

DHOLUO ANAPHORS: AN INTERFACE ACCOUNT

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DECLARATION

I declare that this thesis is my original work, except where due citation has been made, and has not been previously presented for a degree or any other award in any other University. The thesis has been complemented by referenced works duly acknowledged. Where text or data have been borrowed from other work, including the internet, the sources are specifically accredited through referencing in accordance with anti-plagiarism regulations.

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DEDICATION

To my dear mum,
Risanael Dede Onyango, I dedicate this work for her foresight and wisdom in ensuring I went
to school.

To my dear husband Francis, my confidant and friend for ensuring that I live to achieve my
dreams.

And to our children Lisa, Lenny, Joy and Janelle for being a source of inspiration. May God
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ABBREVIATIONS AND ACRONYMS

ACC:	Accusative
ADV:	adverb
ADVP:	Adverb Phrase
C-Command:	Constituent Command
CF:	Confer
GB:	Government and Binding
INFL:	Inflection
N:	noun
Nom:	Nominative
NP:	Noun Phrase
P:	preposition
PP:	Prepositional Phrase
PRE:	Present Tense
PST:	Past Tense
RCP:	Relevance Comprehension Procedure
R-expression:	Referential expression
RT:	Relevance Theory
SG:	Singular
SPEC:	Specifier
V:	verb
VP:	Verb Phrase

OPERATIONAL DEFINITION OF TERMS

In the study, the following terms were used as follows:

Anaphors- an element whose reference is dependent on the reference of another element,
an antecedent

Antecedent- word or phrase that comes before an anaphor in a clause

Argument- an element that occur as noun phrase and used as subject or object in a sentence

A-Position – initial or final position occupied by noun phrases within the sentence that can
be assigned theta role

Binding- the relationship between an anaphor and antecedent where an index or
underscript is used to indicate that they are in a relationship

Case- a grammatical feature assigned to the arguments by the verb, INFL or preposition to
ensure grammaticality

Co-referential- two or more elements referring to the same person or thing

Co-indexed- marking words in phrases or sentence referring to the same thing by use of an
index or subscript

Context- the environment in which an utterance is produced that is used to explain the
meaning of a particular utterance

Dominance- an element occurring at a higher level of a sentence or a clause

Government- elements taking different positions in a sentence where they play particular
role in defining other elements for the purpose of ensuring a sentence is correct

Governing category- maximal projection containing both a subject and a lexical category
governing the subject

Grammaticality- the correctness of a sentence based on whether it qualifies the governing principles

Interface- interpretation of an utterance within the linguistic fields of syntax, semantics and pragmatics

Local binding- the anaphor and antecedent corefer closely as they occur within the minimal inflectional phrase (IP)

Non- local binding- the anaphor and antecedent though corefer occur at a distant in different inflectional phrases (IP)

Position- initial and final areas occupied by the subject or object respectively in a sentence

Precedence- occurring on the left of the element

Relevance- the right interpretation of an utterance derived without using a lot of effort

Saturated- complete meaning of the argument after theta roles have been assigned and registered in the mind that the sentence is interpretable

Theta roles- meanings that the verb assigns to the arguments that it governs to make the sentence grammatical

Utterance- exact words produced from the mouth

ABSTRACT

The purpose of this study was to investigate Dholuo anaphors at linguistic interface of syntax, semantics and pragmatics. Dholuo anaphors (reflexives and reciprocals) are represented with the same morpheme which poses a problem in interpretation. Generative grammar focuses on syntax and semantics in interpretation of anaphors. The study included pragmatics to enrich the interpretation of Dholuo anaphors. The study aimed at answering four main research questions: how are anaphors configured in Dholuo? What is the syntactic structure of Dholuo anaphors? How does semantics and pragmatics determine the interpretation of Dholuo anaphors? How does Relevance Theory and GB Theory account for the interface of Dholuo anaphors? The study scope covered structures and meaning of sentences limited to GB Principle A. Government and Binding Theory and Relevance Theory were used with the study adopting descriptive and qualitative research designs. Rambira village, Rarieda sub-county, Siaya county was the study site. Sample size consisted of eighty-seven structures with anaphors. Purposeful sampling technique was adopted in selecting six respondents. Corpus of primary data was collected through interview and by researcher's intuitive knowledge verified by the respondents. Secondary data was from works of scholars and Dholuo bible. Collected data was coded, and classified to ascertain their configuration. Analysis revealed that Dholuo has lexical and non-lexical anaphors occupying the object position. Dholuo anaphors were bound to the antecedent within the IP, assigned case and theta roles. Various contexts enhanced right interpretation and euphemistic usage of utterances. This is an interesting finding that can contribute to studies in African languages.

CHAPTER ONE

INTRODUCTION

1.0 Introduction

The chapter presents background issues in the study of anaphors, the statement of the problem, the objectives, the research questions and assumptions. It further provides the rationale for the study and the scope of the study of investigation that is relevant in answering the research question.

1.1 Background to the Study

Literature on anaphors indicate that anaphors have drawn interest for study in a number of languages. Anaphor is a kind of reflexivization that is present in all natural human languages of the world. Due to its importance, many competing theories and models have attempted to describe it such that there are many views about the anaphor. This study focuses on anaphors in Dholuo.

According to Haegeman (1994, p.192), anaphors (reflexives and reciprocals) must get their interpretation within the subjects that they appear with, pronouns are free within the governing category; while referential expressions are free everywhere. This statement indicates that anaphors are referential items which point out at what had been mentioned earlier. They do this by avoiding repeating the same item hence reducing redundancy. Anaphors, therefore, involve grammar, syntax and meaning of grammatical items. For instance, syntax is required to describe the arrangement of anaphoric expressions and the words or expressions that come after them and semantics describes the meaning of anaphoric expressions as used in different expressions. Pragmatics is required to give meaning with reference to the context of use.

In the same vein, Poole (2002) notes that anaphors are either lexical or non-lexical units that lack an independent reference so that their reference is attained via reference to another syntactic unit within the same sentence. Anaphors include the reflexives and reciprocals. The defining feature of anaphors is its accessibility to the subject within a particular context. This means that the meaning of the anaphor will depend on the context within which it has been used.

From the foregoing discussions, there is more consensus that anaphors draw a lot of interest and therefore, its study is important. Among the assumptions is the view that anaphors require the syntactic, semantics and pragmatics aspects in its interpretation. Depending on the specific language, the anaphors can be free or attached to the verb. Following the exposition of Government and Binding Theory (GB) by Haegeman (1994), Chomsky (1981, 2001 & 2002) and Poole (2002) the role of anaphors in understanding the structure of sentences has been tremendous. GB has been particularly strong in explaining the sentence structure and meaning of sentences. Anaphors such as reflexives and reciprocals have the property that they cannot be used to refer directly to an element that does not come before them, but must be interpreted by an element elsewhere in the same phrase or sentence. Otherwise, the structure is ungrammatical where an anaphor has no suitable word or phrase that they are in agreement.

Yet, the inclusion of pragmatics in the study of anaphors was excluded from the generative grammar. Chomsky asserts that only syntactic and semantic factors are vital in the interpretation of anaphors. In the paradigm of pragmatics - Relevance Theory, information is relevant depending on the environment by which the utterance was made.

The meaning of the anaphors can be interpreted with reference to the context by which the utterance is made.

According to Huang (2000), anaphors have been the main area of research in Linguistics, and many questions have been raised on the relationship between syntax, semantics and pragmatics. This statement is important in this study as we seek to test the interaction of the three linguistic models using Dholuo.

Huang (2006) reports that in the interpretation of anaphors, factors such as syntactic, semantic and pragmatic are important. This is because the structure of the sentence is important as it enables one interpret it well. The interpretation may vary depending on the environment where the utterance was produced. This study investigated some claims of Relevance Theory by examining data in Dholuo to evaluate its effectiveness in interpreting utterances that were not interpretable in GB. No known research has examined the interface of syntax, semantics and pragmatics of Dholuo Anaphors.

Dholuo was the language of focus in this study. Anaphors in Dholuo are categorized into reflexives and reciprocals (Okoth, 1997, p.41). Okoth argues that there are two types of reflexives: true reflexives that end in ‘-self’ and reciprocal constructions that are equivalent of English ‘each other’. It is noted that there are some ambiguities in the interpretation of reflexives and reciprocals in Dholuo since they are marked by the same morpheme ‘-r-’ followed by the person morpheme. R-expressions in Dholuo are nouns and independent pronouns which appear as adjuncts (Onyango, 2013, p.62). For example, *Peter onego paka* ‘Peter killed a cat’ the nouns *Peter* and *paka* ‘cat’ refer to different entities. While in *Peter onege* ‘Peter killed it/him/her’ the entities Peter (noun) and

pronoun *-e* ‘it/him/her’ are also different entities. The pronoun *-e* ‘it/him/her’ does not refer to *Peter*, but to a person or something affected by the action of *Peter*. This pronoun can be replaced by a noun such as *paka* ‘cat’.

Anaphors are exhibited in different languages and they must corefer with the antecedent where they get their reference for grammaticality. For instance, in English the reflexives and reciprocals are represented with ‘-self’ and ‘each other’ respectively. These anaphors are bound to the antecedent with respect to Binding Principle A of Chomsky’s universal grammar (Chomsky, 1981; Poole, 2002). This principle states that an anaphor must be bound within its governing category. The governing category being the minimal clause that is close enough for the anaphor to be bound. The English reflexive ‘-self’ (singular) and ‘-selves’ (plural) take different persons of which it is bound to. The reciprocal on the other hand occurs as an independent lexical item ‘each other.’ Let us consider (1):

(1)

- a. John_i hit himself_i
- b. The girls_i fought themselves/each other_i

In (1a), *John* and *himself* are bound to each other while in (1b) *the girls* and *themselves/each other* are also bound. This is indicated by use of the subscript (_i) to show a relationship. The reflexive and the antecedent agrees in number and person as seen in (1a) and (1b). *John* the third person takes the third person pronoun *him* attached to the singular reflexive *-self*. On the other hand, the girls take a plural reflexive *themselves* which they agree with in number and person. In (1b), the sentence also means that the girls are performing the act of fighting to *each other*, a reciprocal. This sentence can be

interpreted as a reflexive or a reciprocal in English depending on the context of use. From the examples, we note that in English the person and number must agree with the form of reflexive used (Poole, 2002).

In the same vein, anaphors are also exhibited in other African languages. In particular, Kenya an African country has a number of language groups categorised as Bantus, Nilotes and Cushites. These different language groups exhibit presence of anaphors. The anaphors as demonstrated in the preceding examples from Kenyan languages are also bound to the antecedent. Moreover, they are distinctly marked and assume different positions in the sentences. To begin with, the Lubukusu a luhya dialect and Bantu language has both the reflexive and the reciprocal. These anaphors in Lubukusu are distinctly marked. According to Sikuku (2010a), Lubukusu reflexive occur as allomorph $-e$ □ $-i$. Let us consider (2):

(2)

a. Yohana_i-a-a-e_i-bona-a (Sikuku, 2010, p.61)

John past self see

‘John saw himself.’

b. Mu_i-a-e_i-bona-a

you(pl) self see

‘You saw yourself.’

c. W_i-i_i-siing-a-ang-a

You(sg)self wash

‘You washed yourself.’

In Lubukusu as seen in (2a) and (2b), the reflexive *-e* or *-i* ‘self’ comes before the verb it is attached to. The reflexive *-e* in Lubukusu is used both in the singular and the plural despite the change in person. Again, the reflexive *-e* ‘-self’ is bound to the antecedent *Yohana* ‘John’ (2a) and *mu-* ‘you’ (2b). Besides, the reflexive *-i* ‘-self’ is only used in the singular and is bound to the antecedent *w-* ‘you’. On the other hand, the reciprocal in Lubukusu is marked by *-an* ‘each other’ which occur as a suffix with no allomorph (Sikuku, 2010a). This reciprocal is also present in Kiswahili, a Bantu language like Lubukusu. Let us consider (3):

(3)

a. *Babaana_i ba-a-rem-an_i-a* (Sikuku, 2010, p.88)

children cut each other

‘The children cut each other.’

b. *Watoto_i wa-li-pig-an_i-a* (Sikuku, 2010, p.89)

children fight each other

‘The children fought each other.’

The example in (3a) and (3b) indicates that the Bantu languages mark the reciprocal with the suffix *-an* ‘each other’ followed by a final vowel [a]. In (3a), the reciprocal *-an* ‘each other’ comes after the verb *rem* ‘cut’ in Lubukusu. On the other hand, in (3b) Kiswahili reciprocal *-an* ‘each other’ comes after the verb *piga* ‘hit’. In both (3a) and (3b), the

reciprocal is bound to the antecedent *babaana* and *watoto* ‘children’ respectively. The grammaticality is thus ensured since Binding Principle A is not violated.

Similarly, Nilotic languages like the Ateso and Maasai also have anaphors. For example, the Ateso marks the reciprocal and the reflexive differently. The reciprocal is marked with the morpheme *akin* or *okin* ‘each other’ which are allomorphs (Barasa, 2017). The occurrence of the reciprocal allomorphs in Ateso can only be explained phonologically. The reciprocal is used to apply to more than one person performing the action to the other, hence it requires at least two participants (Barasa, 2017, p.175). On the other hand, the reflexive in Ateso is marked by the lexical morpheme *akwan* ‘self. Let us consider (4):

(4)

a. e-mal_i-akin_i-a-si (Barasa, 2017)

girls each other

‘The girls greeted each other.’

b. a-kik-okin-o-si

bruise each other

‘to bruise each other.’

c. Emusung ong_i akwan_i ka

hurt my self I

‘I hurt myself.’

In (4a), the reciprocal *akin* ‘each other’ is bound to the antecedent girls which it corefer with. This reciprocal is attached to the subject to which it refers to. The example in (4b) indicates that the action is to be performed to more than one participant, though the subject is not specified. In (4c), the reflexive *akwan* ‘self’ comes after the person *ong* ‘my’. The reflexive *akwan* and the person *ong* ‘my’ occur as independent lexical items and they corefer as they are bound to each other.

According to Karani (2018, p.28), the Parakuyo dialect of Maasai has few reflexives that occur as pronouns which refer back to the antecedent. These reflexives occur as lexical items in the sentence and their function is emphasis. The Maa language usage of the reflexive is clear in terms of number. For instance, reflexive occur as *kewan* ‘self’ in the singular and *ate* ‘-selves’ in the plural. In addition, there are other forms of reflexives used among the Parakuyo dialect of Maasai such as *openy* ‘-self’ and *oopeny* ‘-selves’ (Karani, 2018). All these forms of reflexives are bound to their antecedents for grammaticality.

(4)

d. etundunyo Joni_i kewan_i

cut he John self

‘John cut himself.’

e. eisuja ilayiok_i ate_i

wash boys selves

‘The boys washed themselves.’

f. eewuo papa_i openy_i

come father self

‘My father came himself.’

g. ewuon ilayiok_i oopeny_i

come boys selves

‘The boys will come themselves.’

The examples in (4d) - (4g) shows that in Parakuyo dialect of Maasai grammaticality is ensured. For instance, the different forms reflexive and the antecedents used in the sentences agree in number and person. In particular, the singular reflexives *kewan* (4d) and *openy* (4f) ‘-self’ are used with *John* and *father* respectively which are singular subjects. They also corefer and are bound to each other. The plural reflexive *ate* (4e) and *oopeny* (4g) ‘-selves’ occur with plural subject *boys* in each case. They are also bound to indicate that they corefer thus obeys Binding Principle A.

In the same vein, Dholuo a Nilotic language also has anaphors (reflexives and reciprocals). These anaphors in Dholuo are marked the same way with the morpheme *-r-* ‘-self’ or ‘each other’. This is different as compared with Lubukusu, Ateso and Maasai examples which have distinct marking of reflexives and reciprocal. Dholuo anaphor *-r-* is followed by different personal pronoun which depend on the antecedent used in the construction. Let us consider (5)

(5)

a. Apondi_i oherore_i

Apondi love self

‘Apondi loves herself.’

b. Nyithindo_i ogwarore_i

children scratch each other/themselves

‘The children scratch each other/themselves.’

In (5a), the reflexive *-r-* ‘self’ attached to the verb *hero* ‘love’ is bound to the antecedent *Apondi* and they corefer. This reflexive *-r-* ‘self’ in Dholuo is used both in the singular (5a) and plural (5b) where it agrees in number and person with the antecedent. In (5b), the singular reflexive *-r-* ‘self’ occur with a singular subject *Apondi* and takes the third personal pronoun *-e* ‘him’. In an example like *aherora* ‘I love myself’, the reflexive *-r-* ‘self’ occurs with the first person pronoun *-a* ‘I’. In (5b), the plural reflexive *-r-* ‘-selves’ occur with plural antecedent *nyithindo* ‘children’ and they are bound to each other. These reflexives obey Binding Principle A. It is also worth noting that in (5b), the morpheme *-r-* is the plural reflexive also used as a reciprocal ‘each other’ in Dholuo. This makes it ambiguous. Therefore, in order to differentiate the usage as either a reflexive or reciprocal, context has to be involved.

From the foregoing discussion on anaphors, we can draw some contrast and similarities between Dholuo anaphors and anaphors in a few other languages with reference to their usage in sentences. First, in all these Kenyan languages, the anaphors are bound to the antecedent despite the different order of sentences. They thus obey Binding Principle A, to be grammatical. Second, there is a similarity between English and Dholuo in that in English, though marked differently faces some challenge. English reflexive in the third

person plural ‘selves’ and the reciprocal ‘each other’ require context to disambiguate usage. This is the same case with Dholuo where the reflexive and reciprocal are marked the same way by *-r-* ‘selves’ or ‘each other’ which also require context to disambiguate usage. However, Dholuo anaphors vary from Lubukusu, Kiswahili, Ateso and Maasai languages in different ways. Lubukusu reflexive occur as allomorph *-e or -i* ‘-self’, while Dholuo reflexive occur as only *-r-* ‘-self’. Interestingly, another contrast occurs between Dholuo and other Nilotic languages. For example, Maasai language has two forms of reflexive *akwan* and *openy* ‘-self’ used in the singular and *ate* and *oopeny* ‘-selves’ used in the plural while Dholuo uses the reflexive *-r-* ‘-self’ or ‘-selves’ used in either singular and plural followed by different persons. It is these different persons that ensures there is subject-verb agreement. The Maasai reflexives occur as independent lexical items while Dholuo reflexive is non-lexical item attached to the verb followed by different persons that agree with the antecedent in the sentence. In addition, Lubukusu and Kiswahili reciprocals are marked by *-an* ‘each other’. In Lubukusu, the *-an* ‘each other’ reciprocal marker is different from the reflexive marker. This is also evidenced in Ateso and Maasai which have different morphemes that mark the reflexive and the reciprocal. But, Dholuo marks the reflexive and the reciprocal in the same manner *-r-* ‘self’ ‘each other’. Coincidentally, one similarity is on Dholuo *wuon* ‘-self’ and Maasai usage of the anaphor *-wan* ‘-self’ which has some resemblance since they are sister languages. In both Maasai and Dholuo this anaphor is used for emphasis purpose. Although, in Dholuo, as will be discussed (ref. chapter 2), this anaphor does not occur alone and it is optional. It must occur with the anaphor *-r-*. With respect to these Kenyan languages and English language discussed, all of them have different forms of marking

the reflexive and the reciprocal. Apparently, Dholuo uses the morpheme *-r-* to mark both the reflexive and the reciprocal. This poses a problem to any user of the language since context is required in order to disambiguate the usage.

1.2 Statement of the Problem

Anaphor interpretation in Government and Binding Theory requires both syntax and semantics. This brings in the interface between syntax and semantics in the interpretation of anaphors. Previous studies on Dholuo anaphors focused on either syntax or semantics and not interface. Moreover, Dholuo anaphor interpretation as either reflexive or reciprocal requires context. This is the gap the present study filled by bringing the pragmatic aspect since most sentences with anaphors naturally find their interpretation in pragmatics. According to Chomsky (1981), syntax involves the sentences being tested for grammaticality by focusing on the positions of the subject and the anaphors. The anaphor and the antecedent (subject) are expected to corefer by being bound to each other to be grammatical. Grammaticality is also tested by assigning case to the arguments in the sentences. These sentences are deemed either interpretable or uninterpretable (semantics) by assigning them specific theta roles. Thus, there is an interface between syntax and semantics. However, in order to derive the explicit meaning of an utterance with Dholuo anaphor, context is required. Therefore, the dissertation sets out to demonstrate the interface between syntax, semantics and pragmatics in the interpretation of anaphors in Dholuo.

1.3 Research Objectives

The research objectives are to:

1. Identify the configuration of Anaphors in Dholuo
2. Examine the syntactic structure of Dholuo Anaphors
3. Determine the semantics and pragmatic interpretation of Dholuo Anaphors
4. Account for the interface of syntax, semantics and pragmatics within Relevance Theory and GB Theory

1.4 Research Questions

The research sought to answer the following questions:

1. How are Anaphors configured in Dholuo?
2. What is the syntactic structure of Dholuo Anaphors?
3. How does semantics and pragmatics determine the interpretation of Dholuo Anaphors?
4. How does Relevance Theory and GB Theory account for the interface of Dholuo Anaphors?

1.5 Research Assumptions

1. Anaphors have a specific configuration form in Dholuo
2. Dholuo anaphors have a definite syntactic structure
3. The interpretation of Dholuo Anaphors is determined pragmatically and semantically
4. Relevance Theory and GB accounts for the interface of Dholuo Anaphors

1.6 Justification and Significance of the Study

Though there is a lot of literature on Dholuo grammar and semantics, little has been done on the analysis of sentences at three linguistic levels of syntax, semantics and pragmatics. The inclusion of pragmatics is important as meaning of utterances can be derived from the context of use. This is in line with Chomsky (2006, p.5), that claims that one has ability to interpret what he or she hears, express his or her thoughts, and use his or her language in a variety of ways. Hence, a person has an understanding of the grammar of his language and ability to give meaning to words and expressions and even the utterances produced.

The adoption of Relevance Theory enriched the interpretation of Dholuo sentences containing anaphors. This is because utterances attract assumptions which may yield different meanings depending on the environment and paralinguistic factors (body language, facial expressions, tone of voice, gestures). This study brings an insight in the field of linguistics that is useful to other researchers interested in similar area to refer to.

So far, little research has examined the interface of Dholuo Anaphors using Government and Binding Theory and Relevance Theory. 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 (Achola, 2011, p.5) and giving credence to Universal Grammar (UG). It is, therefore, believed that a study in this area gives an insight into the interpretation of anaphors and offer a new and different perspective to their analysis in sentence structure.

1.7 The Scope and Limitations of the Study

The study sought to examine the compositionality of Dholuo anaphors at the interface level of syntax, semantics and pragmatics. The scope only covers the structure and meaning of sentences with anaphors. This study is limited to Government and Binding Theory's Principle A only that deals with anaphors and not Principles B and C that deals with pronouns and R-expressions respectively. Different argument structures of the sentences are examined. The analysis of the data used X-bar Theory, Case theory, Binding Theory, Theta Theory and Government Theory. The grammaticality of the anaphors in structures was tested using Government where case was assigned and Binding Theory where the anaphor and antecedent were coindexed to ascertain their relationship.

Secondly, the study focused on the cognitive principle and communicative principle in Relevance Theory to explain how hearers attribute speaker's meanings. Other tenets such as explicatures, implicatures and lexical pragmatics such as lexical narrowing and broadening were not covered.

Thirdly, as evident from the literature, there is an interface between the three linguistic levels, syntax, semantics and pragmatics. This research was limited though to their application to anaphors as determined by the research questions but not to other aspects where the three modules may interface.

1.8 Chapter Summary

This chapter has discussed the background to the study, foregrounded the statement of the problem, and outlined the research objectives, the research questions and the research assumptions. Also presented is the justification for the study as well as scope and

limitations. The next chapter presents a discussion of literature reviewed and theoretical framework.

CHAPTER TWO

LITERATURE REVIEW AND THEORETICAL FRAMEWORK

2.0 Introduction

In reviewing related literature, we will first account for the anaphors, and then look at studies done on anaphors in general and local studies in particular. Then a review of studies on Dholuo anaphors is done, and finally the theories to be used in the analysis of data discussed.

2.1 Literature Review

The literature that directly concerns the core of the study undertaken was reviewed. It started from works on anaphors through time and some works on African language on anaphors.

2.1.1 General Overview

Anaphors are elements that refer back to other elements in a construction Poole (2002). In most cases they function referentially only when they interact with the antecedent in the same sentence. The antecedent is an element that occurs before the anaphor and the anaphor depends on it for specification of meaning (Haegeman, 1994; Poole, 2002, p.109). The action being performed to a person or something could be direct or indirect. Chomsky (1981)) allude that the anaphors constitute elements that bear the feature [+Anaphor, -Pronominal] during their interpretation. Within the Government and Binding Theory, there are two types of anaphors: reflexives and reciprocals, Chomsky (1981); Poole (2002, p.108). These anaphors are well described using Binding Principle A which

posits that an anaphor must be bound within its governing category. The governing category is the domain in which the anaphor and the antecedent occurs.

Chomsky (1981) elaborates that the interpretation of anaphors (reflexive and reciprocal) should be dependent on the elements that occur before them and must be in agreement with Binding Principle A. Binding Principle B focuses on the pronoun which is not dependent on any element for reference, while Principle C states that an R-expression is free everywhere. The anaphors which are a type of noun phrase (NP) have the feature [+Anaphors, -Pronominal]. Another type of NP is PRO which has the feature [+Anaphor, + Pronominal]. PRO can function as an anaphor and also as a pronoun depending on its use in the sentence.

Moreover, a plethora of studies have been done on anaphors in the Romance language (König & Volker, 2008). For instance, in Italian, the reflexive ‘self’ is marked by *si* while in Spanish and Portuguese the reflexive is marked by *se* and in Romanian its *și*. The reciprocal ‘each other’ is marked by *se* in Spanish and Portuguese while Italian marks the reciprocal by *si*. The difference between the use of *si* for reflexive and reciprocal in Italian is on the position of the anaphor in the sentence. In Spanish the reciprocal *se* occurs before the verb while in Portuguese it occurs after the verb. In addition, in Spanish the morpheme marking the reciprocal appears as an independent lexical item while in Portuguese the morpheme marking the reciprocal is bound to the verb. The reflexive *si* and reciprocal *se* are inflected for person and number in Romance languages. This study on Romance languages is key as it enables us understand anaphors and their positions in constructions and their interpretation. It also highlights on morphemes being bound on a verb or occurring independently, and the fact that the morpheme could represent both the

reflexive and reciprocal. On the contrary, in Italian, the reflexive *si*, a lexical item occurs before the verb; while the same reflexive when used as reciprocal occur as a bound morpheme after the verb. This gives the difference in terms of the use of *si* as a reflexive and reciprocal in Italian. Consider (1) the following data from Romance languages:

(1)

- a. Maria **si** guarda. (Italian)
 Maria **si** watches
 ‘Maria watches herself.’
- b. Sarebbe bello PRO vedersi più spesso. (Italian)
 Would be nice [PRO see **si** more often]
 ‘It would be nice to see each other more often.’
- c. Juan **se** lavó. (Spanish)
 Juan se washed
 ‘Juan washed (himself).’
- d. Los padre **se** despidieron (Spanish)
 The parents se said goodbye
 ‘The parents said goodbye to each other.’
- e. Os meninos insultaram-**se** (Portuguese)
 The children insulted-se
 ‘The children insulted themselves/ each other.’
- f. Janek ubiera **și** (Romanian)
 John dresses **și**
 ‘John gets dressed.’ (König & Volker, 2008)

The data from Romance languages indicate that the reflexive is marked by *se* or *si* and the reciprocal is also marked by *se* or *si*. The *se* reflexive markers in Romance languages appear as free morphemes, not attached to the verb stems they are combined with, except Portuguese where it is bound.

Another form of pronouns that behave as anaphors are the logophors. According to Wambia (2015, p.5) logophorics are pronouns which function like anaphors. These pronouns are what she refers to as long distance anaphors, since they are far from the antecedent. They therefore, violate Binding Principle A as they are found outside the local domain. In terms of C-command, the anaphor and the antecedent must be found within the same minimal clause such that the antecedent dominates the anaphor in the same minimal clause. Since the logophors are outside the minimal clause, they cannot be C-commanded by the antecedent hence violating C-command condition.

In the same vein, Lawal (2006) examined Yoruba pronominal anaphor *Oun* 'he/she'. The study notes that the logophoric in contexts embedded under logophoric verb, a special pronominal called logophoric pronoun is used to indicate reference to the person whose utterance, thoughts and perceptions are reported. These logophoric pronouns are determined by pragmatic factors. The logophorics are anaphors bound outside their local domain, hence violates Chomsky's Binding Principle A. They also do not obey the C-command condition. They behave like long distance anaphors that are not bound within their local domain. This study is important for the current research since anaphors are the core of study and their interpretation in different environment would be useful. It also helps us understand that there are pronouns that function as anaphors.

In addition, there are body part nouns that function as anaphors. For instance, the reflexive markers are frequently related to body part nouns, especially the head, body and soul (Siemund, 2018, p.113). This means that the anaphor points to a particular part of the body affected by the action of the verb. In addition, Schladt (2000) discusses body part reflexives and notes that the reflexive *self* is inherently relational. Ideally, the statement could mean some individual and not an object like a cat, tree, or stone; but has some semblance with nouns that denote head, body or soul. There is also the relationship of mother, father or sister. Consider the example:

(2)

- a. Alice hurt herself
- b. Mary saw herself in the mirror.

In (2a), *Alice* could have hurt her soul or physically hurt part of her body. In (2b), *Mary* looks at her body which is a reflection of herself. Therefore, in (2a) the reflexive *herself* refers to *Alice*, the body and not any other thing. *Alice* could have physically hurt a part of her body or is affected emotionally by a particular act. Besides, *Mary* in (2b) sees a reflection of her own self, body, soul and mind through the mirror. The mirror which is an object allows *Mary* to see parts of her physical body. Moreover, her emotions which are hidden in her soul could also be reflected through her facial appearance on the mirror. These body part anaphors are vital in this research since body part anaphors falls under the types of anaphor found in Dholuo. The current study focused on their interpretability in different contexts.

2.1.2 Anaphors in African Languages

Anaphors are prevalent in African languages. In the study done by Akanbi (2014) of pronouns in Àhàn, a language in Nigeria, pronouns were described syntactically. In the analysis, he notes that there are differences in the use of pronoun in which context is required in their interpretation. This study is helpful to the current research as it also focuses on context in interpretation of pronouns which function as anaphors. Also, object marking was studied in different contexts such as declarative, dislocation which brings in the pragmatic aspect. This work is important in this study since it will help us in drawing comparison with a Dholuo language that has the object marking incorporated in the verb root and to understand the interface of syntax, semantics and pragmatics.

The data from Ateso an Eastern Nilotic language spoken by the Iteso people in Uganda and Kenya gives an account of the anaphors (Barasa, 2017). The reflexive in the Ateso is marked lexically by *akwan* ‘self’ which appears independently. The reflexive is followed by the personal pronoun. On the other hand, the reciprocal appears as an allomorph *akin* or *okin* ‘each other’ of which their usage depends on phonology (Barasa, 2017). Barasa further argues that the Ateso reciprocal require the presence of at least two participants who are affected by the action of the verb (Barasa, 2017, p.175). Consider (3):

(3)

a. Emusung ong akwan_i ka_i

Hurt myself I

‘I hurt myself.’

b. Imusung ijo akwan_i kon_i

Hurt you self you

‘You hurt yourself.’

c. E-mal_i-akin_i-a-si

greet girls each other

‘The girls greeted each other.’

d. A-kik_i-okin_i-o-si

Bruise each other

‘to bruise each other.’

