surface structure level, and the concept of government. Consequently, all other principles that applied at deep structure

level, such as the Ө-criterion and the Projection Principle (deep structure phenomena), case theory and binding theory (surface structure phenomena) have been disposed of. Case theory is reformulated to become a checking process and the Ө-criterion is taken over by the Principle of FI. The binding conditions are left to apply at LF without any structural principle. Case assignment has been unified through the specifier-head relationships of AGRs and AGRo unlike in the GB where the specifier-head of INFL assigned nominative case to the subject, and the head-complement relationship of the verb assigned accusative case to the object (Schroeder 2008:32-34). This can be represented using the figure below:
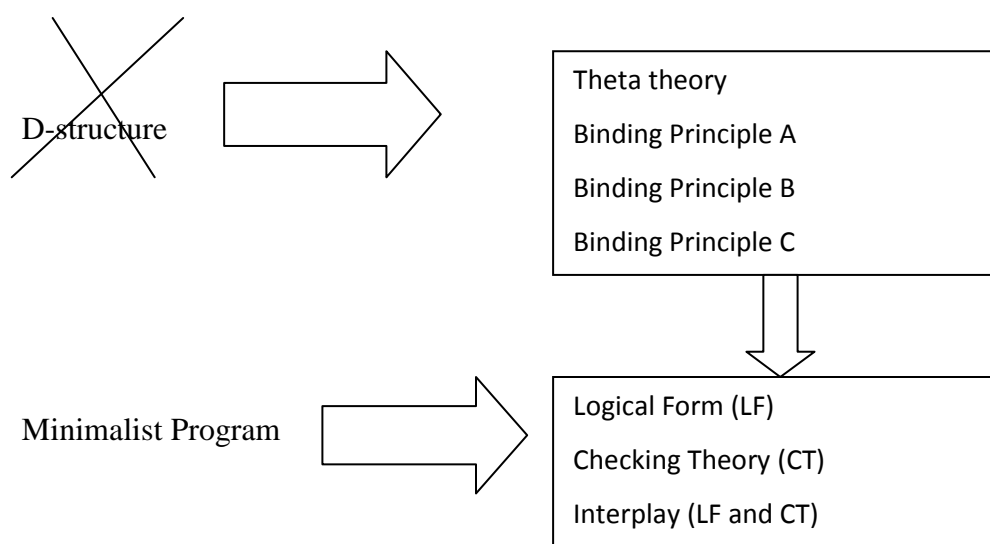
Figure 5: Elimination of the D-Structure (Source: Researcher)

1.9 Significance of the Study

This study is significant in a number of ways. First, it seeks to contribute to the development of generative grammar by giving a semantic analysis of Dholuo

declarative sentences using the Minimalist Program. The outcome of such study will contribute to linguistic knowledge where the checking theory and the Principle of Full Interpretation will be elaborated to yield their roles in semantics.

Secondly, this study will also be useful to linguists studying Dholuo as the data used in the analysis of the anaphors, personal pronouns, and reflexives are generated from the language.

Finally, the study will also help in highlighting the departure of the Minimalist Program from Government and Binding theory. This description of the development in the generative grammar will contribute to linguistic knowledge of the linguists.

1.10 Research Methodology

This study is both data-oriented and theoretical.

1.10.1 Methods of Data collection

Most of the data will be generated by the researcher who has intuitive knowledge of the language. As Horrocks (1987) quoted in Achola (2011:14) observes, that it is possible for a linguist who is a native speaker of the language under study to ask all the important questions regarding linguistic information and answer them by him/herself. The data will be counterchecked by two other Dholuo speakers who are fluent in the language selected randomly for verification.

1.10.2 Data analysis

The study is being carried out in the area of semantics. The data collected consists of Dholuo anaphors, personal pronouns, and R-expressions, which will be analyzed using the theory under study. The data will be translated to English for easy understanding and tree diagrams will be drawn to explain the relevant aspects.

1.11 Conclusion

In this chapter we have looked at the background of the language under study-Dholuo, the statement of the problem, research objectives, hypothesis, the scope and why the study is important. The theoretical framework of the Minimalist Program has also been laid out and its relevance to the research stated using Dholuo examples. The methodology used is also explained.

CHAPTER TWO

R-EXPRESSIONS AND PRONOUNS

2.0 Introduction

This chapter focuses on the identification and analysis of Dholuo R-expressions and pronouns. The sections are organized as follows: section 2.1 examines Dholuo R-expressions, section 2.2 gives a general overview of pronouns, section 2.3 examines the personal pronouns in Dholuo, section 2.4 examines pronominal argument languages, section 2.5 examines the parameters for pronominal languages, section 2.6 examines binding principle B and Dholuo personal pronouns, and section 2.7 gives the summary.

2.1 Dholuo R-expressions

Radford (1997:526) defines referential as the reference of an expression to the entity (for example, object, concept, state of affair) in the external world to which it refers. Therefore a referential expression is one which refers to such an entity.

In Government and Binding theory, the binding principles C states that a referential expression must be free everywhere. An R-expression selects a referent from the universe of discourse and do not tolerate binding from another element. Haegeman (1994:226) points out that R-expressions have independent reference, they do not need an antecedent; in fact they do not tolerate binding from another element. This fact can be illustrated with the Dholuo below:

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(1)   a. Mbura$_i$ onego oyieyo$_j$
             Cat   kill   rat
        '*The cat killed the rat*'

        b. Punda$_i$ ogweyo nyathi$_j$
            donkey kick   child
            '*The donkey has kicked a child*'

In example (1a) above, 'mbura' 'cat' and 'oyieyo''rat' are totally different entities
and they are not bound to each other: they are both free. In example (1b),
'punda'donkey' and 'nyathi' 'child' refer to totally different entities; hence they
are free in their binding domain. Therefore these sentences fulfill the binding
conditions of principle C. The subscripts indicate that the examples given above
are not bound by their antecedent. The R-expressions are said to be neither
pronominals nor anaphors. They are described to have the feature [-anaphor, -
pronominal] (Haegeman 1994:234).

Within the Minimalist Program, words move for checking purposes. The sentences
above can be interpreted within the Minimalist program by checking the fact that
'mbura' and 'oyieyo' in (1a) are different entities referring to different things and
the sentence is grammatical. They are not bound to each other and they refer to
different entities in the world. It therefore supposes that the sentence fulfills the
principle of full interpretation. In example (1b), 'punda' and 'nyathi' are
interpreted as belonging to different worlds, hence they are not bound to each
other. Through checking the sentence is grammatically correct, hence fulfilling the
principle of full interpretation.

2.2 General overview of pronouns

Pronouns have traditionally been referred to as referring expressions. According to Okoth (1997:56) pronouns (in a semantic sense) stand for more than just what may be called nouns. Radford (1997: 109) refers to pronouns as proforms and states that there are items which can be used to replace (or refer back to) a constituent of an appropriate kind. Okoth (ibid) argues against the use of the term proform in that the linguistic elements it refers to are not always noun-substitutes.

Moreover in the theory of Government and Binding, Chomsky states that a pronoun must be free in its governing category. This view is upheld in the analysis of the pronouns in this study. Haegeman (1994:224) gives a summary of the interpretation of pronouns that states:

A pronoun must be free in its governing category;

> a. The governing category is the minimal domain containing the pronoun, its governor and an accessible subject/ SUBJECT;
> b. Free is not bound.

The pronouns are categorized to contain the feature [-anaphor, +pronominal]. This differentiates them from R-expressions since the R-expressions do not contain the feature pronominal.

2.3 Types of pronouns in Dholuo

In Dholuo, there are different types of pronouns categorized as personal, possessive, demonstrative, interrogative, and relative. This study will focus on

personal pronouns with emphasis on the binding principle and the other types of pronouns will not be discussed.

2.3.1 Personal Pronouns

The personal pronouns in English as pointed out in Radford (1997:48) include I/me/us/you/he/him/it/they/them. These personal pronouns encode the grammatical property of **person so do NPs.** In English personal pronouns simply encode sets of **person, number, gender**, and **case** properties. This is illustrated in the table below:

			Case	
Person	**Number**	**Gender**	**Nominative**	**Objective**
1	Singular	-	I	We
1	Plural	-	We	Us
2	-	-	You	You
3	Singular	Masculine	He	Him
3	Singular	Feminine	She	Her
3	Singular	Neuter	It	It
3	Plural	-	They	Them

Table 2: Personal pronouns in English[1]

This account of English pronouns shows that the personal pronouns occur as lexical words having case features. This is relevant for our study because we are able to give a comparison with Dholuo. We can then look at Dholuo paradigmatic account of personal pronouns.