(Barasa, 2017, p.175)

In (3a) and (3b), the reflexive *akwan* ‘self’ an independent lexical item comes after the objects *ong* ‘my’ and *ijo* ‘you’ respectively. The action being performed by the verb *musung* ‘hurt’ and the subject affected by the action of verb *ka* ‘I’, *kon* ‘you’, appears before the reflexive. The reciprocal in (3c) *akin* and (3d) *okin* ‘each other’ which are allomorphs occur as morphemes bound to the verb. The anaphors in Ateso corefer with the subject since they are participants in the same world of discourse (Barasa,2017).

Data from Parakuyo a dialect of Maasai, a Nilotic language spoken in Kenya and Tanzania indicate the presence of anaphors. Karani (2018) argues that there exist anaphors in the language such as reflexives and reciprocals. He noted that there are few reflexives in Maasai which occur as independent lexical items whose function is for emphasis. These reflexives in Maasai are pronouns which refer back to the antecedent in a construction. There exist two forms of the reflexive, singular *wan* ‘self’ and plural *ate* ‘selves’. Another form of reflexive *openy* ‘self’ is used in Maasai to refer to both animate and inanimate argument. On the other hand, reflexive *wan* ‘self’ refers to animate

arguments only. There is, therefore, specification of roles on which singular reflexive should be used. This is represented as shown:

(4)

a. E-tu-duny-o Joni_i Kewan_i

He cut John self

‘John cut himself.’

b. E-isuj-a ilayiok_i ate_i

They wash boys selves

‘The boys washed themselves.’

c. E-ewuo papa_i openy_i

He father come self

‘My father came himself.’

(Karani, 2018, p.234)

In (4a), the reflexive *wan* ‘self’ is attached to the third person *ke-* ‘him’. This reflexive refers back to the person *John* who cut a part of his body. In (4b), the reflexive *ate* ‘selves’ refer back to the *ilayiok* ‘boys’ of which they corefer. In example (4c), the reflexive *openy* ‘self’ refers back to the antecedent *papa* ‘father’ and it is used in the singular. According to Karani (2018, p.215), the reflexive in Maasai is common with inherent reflexive verbs and natural verbs. For example, in the sentence, *enyorr inkera ate* ‘children love themselves or each other’, the reflexive verb *enyorr* ‘love’ indicates that the children perform the act of loving to themselves or to each other. This is also true of Dholuo which has inherent reflexives and natural verbs that shows an action happening to self like loving oneself. For instance, *aherora* ‘I love myself’ meaning that I perform the act of showing love to myself. Moreover, the use of *wan* as a reflexive

marker in Maasai to mean self can be equated to Dholuo use of *wuon* to mean self. Both Dholuo and Maasai are sister languages because of the resemblance. The use of *wuon* in Dholuo is for emphasis on what someone meant or had done. For instance, if one says *aherora awuon* ‘I love myself’, the person tries to indicate the magnitude of his or her love to himself or herself. This data on Maasai is important in this study since it helps in establishing the other words used as reflexive in Dholuo and their interpretation in different contexts. Besides, in Maasai the plural reflexive *ate* ‘themselves/each other’ is employed as a reciprocal. Another form *oopeny* ‘each other’ is used as a reciprocal as in (4d).

d. e-isuj-a ilayiok_i oopeny_i

they wash boys selves

‘The boys are washing themselves/each other.’

e. enyorr inkera_i ate_i

love children themselves/each other

‘Children love themselves/each other.’

f. Kewan_i e-to-rony-o enkayioni_i

Himself trim he boy

‘The boy trimmed his hair himself.’

g. *oopeny_i e-ta-rony-o enkayioni_i

Himself trim he boy

Intended: The boy trimmed himself.’

(Karani, 2018, p.234)

In example (4d), the reciprocal *oopeny* ‘each other’ refers back to the antecedent boys while in (4e) the reciprocal *ate* ‘each other’ refers back to children. Another interesting

thing is that in Maasai (4f) the anaphor *wan* ‘self’ occupies the subject position meant for the antecedent and the sentence is grammatical. This is because of its function of emphasis. In contrast, (4g) is ungrammatical and the reflexive *openy* ‘self’ violates Binding Principle A. The reflexive *openy* and reciprocal *oopeny* cannot occupy subject position in Maasai (Karani, 2018).

2.1.3 Studies in Dholuo Grammar

A number of studies on Dholuo Grammar have been carried. For example, Omondi (1982) focused on the analysis of major syntactic structures using the Generative Transformational Grammar. The basis is on the transformational rules which are applied in the interpretation of sentences. The study tries to identify the major syntactic structures in Dholuo by giving an inventory of the different sentence types in the language. The study informs on Dholuo Phonology by marking tone and stress on the words and provides their morphological realization. It also does a survey of the grammatical categories in Dholuo such as the nouns, verbs, pronouns etc. In the inventory of pronouns, Omondi (1982) observed that the reflexive form of the transitive verb occurs when the subject and the object of the verb corefer. This means that there must be a relationship in their interpretation. This is key in this current study as part of the interpretation of anaphors is syntax. Omondi (1982) identified two types of reflexives to include the generative or impersonal ‘-*ruok*’ a suffix which is attached to the verb. The other type of reflexive is the morpheme ‘-*r-*’ ‘self’ followed by a personal object pronoun. This reflexive occurs when the objects are not impersonal or generative. Consider the following:

(5)

a. *Iluokruok*

Omondi (1982, p.82)

Somebody/ something washing himself/herself

b. *Aluokra*

I wash self

I am washing myself.'

c. *Auma luokre*

Auma wash self

Auma is washing herself.'

In example (5a), the suffix *-ruok* is attached to the verb to refer to the act done by –self. It means to wash oneself or wash each other. In the same vein *wuondruok* means cheating oneself or each other. In examples (5b) and (5c), the reflexive *-r-* ‘self’ is followed by a personal pronoun *-a* ‘my’ and *-e* ‘her’ respectively. In (5b), the person performs the act of washing to herself or himself while in (5c), Auma performs the act of washing to herself.

Another study on Dholuo based on testing Chomsky’s three binding principles was done by Madara (1989). The study examined syntactic and semantic relations of anaphors using Chomsky’s Binding Theory. The study identified two categories of anaphors to include overt anaphors (reflexives and reciprocals) and covert anaphors (PRO) which comprised an argument in a sentence. The argument could be a subject or an object. This work is important in the current study as it highlights the anaphors in Dholuo which are the core study and the examples which are useful in this current study. Consider the following:

(6)

a. Peter onego-re

Peter kill self

‘Peter has killed himself.’

b. Peter onego en (onege)

Peter kill him

‘Peter has killed him.’

c. Peter onego Otieno.

Peter kill Otieno

‘Peter has killed Otieno.’

d. Peter ne dwaro nego-re

Peter PRO want kill self

‘Peter wanted to kill himself.’

The examples in (6a) and (6d) gives us instances of anaphoric uses in the sentences as overt and covert respectively. In (6a) the reflexive *-re* refers to the antecedent NP *Peter*. The act of killing has been performed to the person himself who is *Peter*. This reflexive *-re* ‘himself’ is bound within the local domain of *Peter* the subject that precedes it. Examples (6b) and (6c) do not have reference relationships and so are not anaphors. In example (6b), the subject *Peter* and the pronoun *ne* refer to different persons. The act of being killed is performed on another person. While in example (6d), *Peter* and *Otieno* are different entities. The action of killing has been performed to someone by the name *Otieno*. In (6d), the subject of the infinitival clause is PRO. The reflexive *-re* refers back

to the subject PRO which refers to 'him' *Peter*. PRO governs the reflexive *-re* since it takes the subject position.

Okoth (1997) gives a detailed account of the grammatical categories in Dholuo. This study analyses Dholuo grammar using the Functional Grammar Theory. This theory generates sentences based on the changes in the sentence operations as opposed to rules in transformational grammar. There are three linguistic areas highlighted, syntax, semantics and pragmatics in the interpretation of different constituents in a sentence. This is done by assigning the different interpretation to the different words used. In the study there is extensive use of the pragmatic function applied to different constituents in the sentences with no focus on anaphors. The current study attempts to explain in pragmatic terms the various contexts where an anaphor can be interpreted. Okoth (1997) observed that Dholuo anaphors are of two types: true reflexives and reciprocal constructions. He observed that the true reflexive, Dholuo reflexive is marked by the morpheme *-r-* followed by a final personal pronoun. The use of generative or impersonal reflexive *-ruok* attached to the verb as a reflexive, as pointed out by Omondi (1982) is viewed differently by Okoth (1997). According to Okoth (1997), *-ruok* as a reflexive relies on the intuition in translating the English infinitival phrase. For example, to cheat is translated as *wuondruok* 'cheating oneself or each other' implies to cheat. Although, this perspective still need more research to establish the usage of this anaphor in Dholuo. Nevertheless, both scholars concur that Dholuo true reflexive is marked by the morpheme *-r-* 'self' followed by a personal pronoun attached as a suffix to a verb. This is the same view this study takes. Consider,

(7)

a. Guok' nang'ore.

dog lick self

'The dog is licking itself.'

b. Hinyruok rach

(Okoth 1997, p.40)

'To hurt oneself is bad.'

In example (7a), the reflexive *-re* 'self' is attached to the verb *nang'o* 'lick'. The sentence explains the action that the subject *guok* 'dog' does to itself, that is, of licking itself. So, the reflexive *-re* 'itself' refers back to the dog in this context. (7b) points to the fact that one can hurt himself or herself. The cause of the hurt could be internal caused by self or external caused by someone or something else. Just as Okoth (1997) alluded, it is more of the intuition in trying to translate the infinitival. This sentence can also be '*ahinyora*' meaning that I have hurt myself. The reflexive *-ra* 'myself' refers back to the first person 'I' and the action of being hurt affects this person directly.

In the same vein, Okoth (1997, p.41) asserts that the other form of reflexive in Dholuo is the reciprocal construction. This is where the participants perform the same action to one another. Dholuo reciprocal is marked by the morpheme *-r-* followed by the personal pronoun. The reciprocal is bound to the verb in the construction while the subject is plural. Consider (8) where the participants are performing the actions to each other. The reciprocal *-re* 'each other' in (8a) refers to the action of two people being performed to each other. In this case it is the children running after each other. In (8b), the subject *Odongo and Opiyo* perform the act of loving each other, that is, *Opiyo* loves *Odongo* and *Odongo* loves *Opiyo*.

(8)

a. Nyithindo laore

children run each other

‘Children are running after each other.’

b. Odongo gi Opiyo oherore

‘Odongo and Opiyo love each other.’

In addition, another study by Wambia (2015) aimed at examining the long distance anaphors in Dholuo. The study used four modules of Government and Binding Theory: Government, Binding, Control, and Case Theories. The focus was on the syntactic analysis of the long-distance anaphors. Wambia (2015) observed that the occurrence of long distance anaphors tends to violate the Binding Principle A in that anaphors must be bound within their governing domain. This makes the long distance anaphors ambiguous such that they require a strategy to interpret them. The long distance anaphors in this study are pronominals which are bound by the antecedents and so function as anaphors. The present research undertakes a study on the anaphors of which these long distance anaphors would apply. The data on long distance anaphors would be useful in the current study. The focus though is on the interface of syntax, semantics and pragmatics, where context is key in the interpretation of anaphors.

Conversely, there are other related studies conducted on other languages that are vital in the current work. For example, Sikuku (2010a) studied anaphors in Lubukusu, a Luhya dialect in Western Kenya. His focus was on the syntactic patterns of anaphors, that is, reciprocals and reflexives which appeared as adjuncts just as Dholuo reflexives and reciprocals. In his analysis using Chomsky (1981, 2000, and 2001) binding principles,

Sikuku tried to redefine these binding principles. This work is important in this study since the binding principles are part of investigation in this study. The anaphors are described as adjuncts giving them pragmatic aspect. Semantics is found to be important in the analysis of anaphors, thus the interface between syntax and semantics. This work is important as it helps the study understand how sentences with anaphors arranged syntactically can easily be given both semantic and pragmatic meanings.

In the same vein, Diercks and Sikuku (2013) work focused on the clitics in Bantu Languages with close reference to pronominal incorporation in Lubukusu. Their study focused on the variation in object marking on verbs which is realized by a prefix that appears morphologically adjacent to the verb root. In the study, the object markers are incorporated pronouns. Also, object marking was studied in different contexts such as declarative, dislocation which brings in the pragmatic aspect. This work is important in this study since it will help us in drawing comparison with Bantu language that has the object marking incorporated in the verb root like Dholuo and to understand the interface of syntax, semantics and pragmatics. For example, In Lubukusu *Yohana a-e-bon-a* ‘John saw himself’ the prefix *-e* which marks the object occurs before the verb *bon* ‘see’ and it refers to *John*. The reflexive occurs as a suffix *-a* ‘self’ incorporated on the verb. On the other hand, in Dholuo *a-neno-ra* ‘I saw myself’ the object marking *a-* appears after the reflexive *-r* ‘self’ incorporated with the verb *neno* ‘see’.

Nevertheless, Ndwiga (2014) studied the syntax-pragmatics interface of sentences in Gichuka a dialect in Kimeru language. The study used the Minimalist Program and Relevance Theory to analyse the different sentences. This work is important in this study

because it enables us understand how to apply the principles of Relevance Theory in the interpretation of sentences. For instance, If person A says, “Shall we go to great grandmother tomorrow?” and B responds, “I will go to church (tomorrow)”, Ndwiga (2014, p.64). In this example, A takes B’s response as a rejection of the proposed offer. The assumption is that if B goes to church he will not go to visit the grandmother. B’s response combines with the context of going to church to yield the fact that he will not go visiting the grandmother. Once A arrives at this interpretation, the mind stops at thinking about another interpretation since Relevance Comprehension Procedure requires that little effort is required to derive at the meaning of an utterance.

2.2 Theoretical Framework

This study employed Government and Binding Theory and Relevance Theory in interpreting the sentences. We will begin by discussing the key tenets and assumptions in Government and Binding Theory, then move to Relevance Theory.

2.2.1 Government and Binding Theory

Government and Binding model is a theory that has developed over time. It was developed by Noam Chomsky (1981) and later expounded in his other works (2001, 2002 & 2006). It holds that the human mind has language ability which they are created with and are able to learn vast languages depending on the environment they interact with. Through exposure, the speakers know what governs the different languages, and how languages differ from each other. Also, that the grammar of a language has the syntactic, semantic and phonological component (Chomsky, 2006). This study focused only on the syntactic and semantic components in the analysis of sentences and also include the

pragmatic component that Chomsky did not recognize. Government and Binding Theory has different modules which are sub-theories with their own principles. They include Bounding Theory, Government Theory, X-bar Theory, Theta Theory, Binding Theory, Case Theory and Control Theory. This work focused on X-bar Theory, Case Theory, Government Theory, Theta Theory and Binding Theory, but referred to the other theories to explain some concepts.

2.2.1.1 Government Theory

Government Theory involves the relationship between the head of a sentence and the categories that depend on it (Chomsky (1981); Haegemann (1994); Poole (2002)). In defining government, a category A governs another category B if:

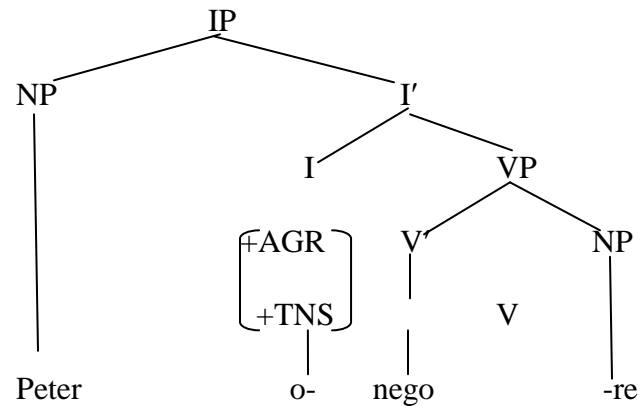
- i. A is a governor
- ii. A and B are sisters

The Governors are heads of lexical categories such as Nouns, Verbs, Adverbs, and Prepositions. In a verb phrase (VP) for example, *negore* ‘kill himself’, the verb *nego* ‘kill’ is the governor and the head of the VP. The NP *-re* ‘himself’ is the governee because it is governed by the verb *nego* ‘kill’. Government by head is based on sisterhood where A and B are sisters. The verb *nego* ‘kill’ theta governs the NP *-re* ‘himself’ (object) as it assigns an internal theta role to it. Node A C-command node B if and only if:

- i. A does not dominate B and B does not dominate A; and
- ii. The first branching node dominating A also dominate B.

In this case, in *Peter onegore* ‘Peter killed himself’, *Peter* (node A) C-commands *onegore* ‘killed himself’ (node B) since *Peter* does not dominate *onegore* ‘killed himself’ and *onegore* ‘killed himself’ does not dominate *Peter*. Both NP *Peter* and VP *onegore* ‘killed himself’ are dominated by the IP. This is demonstrated in Figure (1)

Figure 1: Government Relationship



Moreover, there are also mutual relationships that exist between the elements which are defined in terms of government. Hence, A governs B if and only if A is a governor and A C-commands B and B C-commands A. There is thus a mutual relationship (Mutual, M-command). That is, A C-commands B if and only if A does not dominate B and every X that dominates A also dominates B. When m is equated to the first branching node we obtain C-command definition called strict C-command. X is interpreted as maximal projection which are barriers to government. This gives us another definition of government that A governs B if and only if:

- i. A is a governor; and
- ii. A m-commands B; and

iii. No barriers intervene between A and B

This relationship is captured in example (9)

(9)

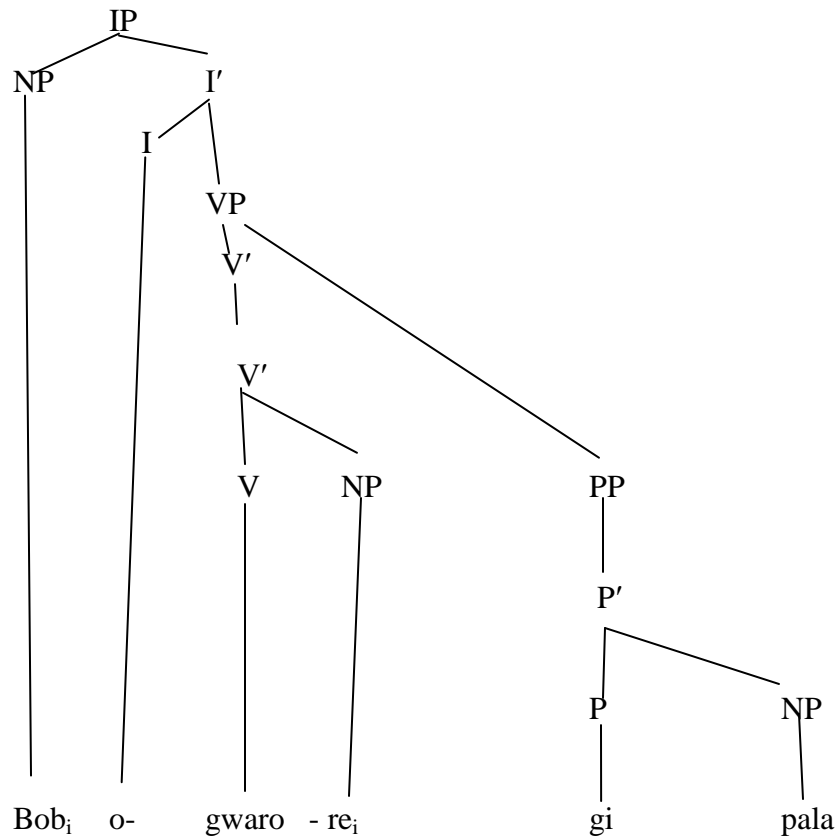
Bob_i ogwarore_i gi pala

Bob scratch self with knife

‘Bob scratched himself with a knife.’

In order to understand this abstract relationship, we can capture it in a diagram. Figure 2 indicates the mutual relationship between the different elements in example (9).

Figure 2: Mutual Relationship



The verb, V *gwaro* ‘scratch’ C-commands the NP *-re* ‘himself’ which it head governs and also theta governs. But the verb, *gwaro* ‘scratch’ does not C-command the PP, *gi pala* ‘with a knife’ because the first branching node that dominates it is the lower V’, which does not dominate the PP. V does not govern PP because it does not C-command it. In relation to the NP *-re* ‘himself’ which is an anaphor, it requires an antecedent referent NP which they corefer. In the IP *Bob_i ogwarore_i gi pala* ‘Bob scratched himself with a knife’, the NP *Bob* C-commands the entire IP with all the elements therein. The NP *Bob* and anaphor *-re* ‘himself’ occur in the same minimal clause and are therefore bound as they corefer in Binding Principle A. This relationship is indicated by use of the subscript (_i). The minimal clause refers to the governing category or the closeness of the anaphor and the antecedent that governs the anaphor in the IP. At the same time, the anaphor and antecedent must agree in number, person and tense to be grammatical. The anaphor *-re* ‘himself’ and NP *Bob* which is the antecedent are close enough to be coindexed. They also agree in number and person since *Bob* the third person takes *-e* ‘him’ attached to the anaphor a third person. NP *Bob* and I’ m-commands each other because the first branching node that dominates NP *Bob* also dominates I’. They are thus in a mutual relationship.

2.2.1.2 X-bar Theory

X-bar theory is concerned with the part of grammar regulating the structure of phrases by bringing out what is common in the structure of phrases. It also provides conditions on how a phrase structure tree is built by looking at the internal structure of the sentence. A sentence is made up of phrases, and phrases made up of different grammatical categories. It begins with the phrase structure rules which explains what is contained in a sentence.

The syntactic categories of the phrasal constituents NP, VP, AP, PP etc. are lexically determined. NP is headed by N, VP headed by V, AP headed by A and PP headed by P. The phrases in brackets are optional, can be left out. These phrases can be illustrated using the following phrase structure rules:

$$VP \rightarrow V _ (NP) _ (PP)$$

$$NP \rightarrow (Det) _ (AP) _ N _ (pp)$$

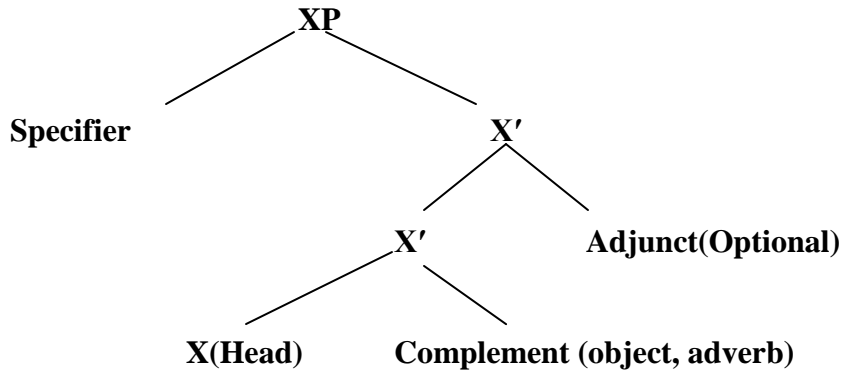
$$AP \rightarrow (A) _ P _ NP$$

$$PP \rightarrow (PP) _ P _ NP$$

The NP and the VP are made up of different grammatical categories. The NP can consist of a noun, specifier and noun or a pronoun. The VP consists of a verb and any element that comes after the verb. The elements placed in brackets are optional. All phrases are headed by one head. This information can be summarized as:

$$XP \longrightarrow \dots X \dots$$

In X- Bar Theory, the heads are terminal nodes and they dominate words. There are two levels of projection, that is, complements combine with X to form X' projections; adjuncts combine with X' to form X' projections. The specifier combines with the top most X' to form maximal projection. XP is the maximal projection of X. X is an obligatory element on the right hand side of the rule and it is the head of the maximal projection. The maximal projection XP and its head X are different bar levels of X. This is represented in a tree diagram as below:

Figure 2: Maximal Projection and Heads

The elements in a tree diagram relate vertically and horizontally. Vertically, node XP immediately dominates the specifier and X'. The first X' dominates X' and adjunct. The second X' dominates X and complement. In the horizontal relationship, the specifier immediately precedes X' as it occurs on its left side. X' precedes the adjunct and X also precedes the complement. The specifier and X' are sisters, X and complement are also sisters. XP is their mother. The head of a phrase governs the complements. For instance, in a VP the verb governs the object and is the governor while the object is the governee. This is because the verb and the object are sisters. Again, the arguments of a verb should be realized inside a VP because the verb can only assign an internal theta role to NPs or clauses that it governs.

(10)

a. Bul_i biro gore_i e ot kawuono

Drum will beat self house today

'The drum will beat itself in the house today.'

This sentence contains several phrases such as VP, NP and PP as represented in Figure

3a:

Figure 3a: Phrases

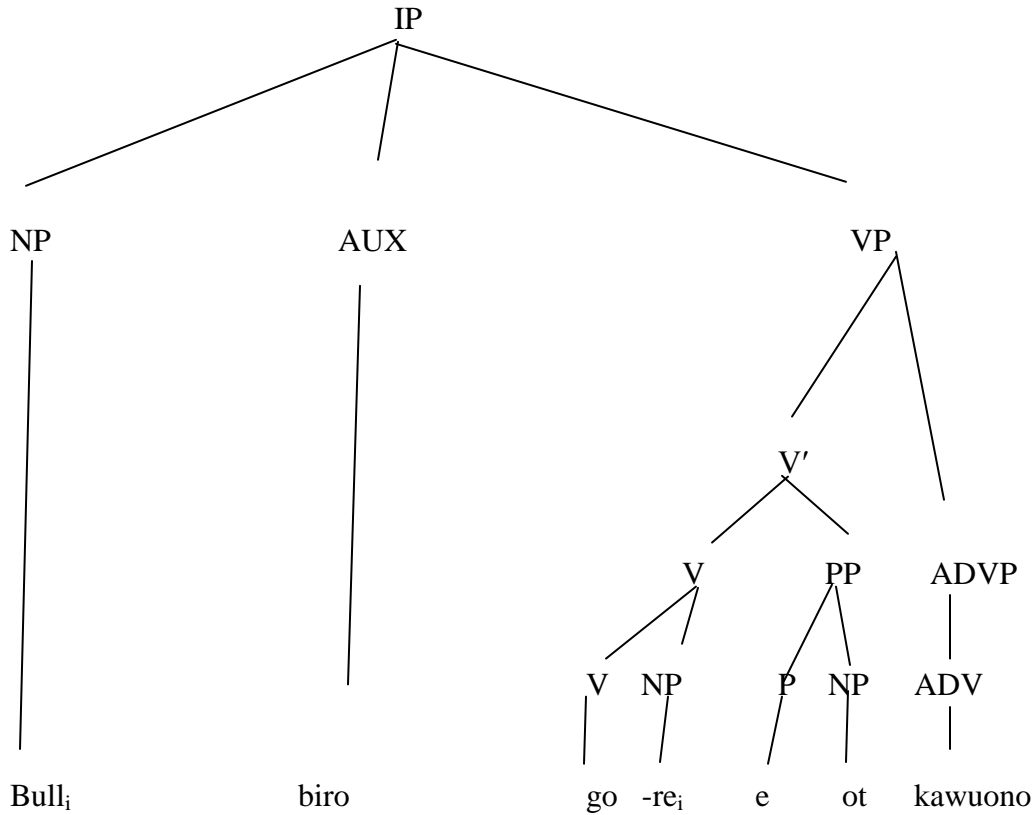


Figure 3a shows different phrases NP, VP, PP, ADVP. In the VP, the maximal projection is VP, the intermediate projections of V are V' (V-bar). The VP has a layered structure in that it has different levels of projection. The relations between a head and non-heads in a constituent is reflected in the bar level it attaches to in that an object of verb attaches to V'. The direct object NP, *ot* 'house' is a complement of the verb. The NP *ot* 'house' combines with P *e* '-in' to form PP *e ot* 'in the house' which combines with V to form the lowest V', the first projection. The PP *e ot* 'in the house' and ADVP *kawuono* 'today' are adjuncts, they combine with a V' to form another V'. The adjuncts are optional constituent and they can be repeated. This means that the level of V' is **recursive**. Node

VP is another V' as it dominates V' and adjuncts. The quantifiers (all, many, most, some, any, each) occupy the specifier position to the left of VP. The specifier dominated by VP is represented as [Spec, VP]. [Spec, VP] combines with V' to form the highest V-projection, VP. For example,

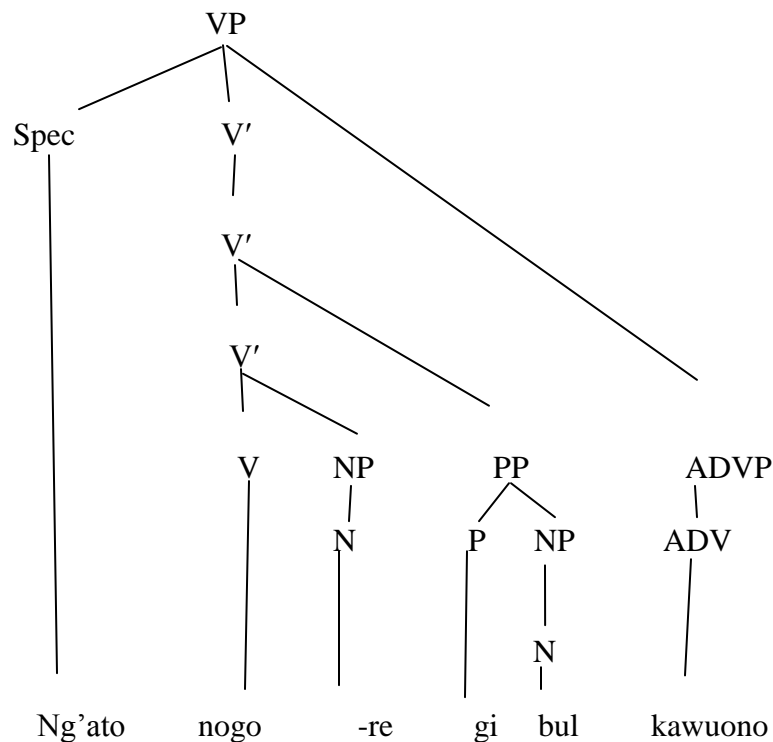
b. Ng'ato nogore gi bul kawuono

Someone beat self with drum today

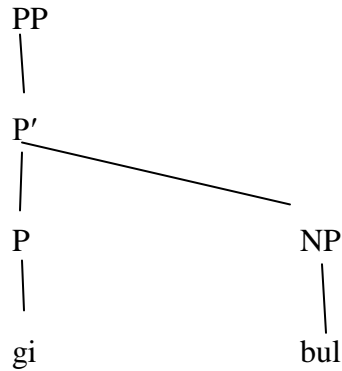
'Someone beat himself with the drum today.'

This information on the verb phrase is represented in Figure (3b) below:

Figure 3b: Verb Phrase



From Figure (3b), we can represent the phrases PP, ADVP, and NP in X-bar syntax with different layers of projection as the VP as shown in Figure (3c) below:

Figure 3c: Prepositional Phrase

In Figure 3c, a preposition *gi* ‘with’ combines with the NP *bul* ‘drum’ to form a P’. The noun Phrase is represented in Figure (3d) below:

Figure 3d: Noun Phrase and Adverb Phrase

From Figures 3d, noun *bul* ‘drum’ combines with the N’ to form the maximal projection NP. In the meantime, adverb *kawuono* ‘today’ combines with ADV’ to form the maximal projection ADVP.

In essence, a sentence is made up of a subject and predicate which depend on each other (mutually dependent) for they are required to form a complete sentence. The subject and the predicate must agree in number for the sentence to be grammatically correct. The verb which is found in the predicate carries the tense. In X-bar syntax, Inflection (INFL)

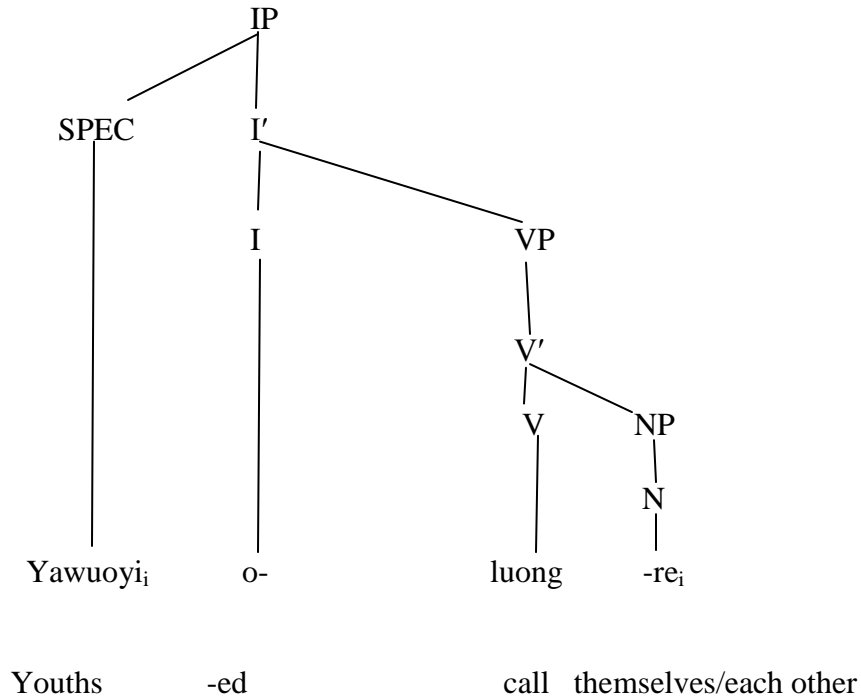
replaces the Auxiliary (AUX) in the structure of the sentence. This is because INFL is a node which contains all verbal inflection (person and number properties). Let us also consider (11):

(11) *Yawuoyi_i oluongore_i*

 Youths call each other

 ‘The youths called themselves/one another.’

In example (11), *yawuoyi oluongore* ‘youths called themselves/one another’, the sentence (IP) contains the subject *yawuoyi* ‘youths’ and the predicate *oluongore* ‘called themselves/one another’. The subject *yawuoyi* ‘youths’ and predicate *oluongore* ‘called one another agree in number and person. This is because the subject is plural and it takes the anaphor in its plural form attached to the person in plural making it grammatical. This sentence contains the INFL *o-* ‘-ed’ which carried the tense. We can represent this sentence in a structure as seen in Figure (3e):

Figure 3e: Dholuo Anaphor X-bar Representation

From Figure (3e), the maximal projection is the IP. The VP has a layered structure V', V in that there are different projections. VP dominates V' because it is higher on the tree. V' *luongore* 'call themselves' dominates the V *luong* 'call' and NP *-re* 'themselves'. The specifier [SPEC] position is occupied by *yawuoyi* 'youths' to the left of I'. The specifier is dominated by IP [SPEC, I']. [SPEC, I'] combines to form the highest projection, IP. *Yawuoyi* 'youths' C-commands *-re* 'themselves/one another' because the first branching node that dominates NP *yawuoyi* 'youths' also dominates I' that contains NP *-re* 'one another' and they corefer. This sentence is grammatical since the anaphor *-re* 'themselves/one another' is C-commanded by its antecedent *yawuoyi* 'youths'.

2.2.1.3 Case Theory

The Case Theory deals with properties that noun phrases have and their distribution in a sentence. Case Theory accounts for some formal properties of overt NPs (lexical and

non-lexical) and case in grammar. These NPs constitute anaphors among others. All the overt NPs are case marked. Case Theory operates under Government Theory. It also shows the nature of abstract case relations and their realizations and assign case markers (Aarts, 2018; Poole, 2002). According to Haegemann (1994), case refers to the relation in which a noun has with other words or change of form by which relation is indicated. If the noun phrase lacks the case feature it is said to be ungrammatical.

Moreover, there are different types of cases, which include the nominative case, accusative case and oblique case. The objects of verbs and prepositions are assigned accusative or oblique case respectively, and subjects are assigned nominative case. The changes in the form of a word also determines the case to be assigned to it. For instance, a noun in a subject position is assigned a nominative case, in an object position is assigned an accusative case; while if the noun is the object of a preposition is assigned an oblique case (Poole, 2002, p.82). The element assigning case is the assignor (V, I, P) while the element being assigned case is the assignee. Case assignment is guided by the case filter principle which stipulates that an NP must be assigned case (Poole, 2002, P.94).

In the same vein, case assignment can either be morphological or abstract. We assume that all arguments are assigned case. The arguments may change form or not depending on their usage in the sentence. These arguments also assume different positions in the sentence which may make the sentence grammatical or ungrammatical. These arguments may either change or not form depending on the usage in the sentence. Hence, when an argument changes form as it assumes different positions as subject and object, we say

that it has changed form morphologically. The different forms that the argument assume are assigned morphological case. On the other hand, if an argument retains its initial form it is assumed to be abstract. It can attain different morphological status and so it is assigned an abstract case. This is supported by the ascertainment by Poole (2002) that, there is a relationship between morphological and abstract case in that morphological case is a realization of the abstract case. This is demonstrated in (12):

(12)

Peter_i onegore_i

Peter kill self

‘Peter has killed himself.’

The antecedent, NP *Peter* in (12) is assigned a nominative case by INFL while the verb *nego* ‘kill’ assigns an accusative case to the anaphor *-r-* ‘himself’ morphologically. This is because the anaphor *-r-* ‘-self’ is attached to the personal pronoun *-e* ‘him’ which when used in the subject position changes to *o-* ‘he’ to read *onegore* ‘he killed himself’. If this anaphor was replaced with *Peter* to read *Peter onego Peter* ‘Peter killed Peter’, the second *Peter* in the object position assumes an abstract case and is assigned an accusative case since there is no change in form. Therefore, anaphor *-re* ‘himself’ assumes a morphological case which is a realization of the abstract case *Peter* which it refers back to.

Poole (2002) alludes that case is assigned under government where the grammaticality of anaphors is determined by government. The antecedents must govern the anaphors within

the minimal IP. Accusative case is assigned by a governing V, or P, nominative case is assigned by INFL, under government or by specifier- head agreement. The subjects of small clauses are case marked by an outside governor. Case assignors in the structure include verbs, prepositions and INFL containing (AGR)eement. There is a particular structural relationship between the case assignor and assignee (arguments being assigned case). This structural case assignment depends on government while inherent case assignment depends on theta role assignment and government. Subjects of finite clauses have nominative case while NPs that are subjects of infinitival clauses appear in the accusative. A verb cannot assign accusative case to an NP outside the VP such as the subject (Haegemann, 1994). The inherent case assignment operates under the condition that; If A is an inherent case assigner, then A assigns case to an NP if and only if A theta marks the NP. The nouns and adjectives assign GENITIVE case inherently. ‘Of’ is the overt reflex of an inherent GENITIVE case. The case assigner and the element to which case is assigned should be adjacent. This adjacency condition requires that case assigners be separated from the NPs which they case-mark by intervening material. But when case is assigned in a specifier-head agreement configuration, the adjacency condition is not relevant (Haegemann, 1994). Consider the following example:

(13)

- a. Auma ohero Mary
 Auma love Mary
 ‘Auma loves Mary.’
- b. Auma ohere

Auma love him

‘Auma loves him.’

c. Auma oherore

Auma love self

‘Auma loves herself.’

d. Omondi oyuayo san kochike

Omondi pull plate towards him (self)

‘Omondi pulled the plate towards himself.’

In example (13a), the INFL assigns *Auma* the nominative case and verb *hero* ‘love’ assigns *Mary* an accusative case. This satisfies the case filter principle and the verb is also adjacent to the NP. The verb *hero* ‘love’ in (13b) and (13c) case marks the NPs *-e* ‘him’ and *-re* ‘herself’ respectively. This is because the verb *hero* ‘love’ governs both *-e* ‘him’ and *-re* ‘himself’ and so assigns them an accusative case. Chomsky (1981) states that a verb assigns case to an NP that it governs if and only if it assigns a theta role to it. The verb *hero* ‘love’ in (13b) and (13c) governs the NPs *-e* ‘him’ and *-re* ‘herself’ respectively and also assigns a thematic role to them and their subjects *Auma*. Thus, the verb *hero* ‘love’ assigns an accusative case to the anaphors *-e* ‘him’ and *-re* ‘himself’. In addition, in (13b) and (13c), INFL (I) assigns a nominative case to the subject *Auma*. In (13d), the preposition *kochiko* ‘towards’ case marks the NP *-e* ‘him’ which act as an anaphor in this case as it refers to *Omondi* and assigns it an oblique case. The verb *yuayo* ‘pull’ assigns an accusative case to the object *san* ‘plate’ while INFL assigns a nominative case to the subject *Omondi*. This is because prepositions assign oblique case

to NPs (anaphors). These examples indicate that the verb (transitive), INFL and the prepositions are case assigners.

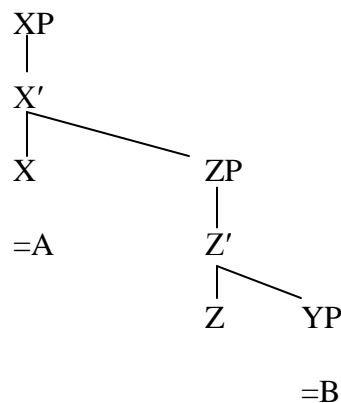
According to the definition of government, the preposition *kochiko* ‘towards’ in (13d) case marks the NP *-e* ‘him’ because the prepositional phrase (PP) is the maximal projection, and hence a barrier. The closest governor assigns case, that is, the minimality condition on government. This condition states that:

A governs B if and only if

- (i) A is a governor
- (ii) A m-commands B
- (iii) There is no node Z such that
 - (a) Z is a potential governor for B
 - (b) Z C-commands B
 - (c) Z does not C-command A

This relationship on minimality condition is demonstrated in Figure 4 below:

Figure 4: Minimality Condition



The assignment of case, therefore, requires both the C-command and m-command where the concepts of dominating and maximal projections are key Poole (2002). For this two concepts to work, there is need of a barrier. Let's consider (14):

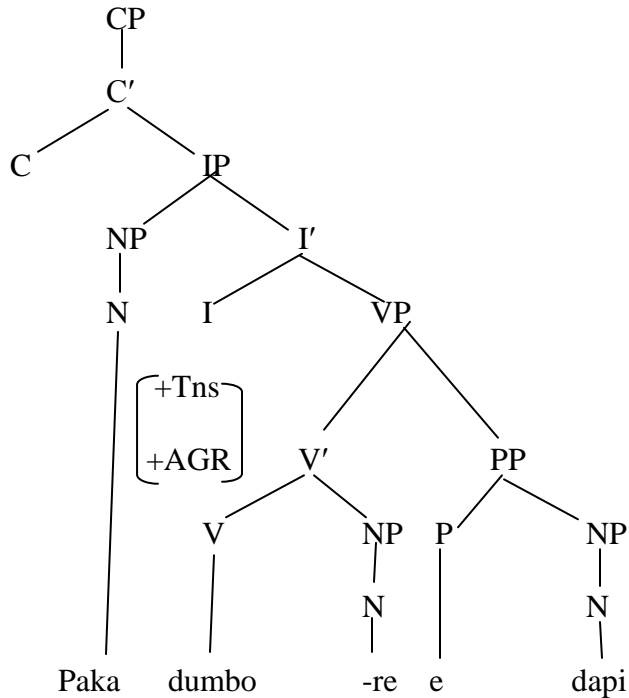
(14)

Paka_i odumbore_i e dapi

Cat plunge self in pot

'The cat plunged itself in the pot.'

The verb *dumbo* 'plunge' assigns an accusative case to the anaphor *-re* 'itself' and the preposition *e* 'in' assign an oblique case to the object *dapi* 'pot'. The verb *dumbo* 'plunge' attempts to assign an accusative case to the object *dapi* 'pot', but is blocked by the preposition *e* 'in'. As earlier discussed, maximal projections are barriers and so the PP where *e* 'in' occurs blocks the verb *dumbo* 'plunge' from assigning the object *dapi* 'pot' case. This is represented structurally in Figure (5):

Figure 5: Case Assignment and Barrier

From figure (5), the verb *dumbo* ‘plunge’ m-commands the NP *dapi* ‘pot’. The first maximal projection dominating *dumbo* ‘plunge’ is VP, and VP does dominate the NP *dapi* ‘pot’. Therefore, if case assignment depends on m-command only, we have a problem. This is because the object of the preposition *dapi* ‘pot’ needs to receive case from the preposition. How then do we protect the object *dapi* ‘pot’ from being assigned case by the verb *dumbo* ‘plunge’? To do this, we assume that the maximal projections are barriers to government and as barriers their heads which are case assignors’ controls elements to be case marked. Therefore, case assignment from outside the maximal projection is barred Poole (2002, p.91). In essence, even though the verb *dumbo* ‘plunge’ still m-commands the object *dapi* ‘pot’ of the preposition, it cannot assign case to it because of the intervening barrier PP. However, there are exceptions where the rules may be violated. Let us consider example (15):

(15)

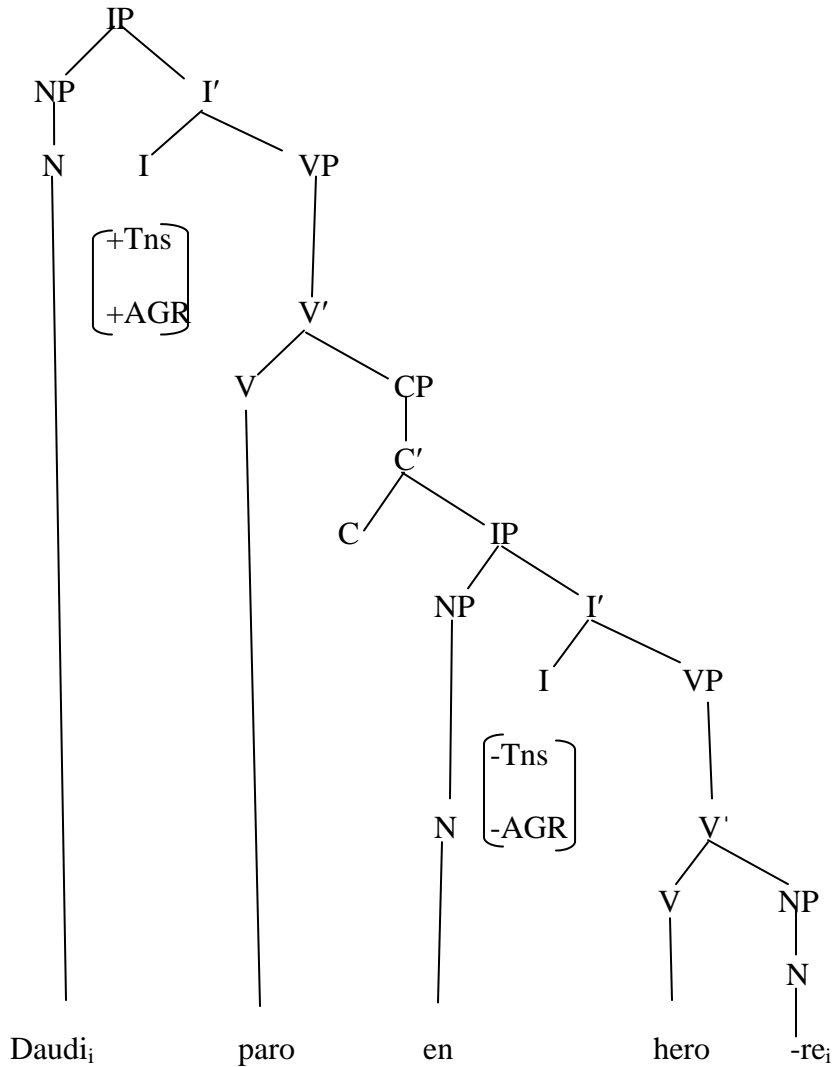
Daudi_i paro en oherore_i

Daudi think him love self

'Daudi thinks himself to be lovable.'

The example in (15) is an instance of Exceptional Case Marking (ECM). ECM applies to infinitival IP which do not constitute a barrier for outside government and to case assignment Poole (2002, P.93) though it is a maximal projection. The reason being that infinitival IP lacks person, number and tense features. It also does not assign nominative case. We need the subject of the IP to be exceptionally case marked with accusative case from the matrix verb. In ECM, the anaphor and the antecedent are not in the same minimal IP. If the CP is present, then Exceptional Case Marking is blocked by this barrier. In (15), the verb *paro* 'think' does not assign an accusative case to *en* 'himself' since it is in a higher clause and *en* 'he' is not the direct object of the verb *paro* 'think'. The NP *en* 'he' is the subject of the lower infinitival clause. The verb *hero* 'love' does not assign accusative case to the anaphor *-re* 'himself' since it is infinitival. The infinitival IP lacks the features number and person, so not a barrier. The anaphor *-re* 'himself' is assigned accusative case by the verb *paro* 'think' from the higher clause to get its reference from the subject *Daudi*, hence Exceptional Case Marking. This is represented in Figure (6):

Figure 6: Exceptional Case Marking



However, Exceptional Case Making may not apply to all sentences containing anaphors, especially when the context of utterance is different. This is because the presence of the CP as a barrier prevents Exceptional Case Marking (Poole, 2002). Example (16) presents two sentences uttered in different contexts. Example (16b) is marked with an asterisk* to indicate that the antecedent *Adoyo* and anaphor *-re* 'herself' cannot be coindexed because of the barrier *ni* 'that' occurring in between. If this happens, then the sentence is

ungrammatical. The different interpretations of sentences (16) can best be explained structurally.

(16)

a. *Adoyo ong'eyo ni Akinyi; ohero umore;*

Adoyo know that Akinyi love cover self

'Adoyo knows that Akinyi love covering herself.'

b. **Adoyo; ong'eyo ni Akinyi ohero umore;*

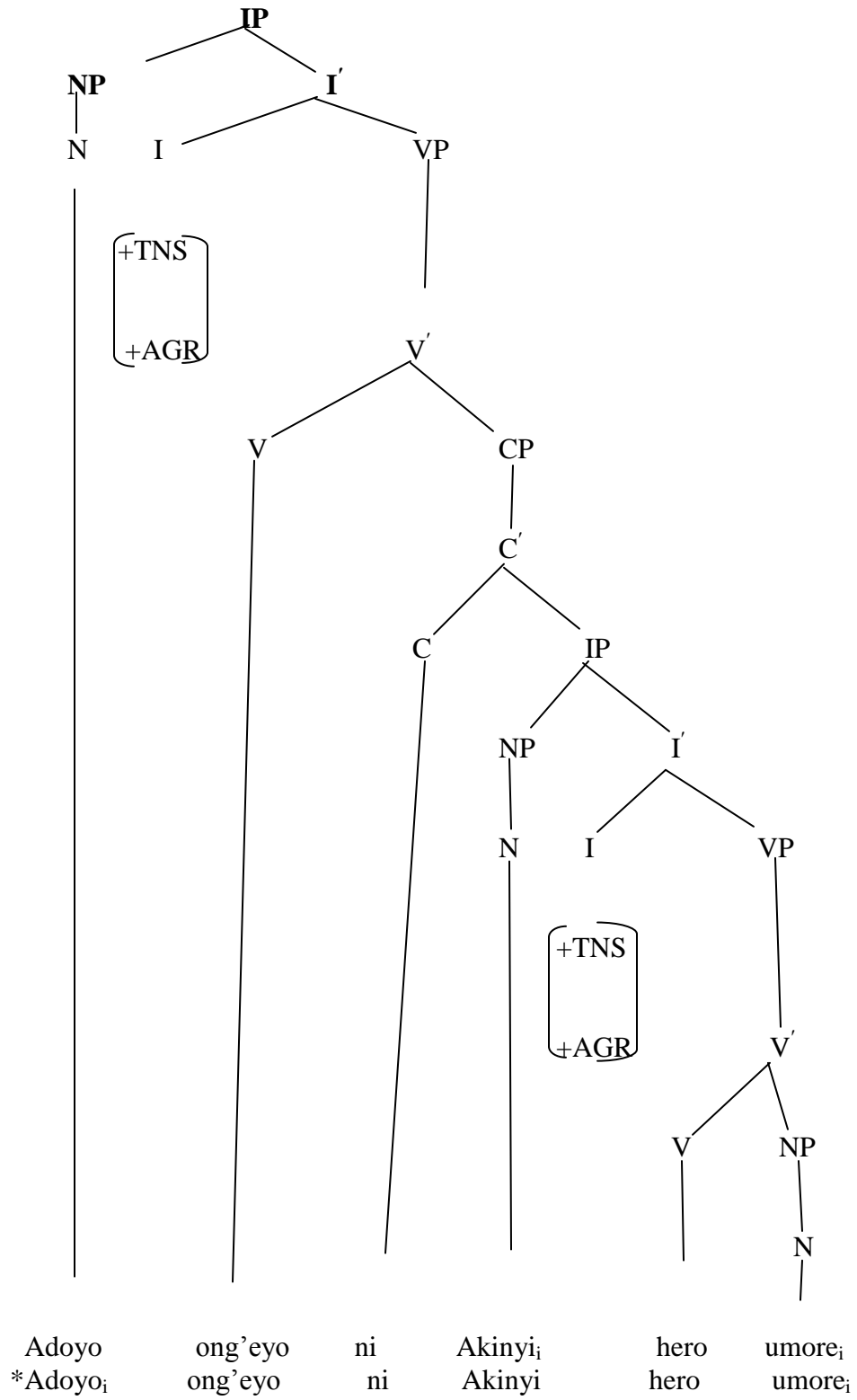
Adoyo know that Akinyi love cover self

'Adoyo knows that Akinyi loves covering herself.'

In example (16a), the sentence is grammatical because *Akinyi* is assigned a nominative case by INFL and anaphor *-re* 'herself' is assigned accusative case by the verb *hero* 'love' since they are in the same minimal IP. The verb *ng'eyo* 'believe' cannot assign case to the anaphor *-re* 'herself' in (16a) because of the presence of barrier CP *ni* 'that', a complementizer and also the anaphor *-re* 'herself' does not co-refer with the subject of this verb. Example (16b) is ungrammatical since the anaphor *-re* 'herself' is coindexed with *Adoyo* and they are not within the same minimal IP. *Adoyo* C-commands *Akinyi oumore* 'Akinyi has covered herself'. There is the maximal projection CP *ni* 'that' that blocks the INFL from the IP *Akinyi oumore* 'Akinyi has covered herself' to assign a nominative case to the subject in IP *ang'eyo* 'I believe'. The verb *hero* 'love' assigns

accusative case to anaphor *-re* ‘herself’ but lacks a referent in the minimal IP *Akinyi oumore* ‘Akinyi covers herself’. Example (16b) indicates that Exceptional Case Marking cannot occur because of the presence of the barrier, CP. This is represented in Figure (7)

Figure 7: Exceptional Case Marking and Barrier



2.2.1.4 Theta Theory

Theta Theory is concerned with the relationship that sentences have in the performance of an action. This relationship is between the predicates and arguments. The predicates which take the arguments are verbs, adjectives and prepositions. Predicate argument structure indicates the NPs required by the predicates to complete the meaning. This is shown by assignment of roles to the arguments or participants. The roles that the predicates assign to the NPs, arguments in the sentences are known as theta (thematic) roles. According to Poole (2002, p.80), theta roles encode the semantic role possessed by the NPs and PPs which are required by the predicate. These roles, for example, indicate the doer of an action and the person or thing affected by the action.

As part of grammar, words (lexical items) and information are stored in the lexicon. These words constitute syntactic categories that are also stored in the lexicon. The lexicon need to specify more than the syntactic category by identifying both grammatical and ungrammatical constructions. This is done through assignment of theta role which is semantic. There is, therefore, an inter-connection between syntax and semantics. The distribution of theta roles in the structure of a sentence is guided by the theta criterion and the projection principle (Haegemann, 1994). Theta criterion (Chomsky, 1981; Haegemann, 1994, p.54) is defined as follows:

Each argument bears one and only one theta role, and each theta role is assigned to one and only one argument.

This principle indicates that there must be a correspondence between the arguments assigned theta roles and the roles assigned to the arguments. Moreover, the projection

principle states that each syntactic level must be projected from the lexicon (Chomsky, 1981). This implies that the syntactic structure observes the lexical properties of the items contained. The term lexical can mean the subcategorization properties as well as the thematic roles. For instance, a verb that takes an agent subject cannot take a theme or a goal subject, while verbs that have a non-thematic subject cannot be inserted in a structure where its subject has received a theta role. In essence, a verb (predicate) assigns either agent and patient theta roles or experiencer and theme theta roles to the arguments it subcategorizes for; while the prepositions assign either goal, source or location theta roles to its object. This is demonstrated in (17)

- (17a) *Auma_i oherore_i*
 Auma love self
 ‘*Auma loves herself.*’

In (17a), verb *hero* ‘love’ is the predicate that assigns theta roles. This verb is a two-placed predicate that requires two argument NPs, *Auma* and *-re* ‘herself’. The NP *Auma* is assigned Agent theta role while the NP *-re* ‘herself’ is assigned Patient theta role by the predicate verb *hero* ‘love’. In the same manner, an argument that takes two theta roles that are assigned to two arguments would violate the theta criterion, and the sentence would be ungrammatical. In example (17a), the NP *-re* ‘herself’ refers back to the antecedent *Auma*. In essence, they are the same thing. Ideally, they should receive the same theta role. But if this happens, then it would be a violation of the theta criterion since they appear as different arguments occupying different positions in the sentence. Let us also consider (17b):

(17b)

Paka_i odumbore_i e dapi

Cat plunge self in pot

'The cat plunged itself in the pot.'

In example (17b), the verb *dumbo* 'plunge' is a two-placed predicate with two arguments: *paka* 'cat' and *-re* 'itself'. The verb *dumbo* 'plunge' assigns theta role of Agent to NP *paka* 'cat' and theta role of Patient to NP *-re* 'itself'. The preposition *e* 'in' assigns the NP *dapi* 'pot' thematic role of Location which is the exact place that the cat fell. (17c) gives another example:

(17c)

Nyithindo_i ogwarore_i

Children scratch each other

'Children are scratching each other/themselves.'

In (17c), the verb *gwaro* 'scratch' is a two-placed predicate with two arguments *nyithindo* 'children' and *-re* 'themselves' or 'each other'. This verb assigns theta role of Experiencer to the NP *nyithindo* 'children' and theta role of Theme to the NP *-re* 'each other' or themselves.

Moreover, the information on theta role assignment is assumed to be part of the lexical entry in the mind. This information is then represented in a theta grid which represents the mind. For the sentences to be assigned thematic roles, they must be grammatically correct which forms part of syntax (Poole, 2002). This is represented in (18a):

(18a)

Auma_i oherore_i

Auma love self

‘Auma loves herself.’

Hero: Verb

love

AGENT	PATIENT

The verb *hero* ‘love’ assigns thematic role of Agent to NP *Auma* and Patient to NP *-re* ‘herself’. This verb is a two-place predicate which requires two arguments. Though the external argument *-re* ‘itself’ refer back to the internal argument *Auma* which is herself, the verb still is a two-place predicate with two arguments. If the two arguments are assigned the same theta role by virtue of their referent, it would be a violation of the theta criterion. This is seen below:

hero: verb

love

AGENT	PATIENT
NP	NP

Theta roles have been assigned to the arguments, so they are saturated and they are marked 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 or subscript. Then the index of the argument to which the thematic role is assigned is entered in the appropriate slot in the theta grid. This is represented in (18c):

(18c) Auma_i oherore_i

‘Auma loves herself.’

hero:

Love

AGENT	PATIENT
Auma_i	re_i
I	I

2.2.1.5 Binding Theory

The Binding Theory entails three principles, Principles A, B and C. Principle A is concerned with anaphors which are at the core of this study. The meaning of the anaphor depends on the antecedent that comes before it (Haegemann, 1994; Poole, 2002). For instance, let's look at sentence (19)

(19)

- a. A_i -hinyo- ra_i
 I hurt-self
 ‘I hurt myself.’
- b. Nyithindo go- re_i
 Children fight each other
 ‘Children are fighting each other.’
- c. Tina owacho ($ni o_i$ -chwanyo- re_i)
 Tina says that she hurt self
 ‘Tina said that she/Tina was hurt.’

In example (19a), the reflexive *-ra*, ‘myself’ is bound to the subject *a*- ‘I’ the antecedent. In sentence (19b), the reciprocal *-re* ‘each other’ is bound to the antecedent *nyithindo*, ‘children’. (19c) is an example of an embedded sentence. The subject *Tina* and *niochwanyore* ‘that she was hurt’ are in different clauses. According to government, CPs are barriers to government. The complementizer *ni* ‘that’ blocks the reflexive *-re* ‘herself’ from getting reference from the antecedent *Tina* which is on a higher clause. Therefore, the reflexive is bound with the antecedent *o*- ‘she’ to which they are coindexed within the same minimal clause.

In Binding Principle B, the meaning of a pronoun is not attached to the elements in the sentence and may refer to someone else; while in Binding Principle C an R-expression is free everywhere. In example (19c), the pronoun *o*- ‘she’ is free, in that it can co-refer with *Tina* outside the embedded sentence or someone else not mentioned. *Tina* an R-

expression refers to someone else outside the expression or universe of discourse. However, this study is not concerned with Principle B and Principle C which deals with pronouns and R-Expressions.

2.2.2 The Relevance Theory

This study adopted Relevance Theory (RT) by Sperber and Wilson (1995, 2002, 2004). This is a theory of human communication that deals with relevance of utterances, in that our minds activate thoughts that are meaningful. In order to understand the relevance of an utterance, context is taken into consideration. Context varies from linguistic, social, cultural and environment contexts to paralinguistic factors (facial expressions, gestures, body language, tonal variation). This means that the strings of words which form a sentence that is grammatical and meaningful as analysed by GB can attract varied interpretations. These interpretations can only be understood when the principles of RT are employed. Again, assumptions are derived from an utterance which guides the listener understand the speaker's meaning.