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[1] Indicates that the item in question carries no specific gender/number restriction on its use

2.3.1.1 Personal Pronouns in Dholuo

Omondi (1982:36) categorized the personal pronouns as definite person and indefinite person. According to Okoth (1982:41, 1997:57), the personal pronouns in Dholuo occur in emphatic and non-emphatic forms as. In this study, we will refer to the personal pronouns as free standing and incorporated. The free standing pronouns only occur as emphatic. The following is a paradigmatic account of the personal pronouns in Dholuo:

	Free standing	Incorporated
First person singular	An	a-, -a
First person plural	Wan	wa-, -wa
Second person singular	In	i-, -i
Second person plural	Un	u-, - u
Third person singular	En	o-, -e,-go
Third person plural	Gin	gi-, -gi

Table 3: Dholuo personal pronouns (source: researcher)

From the table it can be noted that Dholuo has six Person-Number combinations: singular –a,-i, -e, and plural -wa,-u, -gi. As compared to English which has one form second person pronoun for singular and plural 'you'. Dholuo has two forms in singular 'in' and plural 'un' (free- standing). The free standing forms an, wan, in, un, en, and gin can occur in isolation as free morphemes. Omondi (1982:38) points out that prefixes to the verb are markers of a subject. That Omondi

(1982:38) points out that prefixes to the verb are markers of a subject is refuted by Okoth who noted that they are never the subject of a verb (Okoth1982:42). The incorporated forms occur as either prefixes or suffixes when they occur as subject and object respectively.

From the paradigmatic account of Dholuo personal pronouns, for person-number combination (for example first person singular) there exist two incorporated forms x and y such that x occurs as a prefix (corresponding to subject) and y occurs as a suffix (corresponding to object). In our case, the third person singular, the y-element has two allomorphs (-e and –go) which are free variants(Okoth 1997:57).

Since Okoth's study was based on a functional analysis of grammar, it did discuss the functional loads of personal pronouns. He categorized the personal pronouns as emphatic and non-emphatic. Omondi (1982:37) on the other hand treated the personal pronouns as concord agreement whereby the marker of the subject is copied to the verb in which the subject is understood as a general thing. She further pointed out that the personal pronouns occur as headwords of noun phrases which can be qualified by the elements of determiner or relative clauses (Omondi1982:309). This study gives the personal pronouns a different interpretation as free standing pronouns and incorporated pronouns.

 From the discussion we can look at Dholuo declarative sentences with both intransitive and transitive verbs. We will first start with examples which have no

free standing morpheme. The examples are done with the verb 'dhi' 'go' and 'nego' 'kill':

(2)   a. A- dhi
        1ps- go
        I'm going.

        b.I- dhi
          2ps- go
        'You (sg) are going'

(3)   a. O- neg- a
          3ps- kill - 1ps
          'He/she/it kills me'

        b.O- neg- i
          3ps- kill- 1ps
          'He/she kills you'

        c.I – neg- e
          2ps- kill- him/her/it
          'You (sg) kill him/her/it'

In examples (1a, b) the intransitive verb 'dhi' has the prefixes a-, i-, which correspond to the subjects in these sentences. These prefixes are incorporated as they occur in their short forms. In examples (2a-c) the transitive verb 'nego' takes an object. The subject is marked by the prefixes o-, i-, gi-, while the object is marked by the suffixes –a, -i, -e,. These examples in (1) and (2) are evidence that Dholuo pronouns are morphemes which occur in a sentence as prefixes if they are subjects and suffixes if they are objects.

We can now look at examples with the free standing morpheme. Remember it was noted that this morpheme is not a subject. It is used in a sentence to stress on a particular point.

(4)   a. An a - neg- e
             I   1ps -kill- 3ps
             '*I   I kill him/her/it*'

        b.Wan wa- neg- e
          We 1ppl-kill-3ps
          '*We we kill him/her/it*'

In examples (3a-b) the free standing pronoun occur in the sentences as free morphemes which are not subject to the sentences. In (3a) the pronoun 'an' is used to emphasize the fact that it is I who killed him/her/ it , but not any other person. This applies to the other examples where the free morpheme pronouns are used to emphasize the subjects which appear as bound morphemes on the verb. The free morphemes and the bound morphemes agree in terms of number and person. Nevertheless, these examples reveal that the free standing pronoun is not a subject in the sentence but has some contrastive function as will be discussed later.

2.4 Pronominal Argument Languages

In order to understand the concept of pronominal argument languages, we need to examine the role of agreements in expression of arguments first.

2.4.1 Agreement versus arguments

Ackema et al (2006:1) points out that agreement is the linguistic phenomena in which particular features of one element in a clause (the controller) determines the morphological shape of another element (the target). Agreement between the person and number features of the subject of a sentence (the controller) and the finite verb (the target) is one of the best- known instance of agreement. According to Evans and Green (2006:98), agreement describes the morphological marking of a grammatical unit to signal a particular grammatical relationship with another unit. Agreement therefore involves grammatical features like person, number, and gender and may attract case. Dholuo as a language has no agreement, the independent pronouns are adjuncts , and not arguments. This fact can be illustrated in the examples below:

(5)   a. a - go - e
           1ps-beat-3ps
           'I beat him/her/it'

         b. an a - go- e
            I   1ps-beat-3ps
           ' I I beat him/her/it'

From the Dholuo examples in (4a), the incorporated pronoun a- has the grammatical feature of singular and person feature of being first person. In (4b), the independent pronoun 'an' shows agreement in the sentence, and it is the subject.

Languages with rich inflectional morphology for person and number allow certain arguments of the verb to remain overtly unexpressed syntactically rather easily. This phenomenon of not realizing an argument syntactically is called 'pro-drop', the name given in GB theory Chomsky (1981). In our example in (4) the argument of the verb is realized easily as it is expressed syntactically. The pronoun is expressed overtly as a morpheme a- already noted to be the subject of the sentence followed by the verb and the morpheme –e which is the object. The free standing morpheme 'an' is not the subject of the sentence in (4b) as had been discussed earlier. It is therefore evident that 'an' when dropped has no effect on the grammaticality of the sentence since it is not expressed syntactically. It is brought in the sentence to emphasize the fact that it is the speaker who beat the person.

In GB it was assumed that arguments are always expressed syntactically. In cases of pro-drop an empty pronoun pro occupies the relevant argument position. Rizzi quoted by Ackema et al (2006:4) suggested that pro is subject to two distinct types of licensing condition: the occurrence of an empty element must be licensed. Formal licensing restricts the occurrence of pro to a particular syntactic position, in a language. According to Rizzi, there is an arbitrary list of heads in a language such as (C, I, V, P,...) that license the occurrence of pro within their governing domain.

If pro is formally allowed to occur, its content must also be licensed, or recoverable, if it is to be usable. This can be achieved by rich inflection: person

and number affixes on the verb can identify the person and number features of pro, but only if each affix is uniquely specified for a particular person/number feature set- in other words, if the paradigm shows no syncretism.

Ackema et al also quotes Jaeggli and Safir (1986) who hypothesized, on the basis of the literature available then, that a language allows pro-drop if either all or no cells in its agreement paradigm contain an affix. This is expressed by their Morphological Uniformity Condition:

> Null subjects are permitted in all and only those languages that have morphologically uniform inflectional paradigms.
> Ackema et al (2006:6)

This implies that an inflectional paradigm is morphologically uniform if it contains either only underived or only morphologically complex (affixed) forms. If correct, the condition has important consequences for the theory on formal licensing of pro as well as for the theory on how the content of pro is licensed. Languages with poor agreement do not license pro.

2.4.2 The licensing of the argument in AGRP

These facts do not apply to Dholuo as a language since it contains affixes as pronouns. Ackema et al (2006:30) argues that this condition follows from a general economy condition on phrase structure that, roughly states that a phrase may only be projected if its head or specifier contains overt material. In languages with agreement morphology, this morphology must be checked in a spec-head configuration against the subject, and a phrase must be projected in which this

configuration is established, say an AgrP. (cf Chomsky 1995). Spears further assume that, in languages with rich agreement, the independent pronoun is an independent lexical item, which can be inserted directly in the head of AgrP, thereby licensing this projection. In languages with poor agreement this is impossible, and projection of AgrP is licensed only if this phrase contains an overt subject in its specifier position. Hence, pro-drop is ruled out in language with weak agreement. In languages without any agreement, no AgrP needs to be projected to provide the correct checking configuration for agreement, so that questions of how to license this projection do not arise in the first place. In Dholuo the independent pronoun is not an independent lexical item to be inserted directly to AgrP to license the projection. Thus there is no need for building the structure of agreement and for checking configuration for agreement. This is because the pronouns are incorporated in the verb.

Ackema et al (2006:76) combined with the general Economy principles that have the effect that XP (maximal projection) is projected only if X or spec, XP have content, yields the result that null subjects are not allowed in languages with weak AGR, since, in such a language the head of AGRP will have no content. This evidence that no feature licenses the AGRSP I in Dholuo are enough to justify that Dholuo is not a pro-drop language. We can then examine the pronominal languages to see if Dholuo can fit in.

2.4.3 Pronominal Argument (PA) Languages

These are languages where there is no subject-object asymmetry with respect to agreement, and both subject and object are always represented by some overt pronominal element. Coreferent DPs may be present for their argument, but need not be if reference is unambiguous in the context.   This fact can be illustrated below:

(6)　　Rawera o- nego dhiang'
　　　　Boy　　3ps-kill cow
　　　　'The boy killed the cow'

In example (5) the pronoun is an overt element represented by the morpheme o- which is the subject and refers back to the boy.

In PA languages, the subject-object pronominal inflection is absolutely necessary for grammaticality, while the adjoined nominal are present only when the speaker judges that they needed to establish reference. Therefore in example (5) the adjoined 'Rawera' is only necessary in order to establish that it is only the 'boy' who killed the 'dhiang' 'cow'.

2.4.3.1 Features of Pronominal Argument Languages

 In order to bring out the major features of PA languages, we are going to compare them with lexical Argument (LA) languages. Ackema et al (2006:265) points out that information structure is a feature of universal grammar; all languages have some means of marking this level of the interpretation of the sentence. She further points that topic and focus are given syntactic status as functional projections.

First and foremost, in a PA language, DP adjuncts and overt independent pronouns appear at Topic/Focus operator positions, while the incorporated pronouns are merged into verb. In our example (5) above the noun phrase 'Rawera' appears as an adjunct which is the topic of the sentence. The pronouns o- appears as an affix bound to the verb and it stands for subject.

A major feature of inflectional elements in PA languages is that they are all topical and discourse-anaphoric; only the lexical item can be focused. In LA languages on the other hand, both pronouns and DPs serve as arguments, and any constituent can be given focus via intonation, 'light' verbs or auxiliary, modals, even some affixes, can have contrastive stress. If there are any DPs at all in A-positions, then the language does not fall into the Pronominal Argument category. In example (5) all the pronouns are morphemes and bound to the verb. The free standing 'an' is placed on the periphery to give the semantic meaning of the sentence in (5b) that it is only the speaker who did the action. This example has no overt DPs since the pronoun a- is bound to the verb and the free standing 'an' occurs as a free morpheme which is not the subject of the verb.

Furthermore, in LA languages, information structure is largely expressed in intonation contrasts, and traditionally have been set aside as 'post-syntactic'. In PA languages the mapping between argument structure and topic/focus articulation is expressed in the morphosyntax, not by articulation. The incorporated pronouns are topical, unstressed discourse anaphors referring back to

a referent earlier in the clause or in the discourse. New information is presented in the form of lexical items, predicates or DPs that carry inherent focus and stress. This fact can be illustrated below:

(7)   a – nen – i
          1ps-see-2ps
          'I saw you'

In the above example, the pronoun a- occurs as the topic and is unstressed referring back to the person being talked about in the discourse. In this sentence, the affixed pronouns are both familiar and topical; both are topical and are old information. In comparable construction in English, either pronoun may be stressed.

(8)   a. **I** saw you

       b. I saw **you**

In example (7a) the 'I' is stressed while in (7b) the 'you' is stressed. This is unlike the Dholuo example where neither of the pronouns is stressed.

Moreover, Dholuo as a language solves the problem of placing focus on a pronominal argument by adding a freestanding contrastive focus pronoun in an A-bar position preceding the verb sentence as shown in example (8). These pronouns always carry a contrastive reading:

(9)   a. an a- nen-i
          I, 1ps-see-2ps
          'I saw you'

b. In a – nen- i
   You' 1ps-see- 2ps
   'You, I saw you'

In examples (8a,b) the free contrastive focus pronouns 'an' and 'in' have been placed in   A-bar positions preceding the verb sentence, but they are not in A position as PA languages do not have A positions.

It is important to note that the inflected verb, with its argument, does not change when a contrastive independent pronoun is present. This is the case in example (9) above where the addition of the contrastive pronouns 'an' and 'in' do not change the form of the inflected verb. It is impossible to produce a verb without its full complement of arguments, inflectional affixes, in Dholuo. Focus can only be added to an argument only via a contrastive focus element. This is the core difference between Pronominal Argument languages and Lexical Argument languages.

Finally, in a PA language the verb complex always represents a complete predicate/argument complex, with topical, unstressed pronominal arguments-old information-while the verb stem itself is new information. In contrast, in LA languages such as English, verbs appear without affixed arguments, a pronoun can be an arguments and a pronoun may freely receive contrastive intonation. Intonation is not used to mark argument focus in PA languages as has already been illustrated. Affixed pronouns are always topical, and lexical roots have normal (default) focus.

2.5 Pronominal Argument Languages Parameter

This section focuses on different parameters used to test pronominal languages. This is done with an aim of identifying if Dholuo can fit in these parameters.

2.5.1 The absence of pro-drop and agreement

PA languages completely lack the agreement relation, involving subjacency, that licenses pro-drop. The affixed pronouns serve as arguments, and contrastive pronouns and DPs are syntactic adjuncts to the predicate/argument complex. These adjuncts need not occur next to the pronouns. This is evidenced in Dholuo as has already been illustrated that as a language it lacks pro-drop and that it has pronouns which appear as bound morphemes affixed to the verb.

Jelinek (2006:266) says that PA languages have some syntactic agreement relation between terms generally recognized as agreement, where there are matching phi features between constituents in a subjacency relation. These functions are not taken up by independent pronouns, but they are only sets of contrastive focus pronouns that are limited to A-bar position. As already noted, the pronouns in Dholuo appear as either free standing pronouns which are not the arguments of the sentence and appear at A-bar position or incorporated pronouns bound by the verb, hence not independent. For example,

(10)   gin gi – her – i
       They 3ppl-love-2ps
       'They love you'

In example (9) above, the third person plural 'gi' and the second person singular 'i', the arguments of the clause are not independent since they are bound to the verb 'hero'. On the other hand, the contrastive focus pronoun 'gin' is limited to A-bar position, but is not the argument of the clause.

2.5.2 Case marking in PA languages

PA languages have distinct sets of case options available to independent and incorporated pronouns, on the one hand, verses 'full' DPs, on the other hand. The independent pronouns are adjuncts and they are not case marked while the incorporated pronouns are morphemes and morphemes are also not case marked. In contrast, DPs cannot carry grammatical case, as oblique objects do not carry or case . DPs in PA languages may also be cases-less predicate nouns or topical adjuncts.

(11)   ng'ato cha e-ma naneno
         Person that he is the one see
         'That is the person I saw'

The independent pronoun 'cha' 'that' and noun 'ng'ato' 'person' do not have case, and may bind any PA that matches in phi features. In example (11) the adjunct 'ng'ato cha' occupies a topical position, but not an argument position since this position can only be occupied by an incorporated pronoun which is the argument.

These parameters already discussed above are evidence that Dholuo is a pronominal argument language. They can be summed up as stated by Jelinek (2006:287) and Schroeder 2012 (lecture notes) as:

1. Pronominal argument languages have no A positions as the arguments are in the verb.

2. There are no DP- or wh-movement from A-positions, since these constituents are excluded from A-positions; the arguments are in the verb.

3. Reflexes do not function as emphatics, since they are incorporated pronominal arguments that exclude focus. This will be discussed in chapter three.

4. Case-marking is only a logical operation as morphemes cannot be case marked.

5. The arguments are always definite and known information.

6. The indefinite arguments are in adjunct positions.

7. There is a direct mapping between sentence and pragmatic structure taking place.

8. The overt NPs are analyzed in pragmatic terms as topic and focus.

The above conditions hold expressively for Dholuo.

2.6 Binding Principle B and Dholuo Personal Pronouns

This section examines the Dholuo personal pronouns and their interpretation within GB and the Minimalist Program.

2.6.1 Government and Binding Interpretation

As already been noted in the general overview, the pronoun is suppose to be free in its governing category. The governing category is said to be the minimal domain containing the pronoun, its governor, and an accessible subject/SUBJECT.

From the inventory of Dholuo personal pronouns, we have noted that there are two types of personal pronouns: independent pronouns and incorporated pronouns. The free standing pronouns occur as R-expressions while the incorporated ones occur as prefixes and suffixes bound to the verb and subject to principle B. This fact can be illustrated below:

(12)   an a - neg - i
         I, 1ps-kill-2ps
         'I,I kill you'

In example (12), the independent pronoun 'an' is subject to the binding principle C, since it is an R-expression and it is free in its governing category. It thus needs a reference assignment which in our case is '-i' in the sentence above. The incorporated pronoun in Dholuo on the other hand occurs as a bound morpheme which is incorporated in the verb. It therefore violates the binding principle B since it is bound **not** free.