This study aimed at integrating pragmatics in understanding the different meanings of an utterance with anaphors. For instance, example (19c), *Tina owacho ni ochwanyore* 'Tina said that she hurt herself/ someone else' when uttered in a group setting can attract different reactions. One, is that probably someone in the group hurt her, or something that was said or done in the group hurt her. It can also mean that something or someone who is not in that group hurt her. Again, it could figuratively be interpreted that Tina is pregnant in some other context. These varied interpretations are all correct, but the most relevant one will depend on the context of the utterance. This is in line with the cognitive

principle of relevance which indicates that the human mind seems to focus on the right interpretation of an utterance and communicative principle of relevance which asserts that the utterances expressed are the most correct (Sperber & Wilson, 2002).

In the cognitive principle of relevance, human cognition is geared towards the maximization of relevance. This principle is innate and is applied to all sorts of processing that take place in a human mind and interacts with the environment hence transfer the thoughts to one another (Yus, 2010, p.681). This means that our minds can elicit strings of sentences which can be used in different situations. But it is only the relevant ones that can be uttered at any given moment depending on the environment and what is meant. For instance, in (19c) the mind identifies the lexical words that makes the sentence *Tina owacho ni ochwanyore* ‘Tina said that she hurt herself/someone’. The mind recognizes that the words are well arranged and so meaningful.

In communication principle, every act of ostensive communication communicates a presumption of its own optimal relevance. This principle is also innate because the person being addressed tries to interpret the utterance by aiming to select the most appropriate interpretation from the different interpretations the utterance or text has in the current context (Yus, 2010, p.681). This means that in any communication, the listener will try to pick the most relevant interpretation that the mind elicits at any particular time. The mind does this by use of Relevance Comprehension Procedure in order to reach the optimal relevant meaning. Example (19c) can be interpreted to communicate something about *Tina* of which the speaker will pick depending on what is presented at the time of utterance.

In the same vein, we can define relevance as a potential property of input to cognitive processes, whether they are external stimulus (sight, sounds, utterances, actions), or internal representations (thoughts, memories, conclusions) of inferences. Information may be relevant in one context and not another or more relevant in one context than another. Sperber and Wilson (1995) developed Relevance Theory (RT) that focuses on human communication. As the name of the theory suggests, it has to do with relevance in the sense that our minds activate thoughts that are worth thinking or talking about. The human mind is geared to picking out information that is potentially relevant. The aim of RT is to explain in cognitively realistic terms what these expectations of relevance amount to and how they might contribute to an empirically plausible account of comprehension. Sperber and Wilson's proposal of the RT stems from Grice's conversational maxim of relevance which state that, *'any utterance addressed to someone automatically conveys the presumption of its own relevance.'*

Moreover, Carson (2002) argues that what is expressed by an utterance cannot depend wholly on the linguistic features used to express it. The linguistic interpretation gives the explicit understanding of the utterance and the implicit understanding of the same utterance. This means that the semantic and pragmatic interpretation of an utterance is very important as it helps convey a lot of thoughts in the human mind. Carson further explores the relationship between linguistic meaning and speakers meaning and concludes that linguistic meaning underdetermines what is meant and what is said underdetermines what is meant. Her study explores the extent of the gap between linguistic meaning (semantic representation) and speaker intended meaning (pragmatics). This is because whatever the speaker meant depends on the situation and circumstances

that surrounds the interpretation of the utterance. The linguistic interpretation of example (19c) *Tina owachoni o_i-chwanyore_i* ‘Tina said that she hurt herself’ is dependent on both syntax and semantics. Syntactically, the NP *o-* ‘she’ and *-re* ‘herself’ are coindexed and bound to each other within the minimal clause. The anaphor *-re* ‘herself’ cannot be bound to *Tina* because of the CP *ni* ‘that’ that is a barrier to government. Similarly, the verb *chwanyo* ‘hurt’ assigns accusative case to the anaphor *-re* ‘herself’ and INFL assigns nominative case to the NP *o-* ‘she’ which refers to *Tina*, but not *Tina* in the subject position. This is because of the presence of the barrier CP which blocks it. Likewise, the verb *chwanyo* ‘hurt’ assigns theta role of Agent to NP *o-* she and Patient to anaphor *-re* ‘herself’; while the verb *owacho* ‘say’ assigns theta role of Experiencer to *Tina* and Theme to NP *o-* ‘her’. If during the utterance *Tina* wears a sad face and is in a bad mood, then it would be correct to interpret that something annoyed her. But if *Tina* has a good mood with bright face, the interpretation could be someone else was hurt and its *Tina* trying to explain. This change in paralinguistic factors (facial expression and body language) which form part of the context provides different interpretations of the same utterance.

According to Universal Grammar, human beings are born with an innate ability to learn language. Through exposure which is the interaction with the environment, they are able to understand a number of utterances. The understanding is based on the structures, meaning and sounds of the different strings. Besides, the environment here refers to the people who physically use the language as they interact with the child. It could also be the string of sentences introduced to the child as the child learns language. This makes the child have the ability to form as many sentences as possible which are grammatically

correct. Relevance Theory on the other hand is guided by two principles: Cognitive principle of relevance and communicative principle of relevance. The two principles are biologically rooted in the human mind and can be subjected to any form of processing. The processing of information in the mind depends on the environment which may elicit a number of interpretations. RT, therefore, helps us understand the different interpretations of the sentences already uttered in different situations. The interpretations may be varied but the mind picks on only one interpretation that seems relevant without using a lot of energy.

In the same vein, Yus (2010, p.683) argues that in RT every utterance produces a variety of interpretations that depends on the different environments presented. These interpretations do not occur at the same time; some take effort to think about. But hearers are able to pick only one interpretation at a time that seems suitable from the number of the interpretations that may come to the mind. Information can be relevant in one context and not in another (or more relevant in one context than another). Context means a set of mentally represented assumptions used in interpreting (or processing) a given set of information. This means that new or newly presented information is relevant in a context which it interacts with to yield the **cognitive effects**. There are three types of contextual effects:

- i. Derivation of new assumptions (contextual implications)
- ii. Strengthening of existing assumptions by providing further evidence for them
- iii. Contradicting or weakening or eliminating of existing assumptions

There is a relationship between relevance and contextual effects. The greater the contextual effects, the greater the relevance. The presumption of optimal relevance means that the ostensive stimulus is relevant to an audience if it is worth the addressee's effort to process it; or if it is the most relevant one compatible with communicator's abilities and preferences. The ostensive stimulus refers to the verbal communication which intends to inform the audience of something. To achieve maximum relevance, one selects the best context to process an assumption. The information is relevant to somebody if it interacts with some assumptions, that is, contextual effects in some contexts that it has access. There could be derivation of new assumptions (new information achieved); strengthening of existing assumption by proving further evidence for them; and contradicting or weakening or eliminating the existing assumptions. Relevance and contextual effects are closely related. This is because the greater the contextual effect the greater the relevance. The processing effect is also important in getting the relevant interpretation. This is because contexts that are easily accessible require little effort and so the hearer is able to understand an utterance well.

For example, (19c) *Tina owachoni o_i-chwanyore_i* 'Tina said that she hurt herself', could also be interpreted as *Tina* is expectant which is based on the community's use of the word *chwanyo* 'hurt'. This occurs especially for girls with unwanted pregnancies. If at the time of the utterance *Tina* is seen to have a swollen tummy and a sad face, then this strengthens the assumption. We thus conclude that *Tina* is sad because she is pregnant. All the interpretations of an utterance occur simultaneously, though some take a lot of effort to process. Relevance Theory requires that we use least effort in interpretation of utterance in order to maximize relevance. This is guided by the Relevance

Comprehension Procedure (RCP) which requires one to use the least energy in interpretations of an utterance and stop when the right interpretation is reached (Sperber & Wilson, 2002, P.18). It states that,

Follow the path of least effort in deriving cognitive effects:

Consider interpretations (reference assignment, disambiguation, implicatures in order of accessibility)

Stop when your expectation of relevance is satisfied

From the Relevance -Theoretic Procedure (RCP), the mind tends to not strain to get meaning of what is meant. The different interpretations depend on aspects such as reference assignment. In this case, pronouns can function as anaphors by referring back to what the speaker meant. For instance, (20),

(20) Jaricho pakore kuom gombone maricho

Sinner praise self from desire evil

‘A sinner praises himself from his evil desires.’

In example (20), the sentence, *jaricho pakore kuom gombone maricho* ‘a sinner praises himself from his evil desires’ has the pronoun *e* ‘his’ which refers back to *jaricho* ‘sinner’ in the sentence. In other circumstances, a sentence could be ambiguous and so the listener has to pick the interpretation that is relevant and do not require a lot of effort to process. This is because a number of interpretations may come to the mind which may not suit the situation. Once the listener has picked the right interpretation in connection with what he or she wanted, then the rest are left out. From this procedure, it is important to note that the mind works in steps as it interacts with the different contexts in

emphasizing, strengthening or eliminating a given thought, conclusion or interpretation. The context of utterance of (20) may change depending on the use of pronoun *e* 'his'. If the context of the utterance reference is made to *jaricho* 'sinner' then the pronoun function as an anaphor. But, if the pronoun *e* 'his' refers to someone else, then the it does not function as an anaphor.

2.3 Chapter Summary

This chapter has reviewed literature on anaphors and the theoretical framework used. The chapter has discussed anaphors through history, highlighted studies on anaphors from the Romance languages, and outlined the anaphors from African languages. Also presented is the study on Dholuo grammar by other scholars and their significance in the current study. In addition, Government and Binding Theory and Relevance Theory are discussed to shed light on the principles used in the study. The next chapter discusses the research methodology.

CHAPTER THREE

RESEARCH METHODOLOGY

3.0 Introduction

This chapter outlines the research design, the site of the study, target population, sampling technique and sample size, research instruments, data collection techniques, data analysis and presentations and logistical and ethical consideration issues.

3.1 Research Design

The study employed the descriptive research design method. This method investigated the structure of the language by collecting primary data which was gathered by interacting with the native speakers and written native speaker resources as supported by Chelliah & Reuse (2011). A syntactic analysis of sentences containing anaphors was done and meaning explained semantically and pragmatically. Thereafter, the three linguistic areas were used to analyse the sentences with anaphors to bring out the interface. Qualitative research method was also employed in collecting data through interview and secondary data from works of scholars and books.

3.2 Site of the Study

The study site where data was collected was in Rambira village, West Asembo location of Rarieda sub-county. This region is located in Siaya County. This location was chosen because the researcher resides there and most of the inhabitants were born, living and working in the area. The language of communication among the inhabitants in their households is Dholuo.

3.3 Target Population

The target population was native Dholuo speakers that have good knowledge of the language. The assumption was that native speakers have inherent native speaker competence which detected what was well and ill formed in the language. These native speakers were the ones who could speak fluent Dholuo since it is their first language. Moreover, they had good command of the language as they were able to read and write Dholuo language. Apart from the ability to speak the language, the native speakers were adults and educated beyond form four with two teachers among them. The native speakers were able to identify the anaphors and interpreted them accordingly in different situations. They were also able to identify anaphors used inappropriately. This is to support the fact that linguistic data simply requires respondents to be native speakers of the language Chomsky (1981). This is also supported by Crowley (2007) who argues that such data is sufficient if confirmed or verified by other native speakers.

The target age of respondents (verifiers) was between twenty years and sixty years. This group was considered to have mastered the language through sufficient exposure (above 20 years) without the limitation of being disadvantaged by age Nandelenga (2013, p.88). The respondents were selected from Rarieda sub county of Siaya County, born and living in the area.

3.4 Sampling Technique and Sample Size

This section discusses the sampling techniques used in identifying the respondents and the size of data collected.

3.4.1 Sampling Technique

The study employed a mixed purposeful sampling technique to collect data. This method was chosen in order to maximize on the data to be collected. Moreover, the participants selected provided elaborate information about anaphors. First, the researcher generated sample of Dholuo sentences containing anaphors with respect to Government and Binding and Relevance Theories tools used for data analysis. Primary data was also generated through through semi-structured interview conducted with the respondents. Besides, a corpus of secondary data from Dholuo bible and works from scholars was included to verify the presence of anaphors. Secondly, deviant sampling technique was employed to identify the different categories of anaphors, for example, reflexives and reciprocals in Dholuo.

In addition, the study employed random sampling technique to select six respondents out of the twenty participants identified. Age and sex were the variables used to select the respondents who were Dholuo native speakers. These participants included two females and four males between the age of 20-60 years. The participants' role was to verify the data and respond to the questions asked during the interview.

3.4.2 Sample Size

The sample size (see Appendix) comprised of eighty-seven sentences with different anaphors. This sample size was selected from several sentences collected from both primary and secondary data. In order to avoid repetition, this sample size which was good representation of different anaphors in Dholuo was chosen. The sentences were listed and

categorized into reflexives, reciprocals, body part anaphors, inherent anaphors and other elements that function as anaphors.

3.5 Research Instruments

The study used semi-structured, in-depth one-to-one interview with all the six respondents at different times using Dholuo language. The researcher had a string of Dholuo sentences with different structures which was presented to the interviewees. From the string of sentences, the respondents identified the different anaphors used in Dholuo. They also identified Dholuo sentence structures that were making sense and those that were unsensual. Henceforth, the participants provided different responses based on the scenario provided during the interview. To enhance validity of the interview, the researcher did not explicitly explain to the respondents what she was looking for.

3.6 Data Collection Techniques

The study employed both primary data and secondary data. The primary source of data was from two sources. First, data was intuitively generated by the researcher, a native speaker. This data was verified by six native speakers that had good knowledge of the language. Second, the researcher collected data from the respondents through a semi-structured interview.

Secondary source of data was derived from Dholuo texts, especially works from different scholars such as Omondi (1982), Madara (1989), Okoth (1997) and Wambia (2015) and the Dholuo bible. These works were useful in identifying Dholuo anaphors and in generalizing data on different sentences with anaphors.

3.7 Data Analysis and Presentation

The study employed descriptive design in the analysis of data. The corpus of data collected was procedurally analysed based on the assumptions formulated. In answering the first research question, corpus of data containing different anaphors were listed to confirm their configuration. In order to establish the syntactic structure of Dholuo anaphors, that is, research question two, conventional tree diagrams were drawn to represent the syntactic domains of the sentences vis-à-vis their antecedents (interpretation). The anaphor and the antecedent were coindexed to indicate that they corefer in line with Binding Principle A. The NPs containing anaphors were also case marked to indicate their syntactic position in sentences.

In addition, GB concept of government was used to explain the grammaticality of sentences containing anaphors. With regard to answering research question three, theta roles were assigned to the arguments in the structures to indicate the semantic domain. Pragmatics was analysed by applying the cognitive and communicative principle of relevance to utterances. This was aimed at satisfying Relevance Comprehension Procedure which required little effort being used in arriving at the right interpretation. Lastly, Dholuo anaphors were analysed at the interface of syntax, semantics and pragmatics by explicitly interacting with GB's modules; Binding Theory, Case Theory and Theta Theory together with cognitive and communication principles in Relevance Theory. In essence, the anaphors were first analysed for grammaticality using Binding and Case Theories and the meanings interpreted using Theta Theory. Thereafter, pragmatic analysis of anaphoric utterances was done where principles of Relevance Theory were employed to explain the different context of usage of the anaphors.

3.8 Data Management and Ethical Consideration

The researcher observed a number of issues to adhere to ethical requirements and considerations for a professional research. First, the revised proposal was submitted to Kenyatta University graduate school where an authorization letter to conduct research was issued. Second, permission to carry out research was sought from National Commission for Science Technology and Innovation NACOSTI, where the researcher was issued with a certificate. Thereafter, the researcher got an authorization from the chief of West Asembo location to contact the respondents. Then, the researcher sought respondents' consent by ensuring anonymity and their safety. Ethics also involved proper use of data secured from unauthorised persons by coding the respondents' responses. A copy of this thesis which contains the data will be stored in Kenyatta University library repository for safe custody and use by authorised persons. The secondary data used and other resources were appropriately acknowledged.

3.9 Chapter Summary

This chapter described the research methodology used in detail and the techniques adopted. The research design, the site of the study, target population, sampling technique and sample size, research instruments, data collection techniques, data analysis and presentations and logistical and ethical consideration issues have been provided. The next chapter focuses on the presentation of data, analysis and finally, discussing the results.

CHAPTER FOUR

CONFIGURATION AND SYNTACTIC STRUCTURE OF DHOLUO ANAPHORS

4.0 Introduction

This chapter discusses Dholuo anaphors (Reflexives and Reciprocals) and elements used as anaphors in Dholuo. First, data on the structure of Dholuo anaphoric sentences is presented. In addition, data on the different sentences with anaphors together with elements used as anaphors is presented. The data on Dholuo anaphors was collected through interview, researcher's intuition and secondary data. The chapter proceeds to demonstrate the syntactic rules that govern the structure of a sentence containing anaphors and their interpretability. This chapter fulfils research objective (cf 1) which is to identify the configuration of Dholuo anaphors. In configuration, the listing of anaphors and meaning is key. It also answers research objective (cf 2) which is to determine the syntactic structure of Dholuo anaphors. The descriptive tool used in the presentation of data is based on Government and Binding (GB) Theory. In particular, this chapter focuses on the following modules of GB Theory: Government, X-bar Theory, Case Theory and Binding Theory. Section 4.1 gives an account of Dholuo Anaphors, section 4.2 Dholuo anaphors and Binding Principle A, 4.3 Representation of Dholuo anaphors 4.4 Dholuo anaphors and Case Theory. Thereafter, Section 4.5 gives the summary of the chapter.

4.1 Dholuo Anaphors

Anaphors are elements that refer back to other elements in a construction. They refer to the action being performed by somebody or something directly or indirectly. As it will be

illustrated in the sections that follow, anaphors function referentially only when they interact with the antecedent in the same sentence (Poole 2002, p. 109). Dholuo has a number of elements that perform the function of an anaphor. The elements that constitute anaphors in Dholuo appear as either morphemes bound to the verb or lexical words. The lexical words are different types of pronouns such as personal pronouns, demonstrative pronouns which refer back to something or somebody performing an action. There are also nouns that function as anaphors that refer to different body parts like the head, body and soul. In addition, there are also inherent anaphors in Dholuo.

Moreover, anaphors constitute elements that bear the feature [+Anaphor, -Pronominal] during their interpretation. Within the Generative grammar framework, anaphors are of two types: reflexives and reciprocals (Poole 2002, p. 108). The following data presents examples of sentences with Dholuo anaphors:

(1)

a. Auma ohero-re

Auma loves self

‘Auma loves herself.’

b. Akinyi ohero-re ahinya.

Akinyi love self much

‘Akinyi loves herself so much.’

c. Bul go-re oko

drum beat self outside

‘The drum is being played outside.’

d. Mine ohero limo-re.

Women love visit one another

‘Women love visiting one another.’

e. Jogo pidho-re chiemo.

People those feed one another food

‘Those people are feeding one another food.’

The data indicates that there are reflexives and reciprocals in Dholuo. (1a), (1b) and (1c) are examples of constructions in which reflexives are featured. The reflexive in Dholuo is represented by the morpheme *-r-* followed by a personal pronoun. These anaphors are bound to the verb that indicates the action being performed. The reflexive *-re* is attached to the verb *hero* (1a). In (1a), *Auma* perform the act of loving herself and not any other person. Example (1b) indicates that the subject *Akinyi* performs the act of loving herself so much thus the emphasis of ‘*ahinya*’ ‘so much’ and not any other person. In (1c), the act of the drum being played happens outside a building. The construction indicates the extent to which the drum is being beaten. The reciprocal is marked by *-re* ‘one another’ attached to the verb. Examples (1d) and (1e) are instances of the use of reciprocal in constructions to indicate the actions being performed by different parties to each other. In (1d), the women have the tendency of visting one another. So, the women perform the act of visitation to one another. In (1e), the people are performing the act of feeding one another. The next section provides data on the use of Dholuo reflexives in sentences.

4.1.1 Dholuo Reflexives

The following data presents ten examples of the use of Dholuo reflexive in different constructions.

(2)

a. Achwanyora

I hurt self

‘I hurt myself.’

b. Achwanyora sani

I hurt self now

‘I hurt myself now.’

c. Opondo olielore.

Opondo shave self

‘Opondo shaved himself.’

d. Jaduong’ ogo paka moyuagore malit

Elder beat cat cry self badly

‘The elder beat the cat and the cat cried loudly.’

e. Guok nangore.

Dog lick self

‘The dog is licking itself.’

f. Ahinyora malit.

I hurt self badly

‘I hurt myself badly.’

g. Gipogore lepa kindgi.

They share clothes mine themselves

‘They shared my clothes among themselves.’

h. Abuogora kanindo mamit.

I suddenly self sleep nicely

‘I woke myself suddenly from a nice sleep.’

i. Jaricho pakore kuom gombone maricho.

Sinner praises self from desire bad

‘A sinner praises himself/herself from his/her bad desires.’

(2a) literally mean that the person hurt herself which could be a part of the body or soul as will be discussed in body parts anaphors. The cause of the hurt could be personal, accidental or inflicted by someone else’s action. In (2b), the emphasis is on the time the person hurt herself. This person hurt herself now and not any other time. (2c) indicates the fact that the person by the name *Opondo* performed the act of shaving himself. The shaving could have been done using a scissor or any other instrument on any body part. (2d) indicates *cat*’s action of crying as a result of the pain inflicted on it. In data (2e), the dog performs the act of removing its tongue to lick itself and not any other thing. The reason for licking is not given but the fact that the action is seen being performed shows what is taking place. (2f) indicates the extent to which the person hurt himself. It is worth noting that the verbs *hiny* and *chwany* in Dholuo means ‘to hurt’ and they can be used interchangeably.

In the same vein, in most cases the verb *chwanyo* ‘to hurt’ is used when someone feels hurt in the soul. It is also used as a polite word to mean a young girl who gets pregnant before marriage (ref. chapter 6). This can be understood from the biblical context *wecheni ne siro joma ochwanyore* ‘your words encourage people who are hurt’ where the recipient Job feel hurt by his friends and *ahinyora malit* ‘I am hurt badly’ where King

Saul is physically hurt. Example (2h) means that the people shared another person's clothes among themselves. The person could have been away or present depending on the situation at hand. (2i) shows that the person was in deep sleep when he suddenly woke up. Lastly, example (2j) indicates the fact that a sinner praises himself or herself because of his evil desires.

4.1.2 Dholuo Reciprocals

The reciprocal shows that something is done to someone or something else. The participants could be two performing the act to each other or more than two performing the act to one another. The following data provides ten examples of the use of reciprocal in Dholuo:

(3)

- a. Mine yanyore.
abuse each other
'The women are abusing each other.'
- b. Nyithindo ogwarore.
Children scratch one another
'Children are scratching one another/themselves.'
- c. Jogo pidhore chiemo.
People those feed each other food
'Those people are feeding each other food.'
- d. Nyiminegi oritore maber.
Sisters these take care each other well.
'These sisters have taken care of each other well.'

- e. Daudi gi Paula ng'iyore kagibuonjo.
Daudi and Paula look each other smiling
'Daudi and Paula look at each other smiling.'
- f. Nyithindo mienore gi chuodho
Children smear one another mud
'children are smearing one another/themselves with mud.'
- g. Yawuoyi luongore giwegi
Boys call each other only
'The boys are calling each other only.'
- h. Mine ohero limore.
Women love visit one another
'women love visiting one another.'
- i. Nyithindo omienore chuodho
Children smear one another mud
'The children smeared one another with mud.'
- j. Nyithindo nomiyore nyiero
Children gave one another laughter
'Children made one another to laugh.'

From the data (3a) - (3j), the reciprocal in Dholuo is marked by the morpheme *-r-* followed by a personal pronoun. The reciprocal occurs in the plural since the participants consist of two or more people or things. The reciprocal 'each other' is used between two participants while 'one another' is used when participants are more than two. Example (3a) indicates that the women are performing the act of abusing one another. The

participants in (3b) are children scratching one another. (3c) are two people who could be friends or a couple performing the act of feeding each other. (3d) indicates the action of some sisters having taken care of each other well. This action is noticed by someone else who exclaims or tells someone else. (3e) shows that the persons *Daudi* and *Paula* are looking at each other smiling. They could be smiling because of an incident taking place or they could be happy. (3f) shows that the children could have been playing with mud hence the act of smearing mud to one another. (3g) the young men perform the act of calling each other. The call or invitation could be linked to the bond that they have among themselves. (3h) refer to the action of women visiting each other. (3i) means that the children perform the act of smearing mud to one another. (3j) the children performed the act of making one another laugh. This could have been cracking jokes or kindling each other.

From the data provided in (3) and (4), the reflexive and the reciprocal are represented by the same morpheme *-r-* followed by the personal pronoun. This brings ambiguity in interpretation of the reflexive and the reciprocal. The reciprocal and reflexive can be disambiguated by bringing in the context in which they are uttered or used as will be discussed in chapter 5. The only difference between the reflexive and the reciprocal is that the reciprocal is always used in the plural while the reflexive is in both singular and plural. For instance, (3f) *nyithindo mienore gi chuodho* ‘the children are smearing one another or themselves with mud’. In this example, the reflexive is in the plural *-re* ‘themselves’ which also refer to the reciprocal ‘one another’ which means the children could be more than one. This aspect of ambiguity is further elaborated in data (3k) using an element that functions as a pronoun. In this case the pronoun *-e* him/her functions as

an anaphor. This pronoun –e him/her can refer to either *Omondi* loving the person *Oduor* or *Omondi* loving someone else.

k. Oduor owacho ni Omondi ohere.

Oduor say that Omondi love him/her

‘Oduor said that Omondi loves him/her.’

Another aspect of the anaphor in Dholuo is that it can occur in another form of *ruok* which can be a reflexive or a reciprocal. *Ruok* is an impersonal anaphor which occurs as a suffix attached to the verb. (4) gives an instance of the use of *ruok*. (4a) gives an instance of someone or something performing the act of cooking to himself or itself. (4b) can be either a reflexive or a reciprocal. It means the act of cheating oneself or two people cheating each other. The actual meaning of the utterance in (4b) depends on the context which will be expounded on in chapter 5.

(4)

a. Itedruok

you cook cook self

‘somebody/something cooking himself/itself.’

b. wuondruok

cheat self

‘cheating oneself or each other.’

Besides, Dholuo also uses the anaphoric *wuon* ‘self’ to mean something happening to someone or something. The anaphor *wuon* ‘self’ is attached to a personal pronoun of which it must agree in terms of number and gender. This anaphoric *wuon* ‘self’ in Dholuo

in most cases is used for emphasis on action done to self. In line with this use of *wuon* ‘self’ in Dholuo are other Nilotic languages that has the same form. Though this is not the main item of study, it is important to mention that there are similarities in the use of this anaphoric element. This is presented in (4c) and (4d). In (4c) the person hurt himself or herself. The use of *wuon* ‘self’ is to emphasis that no one else was involved. (4d) indicates that the act of fighting was taking place among a specified group of people. Their intention for fighting though is not known. In Maasai, a Nilotic language, the anaphoric *kewan* ‘self’ is used to refer to the action happening to self or to each other. For instance, the sentence *kenyoor Juma kewan* means that ‘Juma loves himself.’

c. Achwanyora awuon

I hurt self I self

‘I hurt myself myself.’

d. Gigore giwuon/giwegi

They fight they self

‘They fought themselves themselves.’

As already mentioned, there are other elements that can function as anaphors in Dholuo. These include personal pronouns, demonstrative pronouns and anaphor that refer to body parts. Data on these elements that function as anaphors in Dholuo is provided in Section 4.1.3.

4.1.3 Dholuo Personal Pronouns as Anaphors

There are pronouns that are used to refer to the antecedent in the sentence, hence functions as anaphors. Asudeh (2008, p.115) observed that many African languages have

particular forms of pronouns that are used to refer to an antecedent whose speech emotions, or thoughts are being reported. The data on the use of pronouns as anaphors is presented below:

(5)

- a. Apondi oneno ng'ato mane ogoye.
Apondi see person who beat her
'Apondi saw the person who beat her.'
- b. Otieno oleko ni en gi nyamburko.
Otieno dream that him with car
'Otieno dreamt that he has a car.'
- c. Nyithindo owacho ne baba ni gituo.
Children say that father they sick
'The children told their father that they were sick.'
- d. Atieno oterone Auma lawe.
Atieno take her Auma clothes.
'Atieno took to Auma her clothes.'
- e. Omondi oyuayo san kochike
Omondi pull plate toward him
'Omondi pulled the plate towards him.'

In data (5a), the pronoun *-e* 'her' attached to the verb *go* 'beat' refers to the person *Apondi* who was affected by the action of beating. (5b) the pronoun *en* 'he' refers to the antecedent *Otieno* who dreamt that he has a car. (5c) the pronoun *gi* 'they' refer to the children who tell their mother that they are sick. (5d) the pronoun *-e* in *law-* 'clothe' refer

to *Auma* and not *Atieno*. In (5e) the pronoun *-e* ‘him’ refer to *Omondi* the person who pulled the plate towards himself.

4.1.4 Dholuo Demonstratives as Anaphors

The demonstrative *ni* ‘that’ or *mano* ‘that’ in Dholuo can be used to refer back to the subject being talked about. The demonstrative pronoun points back to something earlier mentioned. It can be used anaphorically to refer to something mentioned earlier. In example (6a), the demonstrative *ni* ‘that’ refers to *Omondi* describing that act of *Bob*. The demonstrative *ni* ‘that’ in (6b) refer to the young man who is a lawyer. While (6c) the demonstrative *ni* ‘that’ refers to *o-* ‘he’ the person who reported about the young man being a lawyer. In (6d), the demonstrative *mano* ‘that’ refers back to the act of pouring porridge *puko nyuka*. *Mano* ‘that’ is coindexed with *a puko nyuka* and not *Atieno*. This is because *Atieno* is high up in the clause. This is demonstrated in (6)

(6)

a. Omondi owachoni Bob ochwore.

Omondi say that Bob stub self

‘Omondi said that Bob stubbed himself.

b. Rawera manaromogo nyoro owacho ni en okiri.

Young man I meet say that he is a lawyer

‘The young man I met said that he is a lawyer.

c. Owachona ni rawera manaromogo nyoro en okiri.

He says that young man I met yesterday is lawyer

‘He said that the young man I met yesterday is a lawyer.’

d. Awino owacho ni apuko nyuka, mano ok atimo.

Awino says that I spill porridge that I have not done

‘Awino says that I have spilt her porridge but that I have not done.’

4.1.5 Body parts Anaphors

There are reflexive markers that are related to body part nouns like the head, body and soul (Siemund 2018, p.113). The body part reflexives denote such parts as the head, body and soul are common across languages as noted by Schladt (2000). In the same vein, Sikuku (2010b) allude to the fact that African anaphors exhibit a complex lexical form which consists of two or more forms which could mean body, body part or self and another one being the agreeing pro-form. The body part anaphors in Dholuo are presented in the following data:

(7)

a. Omondi ohinyore.

Omondi hurt body/self

‘Omondi hurt himself.’

b. Achwanyora.

I hurt soul/body/self

‘I hurt myself.’

c. Otieno oneno thuol bute.

Otieno see snake near body

‘Otieno saw a snake near himself.’

d. Ruth oneno buk toke.

Ruth see book back body

‘Ruth saw a book behind herself.’

e. Nyithindo onenore.

Children see body

‘Children saw each other/themselves.’

f. Nyiri oherore

Ladies love body/soul/each other.’

‘The ladies love each other.’

Example (7a) refer to the fact that *Omondi* could have hurt part of his body due to an accident or his soul as a result of an occurrence. The morpheme *-r-* ‘self’ refers to the body part of *Omondi* affected by act of being hurt. (7b) means that the person could have hurt part of his or her body. It could also mean that the person’s soul got hurt because of an occurrence. In (7c) *bute* ‘near himself’, the pronoun *-e* attached to *but-* ‘near’ functions as an anaphor. It refers to the position of the snake with reference to the person *Otieno*. (7d) *toke* ‘his back’ is part of the body and the pronoun *-e* attached to *tok-* ‘back’ refers to the antecedent *Ruth* who saw the book. (7e) refer to the fact that the children saw part of each other’s body. (7f) refer to the act of the ladies loving each other’s body or their soul. Their soul here refers to the state of their heart as they expressed the act of loving to one another. From examples (7a) - (f), it is clear that there are morphemes such as *-r-* ‘self’, *-e* ‘him’ or ‘her’ that constitute anaphors in Dholuo. These morphemes also point to different parts of the body affected by the action of the verb.

4.1.6 Inherent Anaphors

There are anaphors that refer to the action happening to the self. In (8a), the action of *mpira* ‘ball’ rolling happens to itself with the direction given towards the field. Whether someone initiated the process is not known. But the fact that the ball is rolling indicates that the ball is the subject, antecedent affected by the action of rolling. In (8b), the person *Opondo* who is the antecedent performs the action of *lierore* ‘shaving himself’. The part of the body being shaved is not indicated, and also the tool used to shave. What is important is that the action of shaving happens to the antecedent *Opondo*. (8c) gives an account of the part of the body being shaved, *tike* ‘beard’. The pronoun *-e* ‘his’ refers back to *Opondo* who is the antecedent. (8d) explicitly provides information on the act of *Opondo* shaving himself and specifically using *makas* ‘pair of scissors’. (8e) provides an instance of someone wiping himself or herself. The reflexive *-re* refers to this person. (8f) indicates that the person wipes his body *dende*. The pronoun *-e* ‘his/her’ refers back to the person performing the act of wiping himself or herself. This act is done using a towel and not any other thing.

(8)

- a. *Mpira ong’ielore kochiko pap.*

Ball roll self towards field

‘The ball rolled itself towards the field.’

- b. *Opondo olielore.*

Opondo shave self

‘Opondo shaved himself.’

- c. *Opondo olielo tike.*

Opondo shave beards

‘Opondo shaved his beards.’

- d. Opondo olielore gi makas.

Opondo shave with scissors

‘Opondo shaved himself with a pair of scissors.’

- e. Oyuere.

He/she wipe self

‘He/she wipes herself/himself.’

- f. Oyueyo dende gi taulo.

He/she wipe body with towel

‘He/she wiped his/her body with a towel.’

(8a) refer to the fact that the reflexive *-re* attached to the verb *ng’ielo* indicate that the antecedent *mpira* ‘ball’ performed the act of rolling itself towards the field. In (8b), the antecedent *Opondo* performed the act of shaving to himself. (8c) specifies the actual part of the body that *Opondo* shaved, that is the beard. (8d) indicates that *Opondo* shaved himself and the tool used was a pair of scissor. (8e) indicates in general that the person wiped himself or herself and this could be any part of the body. (8d) shows the person wiped specifically his or her body with a towel.

4.2 Dholuo Anaphors and Binding Principle A

This section focuses on how the anaphors behave in different structures with emphasis on Binding Principle A. The aim is to gauge the grammaticality of sentences with Dholuo anaphors. We will begin with Dholuo reflexives, then look at Dholuo reciprocals.

4.2.1 Reflexives and Binding Principle A

The Binding Principle A of the Binding Theory requires that an anaphor be bound in its governing category. The anaphors which are reflexives and reciprocals must observe this rule to enhance the grammaticality of the sentence. Failure in observing the rule mean that the sentence is ungrammatical. The anaphor and its antecedent must agree in terms of number, person and gender for grammaticality satisfaction (Poole 2002, p.108). In cases where the anaphor and the antecedent do not agree in number, person and gender, the interpretation is that the sentence is ungrammatical. The relationship is indicated by the use of the subscript (_i). The data below indicates the co-indexing between Dholuo reflexives and their antecedent:

(9)

a. A_i-chwanyo-ra_i

I hurt self

‘I hurt myself.’

b. A_i-chwanyo-ra_i sani

I hurt self now

‘I hurt myself now.’

c. Opondo_i olielo-re_i.

Opondo lielo self

‘Opondo shaved himself.’

In (9a), the reflexive *-ra* refers back to the person, antecedent *a-* who is hurt. The antecedent and the anaphor agree in person and number. The reflexive is bound to the person *a-* who is the antecedent. The relationship is indicated by the subscript (_i) placed

on the antecedent and the reflexive. (9b) is the same case as (9a), with the only difference being the emphasis on time in (9b). In (9c), the reflexive *-re* refers to the antecedent *Opondo*. The reflexive *-re* ‘himself’ in the third person agrees with the antecedent *Opondo* which is also in the third person singular. They are therefore, bound to one another. There are though, instances of ungrammaticality where the anaphor and antecedent do not agree in number, person and gender. In sentences (9d) and (9e) marked with asterisk, the anaphor *-re* do not have antecedents making the sentences ungrammatical.

d.* *re ose tedo*

Self he has cook

‘Self he has cooked.’

e.**nang’ore guok.*

Lick self dog

‘Licking self the dog.’

In (9d), the reflexive *-re* ‘self’ occupies the subject position and appears as an antecedent whilst a reflexive requires an antecedent which comes before it. In (9e) the reflexive attached to the verb occupies the antecedent position. There is, therefore, no antecedent that it can refer to. In terms of number, an anaphor with plural features cannot take a singular antecedent. The anaphor and the antecedent must agree in number for the sentence to be grammatical. (9f) gives an instance of lack of agreement in number between the anaphor and the antecedent:

f. *Awino gi Apiyo_i oherora_i

Awino and Apiyo love self

‘Awino and Apiyo love herself.’

(9f) involves an antecedent with two participants, *Awino* and *Apiyo*. These two participants require the reflexive to be in the plural to indicate their act of loving themselves. But this is not the case in the sentence since the sentence has picked a reflexive *-ra* ‘myself’ in the singular which requires a single participant. This, therefore, makes the sentence ungrammatical.

4.2.2 Reciprocals and Binding Principle A

The reciprocal as one of the anaphors must obey the Binding Principle A. As stated earlier, the reciprocal requires an antecedent in the sentence that it refers to. The reciprocal is also bound to the antecedent in the sentence for the sentence to be grammatical. The co-reference between the reciprocal and the antecedent is shown by use of the subscript (_i) The following data presents instances of the use of the reciprocal and the Binding Principle A:

(10)

a. Nyiri_i oherore_i.

Girls love one another

‘The girls love one another.’

b. Nyithindo_i ogwarore_i

Children scratch one another

‘The children scratched one another.’

c. Mine_i ohero limore_i

Women love visit one another

‘Women love to visit one another.’

d. Joluo_i yanyore_i

Luos abuse one another

‘Luos are abusing one another.’

In (10a), the reciprocal *-re* ‘one another’ is bound to the antecedent *nyiri* ‘girls’ within the same sentence to indicate the fact that the girls love one another. In example (10b), the reciprocal *-re* ‘one another’ attached to the verb *gwaro* ‘scratch’ refer to *nyithindo* ‘children’ which is the antecedent. In (10c), reciprocal *-re* ‘one another’ refer to *mine* ‘women’ while (10d) *-re* ‘one another’ refer to *Joluo*.

The reciprocal *-re* ‘each other’ in Dholuo pluralizes any phrase that describes a single participant in an event. Such a case of plural marking of antecedent with the reciprocal is seen in the data below already enlisted:

e. Nyithindo_i nomiyore_i nyiero

Children made laugh one another

‘Children made one another to laugh.’

f. Nyithindo_i yanyore_i.

Children abuse one another

‘The children are abusing one another.’

(10e) *nyithindo* ‘children’ is in plural and is the antecedent that perform the act of making one another laugh. In (10f), the children perform the act of abusing to one another. This means that they could be different groups of children abusing each other.

In the same vein, the reciprocal and the antecedent must agree in number for the sentence to be grammatically correct. The data below presents instances where the reciprocal and the antecedent do not agree in number (11a) and where the reciprocal is not bound in its governing category (11b).

(11)

a. *Auma_i oneno –re_i

Auma see self

‘Auma saw herself.’

b. *Nyithindo owacho ni Auma_i oneno-re_i.

Children say Auma see each other

‘The children said that Auma saw each other.’

In example (11a), *Auma* is a single entity and antecedent performing the act of seeing each other and is bound by the reciprocal. In reality this act should be performed by two participants. So, this makes the sentence to be ill-formed. This is the same case in (11b) where the children report that the person *Auma* was seeing each other. The fact that *Auma* a single entity and antecedent performing an action expected to be performed by two participants to each other makes it ungrammatical because the sentence violates Binding Principle A. The reciprocal depends on the antecedent which is the subject for its interpretation. In a case where the antecedent (subject) does not agree with the proceeding object in number, the sentence becomes ungrammatical. This is presented in (11c)

- c. * Auma ongisore nyithindo.

Auma show herself children

‘Auma showed the children herself.’

The reciprocal *-re* ‘herself’ in (11c) attached to the verb *ng’iso* ‘show’ does not describe an event with a single participant.

In addition, the body parts reflexives are locally bound in Dholuo according to condition A of the Binding Principle. In (11d), the antecedent *Otieno* is bound to the pronoun *-e* ‘him’ which refer back to the body of the person named *Otieno*. This anaphor *-e* ‘him’ is also C-commanded by the antecedent *Otieno*. In example (11e), the antecedent *Ruth* is bound to the reflexive *-e* which refer to the back of her body. This indicates that the antecedent is directly affected by the position of the book which is behind her. They are therefore in the same IP.

- d. Otieno_i oneno thuol bute_i.

Otieno see snake near him

‘Otieno saw a snake near him.’

- e. Ruth_i oneno buk toke_i.

Ruth see book behind her

‘Ruth saw a book behind her.’

Other anaphors like the inherent anaphors also abide by the Binding Principle A. These anaphors agree in number and gender in the same sentence. In (11f), the action of the antecedent *mpira* ‘ball’ happens to itself indicating the direction that it takes. The reflexive *-re* is locally bound to the antecedent *mpira* ‘ball’. This antecedent *mpira* ‘ball’

also C-commands the reflexive *-re* attached to the action verb *ng'ielo* 'roll'. In (11g), the antecedent *Opondo* performs the act of shaving to self. This could be any part of the body. This antecedent *Opondo* is locally bound to the reflexive *-re* attached to the verb *lielo* 'shave'. (11h) provides the specific part of the body that is being shaved. The antecedent *Opondo* is bound to *tike* 'his beard' which acts as an anaphor because it refers back to the antecedent *Opondo*. They are also in the same minimal IP.

f. Mpira_i ong'ielo-re_i kochiko pap.

Ball roll self towards field

'The ball rolled itself towards the field.'

g. Opondo_i olielo-re_i.

Opondo shave self

'Opondo shaved himself.'

h. Opondo_i olielo tike_i.

Opondo shave beards his

'Opondo shaved his beards.'

4.3 Representation of Dholuo Anaphors

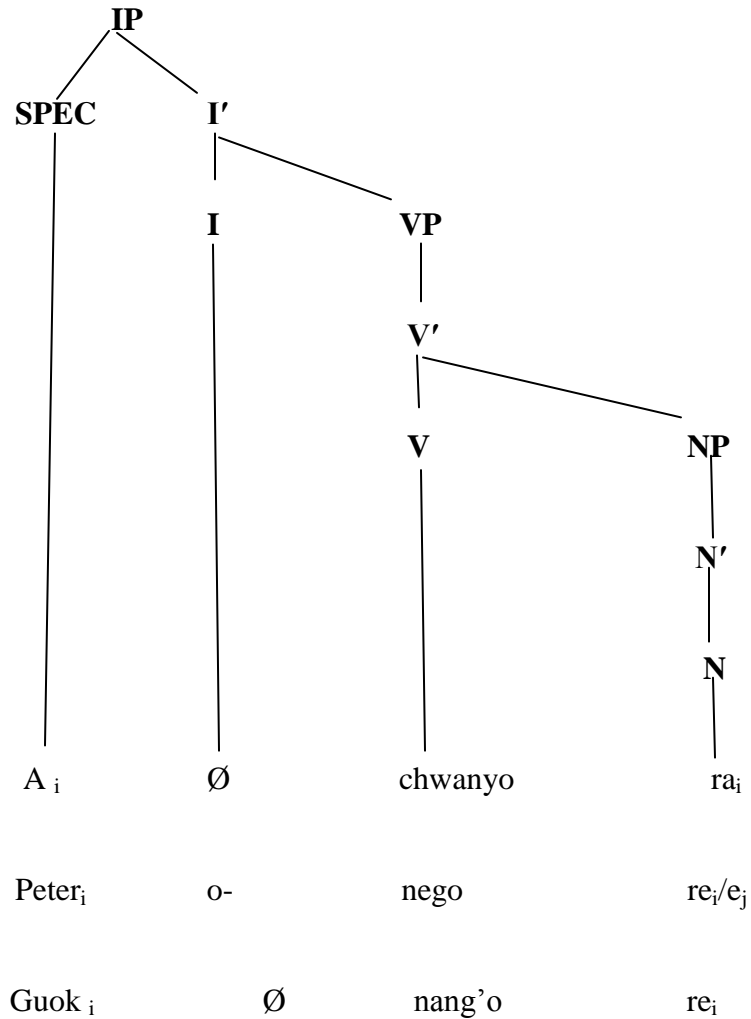
An X-bar tree shows clearly the relationship between the anaphor and the antecedent. It also clearly indicates the C-command rule of the Binding Principle A. According to the Binding Principle A, an anaphor requires an antecedent within the same sentence that it refers to (Poole 2002, p.108). In the same vein, an anaphor must have an antecedent in the same minimal inflectional phrase (IP) (Poole 2002 p.111). Data (12) provides this relationship.

(12)

- a. A_i -chwanyo- ra_i sani.
 I hurt self now
 ‘I hurt myself now.’
- b. $Peter_i$ onego- re_i .
 Peter kill self
 ‘Peter killed himself.’
- c. $Peter_i$ onege $_j$
 Peter kill him/her
 ‘Peter killed him/her.’
- d. $Guok_i$ nang’o- re_i .
 Guok lick self
 ‘The dog is licking itself.’

The relationship between the reflexive and the antecedent is clearly seen in the tree diagram (12e). The minimal IP which dominates the reflexive *-ra* ‘herself or himself’ and *-re* ‘himself or itself’ is the IP. The IPs here are ‘*Achwanyora*’, ‘*Peter onegore*’ and ‘*guok nang’ore*’. The antecedents *a-*, *Peter* and *guok* ‘dog’ are in the same minimal IP as the reflexives. According to C- command relationship, one node C-commands another node B if the first branching node which dominates A dominates B. From the tree diagram, the antecedent NPs *a-*, *Peter* and *guok* ‘dog’ C-commands the reflexive NP *-ra* and *-re* in the same minimal IP. They are therefore coindexed.

(12e)



In (12a), the antecedent is the pronoun *a-* 'I' to which the reflexive *-ra* refers to and both occur in the same sentence. In (12b), the antecedent is the subject *Peter* while the reflexive *-re* attached to the verb *nego* 'kill' refer to the action of *Peter* killing himself. In (12c), the antecedent *guok* 'dog' is being referred to by the fact that it licks itself. The antecedent in a sentence must be close enough to bind the anaphor. The antecedent and the anaphor are coindexed to indicate that they are bound to each other. In (12c) the antecedent is *Peter*, but the referent is a different person from *Peter*. This referent is not

an anaphor since it violated the Binding Principle A, hence a pronoun. Poole (2002, p.229) alludes that pronouns and anaphors are mutually exclusive in distribution. This means where anaphors occur, pronouns are banned and vice versa, they are mutually exclusive, where one is grammatical, the other will be ungrammatical. Anaphors as earlier mentioned have the features [+Anaphor, -Pronominal] while pronouns have the feature [-Anaphor, -Pronominal]. Though in some unique situations the pronouns can function as anaphors as will be demonstrated in the subsequent sections.

Moreover, there are instances where the antecedent is far, while Principle A requires that it should be close enough to bind the anaphor. These are instances of long distance anaphors. The data in (13) provides such cases:

(13)

a. Atudo_i oringo ir Auma monang'ore_i.

Duck run to Auma lick self

'The duck ran to Auma and licked itself.'

b. Apondi_i oneno ng'ato mane ogoye_i

Apondi see someone that beat her

'Apondi saw the person who beat her.'

c. Omondi_i oywayo san kochike_i

Omondi pull plate toward him

'Omondi pulled a plate towards him.'

d. Oduor_i owacho ni Omondi ohere_i
 Oduor say that Omondi love him
 ‘Oduor said that Omondi loved him.’

e. Atieno_i oterone Auma lawe_i
 Atieno take Auma clothe hers
 ‘Atieno took to Auma a clothe that belongs to her.’

Examples 13 (a-e) demonstrates instances of anaphors occurring far away from the antecedent. These anaphors violate Binding Principle A since they are not in the same minimal clause. This is in agreement with Wambia (2015) description of long distance anaphors. These anaphors also violate C-Command relationship since they don’t occur in the same constituent. In (13a), the anaphor *–re* ‘itself’ is bound to the antecedent *Atudo* ‘duck’. They are bound to each other and agree in number and person, although they are not in the same minimal clause. (13b) the pronoun *–e* ‘her’ is bound to the antecedent *Apondi* and they are coindexed to show a relationship. Although, the pronoun and the antecedent are not in the same minimal IP.

In addition, in example (13c), the pronoun *–e* ‘him’ is bound to antecedent *Omondi* and they co-refer. This relationship violates Binding Principle A because it is outside the minimal IP. (13d) also provides an instance of the pronoun *–e* ‘him’ functioning as an anaphor bound to the antecedent *Oduor* outside the minimal IP. Lastly, in (13e), the pronoun *–e* ‘hers’ refers back to the antecedent *Atieno*. The pronoun (functioning as an anaphor) and the antecedent are far away from each other, even though, they co-refer. They therefore, violate Binding Principle A and the C-Command relationship cannot apply.

Besides, the anaphor must have an antecedent which agrees with the anaphor in gender and number in the same sentence. When an anaphor does not have an antecedent in a sentence then it becomes ungrammatical. (14a), (14b) and (14c) indicates instances of ungrammaticality of the use of anaphors in sentences. The reflexive *-re* ‘himself/herself’ in (14a) and (14b) appears as an antecedent taking the position of the subject. The reflexive cannot occupy the subject position, whilst the verb and reflexive in Dholuo cannot be detached. In government, the accusative case is assigned under government. A verb cannot assign accusative case to an NP outside the VP such as the subject *-re* ‘himself/herself’.

(14)

a. **re ose wiro.*

Self has apply

‘self apply himself/herself.’

Intended: ‘He/she applied himself/herself.’

b. * *re ose tedo*

self has cook

‘Self cooked himself/herself.’

Intended: He has cooked himself/herself.’

We can confirm the ungrammaticality of Dholuo sentences with anaphors when the verb which contains the anaphor takes the subject position. In this case, the reflexive is supposed to be bound to the antecedent which should be an NP and not a VP. In our case the antecedent is a VP making the sentence ungrammatical.

- c. *nangore guok’.

Lick self dog

‘Self licking dog.’

Intended: ‘The dog is licking itself.’

On the other hand, the antecedent and the reflexive must agree in terms of number. In (14d), the subject *Apiyo* and *Adongo* require that the reflexive takes a plural personal pronoun *-re* ‘themselves’. But in this case the subject takes a singular personal pronoun after the reflexive *-ra* ‘each self’. The reflexive and the antecedent do not agree in terms of number. This is the case of (14d). In (14e), the antecedent *Auma* is bound to the reciprocal *-re* which is attached to the verb *nindo* ‘sleep’. The anaphor in this case depends on the antecedent *Auma* for its interpretation. It is difficult for the antecedent *Auma* to perform the act of *nindore* ‘sleeping’ to herself. Instead, sleep is expected to come naturally. This then makes the sentence ungrammatical.

- d. **Apiyo gi Adongo oherora.*

Apiyo and Adongo love self

* ‘*Apiyo and Adongo love each self.*’

- e. **Auma onindore kitanda.*

Auma sleep self bed

‘*Auma slept herself on bed.*’

4.4 Dholuo Anaphors and Case Marking

As earlier discussed in Chapter two, Case Theory accounts for distribution of noun phrases (NP) and it operates under government. Case can be marked morphologically or abstractly. Abstract case marking is covert, for example the name *Atieno* is the same

when used in either subject or object position, hence assigned abstract case. However, pronouns are morphologically different in the same position as Dholuo *o-* ‘he/she’ and *-e* ‘him/her’. Thus, in Dholuo these pronouns are assigned morphological case which is overt; they are morphologically different. The morphological case is the realization of an abstract case (Poole, 2002). This means that the meaning is inferred logically.

In describing government, Poole (2002, p.115) alludes that an element let’s call it X governs another element let’s call it Y if and only if X is a head and X m-commands Y, and no barrier intervenes. The barrier is the maximal projection with an exception of an infinitival Inflectional phrase (IP) which has no agreement features. The heads govern everything that they m-command as long as there is no barrier that intervenes, and if the head is one of the special heads that assign case to one of their governors. Barriers constitutes the Complementizer Phrase (CP) that begins with ‘that’.

The case assigners are verbs, INFL and prepositions as they case mark the NPs that they govern. The case assigners assign case only to lexical NPs. For instance, (15a) is an instance of use of R-expression in Dholuo and how case is assigned. The verb *hero* ‘love’ assigns a nominative case to the NP *Atieno* and accusative case to the NP *Auma*. The NPs *Atieno* and *Auma* are all lexical NPs. The case assigner *hero* and the recipient NPs *Atieno* and *Auma* are adjacent to each other when there is an intervening verb. In this instance, there is the intervening verb *hero* ‘love’. As a result, the case filter principle is satisfied as the NPs have been assigned case. This makes the sentence *Atieno ohero Auma* ‘Atieno loves Auma’ grammatical.

(15)

a. *Atieno ohero Auma.**Atieno love Auma*‘*Atieno loves Auma.*’

The assumption is that all NPs are assigned case. (15b) gives an instance of a sentence containing an anaphor. The case assigner is the verb *hero* ‘love’. In this case the verb *hero* ‘love’ assigns a nominative case to the NP *Auma* which is a lexical NP and they are adjacent to each other. The reflexive *-re* ‘herself’ occurs as a bound morpheme on the verb *hero* ‘love’. Whilst one of the rules is that abstract case is assigned to lexical NPs, specifically R-expressions such as *Atieno*, *John* that do not change morphologically whether in object or subject position in a sentence. The implication is that the speaker and the hearer understand what is being expressed, the fact that the person *Auma* loves herself. The reflexive *-r-* ‘self’ is attached to the personal pronoun *-e* ‘her’ that refers to the subject *Auma*. There is change of form as the abstract *Auma* is represented as *-e* ‘her’ in object position. The reflexive *-re* is thus assigned a morphological case since it inherently refers back to the subject. The question is that does this fulfil the case filter principle? The answer is yes because case can be assigned either abstractly or morphologically. The assignment of case to a reflexive in Dholuo is an example of morphological case assigned compared to abstract case marking in Dholuo R-expressions.

b. *Auma oherore**Auma love self*‘*Auma loves herself.*’

Case assignment can also occur in Dholuo reciprocals. In (15c), the verb *limo* ‘visit’ is the case assigner. This verb is adjacent to the lexical NP *mine* ‘women’ and the morphological NP *-re* ‘each other’. The verb *limo* ‘visit’ assigns a nominative case to the NP *mine* ‘women’ and inherently assign a morphological case to the NP *-re* ‘each other’. This is because the reciprocal *-re* ‘each other’ though is adjacent to the case assigner, it does not occur as a lexical NP. The hearer and the speaker logically understands what is being expressed. (15d) is ungrammatical in that the verb *limo* ‘visit’ first is not adjacent to both NPs. The lexical NP *mine* ‘women’ is not adjacent to the case assigner *limo* ‘visit’. The reciprocal *-re* ‘each other’ does not have any referent. This sentence violates the case filter as the NPs are not assigned case leading to its ungrammaticality.

c. Mine limore

Women visit each other

‘Women visits each other/themselves.’

d.* limore mine

visit each other they

‘visits each other women.’

In the assignment of case, there are cases of Exceptional Case Marking (ECM). This is where the verb governs the subject of the infinitive, and an anaphor in that position can look up to the matrix clause for an antecedent. In ECM, the anaphor and the antecedent are not in the same minimal IP. In (16b), the anaphor *-re* attached to the verb *pak* ‘praise’ is in the same minimal IP as the antecedent *Akinyi*. The verb *pak* ‘praise’, therefore, assigns nominative case to *Akinyi* and accusative case to the anaphor *-re* ‘herself’. This sentence satisfies the case filter and is therefore grammatical. (15c) is ungrammatical

because the anaphor and the antecedent *Atieno* are not in the same minimal IP. Therefore, the anaphor cannot refer to this antecedent *Atieno*. This is seen in (16).

(16)

a. *Atieno paro ni Akinyi_i ohero pakre_i.*

Atieno think that Akinyi love praising self

‘*Atieno thinks that Akinyi loves praising herself.*’

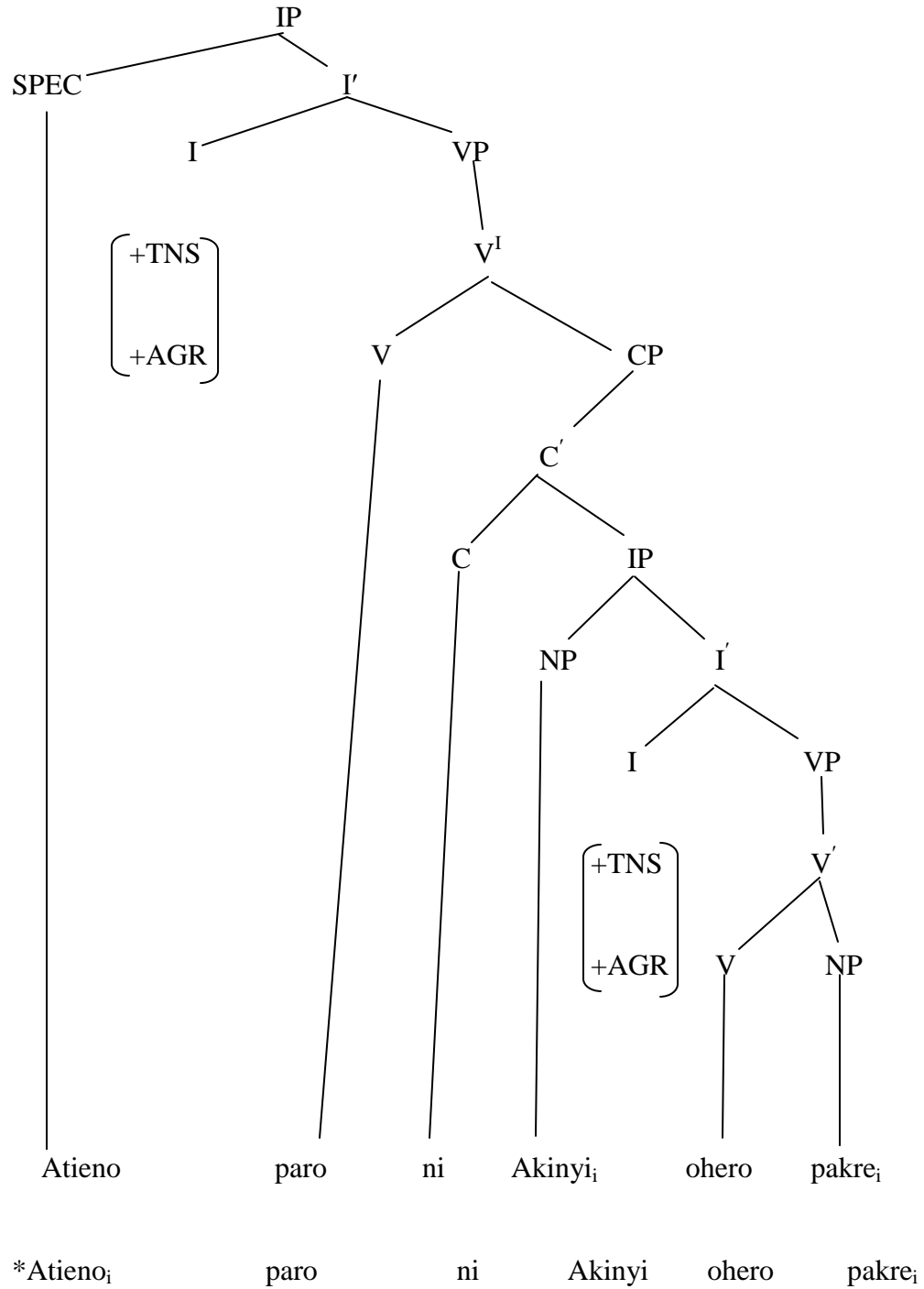
b.* *Atieno_i paro ni Akinyi ohero pakre_i.*

Atieno think that Akinyi love praising self

‘*Atieno thinks that Akinyi loves praising herself.*’

According to C-command rule, a node C-commands another node B if and only if the first branching node which dominates A dominates B. The grammaticality in (16a) is in the fact that the antecedent is in the whole subject *Akinyi*. The first branching node which dominates *ni* ‘that’ NP is the IP node. On the other hand, the ungrammaticality of (16b) is due to the fact that antecedent *Atieno* fails to C-command the anaphor *-re* ‘herself.’ The first branching node which dominates *Atieno* is an NP and that NP node does not dominate the reflexive *-re* attached to the verb *pak* ‘praise’. And *ni* ‘that’ IP node does not dominate the anaphor *-re* ‘herself’. In addition, the presence of the complementizer *ni* ‘that’ and CP is a barrier as the maximal projection. The anaphor *-re* ‘herself’ cannot get reference from the NP *Atieno*. Moreover, the verb *paro* ‘think’ cannot assign case to the NP *pakre* ‘praising herself’. The NP *pakre* ‘praising herself’ can only receive case from the INFL (I) in the IP *Akinyi ohero pakre* ‘Akinyi likes praising herself.’ This then explains the ungrammaticality of (16b). This is seen in (16c).

(16c)



Exceptional Case Marking poses problems to some anaphoric sentences that appear in different contexts. (16d) is seen to be ungrammatical because *Atieno* C-commands *-re* in ‘herself’. The minimal IP containing the anaphor is the embedded IP *en ohore* ‘she

humbles herself.’ The antecedent *Atieno* is not within the IP making the sentence ungrammatical. On the contrary, in (16e) the minimal IP containing the anaphor is *en ohore* ‘herself to be humble’. This can also be predictable to be ungrammatical since *Atieno* is not within this IP. Though in this case this would be a wrong prediction. Exceptional Case Marking (ECM) provides an explanation for the differences between (16d) and (16e). This could be structural differences in that the ungrammaticality in (16d) *paro* ‘think’ takes a CP complement which in this case is an IP in (16e). According to ECM infinitives are IPs and not CPs. This makes the verb *paro* ‘think’ not able to assign any accusative case to the subject of the infinitive in (16d). Instead the verb *paro* ‘think’ which is the head under government governs the subject of the infinitive, and the anaphor is assigned morphological case inherently in (16e).