2.6.2 Binding Principle B and the Minimalist Program

As already noted in section 2.3.1, Dholuo has no agreement with no projection of AgrP. The independent pronoun in Dholuo is not an independent lexical item to be

inserted directly to AgrP to license the projection. It appears as a short form of the free standing pronoun prefixed to the verb. Hence there is no checking configuration for agreement.

The incorporated pronoun is bound to the verb. It therefore violates the binding principle B. While the free standing pronoun occur as free and contains the phi features, and also have some syntactic agreement relation with the prefixed subject. These binding conditions apply in the lexicon' and they are only checked under LF whether they are consistent. This fact can be illustrated as below:

(13)   an a – neg – i
          I, 1ps-kill-2ps
         'I, I kill you'

In example (13), above, the incorporated pronoun a- which is the subject is bound to the verb and therefore cannot be inserted directly to AgrP to license the projection. This incorporated pronoun is the short form of the of the free standing pronoun 'an'. There are no interpretable features, no case features and therefore no basis for merging. The sentence is grammatical and satisfies the conditions of PFI ,and at LF the sentence was checked and found to be consistent.

2.7 Summary

In this chapter we first examined the R-expressions in Dholuo and found that they occur as different entities, hence they are not bound to anything; they are free everywhere. Therefore the R-expressions fulfill the binding condition C of GB. The R-expressions in Dholuo which were found to include the nouns and

independent pronoun were also interpreted within the Minimalist Program and found to be interpretable after checking, thus satisfying the principle of full interpretation. Then we examined the personal pronouns in English and compared them with Dholuo which occur in two forms: free standing and incorporated. This was done by drawing a parallel distinction between pro-drop argument languages and pronominal argument languages. Dholuo was found to belong to the pronominal argument languages since it fits within the parameters for pronominal argument languages. The independent pronouns were found to be R-expressions satisfying principle C while the incorporated pronouns were found to be bound to the verb violating the binding principle B of the GB. The binding principle B was interpreted within the MP and found that there was no basis for merging conditions since the verb was in the lexicon with all its pronominal features; checking only takes place at LF for consistency.

CHAPTER THREE

ANAPHORS IN DHOLUO AND THETA THEORY

3.0 Introduction

This chapter focuses on the identification and interpretation of Dholuo anaphors that is the reflexives and reciprocals and assignment of theta roles to arguments. These elements are discussed using the Government and Binding theory and the Minimalist Program's theory checking theory and the principle of full interpretation. The sections are organized as follows: section 3.1 gives a general overview of the binding principles, section 3.2examines Dholuo reflexive, section 3.3 deals with the Dholuo reciprocals, section 3.4 examines the theta theory and section 3.5 gives the summary.

3.1 General overview of the binding principles

In binding theory of GB, anaphoric relations in many languages are largely local, that is they occur within the same clause (Chomsky 1981, Haegeman1994). The principles of binding theory specify the elements whose construal is determined by some antecedent and the requisite structural conditions for successful construal.

According to Haegeman (1994:205), the binding theory (BT) is a module of grammar that regulates the referential properties of NPs. The BT examines the relations between NPs in argument positions (A-positions), it is a theory of A-

binding. This means that the theory is not concerned with the interpretation of NPs in non-argument positions.

Binding has traditionally, involved reflexives and pronominals. The former have their construal with an antecedent resolved within an appropriately defined domain. The later, on the other hand, appear to be more involved in discourse structure. Either version of binding theory included reciprocals in the typology of bound elements grouped together with reflexives as requiring an antecedent within some local domain.

As said before there are three types of NPs that are subject to various requirements of the binding conditions: anaphors (reflexives, reciprocals), pronouns, and R-expressions (discussed in chapter two). This chapter focuses on principle A which entails anaphors that is reflexives and reciprocals. Haegeman (ibid) says that Principle A is the Principle that regulates the interpretation of elements that are referentially dependent, such as reflexives and reciprocals.

Principle A imposes that reflexives are linked to, or bound by, an NP in an A-position within a certain domain, the **binding domain**.

Haegemann (ibid)) summarizes the binding principle A as follows:

> Principle A: Reflexive pronouns and Reciprocals must be bound in their minimal governing category.

3.2. Reflexive

The NP in which a reflexive is dependent for its interpretation is the antecedent of the reflexive, hence they share the same referent. The reflexive and its antecedent must agree with respect to the nominal features of person, gender, and number. We therefore use coindexation to show that the reflexive and its antecedent share the same referent. This fact can be illustrated with the English example below:

(1) Ann_i hurt $herself_i$

In the example (5) above, coindexation is used to indicate that 'herself' and 'Ann' have the same referent. The reflexive 'herself' and its antecedent 'Ann' agree with respect to the nominal features of person, gender, and number. This follows from the fact that the reflexive depends for its interpretation on the antecedent. The reflexive must be bound by the antecedent. The antecedent is the **binder** of the reflexive (Haegeman 1994:208). From the example, 'Ann' is the binder while 'herself' is the reflexive. They agree in terms of number, gender and person, since 'Ann' the binder is one person, a female and binds the reflexive 'herself' which carries the personal pronoun 'her' referring to a female and –self which is singular.

Haegeman (1994:219) sums up the binding conditions as follows:

A binds B if and only if

(a) A is an A-position;

(b) A c-commands B;

60

(c) A and B are coindexed**.**

The information above can be illustrated with the diagram below
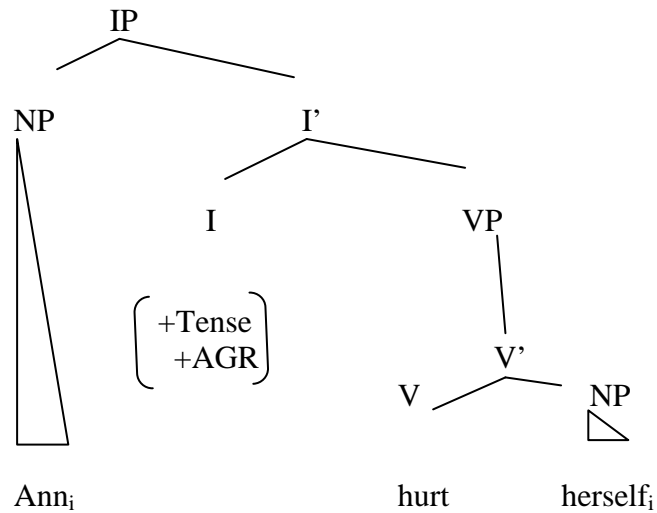
Figure 6: Reflexive Binding

From the diagram above, 'Ann' c-commands 'herself' because the first branching node dominating 'Ann' also dominates 'herself'. The NP 'Ann' is also in an A-position and it is coindexed with 'herself'. Agreement (AGR) is a bundle of nominal features (person, number) contained in inflection (I), the head of Inflectional Phrase (IP) also called a simple sentence. The NP 'Ann' agrees in person and number with the reflexive 'herself'.[2]

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[2] Structurally, the C-command conditions are summed up as follows:

A node A C-commands a node B if and only if

    (a) **A does not dominate B;**

    (b) **B does not dominate A;**

    (c) **The first branching node dominating A also dominates B.**

Chomsky (1995) assumed that LF has the structure of a phrase marker, the reallocation of principles from DS and SS (in GB) is to LF exclusively. In GB, binding principles apply either at S-structure, the level that feeds both PF and LF. However, with the elimination of S-structure and D-structure within Minimalism, then LF remains the only level at which binding theory must hold.

This contrasts sharply with the MP structural assumptions that words /morphemes are selected for use in the derivation (the (N)numeration are inserted into the tree by a derivational structure building process of adjoining known as merge or move, no c-commands are needed anymore. The MP is thus regulated by the twin procedure of move and merge.

According to Chomsky, merge is a function that takes two objects and merges them into an ordered set with a label. The label identifies the properties of the phrase. This is shown in the abstract diagram below
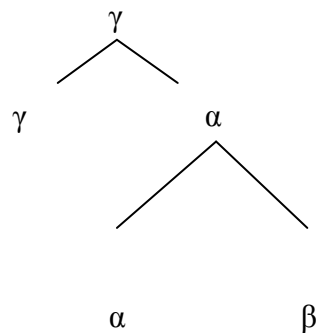
Here γ correspond to a general label specifying the identity of the whole structure. This is some kind of verb phrase (known as light vP), a functional category present to implement movement of the external argument to [Spec, vP] position.