- d. **Atieno_i paro ni en ohore_i*.

Atieno think that she humble self

‘*Atieno thinks that she humbles herself.*’

- e. *Atieno_i paro en ohore_i*

Atieno think her humble self

‘*Atieno thinks herself to be humble.*’

4.5 Chapter Summary

It has been demonstrated in this chapter that a number of elements function as anaphors in Dholuo. The presentation of anaphors was first done with tree diagrams drawn. The data was analysed and the findings were discussed.

Furthermore, it was concluded from the study that Dholuo has a number of elements that perform the function of an anaphor. First, the reflexive and reciprocal in Dholuo is represented by *-r-* ‘each other/one another/themselves’. There are also other elements like pronouns which appear as lexical words, and nouns that refer to different body parts like the head, body and soul that function as anaphors in Dholuo. The body part anaphors focus on individuals and groups and refer to parts of head, body or soul affected by the action. In addition, some anaphors in Dholuo refer to actions happening to self called inherent anaphors. For instance, in *mpira ong’ielore kochiko pap* ‘the ball rolled towards the goal’, the action could have been initiated by some forces or something. Another form of anaphor *ruok* ‘self’ occurs in Dholuo. It means that something is happening to the same person or thing. For instance, *luokruok* means one washing himself or herself.

The syntactic structure of Dholuo anaphors in terms of grammaticality conform to the Binding Principal A. They agree in number and gender to ensure grammaticality. Dholuo anaphors notably do not occupy the subject position, and neither do they appear in isolation, that is, being detached from the verb. In a situation of an anaphor with two participants, then the antecedent must take a plural anaphor. The anaphors are well represented in X-bar trees and conform to government rules. Those that do not conform to government requirements are ungrammatical.

In terms of Case Theory, a comparison with R-expressions show that R-expressions in Dholuo occur as lexical items such as *Peter, dog*. These R-expressions are assigned nominative and accusative cases by the verb. The recipient NPs are adjacent to each other, hence fulfills the case filter principle. Besides, Dholuo anaphors occur as non-lexical items, morpheme attached to the verb as in *guok nang’ore* ‘the dog is licking

itself”, the anaphor *-re* is attached to the verb *nang’o* ‘lick’. They are therefore not independent lexical NPs. The question is, do they violate the case filter principle? The answer is no. Even though these anaphors in Dholuo do not occur adjacent with the case assigner, they are understood by the speaker and the hearer on what is being expressed. The personal pronouns attached to the anaphors change form when in object position and they refer back to the subject. Since they are realization of the subject which is assigned abstract case, the anaphor is assigned morphological case. The case filter is thus fulfilled.

In addition, case assignment in Dholuo anaphor has exceptions. For instance, where the anaphor and the antecedent are not in the same minimal IP. This is the case in (16e) where the maximal projection is an infinitive and infinitive IPs are not barriers to government. Therefore, the verb *paro* ‘think’ which is the head under government governs the subject of the infinitive, and the anaphor is assigned morphological case. However, Exceptional Case Marking poses a problem to some Dholuo structures when there is the presence of CP, a barrier to government. This is the case in (16d) where the verb *paro* ‘think’ could not assign case to the anaphor *-re* ‘herself’ since it was blocked by the complementizer *ni* ‘that’. This meant that the anaphor could not get reference from the antecedent, thus the ungrammaticality of the sentence. The next chapter examines the semantic and pragmatic interpretations of anaphors in different constructions.

CHAPTER FIVE

SEMANTICS AND PRAGMATICS OF DHOLUO ANAPHORS

5.0 Introduction

This chapter presents the semantics and pragmatic interpretation of sentences with Dholuo anaphors. The chapter fulfils research objective (cf 3) which is to determine the semantics and pragmatic interpretation of Dholuo anaphors. The descriptive tool used in semantic interpretation of data is based on Theta Theory. The pragmatics interpretation is based on Relevance Theory. Section 5.1 focuses on semantics of anaphors, 5.2 Dholuo Anaphors and Theta Theory, 5.3 Dholuo Anaphors and Relevance Theory, 5.4 Chapter Summary.

5.1 Semantics of Dholuo Anaphors

Semantics focuses on the meaning of sentences or words and in this case we will focus on sentences with anaphors. In chapter four we discussed the syntactic structure of anaphors in different sentence structures. This information on sentence structure forms the basis for our discussion as we will use the same data to interpret their meanings. Theta Theory, a module of Government and Binding Theory is used in the interpretation of data. We begin by discussing the constituent of a Dholuo sentence and its connection to meaning.

5.1.1 Predicates and Argument Structure

Words are stored in the lexicon which acts as a dictionary (mental dictionary). The words stored in the lexicon are known as lexical items. These lexical items include nouns, verbs, adjectives etc. that are stored in the mind. The lexical items have to be put together to make meaningful sentences. The lexical items form part of the predicates and arguments

as we are going to see in the proceeding discussion (Haegemann,1994; Poole,2002). The relationship between the predicate and the arguments is the main subject of discussion in Theta Theory which is based on two principles: projection principle and theta criterion. These two principles draw from the relationship between the predicates and arguments. Predicates include verbs, adjectives, prepositions, while arguments are phrases such as noun phrases, NPs and prepositional phrases, PP. According to projection principle, syntactic representations must be projected from the lexicon where the lexical properties of the lexical items are observed (Chomsky, 1981). These properties include the subcategorization properties of the lexical items, that is, all arguments that the verb requires and theta roles assigned for the sentence to be grammatical.

All languages including Dholuo have predicates which indicate the argument structure and the kind of NPs or PPs that the verb or preposition requires to complete meaning. So, the focus is on the fact that the meaning must be complete. Data (1) provides an insight into the predicates and arguments found in sentences containing Dholuo anaphor.

(1)

a.* Auma ohero

NP Love

Auma love

‘Auma loves.’

b. Auma ohero-re

NP love NP

Auma loves self

‘Auma loves herself.’

c. Auma ohero luokre.

NP love NP

Auma love bathe self

‘Auma loves bathing herself.’

d. Mine ohero limore

NP love NP

‘Women love visit one another.’

‘Women love visiting one another.’

Example (1a) is marked as ungrammatical because the verb *hero* ‘love’ which is a two-argument predicate, has only one argument *Auma* and the meaning is incomplete. This is in violation of the projection principle since the verb *hero* ‘love’ subcategorises for two arguments and not one. (1b) is grammatical in that the verb *hero* ‘love’ has two arguments *Auma* and *-re* ‘herself’. (1c) is grammatical in that the verb *hero* ‘love’ has two arguments *Auma* and *luokre* ‘bathing herself.’ In (1d), the verb *hero* ‘love’ has two arguments *mine* ‘women’ and *-re* ‘one another.’ The arguments occupy the subject and object positions as we can see in examples (1a) - (1d) and the projection principle is satisfied. Moreover, the structure of the sentence refers to the arrangement of the different lexical items in the sentence. This includes the position of the noun phrases and prepositional phrases which are the arguments. There are verbs that require one argument to make the meaning complete. Besides, there are verbs that require two or three arguments. Data provided in (1) helps to explain this fact. In (1a), the verb *hero* ‘love’ requires two arguments to make complete meaning. But in this case it has only one

argument *Auma* making the sentence ungrammatical. Example (1b) has two arguments *Auma* and the anaphor *-re* ‘herself’. (1c) has also two arguments *Auma* and *-re* ‘herself’. Again (1d) has two arguments *mine* ‘women’ and *-re* ‘one another’. Therefore, in this case the verb *hero* ‘love’ is a two-place argument verb.

However, by merely looking at the verb may pose some difficulty in judging the grammaticality of the sentences. This is because some verbs can take either an NP complement as an argument or an NP in a verb CP complement as an argument. An NP complement refers to a phrase that begins with the noun as the head, while a CP complement refers to a phrase that begins with the complementizer such as ‘that’. The data in (2) provides instances of verbs taking either an NP complement or CP complement.

(2)

- a. Guok nang'o-re
 NP nang'o NP
 Dog lick self
 ‘The dog is licking itself.’
- b. *nang'ore guok
 nang'o NP NP
 lick self dog
 ‘licking itself the dog.’

c. Auma oneno guok kanang'ore.

NP oneno CP

Auma see dog lick self

‘Auma saw that the dog was licking itself.’

d.* Akinyi onindo-re kitanda.

NP onindo NP NP

Akinyi sleep self bed

‘Akinyi sleep herself on bed.’

In (2a), the verb *nang'o* ‘lick’ requires a subject and object arguments while (2b) lacks the subject argument as the arguments occur as two objects. This makes (2b) to be ungrammatical. In example (2c), the verb *nen* ‘see’ requires a subject argument and a CP complement hence the grammaticality. The verb *nang'o* ‘lick’ is a two-place predicate since it takes the second argument which appear as an NP (2a) or NP in a verb CP complement (2c). (2d) is ungrammatical since the verb *nindo* ‘sleep’ does not require a complement, hence violating the projection principle. It is a one place argument as it only requires the subject.

5.2 Dholuo Anaphors and Theta Theory

Theta Theory deals with the relationship between predicates and arguments in which predicates assign thematic (semantic) roles to their arguments. The predicates can be verbs, adjectives and prepositions. The predicates as already discussed in section 5.1 have argument structure that indicate the type of noun phrases, NPs that the verb requires to complete the meaning of a sentence. We also observed in Chapter Four that Dholuo anaphors are assigned case morphologically. The condition being that if the verb is an

inherent case assigner, then it assigns case to an NP if and only if the verb theta marks it. There is, therefore, a correlation between Case Theory and Theta Theory in checking the grammaticality of a sentence. But Theta Theory goes further to give the semantic interpretation by assigning theta roles to its arguments as we are going to see later. Theta Theory operates under two principles: theta criterion and the projection principle. These two principles help in interpretation of sentences correctly.

5.2.1 Dholuo Anaphors and Theta Roles

From the preceding discussion on argument structure, we can deduce that the meaning of the sentences become easy to understand since the lexicon carries the lexical items and the argument structure. Hence, the argument structure of the predicate is related to its semantics (Poole 2002, p.80). Whatever makes the verb *nindo* ‘sleep’ (2d) a one-place argument predicate (intransitive verb) is related to what *nindo* ‘sleep’ means. Besides, the anaphor *-re* ‘herself’ and *nindo* ‘sleep’ do not correlate. It is as if the person *Akinyi* is performing the act of sleeping to herself which is not possible. The meaning of this sentence can be enhanced by assignment of theta roles. This is because theta roles encode the semantic roles possessed by the various NPs which are required by the predicate. We are going to compare the assignment of theta roles between Dholuo R-expressions and Dholuo anaphors in the next data. Consider (3)

(3)

a. Auma onego guok

Auma kill dog

‘Auma killed the dog.’

b. Guok nang'ore

dog lick self

'The dog is licking itself.'

c. Auma oneno guok kanang'ore.

Auma see dog lick self

'Auma saw the dog licking itself.'

(3a) is an example of Dholuo R-expression sentence where the NPs are lexical items referring to different entities in the world. The verb *nego* 'kill' assigns the NP *Auma* a thematic role of Agent and Patient to the NP *guok* 'dog'. This is because *guok* 'dog' is the thing affected by the action of the killing performed by the Agent *Auma*. On the contrary, (3b) and (3c) are examples of anaphoric sentences whereby the anaphor is attached to the verb. The anaphor does not appear as an independent lexical item. In Chapter 4 when discussing case, we reported that assignment of case in Dholuo anaphors is unique. The case assigner and Dholuo anaphors *may* not necessarily be adjacent to each other. So, this adjacency principle is not universal since Dholuo anaphors are assigned morphological case by the verb they are attached to. The condition on inherent case marking is that the predicate assigns case to an NP only if the case assigner theta marks the NP (Poole, 2002).

In example (3b), the Agent *guok* 'dog' who is the doer of the action is also the Patient *-re* 'itself' affected by the action of *nang'o* 'lick'. In theta criterion, each argument is assigned a different theta role. (3b) has two arguments *guok* 'dog' and anaphor *-re* 'itself'. The verb *nang'o* 'lick' is, therefore, a two-place predicate. The verb *nang'o* 'lick' assigns theta role of Agent to the NP *guok* 'dog' and theta role of Patient to NP *-re*

‘itself’. This is because the argument *guok* ‘dog’ is affected by the action of licking on itself even though the anaphor *-re* ‘itself’ gets reference from it. In (3c), the verb *nenó* ‘see’ assigns the NP *Auma* theta role of Experiencer and NP *guok* ‘dog’ theta role of Theme. In the CP *guok nangore* ‘that the dog was licking itself’, the verb *nang’o* ‘lick’ assigns the theta role of Agent to NP *guok* ‘dog’ and Patient to NP *-re* ‘itself’. In this case, the NP *Auma* emotionally experienced seeing the action being performed by the dog. On the other hand, the CP contains the anaphor *-re* ‘itself’ which refers back to the dog. So, it is the dog that is affected by the action of licking itself. (3d) gives another example of the use of anaphor in showing the direction of the action.

(3d)

Mpira ong’ielore kochiko pap.

Ball roll self towards field

‘The ball rolled itself towards the field.’

In (3d), the verb *ng’ielo* ‘roll’ is a two-placed predicate. The verb *ng’ielo* ‘roll’ assigns theta role of Agent to the NP *mpira* ‘ball’ and theta role of Patient to NP *-re* ‘itself’. This is because the action of the verb *ng’ielo* ‘roll’ affects the argument *-re* ‘itself’ which refers back to the ball. In the PP *kochiko pap* ‘towards the field’, the preposition *kochiko* ‘towards’ is a one-placed predicate and it assigns theta role of Goal to the NP *pap* ‘field’ indicating the direction taken by the ball as it rolled.

On the contrary, there are instances where the NP and predicate do not show any semantic relation. In such instances, the projection principle and theta criterion cannot apply since the sentence is ungrammatical. Let’s consider (3e).

(3e) **nang'ore guok*

Lick self dog

‘self licking dog.’

Intended: ‘The dog is licking itself.’

In example (3e), the verb *nang'o* ‘lick’ a two-place predicate lacks an external argument. It subcategorises for argument *-re* ‘itself’ which lacks a reference. Besides, the argument *guok* ‘dog’ lacks a predicate that subcategorises it. It is thus left hanging, hence a violation of the projection principle. According to theta criterion, each argument must be assigned a theta role and each theta role must be assigned to only one argument. This is not the case with example (3e) because the verb *nang'o* ‘lick’ which is a two-place predicate lacks one argument to which the argument *-re* itself gets referent. Besides, the argument *guok* ‘dog’ lacks a predicate to assign it theta role. This is a violation of the theta criterion rendering the sentence ungrammatical.

5.2.2 Dholuo Anaphors and Theta Principles

The question we need to ask is, does the examples in (3a) - (3d) fulfil the theta criterion and projection principle? Theta criterion requires that each argument be assigned a thematic role and that each thematic role be assigned to an argument. This means that first the arguments have to be identified. Then the functions of the arguments identified in relation to the action of the predicate that assigns the thematic roles. The projection principle on the other hand ensures that a predicate subcategorizes for its arguments. Thus it encompasses both the subcategorization and theta roles assigned to the arguments. The answer to the

question is yes. The sentences in (3a) - (3d) fulfil the theta criterion and projection principle. This is because in (3a) *Auma onego guok* 'Auma killed the dog' which is an R-expressions, is a two-placed predicate with two arguments, *Auma* and *guok* 'dog'. The verb *nego* 'kill' subcategorises for the arguments *Auma* and *guok* 'dog' as per projection principle. These arguments identified are then assigned theta roles to be interpretable. Therefore, the verb *nego* 'kill' assigns the theta role of Agent to *Auma* and Patient to *guok* 'dog'. In (3b), the verb *nang'o* 'lick' subcategorises for arguments *guok* 'dog' and anaphor *-re* itself which refers back to the dog. This then means that we have two arguments, even though the referent is the same thing. The verb *nang'o* 'lick' is thus a two - place predicate. By identification of these arguments that the verb picks to make the sentence grammatical, the projection principle is satisfied. In order to satisfy the theta criterion, each of these arguments have to be assigned theta roles. The verb *nang'o* 'lick' assigns theta role of Agent to *guok* 'dog' that performed the action of licking and theta role Patient to anaphor *-re* 'itself', the object that was licked.

In the same vein, example (3c) *Auma oneno guok kanang'ore* 'Auma saw that the dog was licking itself' has three arguments NP *Auma*, *guok* and CP *nang'ore* 'that the dog was licking itself'. In the first place, the verb *nenno* 'see' is a two-place predicate and it subcategorises for the arguments *Auma* and *guok* 'dog'. The verb *nenno* 'see' assigns thematic role of Experiencer to *Auma* whose emotions were affected by the action of the dog and thematic role of Theme to *guok* 'dog' that was seen by *Auma*. In the CP, the predicate *nango* 'lick' a two place-predicate subcategorises for the arguments *guok* 'dog' and anaphor *-re* 'itself'. It then assigns theta role of Agent to *guok* 'dog' and theta role of

Patient to *-re* ‘itself’. So, this sentence fulfils the theta criterion and projection principle since all the arguments are identified and assigned theta roles.

In addition, example (3d) *mpira ong’ielore kochiko pap* ‘the ball rolled itself towards the field’, has three arguments which have been assigned thematic roles. First, the verb *ng’ielo* ‘roll’ a two-place predicate subcategorises for arguments: *mpira* ‘ball’ and anaphor *-re* ‘itself’; while *kochiko*, one-place predicate subcategorises for argument *pap* ‘field’. The predicate *ng’ielo* ‘roll’, a two-placed predicate assigned theta role of Agent to NP *mpira* ‘ball’ and Patient to NP *-re* ‘itself’; while the preposition *kochiko* ‘towards’, a one-placed predicate assigned NP *pap* ‘field’ Goal theta role. The NP *-re* ‘itself’ refers back to the NP *mpira* ‘ball’. The theta criterion and projection principle is then fulfilled in this case.

5.2.3 Thematic Grid Representation

The grammaticality of the above sentences in (3a) - (3d) can be seen from the fact that the predicate assigns the thematic roles to the arguments. The NPs in the sentences have semantic relation to the predicates adjacent to them. The information as to the semantic relationship between the predicate and its arguments is part of the lexical knowledge of the native speaker and is recorded in the lexicon. This information can be represented in a thematic grid or theta grid which is part of the lexical entry of the predicate. Consider (4a)

(4a) Guok nang’ore

Dog lick self

‘The dog licked itself.’

Nang’o: Verb

lick

AGENT	PATIENT
Guok	-re

The verb *nang'o* 'lick' assigns thematic role of Agent to NP *guok* 'dog' and Patient to NP *-re* 'itself'. This verb is a two-place predicate which requires two arguments. Though since the external argument *-re* 'itself' refers back to the internal argument *guok* 'dog' which is itself, the verb still is a two-place predicate with two arguments. If the two arguments are assigned the same theta role by virtue of their referent, it would be a violation of the theta criterion. This is seen in (4b):

(4b)

Nang'o: verb

lick

AGENT	PATIENT
NP	NP

Since the theta roles have been assigned to the arguments, they are saturated and they are marked 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 or subscript. Then the index of the argument to which the thematic role is assigned is entered in the appropriate slot in the theta grid. This is represented in (4c):

(4c) Guok_i nangore_i

Nang'o:

Lick

AGENT	PATIENT
Guok_i	re_i
I	I

In addition, there are verbs that take an NP argument and CP complement. Such arguments and complements are also assigned thematic roles and represented in a theta grid. Consider *Auma oneno guok kanang'ore* 'Auma saw that the dog was licking itself' on the thematic grid in (5):

(5a)

Neno: verb

see

EXPERIENCER	THEME
NP	NP

CP Nang'o: Verb

lick

AGENT	PATIENT
NP	NP

The verb *nenó* 'see' assigns two thematic roles to the arguments. It assigns Experiencer theta role to *Auma* and Theme theta role to *guok* 'dog'. In the CP *guok nang'ore* 'that the dog is licking itself' there are two arguments. The verb *nang'o* 'lick' in this complement assigns NP *guok* 'dog' theta role of Agent and NP *-re* 'itself' theta role of Patient. The verb *nenó* 'see' is a two-place predicate since it requires two arguments whose roles can be assigned and the verb in the CP is also a two-place predicate as in (5b).

(5b)

nenó: Verb

see

EXPERIENCER	THEME
NP	NP

CP Nang'o: Verb

lick

AGENT	PATIENT
NP	NP

(5b) indicates that the theta roles have been assigned to the respective arguments, thus fulfilling the theta criterion. This is the state of the arguments being described as saturated (Haegeman 1994, p.52). This saturation is done by checking off the thematic roles in the thematic grid of the predicate. This is represented in (5c)

(5c) Auma_j oneno guok_i kanango-re_i

nenno: Verb

see

EXPERIENCER	THEME
Auma	guok_i
J	I

AGENT	PATIENT
guok_i	-re_i
I	I

We can also consider another case of a two-place predicate involving an NP with the verb as the predicate and preposition as a predicate in the PP. In the sentence *mpira ng'ielore kochiko pap* 'The ball rolled itself towards the field', the predicate *ng'ielo* 'roll' has two arguments, *mpira* 'ball' and *-re* 'itself'. The preposition *kochiko* 'towards' in the PP *kochiko pap* 'towards the field' is a one-place predicate with the argument *pap* 'field'. This information can also be represented in a thematic grid as seen in (6a).

(6a)

Ng'ielo: Verb

EXPERIENCER	THEME

Kochiko: Preposition

towards

GOAL

The verb *ng'ielo* 'roll' is a two-place predicate that assigns two thematic roles of Experiencer and Theme to its arguments. The preposition *kochiko* 'towards' is a one-place predicate that assign thematic role of Goal to its argument. This is shown in (6b):

(6b)

Ng'ielo: Verb

Roll

EXPERIENCER	THEME
NP	NP

Kochiko: Preposition

towards

GOAL
NP

Since the thematic roles have been assigned to the arguments, they are saturated. We then mark the arguments by checking off the theta roles in the theta grid of the predicate. This is done by entering the index of the argument to which the thematic role is assigned in the appropriate slot in the theta grid. This is represented in (6c):

Mpira_i ongielore_i kochiko pap_j

Ball roll self towards field

‘The ball rolled towards the field.’

EXPERIENCER	THEME
mpira_i	-re_i
I	I

GOAL
pap_j
J

5.3 Dholuo Anaphors and Relevance Theory

This section focuses on pragmatic interpretation of Dholuo anaphors. We are going to use the Relevance Theory (RT) by Sperber and Wilson (1995, 2002, 2004) as the interpretation tool to help us understand the different utterances containing anaphors. As already discussed (cf 2), RT as a theory deals with relevance of utterances used in human communication. The brain processes meaning based on both what is understood internally in the mind and also externally from the environment. The external environment is based on the paralinguistic features such as body language, gestures and tone of the speaker. The hearer picks only what is relevant to the occasion and leave out

the rest that is not relevant. The intentions of the hearer and the speaker are taken into consideration in order to help come up with assumptions that can guide the listener understand the speaker's meaning. This is demonstrated in (7)

(7)

a. Guok nang'ore

Dog lick self

'The dog is licking itself.'

In (7a), the internal meaning that the brain gets is that *guok* 'the dog' has removed its tongue to lick a part of its body. The reason for the dog licking itself is not known. If at the time of the utterance the speaker seems disgusted by the action of the dog, then one may want to know the cause of the dog licking itself. If by a closer look at the dog one notices a tick, then the assumption could be that the dog's body is irritated by the tick. And this could be a reason enough for the dog to lick itself. On the other hand, the dog could be licking itself because of other reasons. For instance, if the dog's skin at the time of utterance is wet or muddy, this could be an indication of the fact that the dog is uncomfortable. Relevance Theory is guided by two principles: cognitive principle and communicative principle. These two principles help both the speaker and the hearer to explicitly understand an utterance.

As already discussed in Chapter Two, the cognitive principle focuses at maximization of relevance. This principle takes place within the mind of both the hearer and the listener. It then interacts with exposure to the environment (Yus 2010, p.681). Our minds can therefore, elicit a number of utterances with different interpretations. But at any given time, only the relevant ones are uttered depending on the environment and what is meant.

The utterance in (7a) *guok nang'ore* 'the dog is licking itself' can elicit a number of interpretations. The different interpretations are highlighted in (7b) - (7d):

(7)

b. The dog has eaten.

c. The dog has ticks.

d. The dog is dirty.

All the interpretations in (7b) - (7d) are correct, but only one is relevant. If at the time of utterance there are a few droplets of food and an empty feeding trough, then we can deduce that (7b) is the most relevant interpretation. The other two (7c) and (7d) are correct though not relevant in this situation. The question then is, is the cognitive principle fulfilled? The answer is yes because the mind maximized at the most relevant interpretation based on what was in the environment, an empty feeding trough and food droplets. The cognitive principle works hand in hand with the communication principle.

The communicative principle is based on the fact that in every communication, the mind is aimed at optimum relevance. This is different from the cognitive principle which focuses on eliciting utterances. The aim in the communication principle is to select the most relevant interpretation by the help of what Sperber and Wilson calls Relevance Comprehension Procedure (RCP). By doing so, the listener is able to reach the optimum relevant meaning. The Relevance Comprehension Procedure states that:

Follow the path of least effort in deriving cognitive effects:

Consider interpretations (reference assignment, disambiguation, implicatures in order of accessibility)

Stop when your expectation of relevance is satisfied

(Sperber & Wilson, 2002, p.18).

Apparently from the Relevance Comprehension Procedure, the mind is guided into selection of the right interpretation. This is because all the interpretations occur simultaneously, even though others take a lot of effort to process. The interpretations are guided by elements that act as references such as pronouns which require context in disambiguating ambiguous utterances to mean either a pronoun or an anaphor. Relevance Comprehension Procedure ensures that we use very little effort in interpretation of an utterance with the aim of maximization of relevance. The contextual effects, as will be elaborated in the next section, are the different information received and the paralinguistic features evident during the interpretation. For instance, in (7a) *guok nang'ore* 'the dog is licking itself', we can deduce a few things to arrive at the right interpretation.

First, there are a number of interpretations that come simultaneously to the mind as highlighted in (7b) *the dog has eaten*; (7c) *the dog has ticks*; (7c) *the dog is dirty*. All these interpretations are correct, but our aim is to get the most relevant one without using a lot of effort. Secondly, if at the time of the utterance the dog had just eaten and there are traces of food on its mouth then this forms an evidence for licking itself. Then by a closer look at the dog a tick is spotted, we can guess that the tick causes some irritation that makes the dog lick itself. The implication of all these assumptions points at the fact that the dog is dirty and needs cleaning. We can therefore stop at the knowledge that the dog is dirty and leave out the other interpretations. The next section expounds on the contextual or cognitive effects that helps get the relevant interpretation.

5.3.1 Contextual Effects and Dholuo Anaphors

As already discussed in Chapter Two, there are contextual effects that aids the interpretation of an utterance. The basic ideas of Relevance Theory as noted by Yus (2010) are that every utterance has a variety of interpretations that is compatible with information which is linguistically encoded. The interpretations do not occur at the same time; some take effort to think about. But hearers are able to pick only one interpretation at a time that seems suitable from the number of the interpretations that may come to the mind. Information can be relevant in one context and not in another (or more relevant in one context than another). Context means a set of mentally represented assumptions used in interpreting (or processing) a given set of information. This means that new or newly presented information is relevant in a context which it interacts with to yield the cognitive effects. Yus (2010, P. 683) sums up three types of contextual effects as:

- i. Derivation of new assumptions (contextual implications)
- ii. Strengthening of existing assumptions by providing further evidence for them
- iii. Contradicting or weakening or eliminating of existing assumptions

In the same vein, we can note that there is a relationship between relevance and contextual effects. The greater the contextual effects, the greater the relevance. The presumption of optimal relevance means that the ostensive stimulus (verbal communication) is relevant to an audience if it is worth the addressee's effort to process it; or if it is the most relevant one compatible with communicator's abilities and preferences. In (7a) *guok nang'ore* 'the dog is licking itself', the assumptions are that (7b) *the dog has eaten*; (7c) *the dog has ticks*; (7c) *the dog is dirty*. If at the time of

utterance some blood is seen on the dog's mouth and a dead snake bleeding is seen a few meters away, then this new evidence changes our interpretation. The first assumptions (7b) – (7d) are eliminated and the new finding prompts us to assume that the dog had killed the snake. Hence, the presence of blood and licking itself. This then is the new interpretation (7e) which is in line with the Relevance Comprehension Procedure (RCP) that we stop when the most relevant interpretation is reached.

(7e) The dog killed the snake

From the foregoing discussion, it is evident that Relevance Theory uses the two principles: cognitive and communication together in the interpretation of utterance. These two principles work hand in hand with the RCP to derive the contextual effects which further enhances proper interpretation. In the next section, different utterances containing anaphors are analyzed using the aspects discussed in RT.

5.3.2 Dholuo Anaphors and Relevance Interpretation

This section features Dholuo anaphors and their interpretation within Relevance Theory. Dholuo anaphors as discussed in Chapter Four includes the reflexive and reciprocal *-r-*. However, there are other elements used as anaphors in Dholuo such as personal pronouns and demonstrative pronouns. We also deduced that there are body parts anaphors in Dholuo which represents parts of the body like head and soul. In addition, there are inherent anaphors in Dholuo which refer to self that require logic for their interpretation. We begin with reflexives and reciprocals interpretations within Relevance Theory, then embark on other elements that function as anaphors in Dholuo.

The reflexive and the reciprocal depends on the antecedent for its interpretation in an utterance. In Relevance Theory, the context of the utterance is important in giving the right interpretation. At any given time, we may have different utterances. These different utterances can yield a number of assumptions and contextual implications. The mind is required to settle on only one interpretation. This relevant interpretation is arrived at by the help of two principles: cognitive principle and communicative principle. These principles allow the speaker and hearer get the different meanings of the utterance. This is enhanced by the RCP which enables us use the least effort in settling on the most relevant interpretation and stop when satisfied. We can demonstrate these concepts in Relevance Theory using the data in (8).

(8)

a. A-hero-ra

I love self

‘I love myself.’

b. Opiyo o-hero-re

Opiyo love self

‘Opiyo loves himself.’

c. Otieno o-wacho-ni Omondi o-hero-re

Otieno say that Omondi love self

‘Otieno says that Omondi loves himself.’

d. Mine go-re

Women fight one another/selves

‘Women fight one another/themselves.’

- e. Jaricho pakore kuom gombone maricho
wicked praise self because desire his bad

‘The wicked praises himself because of bad desire.’

In example (8a), the sentence *aherora* ‘I love myself’ means that the speaker loves himself or herself. The reflexive *-ra* ‘myself’ refers back to the person *a* ‘I’. There are various assumptions that we can derive from this interpretation. One, the speaker could be justifying why he or she, for example, dresses well, served himself or herself first or prioritizes himself or herself. If in the process of the utterance the speaker is actually dressed well, then the assumption is strengthened. More so, if the speech is accompanied by some non-verbal cues whereby the speaker is actually looking at himself or herself. The other interpretations could also be correct though they require more effort to justify the contexts that they infer. However, if in the process of the utterance a bus passes by, there would be no connection between the bus and loving oneself. This then means that the passing of the bus is irrelevant, and so is eliminated. Again, if the speaker utters the words *aherora* ‘I love myself’ and points or sneers at someone else, then the utterance could be sarcastic. The meaning implies that the person being pointed at could be proud or despises people. This gives a negative connotation on the person. This interpretation would then be relevant in this context.

For the case in (8b) *Opiyo oherore* ‘Opiyo loves himself’, the pronoun ‘*o-*’ refers to *Opiyo* and is bound to the reflexive ‘*-re*’ ‘himself’. In this case the pronoun ‘*-e*’ attached to reflexive *-r-* ‘self’ refers to the third person him or her. The utterance means that *Opiyo* loves himself and not anyone else. This sentence based on cultural context could attract a number of assumptions like: *Opiyo* had bought a new pair of shoes, a car or even a house.

If for example, at the time of the utterance *Opiyo's* mum was wearing torn clothes, then we could deduce that he actually is not responsible. The fact that he loves himself could be that he is greedy and cares less about others. Whilst at that moment *Opiyo* produces a receipt indicating that someone bought for him the shoes. This eliminates all the assumptions and interpretations of being greedy and irresponsible. Therefore, the utterance that he loves himself would be irrelevant.

Moreover, (7c) *Otieno owacho ni Omondi oherore* 'Otieno says that Omondi loves himself' means that someone else by the name '*Otieno*' is reporting the fact that another person by the name *Omondi* loves himself. This could be based on some observable behaviour or action of *Omondi* observed by *Otieno* which could be true of an assumption. One of the observations could be that *Omondi* buys things for himself first before considering anyone else. It could be that *Omondi* has paid for himself school fees for masters and his siblings are out of school. Or it could be that *Omondi* had gone to entertain himself. If at the time of the utterance *Omondi* was actually in Dubai for holiday, then it would strengthen the assumption that he loves himself by entertaining himself. If in addition to that he comes back with new items from Dubai, then it is correct to deduce that he really loves himself. This then would be the relevant interpretation of that assumption. If on the other hand they learn that *Omondi* had not gone to entertain himself, but had been hospitalized for some time, then the utterance would be eliminated. The interpretation would be irrelevant in this case.

Again, in (7d) the sentence *mine gore* 'women are fighting one another or themselves' could be interpreted as either a reflexive or reciprocal. The fight could be physical or verbal where they could be abusing one another. It could also be a case of seeking for

attention. The interpretation that the women are fighting themselves could elicit assumptions such as: women belonging to a group differing because of divergent opinions, women disagreeing among themselves because of betrayal, women hauling abuses to one another. If at the time of utterance by the speaker some noise of women yelling is heard. Then what follows is strange faces of mediators passing by and heading straight to the room in the company of their leaders. This information strengthens the assumption that the women could be having some differences which needed to be sorted. The implication is that the interpretation is relevant. On the other hand, the interpretation that women are fighting one another would imply that the women are involved in physical war which could lead to injury. If at the time of utterance there is a crowd, a lot of yelling is heard or people run towards the direction where women were then these could heighten the assumption. And if by a closer look one sees a woman thrown on the ground and some women being restrained, then it could be true. Henceforth, the utterance interpretation that the women were fighting one another would be relevant. But if on a closer look you realize that the women were just involved in a game of wrestling or tag of war; then all the information of harming each other would be eliminated. Besides, there could be another interpretation, for example, if at the time of utterance, a siren was heard of a police car approaching. This new information on the appearance of the police car would be irrelevant. This is because there would no dispute to resolve.

5.3.3 Anaphoric Pronouns and Relevance Interpretation

The anaphoric pronoun refers back to the antecedent in the utterance. (9) provides examples of utterances with anaphoric pronouns which are interpretable within Relevance Theory.

(9)

f. *Apondi oneno ng'ato mane ogoye.**Apondi see person who beat her**'Apondi saw the person who beat her.'*g. *Otieno oleko ni en gi nyamburko.**Otieno dream that him with car**'Otieno dreamt that he has a car.'*h. *Nyithindo owacho ne baba ni gituo.**Children say that father they sick**'The children said to their father that they were sick.'*i. *Gilokore ire mondo giked kode**They turn selves to him so that they fight him**'They turned to fight him back.'*

(9a) *Apondi oneno ng'ato mane ogoye* 'Apondi saw the person who beat her'. This utterance is ambiguous in that it attracts two interpretations. One, it may imply that the pronoun *-e* 'her' refers back to *Apondi* and not *ng'ato* 'someone'. In other words, it is *Apondi* who was beaten and is able to identify the person who performed the act of beating her. Another interpretation could be that someone else was beaten by the person that *Apondi* was able to identify. These two interpretations could form our assumptions in the first place. If at the time of the utterance we notice that *Apondi*'s face is swollen and the person is seen in the vicinity, then this context increases the implication of the first assumption. The second assumption is thus eliminated. The Relevance Comprehension

Procedure is thus satisfied as very little effort has been used to arrive at the right interpretation.

(9d) *Otieno oleko ni en gi nyamburko* ‘Otieno dreamt that he has a car’. This utterance has the implication of a person by the name *Otieno* who dreamt that he had a car. This is because the pronoun *en* ‘he’ refers back to *Otieno*. This utterance can elicit a number of assumptions. One is that *Otieno* desires to have a car. Two, *Otieno*’s dream is actualized. And three is that *Otieno* saw a car passing. If at the time of utterance, we see a devastated person, *Otieno* looking confused. In addition, there seems to be no sign of a car after close interaction with him. Then, we can eliminate the many assumptions and settle that *Otieno* was only dreaming and this could have been a desire in her mind. The relevant interpretation, therefore, is that *Otieno* desired to have a car.

(9c) *nyithindo owacho ne baba ni gituo* ‘the children said to their father that they were sick’. This utterance is ambiguous in that it can be interpreted as *gi-* ‘they’ to refer to the children who are sick. The second interpretation is that *gi-* ‘they’ are other people whom the children identified to be sick and so they have come to report to their father to be aware. If at the time of the utterance we notice that the children look dull, then the assumption could be that the children are actually sick. But if at the time of utterance, the children look bright and points at a group of people who look emaciated and worn out, then the first assumption is eliminated. The action of the children pointing at the emaciated people strengthens the interpretation of the people to be sick and not the children.

(9d) *gilokore ire mondo giked kode* ‘they turned to fight him back’ presents a case of an action being performed to another. The person being fought by the people is the referent

–e ‘him’ affected by the action of the people. These people were in a battle in this context and, therefore, performed the act of fighting to him and not to themselves. Their intention of fighting is well known to the listener since the context presented is a battle field. The most relevant interpretation is that the recipient –e ‘him’ was going to be hurt.

5.3.4 Anaphoric Demonstrative and Relevance Interpretation

Dholuo anaphoric demonstratives can also be interpretable within Relevance Theory. The idea of context is key in their interpretation. Context here involves both the cultural and social aspect. The cultural context refers to the way the society interprets an utterance while the social context is based on the persons involved during communication. Example (10) provides use of the anaphoric demonstrative in different contexts.

(10)

a. Omondi owachoni Bob ochwore.

Omondi say that Bob stub self

‘Omondi said that Bob stubbed himself.’

e. Rawera manaromogo nyoro owacho ni en okiri.

Young man I meet say that he is a lawyer

‘The young man I met said that he is a lawyer.’

f. Atieno owacho ni apuko nyuka to mano ok atimo.

Atieno says that I spill porridge but I have not done

‘Atieno says that I have spilt her porridge, that I have not done.’

(10a) *Omondi owacho ni Bob ochwore* ‘Omondi said that Bob stubbed himself’ can be interpreted as *Bob* performed the act of stubbing to himself which may have been witnessed and reported by *Omondi*. The reason for Bob stubbing himself is not known.

But we can assume that Bob stubbed himself because of frustrations, disappointment, or wanted to commit suicide for failure to pay debts. These are assumptions that are being processed in the mind. If for example, *Omondi* and *Bob* had been very close friends and in the process *Omondi* produces evidence of a letter written to *Bob* that he needs to clear his debts; then this is evidence to warrant the assumption for stubbing himself. The new finding that Bob wanted to commit suicide for failure to pay debt could have triggered the frustration and most probably his disappointment for not honoring to pay his debts. The underlying causes for not paying debts could have been that Bob lost his job or that he had many other engagements. These underlying factors would require a lot of effort to process, which violates RCP. So, the most relevant interpretation that requires little effort would be that *Bob* committed suicide.

In (10b) *Rawera manaromogo nyoro owacho ni en okiri* ‘the young man I met yesterday said that he is a lawyer’ is ambiguous. The utterance could mean that the young man being referred to is the lawyer. It could also mean that there was another person that the young man told the speaker that is a lawyer. The assumptions that come to our mind is that the man was neatly dressed, the man had a degree in law or the man is a practicing lawyer. If at the time of the utterance the speaker looks disappointed and dissatisfied at a second thought. And at the same time tries to express the same sentiments to another person on how he felt cheated by the young man he met. Then, we can eliminate the fact the young man is a lawyer or has a degree in law. It could probably be that the young man dressed neatly to give an impression of a lawyer. This then gives us the interpretation that the neatly dressed young man was not a lawyer.

There is the use of anaphoric demonstrative *mano ok atimo* ‘that I have not done in (10c) *Atieno owacho ni apuko nyuka to mano ok atimo* ‘Atieno says I have spilt her porridge, that I have not done.’ This anaphoric demonstrative *mano* ‘that’ refers back to the person *a-* ‘I’ reporting that what *Atieno* said was not true. The Relevance Comprehension Procedure requires that we use the least effort in picking the right interpretation. The context of this utterance counts most since it would assist in picking the relevant interpretation. If at the scene of utterance there is evidence of spilt porridge, then we can come up with an assumption. More so, if we are able to see the cup on the floor and the things that have been messed up. The assumption could be that person who was seen at the time *Atieno* came in is the one who spilt the porridge. Secondly, it could be that someone or something else could have knocked the cup containing porridge. Or most probably it could be *Atieno* herself who performed the act of pouring porridge. If in the process of this happening a cat is seen coming from under the chair licking itself and soiled in porridge, then this becomes the new implications. Our first assumption is eliminated in this context and the new evidence of the cat changes our understanding that the porridge was spilt by the cat. We therefore, stop at this interpretation.

5.3.5 Body Parts Anaphors and Relevance Interpretation

The body part anaphors refer to the parts of the body such as head, soul and body. These anaphors get reference to parts of the body to make complete meaning. (11) provides body part anaphors.

(11)

a. Achwanyora.

I hurt soul/body/self

'I hurt myself.'

b. Otieno oneno thuol bute.

Otieno see snake near he

'Otieno saw a snake near him.'

c. Nyithindo onenore.

Children see selves

'Children saw each other.'

Within Relevance Theory, (11a) *achwanyora* 'I hurt myself' can have different interpretations. Context as earlier discussed is vital in the interpretation of utterance. For instance, we can have situational context which could be physical, time, cultural, participants or even events. Conversely, context could be linguistic whereby interpretation is based on words used prior to the utterance. All these contexts are important in pragmatics. In (11a), the person could have physically hurt a part of his body like, for example, the leg. At the same time, the same utterance can elicit another meaning that the person's soul was affected by something. This could be words spoken by another person affected due to what someone said to him or her or actions performed to the person. On the contrary, we may have another interpretation based on the culture which brings in euphemistic usage. For instance, when a person, especially an unmarried lady, says that *achwanyora* 'I hurt myself'; the implication could be that she is pregnant. In this case *chwanyo* 'hurt' is not intentional for the lady was not prepared to have a baby

and is not married. The part of the body affected, in this case, is the soul and the body itself. Suppose at the time of the utterance the person is a lady and is seen to be devastated and is actually pregnant from the bulging stomach, then we can make that conclusion. The most relevant interpretation is that the person is pregnant. The other interpretations are thus eliminated though they are associated with the person's state.

Consequently, the use of *chwanyo* and *hiny* all meaning 'hurt' can attract different interpretation in different contexts. For instance, in the biblical example mentioned in Chapter Four *wecheni ne siro joma ochwanyore* 'your words encouraged people who felt hurt'. In this context, the person Job felt hurt by the people he thought were friends. The words they uttered to him hurt his soul and so he tried getting encouragement from the word of God. The state of Job in this context is that of desperation as we are told that his body was physically hurt from the sores. We are given a picture of a person who is physically and emotionally hurt. But the mind is directed to the words spoken by Job which needs little effort to connect with the utterance. Therefore, the mind stops at the interpretation of the soul that is hurt. Besides, the context biblical example of *ahinyora malit* 'I am hurt badly' is different. This is a case of the king who went to battle and is physically hurt by a spear. He is uttering these words to one of the soldiers indicating that he is indeed in pain. The presence of the spear on his chest and agony on his face strengthen our interpretation of him being physically hurt.

In (11b) *Otieno oneno thuol bute* 'Otieno saw a snake near him', the pronoun *-e* 'him' in *bute* 'near him' refer to the antecedent *Otieno*. This implies that the snake could have been very close or a little bit far away from *Otieno*. This utterance could also give an interpretation that the snake was close to someone else that *Otieno* was able to see. This

then indicates that this utterance is ambiguous. If at the time of utterance, we see the person *Otieno* shaking and worried and a snake is seen crawling away, then we can assume that *Otieno* was shaking because of the sight of the snake. This is because there is a probability that the snake could bite him. If at the same time there is somebody near *Otieno* and this person confirms that the reason for *Otieno* shaking is because he saw a snake near him, then this strengthens the assumption that *Otieno* was shaking because of the snake near his body. The body could be his leg or any part of the body. Therefore, the other assumption that the snake was near someone else's body is eliminated.

In (11c) *Nyithindo onenore* 'Children saw one another', the assumption could be that the children met after a long time. It could also mean that the children visited each other. Again, it could be that the children saw one another's face or one another's body part. Assuming that the children were playing hide and seek and so they were to search for one another, then sounds of excitement is heard. We can deduce that the children found one another and this implies seeing one another's face or body part. All the other interpretations are thus eliminated.

5.3.6 Inherent Anaphors and Relevance Interpretation

The inherent anaphors as already discussed in chapter four, refer to the action happening to self. These actions can elicit a number of assumptions based on the context of interpretation. (12) provide instances of use of the inherent anaphors.

(12)

g. Mpira ong'ielore kochiko pap.

Ball roll self towards field

'The ball rolled itself towards the field.'

h. Opondo olielore.

Opondo shave self

'Opondo shaved himself.'

i. Gipogore lepa e kindgi (Psalms 22:18)

They share each other/themselves clothes among themselves

'They shared my clothes among themselves.'

In (12a) *mpira ong'ielore kochiko pap*, 'the ball rolled itself towards the field' attracts number of interpretations. The action of rolling happens to the ball and the direction the ball is rolling to is the field. In the natural sense, the ball cannot just start rolling, there must be some external force that caused this action. One of the causes could be that the ball was forced to move by the blowing wind. It could also be that the ball was placed on a sloppy ground and so it rolled itself. Another possibility could be that there were people playing with the ball and in the process of kicking it, the ball slipped and rolled towards the field. If at the time of the utterance there were people standing on a sloppy ground and next to a field looking towards the direction of the rolling ball; then we can assume that the ball rolled because of the slop. And if in addition to that we notice that the people were dressed in games uniform then this new finding strengthens our assumption. The new interpretation is that the people had been playing with the ball and had taken a break and in the process the ball rolled away on a steep slop.

In (12b) *Opondo olierore* ‘Opondo shaved himself’ the action of shaving happens to self ‘*Opondo*’. The part of the body that *Opondo* is shaving is not known. Whether it is the beard or the hair is not indicated. All we know is that *Opondo* is shaving himself. In addition, the tool used for shaving is also not mentioned. The assumptions could be that *Opondo* shave his hair or beard. Another assumption could be that *Opondo* is having a pair of scissors. If at the time of the utterance *Opondo* is seen holding a pair of scissors and the beard is clean, then we can conclude that *Opondo* actually shaved his beard. This interpretation strengthens our assumption that *Opondo* shaved his beard using a pair of scissor.

(12c) *gipogore lepa e kindgi* ‘they shared my clothes among themselves’ indicates a case of someone affected emotionally. The context indicated is that the person witnessed his clothes being shared among the people. The person seems helpless as the action of sharing clothes takes place. The mind, therefore, settles on the fact that the person is emotionally hurt. This then is the most relevant interpretation in line with RCP.

5.4 Chapter Summary

This chapter analysed the semantics and pragmatics of Dholuo anaphors. Semantic interpretation was discussed using Theta Theory to ascertain that theta criterion and projection principle were adhered to. Besides, pragmatic analysis was done using Relevance Theory where different contexts were presented to test the cognitive and communication principles. Also the pragmatic analysis ensured that the Relevance Comprehension Procedure (RCP) was observed.

First, in semantic interpretation, Dholuo anaphors occurred as NP complements or NP in a verb CP complements in the sentences. For example, in the sentence *guok nang'ore* 'The dog is licking itself' the verb *nang'o* 'lick' takes two arguments (NPs) *guok* 'dog' and *-re* 'itself'. Moreover, in *Auma oneno guok kanang'ore* 'Auma saw that the dog was licking itself,' *guok kanang'ore* is the CP complement of the verb *nenno* 'see'. The NPs *guok* 'dog' and *-re* 'itself' are found within the CP. They are, therefore, arguments which are assigned thematic roles. In chapter four we discovered that Dholuo anaphors are assigned a morphological case by the verb. This meant that a verb in Dholuo assigns morphological case to an NP that it theta marks while an oblique case is assigned to the object of the preposition. This applies to theta assignment in that the anaphoric arguments that are NPs and NPs in verb CP complement are theta marked in Dholuo. In Dholuo, the anaphors are attached to the verb, and so do not occur as independent lexical items. The verb assigns theta roles to the arguments to fulfil the theta criterion.

In comparing the R-expressions and anaphor in Dholuo, the following was noticed: Dholuo R-expressions occur as independent lexical items and so are assigned thematic roles. On the contrary, Dholuo anaphors get their reference from the antecedent in the same clause. But since they occur as different NPs occupying subject (antecedent) and object (anaphor) positions, they are assigned different theta roles. For instance, in *Auma oneno guok kanang'ore* 'Auma saw the dog licking itself', has the NP *Auma oneno guok* 'Auma saw the dog' and CP *Auma oneno guok kanang'ore* 'Auma saw the dog licking itself'. The verb *nenno* 'see' assigned *Auma* theta role of Experiencer and *guok* 'dog' theta role of Theme. In the CP, the verb *nang'o* lick assigned *guok* 'dog' theta role of Agent while anaphor *-re* 'itself' assigned theta role of Patient. By assignment of the theta roles

to the arguments, the theta criterion is satisfied. The projection principle is also satisfied as the predicates subcategorized its arguments. This information is stored up in the mental dictionary which is represented in the theta grid. Theta grid acts as the brain that records semantic information of the predicate and the arguments that are assigned theta roles. The information is said to be saturated once all the arguments are represented with a subscript and placed within the theta grid. This happens to all Dholuo anaphors that occur in sentences.

In the same vein, Dholuo anaphors are also given a pragmatic interpretation within the Relevance Theory. In Relevance Theory, both the speaker and the hearer are important in the interpretation of an utterance. Context plays an important role as it enables the hearer and the speaker get the right interpretation of an utterance that seemed ambiguous. The contexts included cultural, social and use of paralinguistic features such as facial expressions, tone of voice and body language. These contexts when presented enhanced interpretation by either eliminating, strengthening or contradicting the existing assumption. Again, by RCP enabled the hearer follow the path that does not need a lot of effort to arrive at the right interpretation.

In conclusion, it was noted that most utterances with anaphors that were ambiguous were disambiguated. The different contexts presented enabled the right interpretations. The next chapter examines the interface of syntax, semantic and pragmatic in the interpretation of Dholuo anaphors in different constructions.

CHAPTER SIX

DHOLUO ANAPHORS AT THE LINGUISTIC INTERFACE

6.0 Introduction

In this chapter, we examine Dholuo anaphors at interface within Government and Binding (GB) and Relevance Theory (RT) frameworks. In particular, our focus is on inclusion of context in interpretation of utterances. This analysis answers the fourth research question: How does Relevance Theory and GB Theory account for the interface of Dholuo Anaphors? The objective in this analysis is to provide the relevant interpretation of utterances by focusing on three linguistic areas: syntax, semantics and pragmatics. Section 6.1 discusses the concept of interface, Section 6.2 Dholuo Reflexives and Reciprocals at interface, Section 6.3 Interface and anaphoric elements, Section 6.4 Mind and linguistic interface, Section 6.5 Chapter Summary.

6.1 The Concept of Interface

The concept of interface has been a subject of discussion by linguists. Carson (2002) argues that whatever is expressed by an utterance is not fully determined by the meaning of the linguistic expression used to convey it. To her, the semantics that is, the linguistic meaning provides the explicit context and utterance meaning is derived from the different contexts presented. Prior to any interpretation, the mind must gauge that the utterance is grammatically correct. This grammaticality involves syntax which is then followed by the interpretation, semantics. The interpretations vary depending on the contexts presented, thus involving pragmatics. The pragmatics model used in this study is Relevance Theory. It is used to explain the different contexts of interpretation. Relevance Theory aims at explaining cognitively the expectations of relevance and their contribution to relevant comprehension.

The interpretation of grammatical structures depends on different levels of language study. For instance, anaphors can be interpreted by first looking at their syntactic positions in the sentences. In this study, X-bar Theory, Binding Theory and the Case Theory are used to understand the structure of Dholuo sentences. On the other hand, semantic interpretation of structures with Dholuo anaphors is done using Theta Theory. All these theories are models in Government and Binding Theory. In all these interpretations of structures with anaphors, the interpretations required the inclusion of the context to help understand the utterances. This then brings in the concept of interface in the interpretation, in that the syntax, semantics and pragmatics are paramount in making it vivid to understand an utterance. According to Chomsky (2001, p.9) the interpretation of the structures in the mind depends on the conditions imposed by the external environment where language interacts. This means that the semantic interpretation of syntactic structures is not enough. We need the pragmatic interpretation where context plays a major role in giving the meaning of the utterances.

Chomsky (2001, 2002) further suggests that language is a perfect system with an optimal design in the sense that natural language grammars create structures which are designed to interface perfectly with other components of the mind like speech and thought system. This means that in the mind we are able to construct as many syntactic structures as possible. These structures have to be semantically meaningful and the structures have to be communicated verbally through the utterances in communication. The utterances are then interpreted differently depending on the context of use. This brings in the concept of interplay between syntax, semantics and pragmatics.

6.2 Dholuo Anaphors and Interface

According to Sperber and Wilson (2002) which centers on pragmatics, there is this assumption is that in the production of an utterance, it takes time to process the same utterance. In order to understand this utterance, then one needs to have knowledge of syntax, semantics and pragmatics. This then enables one to bring in the context, thus the interface. In the production of an utterance, the mind takes time to process the interpretation. These interpretations depend on the syntax (grammaticality) of the utterance, semantics (meaning) and pragmatics (context) of the utterance. Since the mind takes time to process the information, context (pragmatics) of the utterance becomes handy. The context enables the mind to link what the utterance meant by allowing the most relevant interpretation. This means that an utterance that was grammatically correct and was, for example, ambiguous can be disambiguated using the context presented as shown in the following.

(1)

Nyithindo_i ng'iyore_i

children look one another/themselves

'The children are looking at one another/themselves.'

From the data provided in (1), we can use the three linguistic areas to interpret the sentence. First, the sentence can be tested to be grammatical using Case Theory and Binding theory. The anaphor *-re* 'one another' or 'themselves' is bound to the antecedent *nyithindo* 'children' within the same minimal IP. The anaphor *-re* 'one another' or 'themselves' is plural agreeing with the third person *nyithindo* 'children'. They are thus coindexed to indicate their relationship, hence grammatical. In Case Theory, the verb

ng'iyó 'look' assigns accusative case to anaphor *-re* 'one another' or 'themselves', while the argument *nyithindo* 'children' is assigned nominative case by INFL. By assignment of case to the arguments, the sentence is grammatically correct. This is because the case filter principle is fulfilled. Semantically, the verb *ng'iyó* 'look' assigns a thematic role of Experiencer to the argument *nyithindo* 'children' and Theme to anaphor *-re* 'one another' or 'themselves'. The explanation is that the argument *nyithindo* 'children' are the persons feeling or experiencing or performing the act of looking to each other or to themselves. In order to fully understand this utterance, Relevance Theory picks on the context of the utterance to provide the most relevant interpretation. The question is, why are the children looking at each other? Several assumptions can be made based on the context of the utterance. These include, children are shocked, children love each other, children are annoyed at each other or children are communicating non-verbally about a situation to each other. If at the time of the utterance the children were found playing with water, then the implication is that the children were caught unaware. They are, therefore, shocked and so look at each other. The other interpretations are thus eliminated. The presence of water used by the children in playing strengthens our interpretation. The Relevance Comprehension Procedure enables us to settle on this interpretation where little effort is used. The other eliminated interpretations would require a lot of effort in relation to the context presented.

Moreover, for an utterance that is referentially ambivalent, the range of possible interpretations is determined by grammar. It is the grammar that indicates the speaker of an utterance while the mind together with contextual information helps identify the exact

speaker at any given occasion (Sperber & Wilson 2000, p.41). We can demonstrate how this works in grammar.

(2)

a. Nyithindo_i gore_i

Children fight one another/themselves

‘The children are fighting one another/themselves.’

b. Apiyo_i oherore_i

Apiyo love self

‘Apiyo loves herself.’

c. Peter_i onegore_i

Peter kill self

‘Peter killed himself.’

In (2a), grammar shows that the anaphor *-re* ‘one another or themselves’ refers to the antecedent *nyithindo* ‘children’. The antecedent is plural and so it agrees in number with the anaphor in plural which is in the third person. The anaphor and the antecedent are bound to each other in the same minimal clause. Grammar also indicates that the verb *go* ‘fight’ case marks the arguments *nyithindo* ‘children’ and anaphor *-re* ‘one another or themselves’ which is attached to the verb *go* ‘fight’. The verb *go* ‘fight’ assigns accusative case to the argument *-re* ‘one another’ or ‘themselves’ and *nyithindo* ‘children’ is assigned a nominative case by INFL. This is in line with the case filter since all the arguments have been assigned case. The semantic interpretation depends on the grammaticality of the sentence. Thus the verb *go* ‘fight’ assigns a thematic role of Agent to *nyithindo* ‘children’ and Patient to *-re* ‘one another or themselves’. This is because

through grammar the anaphor *-re* ‘one another’ or ‘themselves’ refers back to the antecedent *nyithindo* ‘children’ that are directly affected by the action of the verb. In order to explicitly understand what the speaker meant, we can include the context of the utterance. If at the time of utterance there is actually commotion and cries of children, then this context strengthens our assumption. The implication is that the children are actually fighting. The reason for fighting is not known. Though the reason might require a lot of energy to connect with the interpretation. If at the scene there are toys scattered, then we can guess that the children were fighting over toys. This new information on toys affects the existing information by strengthening it. If at a closer look at the children you see them laughing, then this new information contradicts our first assumption that children were playing over toys. The implication is that the children were playing. The noise could have been caused by the excitement of the children as they scattered the toys. This new information helps us in achieving relevance by strengthening the fact that children were fighting for fun.

(2b) *Apiyo oherore* ‘Apiyo loves herself’ can be tested for grammaticality. First, the antecedent *Apiyo* refers to only one person. The anaphor *-re* ‘herself’ and antecedent *Apiyo* agrees in terms of number and gender. The anaphor *-re* ‘herself’ refers back to the antecedent *Apiyo*, they are bound to each other within the same minimal clause. It means that *Apiyo* performs the act of loving to herself and not any other person. Grammar also indicates that the verb *hero* ‘love’ assigns accusative case to anaphor *-re* ‘herself’ and INFL assigns nominative case to *Apiyo* since they are the arguments in the sentence. Semantically, the verb *hero* ‘love’, assigns thematic roles of Experiencer to *Apiyo* and Theme to anaphor *-re* ‘herself’. This is because the antecedent *Apiyo* is the one directly

feeling the act of love. The reason for the utterance of *Apiyo*'s action is not known. One who is new to *Apiyo* might wonder why the speaker uttered those words. How then does context come in to help the listener understand? We can assume that *Apiyo* was neatly dressed, she was seated comfortably or she looked less bothered. If at the time of utterance there were people standing because of lack of chairs, and *Apiyo* is seen seated neatly dressed and unbothered, then we can conclude that *Apiyo* loves herself. If on the other hand, the person *Apiyo* is seen carrying ice cream in a group of people close to her. And if the ice cream vendor is still there, but *Apiyo* pays for only one ice cream (assuming that she had enough money). Then this utterance becomes relevant indicating the love of *Apiyo* for herself. This second context provides a metaphorical meaning of *Apiyo*'s love for herself as a mean person who cares less about others. This meaning is understood by both the speaker and the listener. The mind, therefore, uses very little effort to comprehend what the speaker meant which is also relevant.

(2c) *Peter onegore* 'Peter killed himself' can be interpreted to be grammatically correct. The anaphor *-re* 'himself' refers to the antecedent *Peter* who performed the act of killing himself. They are bound to each other within the same minimal clause and coindexed $Peter_i onegore_i$ 'Peter killed himself'. The verb *nego* 'kill' assigns accusative case to anaphor *-re* 'himself' while INFL assigns *Peter* a nominative case. In order to confirm that the sentence is interpretable, the verb *nego* 'kill', a two-place predicate theta marks the argument *Peter* and anaphor *-re* 'himself'. The verb *nego* 'kill' assigns thematic role of Agent to the argument *Peter* and Patient to anaphor *-re* 'himself' since the action happens to self. The sentence is therefore saturated as the arguments have been theta marked. This sentence *Peter onegore* 'Peter has killed himself' attracts different

interpretations depending on the context. This means that *Peter* can be assigned different theta roles depending on the interpretation. One, it can literally mean that the person *Peter* actually committed suicide and is dead. Therefore, semantically *Peter* is assigned theta role of Agent and anaphor *-re* 'himself' theta role of Patient. Secondly, it can mean that the person *Peter* overworked himself and so was very tired. In this situation, *Peter* is assigned theta role of Experiencer and anaphor *-re* 'himself' assigned theta role of Theme. If at the time of the utterance people are seen crowded and talking in low tones, and there is a dead body hanging; we can conclude that it is true *Peter* committed suicide. If on the other hand there is a crowd of people and closer there is a person seated and looks exhausted, then we can conclude that this person *Peter* overworked himself. The fact that he is said to be dead is because the body cannot contain it anymore. The implication is that someone should only do what the body can contain. Relevance Comprehension Procedure allows us to use very little effort in picking the right interpretation. Therefore, our mind stops at the fact that *Peter* actually killed himself without focusing on the reasons for doing so. There is, therefore, the interface of syntax, semantics and pragmatics.

Consequently, (2c) (2c) *Peter onegore* 'Peter killed himself' could be pragmatically interpreted as *Peter* overworked himself to the point of his physical death. In order to arrive at this interpretation, a number of contexts and explanations have to be incorporated. This would be a violation of RCP since a lot of energy would be used to infer the meaning.