3.3 Dholuo reflexives

As already discussed in chapter two, Dholuo is categorized under pronominal argument language in which the reflexives are incorporated arguments. Omondi (1982:105) points out that the reflexive form of the verb is the form the transitive verb may assume when its object and subject are correferent. She further states that the impersonal or general reflexive suffix is 'ruok' which may occur, for example in 'iluokruok' 'somebody/something is washing himself/itself. When the objects are not impersonal or general indefinite the suffixes in the reflexive form of the verb seem to consist of an /r/ plus the personal object prefix. Okoth (1997:41) on the other hand categorizes the reflexives and the reciprocals in one category. He points out that there are two types of reflexives: true reflexives that end in –self and reciprocal constructions that end in each other. Both Okoth and Omondi agree to the fact that there are some ambiguity in the interpretation of reflexives and reciprocals since they are marked by the same morpheme –r followed by the person morpheme. The ambiguity is also found in the Dholuo data in this study. For instance in the example below,

(1)   Dhok nang'o-re
          Cows lick each other/themselves
          'Cows are licking each other/themselves'

In the above sentence, there is a word level structural ambiguity with respect to the word 'nang'ore'. We can interpret the sentence above as a reflexive or a reciprocal

because of the morpheme –re which can either be themselves or each other. It is left to context to find the right intepretation.

In this study the reflexives and the reciprocals are categorized as anaphors and they are going to be analyzed as such. The reflexive in Dholuo is marked with a bound morpheme –r meaning 'self' followed by the person morpheme –a, -e, -u. The occurrence of the reflexive can be illustrated in a paradigm as shown below with 'hero' 'love':

(2)   a-hero –ra
         'I love myself'
         wa-hero-re
          'We love ourselves'
         i-hero-ri
          'You love yourself'
         u-hero-ru
          'You love yourselves'
         o-hero-re
         'He/she/it love him/her/itself'
          gi-hero-re
          'They love themselves'

From the Dholuo paradigmatic account, -r is the 'self' and it is bound on the verb. The arguments occur as morphemes which are also bound on the verb. The prefixes a-, wa-, i-, u-, o-, gi- refers to the subject, while the suffixes a-, e-, i-, u- occur as incorporated morphemes within the verb expressing the persons in relation to the reflexives.

From the data, the morpheme –e combined with –r self to form the reflexives ourselves/himself /herself/itself/themselves, we can assume that at one point in the

language the suffix ending was different as we will see in the reciprocals. This information is summed up in the table below:

Person	Singular	Plural
First person	ra	re
Second person	ri	ru
Third person	re	re

Table 4: Reflexives in Dholuo

From the table above, the reflexive ' r' a morpheme combines with the vowels a/i/e/u in different environments. In the first person singular, the reflexive combines with –a while in the plural it combines with –e. In the second person the reflexive combines with –i in the singular and –u in the plural, while in the third person the reflexive combines with –e in both singular and plural. The reflexive 'r' in Dholuo therefore occurs as an incorporated morpheme in the verb.

In GB, Binding in Dholuo occurs within the domain of the word, the verb, as in the word 'aherora' as compared to English where it occurs in the domain of the sentence. The reflexive –ra is therefore bound by the morpheme a- which is the antecedent. This fact is illustrated below:

A_i-hero-ra$_i$
'*I love myself*'

The reflexive in the above example is coindexed with the antecedent to establish their relationship. This one word sentence therefore fulfills the binding conditions

that a reflexive must be bound in its binding domain, however the binding domain
is not the sentence but the word.

We can also examine the example below with a free standing NP:

(3)   Atieno o$_i$-hero-re$_i$
           '*Atieno loves herself*'

In the above example (3), the reflexive –re binds the morpheme o- because they
occur in the same word domain. The NP 'Atieno' is not bound by the reflexive-re,
since it occurs as a adjunct, and is also not in an A-position as it had already been
established in chapter two that it is an R-expression.

Consequently, we can establish from the analysis above that the argument
reflexive in Dholuo occurs as an integrated argument within the word. Binding in
Dholuo therefore occurs at the word level as we have seen in the examples above.

3.3.1 Dholuo Reflexives in Minimalist Program

As earlier mentioned in the literature, words move for checking purpose within the
Minimalist Program. The words are checked for their features to determine if they
are interpretable or uninterpretable. The uninterpretable features are then erased.
We can examine the Dholuo reflexive paradigm below using the verb 'hero' 'love'
to establish their interpretability:

(4)   a-hero-ra
           wa-hero-re
           i- hero-ri
           u-hero-ru
           gi-hero-re
           o-hero-re

From the paradigm above, we can establish that the morphemes (prefixes a-, wa-, i-, u-, gi-,o-, and suffixes –ra, -re, -ri, -ru) are features. The prefixes contain the grammatical features of number and gender, while the suffixes contain the uninterpretable person features. When we examine the word 'aherora', the binding conditions do not apply, but the principle of full interpretation is used to interpret the word. There is no basis for merging conditions since there is no agreement, no case and no interpretable features within the word, verb which have to be matched. The verb is contained in the lexicon where it is checked under LF for consistency. We can also examine the sentence below:

(5)   Atieno o-hero-re
        '*Atieno loves herself*'

 In the above sentence, the principle of full interpretation ensures that 'Atieno' which occurs in an adjunct position is not bound by the reflexive –re. Instead, the interpretable features of o- and the uninterpretable features of –re are matched and found to be interpretable satisfying the principle of full interpretation; hence the derivation converges at LF.

From the paradigm in example (4) above, the word- final vowel is chosen from the person-markers a-, i-; e- is the unmarked form that can be used to replace any of the specified environments. This unmarked form is the citation form of a reflexive verb as stated in (Okoth 1997:40). In the example (4), the verb 'aherora' 'love' is marked to show that the subject a- relates to itself rather than to some other entity. According to Lyons (1968:361), he defines a reflexive construction as one in

which the subject and object refer to the same person or thing. This means that the subject and object have one common referent. This can be illustrated in the following Dholuo constructions:

(6)   Guoko o-nang'o-re
           Dog lick-itself
           'The dog has licked itself'

In the example above, the subject o- and the object '-e' refer to the same thing 'guok'. The dog in this case is performing the act of licking itself '-re'. The noun 'guok' 'dog' occurs as an adjunct, while the reflexive –re is bound within the verb. There is no merging that takes place since the verb has no case features and interpretable features. The verb is interpreted as grammatical in the LF satisfying the conditions of the PFI.

It was stated above that agreement is the licensing conditions for uninterpretable and interpretable. Dholuo as had been noted in chapter two has poor agreement with no projection of AgrP. The independent pronoun is not an independent lexical item to be inserted directly to AgrP to license the projection. The reflexive is incorporated in the verb. In examples (5) and (6), the independent lexical items 'Atieno' and 'guok' cannot license the merging process since they are interpreted as R-expressions. The reflexive as can be seen in the examples is incoporated in the verb, and so cannot be moved for checking purposes.

3.4 Reciprocal

The reciprocal in English is represented by 'each other'. These reciprocals are said to be referentially dependent. The reciprocals are inherently plural and hence need a plural antecedent for their interpretation (Haegeman 1994:223). In the literature, reciprocal elements just like reflexives are said to be subject to the binding relations, that is, they select an antecedent in the local domain which is normally the minimal clause or NP containing the reciprocal and the accessible antecedent (Chomsky 1981). These facts can be illustrated with the English examples below:

(7)   a. The students$_i$ attacked each other$_i$.

            b.* The student$_i$ attacked each other$_i$.

In example (7a) above, the reciprocal 'each other' is bound by the subject NP 'the students' and this sentence is grammatical. In example (7b) on the other hand, the singular NP 'the student' cannot act as the binder for the reciprocal.

According to the binding conditions on the reciprocals, a reciprocal must be bound by an antecedent in an argument position. The argument c-commands the reciprocal, it is coindexed with. In example (7a) above, the argument 'the students binds the reciprocal 'each other' because it is in the argument position, and it is the only accessible subject in its local domain. The argument 'the students' and the reciprocal each other are coindexed to indicate the binding relationship. This information can be represented in the tree diagram as shown below:
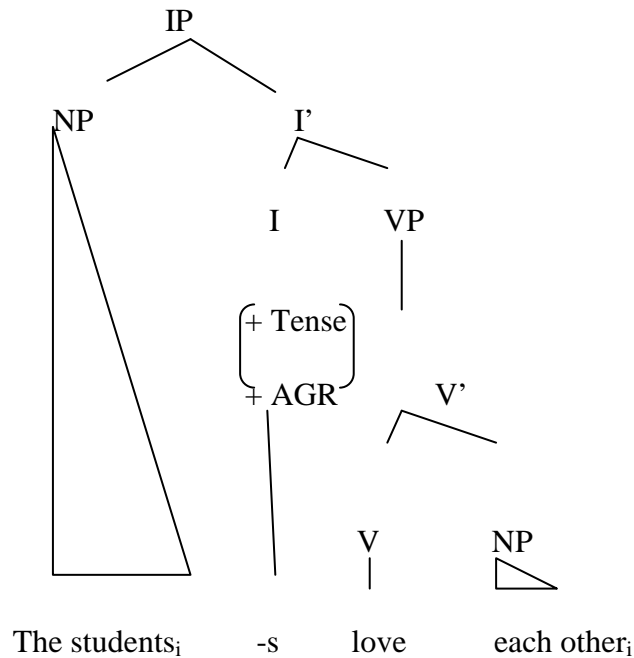
Figure 7: Reciprocal binding

From the diagram 'the students' C-commands the reciprocal 'each other' because the first branching node dominating 'the students' also dominates 'each other'. This information is summed up in the C-command condition below:

3.4.1 Dholuo reciprocal

The reciprocal in Dholuo is marked morphologically with the same bound morpheme –r as the reflexive followed by the person morpheme. This fact can be illustrated by the paradigm below:

(8)   Wa- hero- re
         '*We love each other*'

          Gi –hero-re
         '*They love each other*'

From the examples given above, we find that –re refers to the reciprocal and it occurs with plural subjects 'wa' 'we' and 'gi' 'they'. The reciprocal –re in Dholuo should not be misinterpreted for the reflexive –re because for the reflexive, the final vowel refers to different persons while r is the reflexive 'self. On the other hand the reciprocal 'each other' is represented with both r and –e. Moreover, the difference between the reciprocal and reflexive in Dholuo can be established within the context of use by the speaker. The reciprocal -re therefore occurs as a bound morpheme in the verb.

The idea of reciprocal binding appears to be noted in efforts to provide a coherent account of the reciprocal relation that is evident in the semantic interpretation of expressions built from reciprocal verbs. In a reciprocal construction, the participants in the given state of affairs do the same thing to one another. This fact can be illustrated below:

(9)   a. Rawere gi- go -re
               Youths-they-fight-each other
               'The youths are fighting each other'

         b. Mine wa- lau-   re
             Women-we- chase-each other
            'Women are chasing each other'

In example (9a), the youths who are the participants are in the act of fighting one another, while in (9b) the women are chasing after one another.

In GB theory the binding principle A states that the reciprocal is bound within its governing category. The antecedents which appear as a lexical constituent occur in the argument position. Just like in the reflexive in Dholuo which is incorporated within the verb, the reciprocal in Dholuo is also incorporated within the verb and it appears as a bound morpheme within the word. In example (9a) for instance, the reciprocal –re is bound by the verb 'go' 'fight'. The independent NP 'rawere' occurs as an adjunct therefore does not bind the reciprocal verb 'gore'. The reciprocal –re is bound by the morpheme 'gi-'which is its antecedent. The binding condition occurs within the domain of a word, that is the verb. The conditions of the binding principle A are fulfilled through coindexation. In example (9b), the reciprocal –re is bound by the morpheme wa- its antecedent within the verb. The reciprocal –re is hence coindexed with the morpheme wa- to satisfy the binding condition A. This fact is shown in example (10) below:

(10)　　　a. Rawere gi_i-go-re_i
　　　　　　Youths they fight each other
　　　　　'The youths are fighting each other'
　　　　　b. Mine wa_i-lau-re_i
　　　　　　Women we chase each other
　　　　　'Women are chasing each other'

In example (10a) above, the reciprocal '-re' is bound by the accessible subject morpheme gi- which is an argument and it is coindexed with it. In example (10b), the reciprocal –re is coindexed with the morpheme wa- which is an argument. These sentences therefore satisfy the binding condition of principle A which has occurred within the word, in our case the verb.

3.4.2 Reciprocals in Minimalist Program

Within the Minimalist Program, the lexical elements enter the computational process with the features; head, specifier and complement features. The checking process then takes place to check the interpretable and uninterpretable features. The uninterpretable features already discussed in the literature are then erased. The licensing condition is agreement. It is therefore important to recount what was discussed in chapter two that Dholuo as a language has poor agreement with no projection to AgrP, and the verb occurs with incorporated argument. The reciprocal as it has been established occurs as a bound morpheme on the verb. We can illustrate these facts by the example below:

(11)   Rawere gigore
            '*Youths are fighting each other*'

As it had already been discussed in the reflexives, there is no basis for merging conditions in Dholuo because the reciprocal is incorporated in the verb. The verb has no case features and agreement features. The verb therefore does not move for checking purposes since there is no projection for AGRP. The binding conditions apply in the lexicon where they are only checked under LF for grammaticality and consistency. The lexical item 'rawere' is interpretable as an adjunct which is not bound by the reciprocal. The sentence is example (11) is grammatical as it satisfies the PFI.

3.5 Theta theory

This section examines the theta theory in the GB and the MP. We will first give an overview of the PA language which will help us in the assignment of the theta roles.

3.5.1 Overview of pronominal language

We found out that Dholuo is a pronominal language based on the fulfillment of the parameters discussed. We discussed that pronominal languages are languages where there is no subject-object asymmetry with respect to agreement, and both subject and object are always represented by some overt pronominal element. This fact can be illustrated below:

(12)　　a. o- nen-　e
　　　　　 He see(pst) him
　　　　　'He saw him.'

　　　　　b. Otieno　no - nen-　e
　　　　　 (Otieno) he see(pst) him
　　　　　 '(Otieno) saw him.'

The subject-object pronominal inflection is absolutely necessary for grammaticality, while the adjoined nominal are present only when the speaker judges that they needed to be established reference. In the example (12a) above, the morpheme o- which is overt refers to a person well known to the speaker and it is the subject of the sentence. Therefore this sentence is grammatical because the pronominal inflection fills up the subject position and the object position is filled up by the person morpheme. On the other hand, in example (12b) the DP (Otieno)

is in an adjunct position because the subject is marked on the verb, hence not the subject of the sentence, but a lexical item that is focused on. The pronoun o- refers back to the referent 'Otieno.' With this background in mind, we will base our analysis of theta roles in Dholuo on the fact that the language is a pronominal argument language unlike English which is a lexical argument language as it was discussed in chapter two.

3.5.2 Predicate and argument

Earlier in the literature we discussed that it is the property of the verb to have one or more NPs inside the VP. The verbs are subcategorized as transitive, intransitive and ditransitive. In the argument structure, the lexicon is the repository of all (idiosyncratic) properties of particular lexical items. These properties include a representation of the phonological form of each item, its morphosyntactic features and a specification of its semantic characteristics. This information is important because it would be of use in the assignment of thematic roles.

3.5.3 Theta theory in GB

Theta theory is a theory that handles the relationships that sentences have such as who is doing the action and who or what is being affected by the action. They are part of the contents of the lexical entry for an item, which get assigned to a relevant NP in the sentence; 'We call the semantic properties assigned by heads thematic roles (Ө- roles)' (KOL 1986a:93). The lexical entry for a verb needs to

specify the Ө-roles that go with it (Cook 1988:111).The relationship between verbs and their arguments are referred to in terms of thematic roles or theta roles. The component of the grammar that regulates the assignment of thematic roles is called **theta theory**. We can explain this fact using the Dholuo example below:

> (13)   Alice baro yien.
>   '*Alice splits wood*'
>   baro: verb; 1   2
>   NP   NP

The sentence above means that Alice is the person performing the action of splitting the wood 'yien'. The wood therefore is the thing affected by the action. These semantic properties of the NPs are assigned by the verb 'baro'. The semantic properties of the NPs adopted from Haegeman (1994:49-50) already in the literature can be illustrated can be as shown in the English examples below:

> (14)   a. The ball rolled towards the post.
>   **Theme**   **goal**
>   b. Mary   likes   fairy tales.
>   **experiencer**   **theme**
>   c. Liz   is   in Nairobi.
>   **theme**   **location**

From the examples above, we can see that in (14a), the verb 'roll' assigns a semantic functions of **theme** to the NP ball and **goal** to the preposition 'towards'. In (14b) on the other hand, the verb 'like' assigns the semantic functions of **experiencer** to the NP Mary and **theme** to the NP fairy tales. Then in (14c), the auxiliary verb 'is' assigns the semantic function of **theme** to the NP Liz and **location** to the NP ' Nairobi' because it is preceded by a preposition of location. It

is therefore clear from the English examples above that the verb assigns semantic functions to its arguments. The semantic properties can also be assigned to Dholuo examples as shown below:

(15) a.Ben o-ng'ielo mpira kochiko Apidi
agent   theme   goal
'Ben rolled the ball towards Apidi'

b. Mpira o-ngielore koa got
theme   source loc
'The ball rolled down from the hill'

From the examples above, we can see that in (4a), the verb 'ng'ielo' assigns a semantic function of **agen**t to the NP o-'he' , **theme** to NP 'mpira' and **goal** to NP 'Apidi'. In example (4b), the verb 'ng'ielo' assigns a semantic function of **theme** to the NP o- 'it', **source** to 'koa' and **goal** to the NP 'got'.

3.5.3.1 Thematic roles

According to Haegeman (1994:49), the semantic relations between verbs and their arguments are referred to in terms of thematic roles or theta roles. The verb theta marks its arguments. For instance, we can examine this fact with the English example below:

(16)   Ben   killed   the bird
agent   patient

In the above example, the verb 'kill' takes two arguments to which it assigns a theta role: it assigns the role of **agent** to the subject argument of the sentence, and the role **patient** to the object argument.

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The information as to the semantic relationship between the predicate and its arguments is part of the lexical knowledge of the native speaker and should hence also be recorded in the lexicon. Haegeman (1994:51) further asserts that rather than specifying the number of arguments of a predicate, one may envisage a representation which specifies the type of semantic roles of these arguments. In GB theory this is represented by means of a theta grid, which is part of the lexical entry of the predicate. We can represent example (16) above as follow:

Kill: verb

AGENT	PATIENT

The grid specifies that the verb 'kill' assigns two thematic roles (AGENT, PATIENT). We then deduce that the verb is a two place predicate, which requires two arguments to which these roles can be assigned. The syntactic category realizing the thematic role can also be specified in the thematic grid of a predicate. This fact is shown below:

Kill: verb

AGENT NP	PATIENT NP

Haegeman (1994:52) further argues that one criterion for judging whether a sentence is grammatical is that the thematic roles associated with its predicate(s)

must be assigned to arguments, these arguments must be structurally realized. Conversely, the referring NPs in the sentence must bear some semantic relation to a predicate. This semantic relation can be established via the assignment of thematic roles. When these theta roles can be assigned to arguments we say that they are **saturated** and we mark this by checking off the theta roles in the thematic grid of the predicate. In order to identify the assignment of the respective thematic roles to the corresponding arguments, NPs are identified by means of an index, a subscript. This fact is illustrated below:

Kill: verb

AGENT NP	PATIENT NP
i	J

In the above example, the thematic role of 'agent' assigned to the first NP is identified by the subscript 'i' while the thematic role 'patient' assigned to the second NP is identified by the subscript 'j'. These facts can also be explained using Dhouo example below:

(17)   Ann o-nego gweno.
            agent   patient
            '*Ann has killed a chicken*'

The verb 'nego' 'kill' assigns two thematic roles (AGENT to the NP o- and PATIENT to the NP 'gweno'). The verb is therefore a two- place predicate which requires two arguments to which these roles can be assigned. This can be represented in a grid as shown below:

Nego: verb

AGENT NP	PATIENT NP
1	2

The thematic grid above shows that the predicate 'nego' is a two place-predicate with two arguments represented by the NPs bearing the semantic roles of agent and patient. This information is recorded in the lexicon and is part of knowledge of the native speaker. The numbers (1) indicates that it is an external argument while (2) an internal argument.

In the example containing the predicate 'nego', nego assigns the thematic roles of AGENT and PATIENT, hence it requires two arguments. This fact is shown below:

(18)   Ann o_i-nego gweno$_j$

Nego: verb

AGENT NP	PATIENT NP
I	j

In the example above, the arguments have been assigned theta roles hence they are saturated. The NPs are identified by the index i and j which appear as subscript below the arguments. The NP agent is indexed i while the patient is indexed j. The agent subscript is underlined to show that it is an external argument; hence the

verb assigns it an external theta role. The verb assigns an internal theta role to the argument 'gweno' represented by the subscript j.

Theta criterion

From the literature it was pointed out that in the predicate-argument condition complements functional uniqueness, requires every argument in a sentence to bear a theta role. This excludes the possibility of having arguments occur in non-thematic positions where they are not linked to some other non-thematic position via trace binding. These two conditions have been incorporated into a more general condition, the theta criterion summed up below:

a. Each argument is assigned one and only one theta role.

b. Each theta role is assigned to one and only one argument. (Haegeman 1994:54)

The second part of the theta criterion prohibits two structural arguments of a predicate from bearing the same thematic function.

The theta criterion concerns some lexical properties of predicates-namely, how many theta roles each assigns and which theta roles they are. These lexical properties are also expressed in the projection principle, which states that lexical structure must be represented categorically at every syntactic level (that is, D-structure, S-structure, and LF).

From the discussion on theta criterion above, we can say that our example 'Ben killed the bird' satisfies the conditions since each theta role has been assigned to only one argument: Ben as agent and the bird as patient. Besides, each argument has been assigned one and only one argument; the arguments Ben and the bird each have been assigned a thematic role. On the other hand the example 'Ann onego gweno' also satisfies the theta criterion since the each argument o- and gweno have been assigned one and only one theta role and each theta role has been assigned to each of the arguments.

3.5.4 Theta theory in the Minimalist Program

According to Brown and Miller (1996:135) the principles of universal grammar are formulated as conditions on representations-licensing conditions on particular elements in syntactic representation. In order to understand how theta theory is interpreted within the MP, we will examine how movement takes place in the MP and the principle of full interpretation. Then we shall analyze Dholuo examples within the MP.

3.5.4.1. Movement and theta theory

Chomsky (1995:219) noted that theta theory is complementary to the theory of checking, a fact expressed in part as a descriptive generalization in the chain condition: in the chain CH= $(\alpha_{1-----;}\alpha_n)$, α_n receives a theta role and α_1 enters into a checking relation. Furthermore, only α_n can assign a theta role, so that only the base position is "theta related", able to assign or receive a theta role. The

properties of α_n are such that movement takes place from a position that is theta related to one that is not: for an argument, from a theta position to a non-theta position; for a head (or predicate), from a position in which it is not. Dholuo as a pronominal language has DP adjuncts appearing as topic and focus; hence they are not theta marked. This is because they are adjuncts, and therefore they do not occupy theta positions. Movement cannot take place in this case since the adjuncts are not arguments, but they act as references that the speaker refers to. This fact is illustrated below:

(19)   Alice obaro okombe
          'Alice broke a cup'

In example (19) above, the NP 'Alice' appears as an adjunct in which the speaker needs to refer to which is not an argument. It therefore cannot be checked since it is not in the specifier head position. The morpheme o- which is overt is bound to the verb 'baro' which is the head of this sentence, and it is an argument. There is no AGRP projection to allow any movement. Therefore the sentence is interpreted as grammatical satisfying the conditions of the principle of full interpretation making the derivation to converge at LF.

Chomsky (1995:313) concludes that a theta role is assigned in a certain structural configuration; β assigns that theta role in the sense that it is the head of that configuration. A raised element cannot receive or assign a theta role. Theta relatedness is a   "base property", complementary to feature checking, which is a

property of movement. More accurately, theta relatedness is a property of the position of merger and its (very local) configuration. A principle and parameter principle is derived that there is no raising to a theta position since theta relatedness is generally a property of "base positions". We can illustrate this using the English example below:

(20)   John likes Bill

In example (20) above, there is a derivation where 'John' is inserted directly in [Spec, I], not raising from VP. Insertion of 'John' satisfies the extended projection principle, and other features are checked as or by free riders. The only defect lies in theta theory: the argument 'John' lacks a theta role, and 'like' does not assign its external theta role. If either of these properties constitutes a violation of full interpretation, the derivation crashes, and the problem disappears. The "shortest derivation" condition, then, entails that a violation of the theta criterion causes the derivation to crash, by failure to satisfy full interpretation. This is because an argument without a theta role violates full interpretation, causing the derivation to crash. The failure of a transitive verb to assign an external theta role could be interpreted as simply meaningless. The external role is a property of the VP internal configuration; therefore, a transitive verb assigns an external theta role by definition.

3.5.2 The Principle of Full Interpretation

According Chomsky (1995) the principle of full interpretation replaced the theta criterion. This is because the theta criterion turned out to be insufficient and arbitrary which guaranteed that the morphological elements of the verb and its syntactic relations appear at PF and LF after they have been case-assigned.

Moreover, the Ө-theory and its principles turned out to be very weak, so Chomsky replaced its concepts. He retained the idea that semantic information has to be integrated into the syntactic framework, but the Ө-theory is no longer the mediator; rather, the Principle of Full Interpretation (PFI) (Chomsky 1995a:98): "Every element of PF and LF, taken to be the interface of syntax with systems of language use, must receive an appropriate interpretation- must be licensed in the sense indicated." Radford (1997:200) says that the PFI requires that PF representations should contain only phonetic features, and that LF representations should contain only semantic features; a derivation which satisfies this requirement converges, whereas one which does not crashes. Therefore, from the principle of full interpretation, it follows that LF representation for natural languages may not contain vacuous quantifiers that are functionally related to some predicate in the representation. Hence the functional relatedness requirement of the theta criterion follows from the principle of full interpretation, a more general requirement that representations be minimal in some way. These facts can be illustrated with the Dholuo example below:

(21)   Ann ochamo rech.
            'Ann has eaten fish.'

From example (21), the transitive verb 'chamo' is selected from the lexicon and determines the subject of the sentence 'Ann' is an adjunct which we had established to be an R-expression, the morpheme o- is an argument and has the semantic role of an agent, and the object 'fish' has the semantic role of a patient . This makes the verb 'chamo' to have the structure: agent-chamo-patient. The representation of this sentence is minimal since there are no grids required. This sentence is well interpreted and satisfies the principle of full interpretation since it is well pronounced and the meaning is understood, therefore the derivation converges at LF. We can also examine examples with ditransitive and intransitive verbs below:

(22)   a. Ann omiyo nyathi chiemo.
               'Ann gave the baby food.'

               b. Mine giluokore.
                  'Mothers are bathing.'

In example (22a), the ditransitive verb 'miyo' determines the subject of the sentence the morpheme 'o-'which is an argument to have the semantic role of an agent, the indirect object 'nyathi' to have the semantic role of theme, and the direct object 'chiemo' the semantic role of goal. This sentence is well interpreted and satisfies the PFI making the derivation to converge at LF. In example (22b), intransitive verb 'luokore' determines the subject of the sentence 'gi' to have the

semantic role of agent while the verb does not allow an object. This sentence is grammatically correct making the derivation to converge at LF.

Moreover, Chomsky (1995:151) states that an element can appear in a representation only if it is properly "licensed". Licensing under the principle of full interpretation is expressed in terms of conditions relating the syntax, broadly construed, to other systems of the mind or brain. At LF, any element that appears must have a language-invariant interpretation in terms of interaction with the systems of conceptual structure and language use. Jackendoff (1990:43) points out that the innate formation rules for conceptual structure include the semantic parts of speech including among others action, place, event and path. In our example (21), the transitive verb 'chamo' which is an action licenses only one object 'rech', in example (22a), the verb 'miyo' licenses only two objects, while in (22b) the verb 'luokore' does not license an object since the object is implied and it is assumed that the speaker and the hearer understands what is implied. Therefore these sentences are grammatically correct and acceptable satisfying the principle of full interpretation.

3.6 Summary

This chapter attempted to analyze Dholuo anaphors (reflexives and reciprocals). We first started by focusing at the general overview of the binding principles in GB and their interpretability in the Minimalist Program with an aim of finding out how they are interpreted. We then found out that in GB theory the binding

principles apply at the S-structure. But, with the elimination of the D-structure and the S-structure within the Minimalist Program, the binding conditions were left to apply at LF without any structural condition. In Dholuo, no merging takes place because the verb is in the lexicon. The reflexive and the reciprocal occur as bound morphemes in the verb. Binding of anaphors in Dholuo was found to occur within the domain of the word, which is the verb satisfying the binding condition A. The anaphors were found to be interpretable within the Minimalist Program although no merging took place since the verb is incorporated and is in the lexicon. Hence, checking only occurs at LF for consistency, moreover the verb has no case features. Finally, we discussed the theta theory in GB where we found out that Dholuo being a pronominal language do not assign theta role to the NP which appear as an adjunct in the sentence. The arguments which appear as morphemes are assigned thematic roles in Dholuo since they occupy theta positions. Theta theory in the MP was interpreted to apply in the lexicon at LF where the lexical items were checked for grammaticality using the PFI. We also found out that merging conditions were not necessary in Dholuo since the argument is incorporated in the verb, and the verb has no case features and agreement features. This meant that there were no uninterpretable features to be erased and checking for the interpretable features for the derivation to converge.

CHAPTER FOUR

CONCLUSION AND RECOMMENDATIONS

4.1. Conclusion

This study dealt with a semantic analysis of Dholuo simple declarative sentences using the Government and Binding theory and the Minimalist Program perspective.

The study of the simple declarative sentence brought forth that Dholuo does not have overt NPs for arguments, but the subject and the object of the sentences are incorporated in the verb as pronominal arguments. Thus it was concluded that Dholuo is a pronominal argument language according to the parameter proposed by Jelinek (2006). The overt NPs are adjuncts which do not occur at A positions hence they are not arguments; they are interpreted in pragmatic terms as topic and focus bringing the mapping between pragmatics and syntax in the study. Other characteristic of the parameter of pronominal argument languages support this findings. The reflexive and the reciprocal are incorporated within the verb as it is evidence in Dholuo.

 It was also established that Dholuo has poor agreement and does not license pro, hence it is not a pro-drop language. It was established that the binding principles in GB apply in Dholuo with certain variations. Binding principle A had to be modified because it occurred within the domain of the word unlike in English

where binding occur within the domain of sentences. For instance, the reflexive occurred as a bound morpheme on the verb and it contained –r 'self' plus a person morpheme –a, -e, -u, while the reciprocal occurred as -re 'each other' bound on the verb. So both of these anaphor are not free but bound in the word domain instead as in English, the anaphors are bound in the sentence domain. This idea of domain then brought about contrast on the parametric variation of languages on the domain of binding. The difference in interpretation between reflexives and reciprocals was noted to be established through the context of the use by the speaker.

Binding principle B also had to be modified. The pronouns were found to occur as two types; free standing/independent and incorporated ones. The independent pronouns are overt NPs in the sentences and they serve to emphasis the subject being spoken of. They function like the overt NPs in a pronominal argument language. They are there for pragmatic reasons to represent topic and focus. The incorporated pronouns occur as prefixes and suffixes and are bound to the verb. The independent pronouns, serve as topic and focus and overt NPs that are not arguments, they are R-expressions in Dholuo and they satisfy the binding condition C. The incorporated pronouns were found to violate the binding condition B since they were bound in the word domain and not free.

Moreover, we established that in Dholuo, the arguments which appeared as morphemes were assigned theta roles since they occupied theta positions. Besides,

the overt NPs that occurred as adjuncts were not assigned theta roles since they did not occupy theta positions.

Usually in the MP words move for checking purpose, but in Dholuo words do not move because Dholuo as a language was found to have no agreement and therefore there was no projection to be created for the AGrP. Moreover, in the assumption on where the binding principles and theta theory will apply in the MP checking theory, it was discovered that the lexicon takes care of the binding principles, and later on at LF checking only takes place for consistency and grammaticality to satisfy the Principle of Full Interpretation.

In the analysis, it was found that in the effort to reduce principles some elements of the MP were not catered for like move and merge processes; which could not apply in the analysis of Dholuo. This is because Dholuo a pronominal argument language has no overt arguments in A positions. This entails the fact that it has no case checking of NPs and so no merge can take place because there are no interpretable and uninterpretable features to be merged. The uninterpretable features such as case features are usually erased; while the interpretable features like number, persons and gender are checked for agreement and merged for the derivation to converge. We thus found out that there were no interpretable and uninterpretable features, because the verb has the arguments incorporated no case checking takes place on phonological feature level. A matter then has to be raised how does case checking take place for the incorporated arguments take place, as

they are morphemes. It is only possible to assume a logical type of case checking because not features for case-checking are licensed.

4.2 Recommendation

This study set out to analyze the semantics of Dholuo simple declarative sentences. It established that to a large extent the objectives of the study have been met. It established that the sentences were interpretable within the Minimalist Program with certain modifications even after the elimination of the S-structure and the D-structure; and also established that the checking theory and the principle of full interpretation were concepts enough to analyze the sentences, and finally proved that the Minimalist Program can adequately analyze semantics in sentences considering certain modifications of the principles of the MP.

However, due to time constrain and the scope of this study, we did not go into details of assigning tone to the words in order to bring out the perfective and imperfective aspects of the verbs, and also to bring out the dialectal differences. We therefore recommend that a linguistic study on this matter be carried out in future.

Also because of our findings that a concept typically assigned to semantics finds its analysis in pragmatics gives rise to the question on the scope of semantics and the scope of pragmatics for Dholuo simple sentences. A detailed study involving the incorporation of pragmatics in analyzing the simple declarative sentences would shed light on the boundaries of these linguistics fields and enhance the study of Dholuo simple sentences.

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