6.3 Interface and Anaphoric Elements

As earlier discussed in chapter four, there are elements in Dholuo language that function as anaphors. These elements point back to the antecedent in a sentence. This section focuses on the interface of syntax, semantics and pragmatics in anaphoric elements.

6.3.1 Anaphoric Pronouns

Pronominals can function as anaphors when they take their reference from some other NPs in a construction. They can thus be interpreted as referring back to another NP. These anaphoric pronouns tend to cause some ambiguity in their interpretation. By syntactic and semantic analysis of sentences with anaphoric pronouns, a gap is still left on what the speaker meant. This gap can be filled by bringing in the context of utterance to disambiguate the meaning. According to Binding Theory, the anaphor and the antecedent should be in the same clause (Poole, 2002). When they are not in the same domain, it becomes problematic to interpret. This is not the case with most anaphoric pronouns. In order to interpret this problematic anaphors, context becomes handy. Consider the anaphoric pronoun *ne* in (3a) and (3b) and *en* in (3c):

(3)

a. Ouma_i nong'eyo ni Amondi nokelone_i mich

Ouma know that Amondi bring present

‘Ouma knew that Otieno brought him a present.’

b. Japuonj_i omako rawere mane otong'o bandone_i

teacher catch youths that cut maize his

, ‘The teacher arrested the youth that cut his maize.’

c. Otieno_i oleko ni en_i gi nyamburko

Otieno dream that he has car

‘Otieno dreamt that he has a car.’

In (3a), the pronoun *-e* ‘him’ refer to the antecedent *Ouma* since they are bound by being coindexed. According to Binding Principle B, pronouns are free everywhere. This means that there meaning is not connected with other elements in a construction. The pronoun *-e* ‘him’ is not in the same minimal clause with *Ouma*, though this sentence is ambiguous. The ambiguity in this sentence comes in that the pronoun *-e* ‘him’ can refer to *Ouma* or someone else. When this pronoun refers to *Ouma*, then it functions as an anaphor since it gets its reference from the discourse antecedent *Ouma*. They are therefore bound together and coindexed to show that they are related. By Case Theory, the verb *kelo* ‘bring’ assigns accusative case to *Otieno* and INFL assigns nominative case to pronoun *-e* ‘him’ attached to the verb when it functions as an anaphor. But the same pronoun *-e* ‘him’ is assigned an accusative case when it is used to refer to another person other than the antecedent *Ouma*. In this later case, it does not function as an anaphor. The verb *ng’eyo* ‘know’ assigns accusative case to *Otieno* and INFL assigns nominative case to *Ouma*. This is because of the barrier CP that blocks the pronoun *-e* ‘him’ be assigned case by the verb in the higher clauses. (3a) thus fulfils the case filter principle. Using the Theta Theory, the verb *kelo* ‘bring’ assigns a thematic role of Agent to *Otieno* and Patient to pronoun *-e* ‘him’. When the pronoun functions as an anaphor, the same verb *kelo* ‘bring’ assigns theta role of Agent to *Ouma* and Patient to *-e* ‘him’. This is because it is *Ouma* who experiences the action of receiving the present. These two interpretations give us the interface of syntax and semantics since the assignment of theta roles is dependent on the arguments identified in syntax. These arguments were identified by ensuring they are

assigned case. The presence of aspect of ambiguity attracts an interface of pragmatics. The Relevance Comprehension Procedure requires that little effort is used to achieve relevance in the interpretation of an utterance. We can assume that the present is brought by someone, wrapped with some wording on it. If at a closer glance we notice that the name of the sender is *Omondi* and the receiver is *Otieno*, the implication is that *Otieno* bought the present. If on the other hand we notice that the person who bought the gift was not *Otieno*, then the utterance becomes irrelevant. Besides, if *Omondi* is excited that *Otieno* bought the gift and later is told by someone else that is not true that the gift was bought by *Otieno*, but by someone else. This new information contradicts what was on *Omondi's* mind. The implication is that the present was bought by someone else which could be a surprise to *Omondi*.

In example (3c), the pronoun *en* 'he' refers back to the subject *Otieno*. They corefer and are coindexed as can be seen in this illustration *Otieno_i oleko ni en_i gi nyamburko* 'Otieno dreamt that he has a car'. *Otieno* is the discourse antecedent and the pronoun *en* 'he' refers to *Otieno*. Since they are bound to each other, they satisfy Binding Principle A. The verb *lek* 'dream' assigns accusative case to pronoun *en* 'he' and INFL assigns nominative case to the argument *Amondi*. In terms of theta roles assignment, the verb *lek* 'dream' assigns thematic role of Experiencer to the arguments *Otieno* and Theme to pronoun *en* 'he'. In the context that the person *Otieno* wakes up excited and when asked he talks of a car. On closer interrogation we realize that it was a mere dream. Then the conclusion is that the person just dreamt. If a car is heard passing nearby and *Otieno* points at it to his friends to indicate that he actually owns one. And if there is someone among the people who confirms that *Otieno* owns a car, then the interpretation of a dream

is contradicted. This new evidence of confirmation makes the relevant interpretation that *Otieno* actually owns a car. The mind therefore stops at this interpretation without using any more effort.

6.3.2 Anaphoric Demonstratives

In some other instances, Dholuo demonstratives can refer back to the antecedent in the sentence. The demonstratives in this case do not occur in the same minimal clause with the discourse antecedent though they corefer. Therefore, there is a relationship between them. In such cases they function as anaphors and they can be interpreted at interface. Let's focus on data (4) to explain these anaphoric demonstratives.

(4)

Awino owacho ni a_i-puko nyuka mane_i ok atimo

Awino say I pour porridge that not done

'Awino said I poured porridge but I didn't.'

In (4) *Awino owachoni apuko nyuka, mane ok atimo* 'Awino said that I poured porridge but that I didn't', the antecedent in this embedded clause is the subject *a*- 'I' attached to the verb *puko* 'pour'. The anaphoric demonstrative *mane* 'that' refers back to the antecedent which refers to the fact that the subject did not perform the act of pouring porridge. The anaphoric demonstrative *mane* 'that' binds the antecedent *a* 'I' within the same minimal IP and so are coindexed *Awino owacho ni a_i-puoko nyuka to mane_i ok atimo*. Semantically, the verb *puko* 'pour' theta marks the arguments that occur adjacent to it. The arguments *a* 'I' is assigned theta role of Patient by the verb. This is because it is the subject affected by the accusation of performing the act of pouring porridge. But, the verb is followed by a clause *mane ok atimo* 'that I didn't' do' whilst theta roles are only

assigned to arguments. This poses a problem as the utterance is not completely interpreted. In order to completely understand this utterance, context is included. This brings in the interface of pragmatics. If at the time of the utterance there is actually porridge on the floor and the person on sight is the subject *I*, then we can conclude that *Awino* is right. But if at closer look a cat is seen nearby with the fur full of porridge, then this becomes our new evidence. The first assumption that *Awino* poured the porridge is eliminated. The new interpretation is that it is the *paka* ‘cat’ that poured the porridge. The mind stops at this interpretation since it is most relevant.

6.3.3 Body Parts Anaphors

The body parts reflexives as earlier discussed involves parts of the body such as head, body and soul. There are also anaphors such as reflexive which refers to self and touch on these body parts. These body part anaphors in sentences attract different interpretations since one may not be sure of the exact part of the body affected. In Dholuo, body part anaphors can be represented by the anaphor marker or nouns that function as anaphors. These nouns point to particular body parts. This is in line with Reuland and Schandler (2000) who argue that ‘self’ is related to what makes an individual. This knowledge of self is made up of the head, body and soul. These body part reflexives can also include pronouns and they are found in a number of African languages, Schladt (2000). In addition, Sikuku (2010b) focusing on Lubukusu anaphors, argue that the anaphors relations are indicated by a complex lexical form of two or more forms, one meaning body, body part or self and the other an agreeing pro-form. For instance, *Olu ri ara re* ‘Olu saw himself’, means that the person *Olu* saw part of his body through, for example a mirror. This could either be the face or any body part that he was interested with. This also implies the person *Olu* saw a reflection of himself in general. These body part anaphors must first adhere to grammar. Secondly, they must be interpretable. Third, different contexts and paralinguistic

features may attract varied interpretations of these body parts anaphors. Let's consider (5) to explain these aspects in Dholuo:

(5)

a. No_i-nenore_i kamoro-amora

He saw self everywhere

'He/she saw himself/herself everywhere.'

b. Akinyi_i ohinyore_i

Akinyi hurt self

'Akinyi hurt her body/soul.'

c. Otieno_i oneno thuol bute_i

Otieno see snake near body

'Otieno saw a snake near him.'

In (5a), *nonerore kamo -a- mora* 'he saw himself everywhere' indicates that the person saw every part of his or her body. It is possible that the person could only see a part of his or her body but not the entire body. Whether the person used something like a mirror to reflect his or her image is not known. Moreover, the sentence can also mean that the person was seen walking or featuring everywhere. The image of this person which carries the body must be the same. Grammatically the anaphor *-re* 'self' refers back to the antecedent *o-* 'he/she'. They are bound to each other in the same minimal clause and are coindexed. The morpheme *n-* refers to the past, that is, an action that took place some time back. The verb *nenore* 'see' case marks the arguments *o-* 'he/she' and the anaphor *-re* 'himself/herself'. The argument *o-* 'he/she' is assigned a nominative case by INFL while the anaphor *-re* is assigned accusative case. In the semantic interpretation of this

sentence, we find that the body part anaphor is ambiguous. The verb *nenó* ‘see’ assigns thematic roles to both arguments. The arguments *o-* ‘he/she’ is assigned theta role of Experiencer and anaphor *-re* assigned theta role of Theme. The sentence is thus said to be saturated once the arguments are assigned theta roles and the theta criterion and projection principle are fulfilled. The question is, do we fully understand what the speaker meant? The answer is no since the utterance attract two different meanings. In order to disambiguate this utterance, context of utterance is needed. If at the time of the utterance a portrait of the person being talked about is seen carried by some strangers; then, we can assume that the person is famous, can be seen everywhere. This portrait strengthens our interpretation that the person featured everywhere.

Example (5b), *Akinyi ohinyore* ‘Akinyi hurt body/soul’ is also interpretable. The anaphor *-re* ‘herself’ refers to *Akinyi* and they are coindexed $\langle Akinyi_i ohinyore_i Akinyi$ and the anaphor *-re* ‘herself’ are bound within the same minimal clause, hence the sentence is grammatical. The cause of *Akinyi* getting hurt either physically or emotionally is not known. The only thing we know is that the person *Akinyi* is hurt and the sentence is grammatical. The grammaticality of this sentence can also be tested using Case Theory. The verb *hinyo* ‘hurt’ case marks the arguments *Akinyi* and anaphor *-re* that occur adjacent to it. *Akinyi* is assigned a nominative case by INFL since it occupies the subject position, and anaphor *-re* ‘herself’ is assigned accusative case by the verb *hinyo* ‘hurt’. The arguments in this sentence *Akinyi* and anaphor *-re* bear some semantic relation to the predicate *hinyo* ‘hurt’. This relation is established through theta role assignment. The verb *hinyo* ‘hurt’ assigns theta role of Agent to *Akinyi* and Patient to anaphor *-re*. The anaphor *-re* points back to the antecedent *Akinyi* being the person directly affected either

physically or emotionally. The extent of the hurt is not known to the listener. This utterance can attract varied interpretations depending on the context. Suppose at the time of utterance the person called *Akinyi* is seen crying and looks helpless. We can have the following assumptions: *Akinyi* has hurt part of her body herself, *Akinyi* is hurt by someone else emotionally or physically or *Akinyi* is heart-broken. If at that point some luggage is seen scattered and a motorbike lying on the side, our interpretation is that *Akinyi* is hurt from the accident by the motorbike. On closer assessment we realize that *Akinyi's* leg is broken and she cannot walk. We can, therefore, conclude that *Akinyi* was crying because of the pain from the broken leg caused by the motorbike accident. But, if a bus is seen passing by, this bus is irrelevant as it has nothing to do with *Akinyi* being hurt.

On the other hand, in (5b) the assumption that *Akinyi* is hurt emotionally is also possible. Suppose at the time of utterance *Akinyi* is seen to be sad and at close intervention by someone she breaks down. Then, we can conclude that something must have hurt her. If during this time someone comes and confirm that in deed something hurt her soul, this new evidence strengthens the assumption. *Akinyi* in this new interpretation is assigned Theta role of Experiencer and anaphor *-re* 'herself' is assigned theta role of Theme.

In (5c), *Otieno_i oneno thuol bute_i* 'Otieno saw a snake near him' presents a situation of the use of a pronoun to refer to the body of someone. According to Binding Principle B, pronouns are free everywhere. But in this sentence, the pronoun *-e* 'him' refers back to the discourse antecedent *Otieno*. They are bound to each other within the minimal clause and coindexed to indicate a relationship. This shows that Binding Principle A is satisfied and the sentence is grammatical. In terms of semantics, the verb *nen* 'see' theta marks

its arguments *Otieno* and *-e* ‘him’. *Otieno* is assigned a theta role of Agent while the anaphoric pronoun *-e* ‘him’ is assigned Patient theta role because it refers to the body of *Otieno* affected by the sight of the snake. When we bring in the aspect of context, body part anaphors in Dholuo attract different interpretations. The meaning may be interpreted to mean a particular part of the body. Consequently, among the interpretations is the fact that the anaphoric interpretation may disappear altogether. Suppose at the time of the utterance *Otieno_i oneno thuol bute_i* ‘Otieno saw a snake near him’, *Otieno* is seen shocked from the body language and trying to gaze at a particular direction, on closer look one sees a snake coiled next to his body. The message being passed is that there is danger as the snake could bite him. If on the other hand *Otieno* is seen gazing at another person who is unaware of the presence of the snake near him, then this interpretation does not give the anaphoric use of body anaphors.

6.3.4 Inherent Anaphors

As earlier discussed in Chapter Four, the inherent anaphors refer to actions happening to self. The inherent reflexive is specific as it points to the exact thing happening to self and the instrument being used.

(6)

d. *Auma_i olierore_i*

Auma shave self

‘*Auma* shaved herself.’

e. *Apondi_i oyuere_i gi taulo*

Apondi wipe self towel

‘*Apondi* wiped himself/herself with a towel.’

(6a) *Auma_i olierore_i* ‘Auma shaved herself’ could mean the person *Auma* performed the act of shaving to herself. The reason for shaving is not known and neither is the instrument used. The sentence is grammatically correct since the anaphor *-re* ‘herself’ refers to the antecedent *Auma*. The two are coindexed because they occur in the same minimal clause. *Auma* is assigned a nominative case by INFL while the verb *lielo* ‘shave’ assigns accusative case to anaphor *-re* ‘herself’. Semantically, the verb *lielo* ‘shave’ theta marks the arguments *Auma* and anaphor *-re* ‘herself’. *Auma* is assigned a thematic role of Agent while anaphor *-re* ‘herself’ is assigned Patient theta role. In the utterance of *Auma olierore*, the mind activates the concept of self and the person (antecedent). The concept of *-re* ‘self’ yields the following assumptions: an independent person, a mean person, a betrayer or an I-don’t-care person. On the other hand, the concept *Auma* yields the following assumptions: a person, a noun, a female. The contextual implication yielded is that *Auma* is an independent woman. If at the time of the utterance *Auma* is seen with her hair *shaved* with some parts not well done, then this new context implies that *Auma* is a careless person. This then contradicts our first assumption. The mind then stops at this interpretation of *Auma* as an I-don’t-care person.

Example (6b) *Apondi_i oyure_i gi taulo* ‘Apondi has wiped herself with a towel’ is grammatical. The anaphor *-re* ‘herself’ refers to *Apondi* since they are bound together in the same minimal clause and they are coindexed. Semantically, the verb *yueyo* ‘wipe’ assigns the argument *Apondi* theta role of Agent and Patient to anaphor *-re* ‘herself’. The argument *gi taulo* ‘with a towel’ is assigned a thematic role of instrument being the thing *Apondi* used to wipe herself. In the context that the person called *Apondi* is seen carrying

a towel then we can have the following assumptions: Apondi showered, Apondi wiped herself with a towel. If at a closer glance we realise that the towel is dry, then our interpretation is irrelevant to the fact that Apondi showered and wiped herself with a towel. It could be that she was just carrying the towel. We therefore stop at this interpretation.

6.3.5 Interface and Grammaticality

Most sentences would appear grammatical whether they make sense or not. The arguments in these sentences are legible to be assigned thematic roles since they are identified structurally. The context of the utterance enables us to understand and interpret these sentences that do not make sense on their own without factoring in contextual ones. For instance, a verb assigns case to an argument if and only if the verb theta marks it. This condition is fulfilled irrespective of whether the sentence is grammatical or ungrammatical; or whether it makes sense or not. Case assignment and theta roles are two levels of language interpretation, hence an interface of syntax and semantics. Moreover, the antecedent and the anaphor can be bound in their minimal clause to satisfy Binding Principle A, though the sentence does not make sense. The mind connects these interpretations by presenting different contexts. Relevance Theory enhances the right interpretation. Let's focus on (7)

(7)

a. Atudo_i oringo ir Auma monang'ore_i

Duck run to Auma lick self

'The duck ran to Auma and licked itself.'

b.**ir atudo Auma_i oringore_i*

To duck Auma run self

‘To duck Auma herself.’

c. *Yien_i oringo ir Auma monang’ore_i*

Tree run to Auma lick self

‘The tree ran to Auma and licked itself.’

(7a) *Atudo oringo ir Auma monangore* ‘the duck ran to Auma and licked itself’ has syntactically followed the rules on correct sentence structure. The antecedent ‘*atudo*’ ‘duck’ and anaphor *-re* ‘itself’ are bound to each other and are coindexed because they refer to the same thing though they are not in the same minimal IP. Since PP is not a barrier to government, the anaphor *-re* ‘itself’ gets reference from the antecedent *atudo* ‘duck’ in a higher IP. Again, the verb *ringo* ‘run’ assigns *Auma* accusative case while INFL assigns *atudo* ‘duck’ nominative case. The verb *nang’o* ‘lick’ assigns accusative case to anaphor *-re* ‘itself’ and preposition *ir* ‘towards’ assigns *Auma* oblique case. The sentence is therefore grammatically correct. The same verb *nang’o* ‘lick’ theta marks the arguments *atudo*, *Auma* and the anaphor *-re*. The verb *nang’o* assigns thematic role of Agent to *atudo*, Patient to anaphor *-re* and theta role of Goal to preposition *ir* ‘towards’. The argument *Auma* found within the PP *ir Auma* ‘towards Auma’ indicates the direction the duck was running to. *Auma* is assigned theta role of Agent by the preposition *ir* ‘towards’ and anaphor *-re* ‘itself’ assigned theta role of Patient. After theta role assignment, the mind is satisfied with the interpretation. But at a closer look, this sentence elicits a number of interpretations. One, it could mean a duck literally running

towards the person *Auma*. Second, it could be a person nicknamed *atudo* running towards *Auma* and licking himself or herself. Third, it could have been a dog licking itself. Ideally, a duck does not remove its tongue to lick itself. Instead the duck scratches itself on the ground. In this context, then our mind stops at the interpretation that the mention of a duck is linked to a person who probably behaves like a duck. This person is the one who ran to *Auma* licking herself or himself. The intention for the action of licking is not known. This sentence could also mean that it was a dog licking itself. This information may require a lot of effort to interpret which may be irrelevant at the moment. The context being a situation whereby the *dog* could have been on sight but the speaker says the *duck* while looking at the *dog*. Hence the listener could easily have connected with what the speaker meant.

However, there is a violation of some grammatical rules that indicates the ungrammaticality of (7b) **ir atudo Auma oringore* ‘to the duck Auma ran herself’. The two arguments *atudo* ‘duck’ and *Auma* are following each other and none is occupying the argument position. The sentence begins with the preposition *ir* ‘towards’ which gives us the direction that the subject should follow whilst there is no subject. The anaphor *-re* ‘herself’ refers back to *Auma*, **ir atudo Auma_i oringore_i*. This sentence violates the Binding Principle A since the antecedent *ir* ‘towards’ is not an NP and it cannot be bound to the anaphor. In terms of case assignment, the preposition assigns oblique case to object *Auma*, the verb *ringo* ‘run’ assigns anaphor *-re* accusative case and *Auma* cannot be assigned nominative case by INFL because it is not at the subject position. This lack of case assignment is a violation of case filter that all arguments must be assigned case to be grammatical. It then means that the sentence is incorrect. In terms of theta role

assignment, the verb *ringo* ‘run’ should theta mark its arguments by assigning them theta roles. The argument *ir atudo* ‘to duck’ indicates the direction and should be assigned a thematic role of Goal. But in this case direction cannot come first before the thing being directed. Besides, the argument *Auma* and the anaphor *-re* should be assigned the theta role of Agent and Patient respectively by the verb *ringo* ‘run’. This makes it look like the sentence is correct since theta roles have been assigned. In context, it becomes impossible for one to perform the act of running to herself. This utterance would require a lot of effort to process which is in violation of the RCP.

In the same vein, (6c) *yien_i oringo ir Auma monang’ore_i* ‘the tree ran to Auma and licked itself’ is grammatically correct. It means that it is the tree that ran towards the person *Auma* and performed the act of licking itself. The antecedent *yien* ‘tree’ and anaphor *-re* ‘itself’ are bound to each other and are coindexed to indicate that they are related. Binding Principle A is not violated since the PP is not a barrier to government. This makes the anaphor *-re* ‘itself’ to get reference from the antecedent *yien* ‘tree’ in the higher clause. Semantically, the entity *atudo* has a meaning feature of animate whereas *yien* ‘tree’ is inanimate. The verb *ringo* ‘run’ requires a subject that is animate like *atudo* ‘duck’, but not *yien* ‘tree’. Pragmatically, there is more being communicated than what is said. This is because *yien* ‘tree’ here could be associated with a slender or thin person who probably ran to this person ‘*Auma*’. It could also mean that something strange or mysterious happened that people saw a tree run towards the said person. In this case this is unusual happening because trees are inanimate and not expected to run. The person could also have meant *atudo* ‘duck’, but maybe in the course of the utterance he or she was looking at the ‘tree’. This then would have made the listener think that the person

meant a *'tree'*. How then do we get the right interpretation in this context? If at the time of the utterance there is a slender person seen running towards *Auma*, then the assumption is that this person is the tree being talked about. At the same time if the person is seen licking herself or himself, our interpretation is strengthened. But the problem is that we are violating the RCP. In this interpretation, we need a lot of effort to infer the meaning that *yien* 'tree' refers to a person. This is because it takes one an effort to find out the connection between the two.

6.4 Mind and Linguistic Interface

The mind processes a lot of information based on what is presented. People tend to interpret situations based on what they know, think or have experience in. The focus is on anaphoric utterances produced when a situation is presented. Let us have a look at the following scenario that was presented to the respondents:

You are sitting in the house feeling tired, you hear thunderstorm, and some thoughts come to your mind. In this context, a lot of new information will be processed associated with thunder. (7) provides some of the responses from the data collected from different respondents on their views associated with thunderstorm. The mind tends to process different ideas as presented in the data.

(7)

- a. Puothe_i biro purre_i
farms will dig self
'The farms would be dug.'
- b. Udi_i mit omukore_i?

Houses could destroy self

‘Could the houses have been destroyed?’

c. Ondiegi_i dwa yuagore_i kawuono.

Hyenas will cry self today

‘The hyenas would yell today.’

d. Tado_i biro walore_i gi yamo.

Roof will blow off with wind

‘The wind will blow off the roof.’

e. Koth_i dwa chwere_i aduwa.

Rain want rain self heavily

‘It wants to rain itself heavily.’

The utterances in (7) presents what the society associates the sound of thunder to. In all the responses, thunderstorm is associated with either good or bad. But one thing in common is that all the utterances have anaphors and antecedents to which they refer to. In example (7a), *puothe biro purre* ‘farms would be dug’ is a situation whereby the act of digging is expected to be done on the farms. The farms cannot dig themselves, they require either a person or a tractor to be used for ploughing. The antecedent *puothe* ‘farms’ and anaphor *-re* ‘themselves’ are bound to each other and they corefer. This indicate that the sentence is grammatical. The verb *pur* ‘dig’ assigns theta role of Agent to *puothe* ‘farms’ and Patient to *-re* ‘themselves’ since the anaphor *-re* refer to *puothe* and they will be affected by the action of being dug. Based on time context, it seems the sound of thunderstorm acts as an alert for people to prepare their lands for planting. The

utterance literally means that the act of land preparation is to be done by the farms themselves. But the listener who is the speaker of the language understands what the utterance means. We can implicitly interpret this utterance as people going to prepare their farms in preparation for planting.

Example (7b) indicates some worry in form of a question, *udi mit omukore?* ‘could the houses have been destroyed?’ This is quite interesting that houses can perform the act of destruction to themselves. Grammatically, this sentence is correct since the anaphor *-re* ‘themselves’ refers to *udi* ‘houses’ and they agree in terms of number and person. They are also coindexed to show that they are related. Semantically, the verb *muko* ‘destroy’ assigns theta role of Agent to argument *udi* ‘houses’ while anaphor *-re* ‘themselves’ is assigned Patient theta role. Based on this situation, there is a probability that houses have once been destroyed by the roaring thunder in this place. So, context brings in the interpretation that the destruction of houses is due to the roaring of thunder which probably could make the houses weak leading to destruction. This interpretation requires little effort to process. We therefore, assign covert Agent role to thunder which causes the houses to be destroyed.

Besides, (7c) points to animals affected as a result of thunderstorm, *ondiegi dwa yuagore kawuono* ‘the hyenas would yell today’. This sentence means that the hyenas will yell to themselves. The verb *yuak* ‘yell’ or literally ‘cry’ theta marks *Ondiegi* ‘hyena’ and the anaphor *-re*. *Ondiegi* ‘hyenas’ are assigned theta role of Experiencer while anaphor *-re* ‘themselves’ is assigned theta role of Theme. This is because it is the hyena that will experience or perform the act of yelling. The connection between the yelling of hyenas and the roaring thunder is not very clear. But based on cultural context, we can assume

that the yelling of the hyenas is due to thunderstorm. This symbolically can be interpreted that the weather has changed. This interpretation makes it clear to the listener that the yelling of hyenas is associated with the looming rain.

(7d) shows the effect of the rain on things, *tado biro walore gi yamo* ‘the wind will blow off the roof’. The sentence means that the roaring thunder is accompanied by strong wind which could blow off the roof. The antecedent *tado* ‘roof’ and the anaphor *-re* ‘itself’ are bound to each other and are coindexed making the sentence grammatical. The verb *walo* ‘blow off’ assigns thematic role to three arguments. It assigns *tado* ‘roof’ theta role of Agent since it is the thing affected by the action of the wind; the anaphor *-re* is assigned theta role of Patient as it refers to the antecedent *tado* ‘roof’; theta role of Instrument is assigned to the argument ‘*gi yamo*’ giving us the thing that would cause the roof to be blown off. In this context, it depends on how the roof is located or constructed. If the roof of the house the speaker is in was not in good condition or was built badly, then there is a probability that it could be blown off. Based on the fact that the listener was at the scene and the roof was not nailed well, then it could be blown off. This then is the most relevant interpretation for the utterance.

(7e) hints on the intensity of the coming rain, *koth dwa chwere aduwa* ‘it wants to rain itself heavily.’ This sentence implies that rain would rain on itself. The antecedent *koth* ‘rain’ and anaphor *-re* ‘itself’ are bound to each other. They are also coindexed to show a relationship obeying Binding Principle A. The verb *chwe* ‘rain’ theta marks the arguments *koth* ‘rain’ and *-re* ‘self’. Since *koth* ‘rain’ is intended to perform the action of raining to itself, it is assigned a theta role of Agent and anaphor *-re* ‘itself’ assigned Patient theta role. The intensity of the rain ‘*aduwa*’ is directly linked to the rain. In the

theta grid, the verb *chwe* ‘rain’ is a two place predicate assigned two thematic roles. In this context, thunderstorm is associated with heavy rainfall. The referent of rain pouring on itself is metaphoric to mean that there would be a lot of rain. If at the time of utterance, the clouds turn dark and all of a sudden heavy rainfall is experienced, then the assumption is strengthened. The mind settles at this interpretation of heavy rain as the most relevant one in line with Relevance Comprehension Procedure.

6.5 Chapter Summary

This chapter focused on the analysis of Dholuo anaphors at the linguistic interface of syntax, semantics and pragmatics. This included analyzing other elements that function as anaphors in Dholuo. It also involved interpreting utterances based on a situation presented to respondents, which drew varied anaphoric responses. In order to explicitly understand the meaning of an utterance, context of the utterance is vital. An utterance can be grammatical when tested for grammaticality using Binding Theory and Case Theory and well interpretable using Theta Theory, but still remains ambiguous. It is in this sense that the ambiguity is sorted using Relevance Theory.

In testing for grammaticality, Dholuo anaphors were bound within the minimal clause obeying Binding Principle A and case assigned to the arguments in line with the case filter. For instance, *Apiyo_i oherore_i* ‘Apiyo loves herself’ has the antecedent *Apiyo* which refers to only one person. The anaphor *-re* refers back to antecedent *Apiyo* and they agree in terms of number and person. *Apiyo* and anaphor *-re* ‘herself’ are bound within the minimal clause and they corefer. The verb *hero* ‘love’ assigned accusative case to anaphor *-re* ‘herself’ while INFL assigned *Apiyo* a nominative case. Semantically, the verb *hero* ‘love’ assigned thematic roles of Experiencer to the antecedent *Apiyo* and

Theme to anaphor *-re* ‘herself’. This is because the antecedent *Apiyo* is the one directly feeling the act of love. This utterance attracts a number of interpretations. We can assume that *Apiyo* was neatly dressed, she was seated comfortably or she looked less bothered. If at the time of utterance there were people standing because of lack of chairs, and *Apiyo* is seen seated neatly dressed and unbothered; then we can conclude that *Apiyo* loves herself. The mind therefore uses very little effort to comprehend what the speaker meant which is also relevant.

Furthermore, different interpretations presented by context, attracts assignment of different theta roles. This meant that there was an interface between semantics and pragmatics in that assignment of theta roles is dependent on the pragmatic interpretation of an utterance. For instance, *Peter onegore* ‘Peter killed himself’ when interpreted as Peter committed suicide, *Peter* is assigned theta role of Agent and anaphor *-re* ‘himself’ assigned theta role of Patient. But, if the utterance is interpreted as *Peter* overworked himself, the roles changes, in that, *Peter* is assigned Experiencer theta role while anaphor *-re* ‘himself’ is assigned theta role of Theme. All these interpretations are dependent on the grammar. Grammatically, *Peter* and anaphor *-re* ‘himself’ are bound to each other within the minimal clause and are coindexed.

Interestingly, the introduction of context attracted the assignment of different theta roles to both arguments in the construction. For instance, *Akinyi_i ochwanyore_i* ‘Akinyi hurt herself’ when interpreted as *Akinyi* is hurt physically; *Akinyi* is assigned Agent theta role and *-re* ‘herself’ assigned Patient theta role. But when the sentence is interpreted as *Akinyi* is hurt emotionally, then *Akinyi* is assigned Experiencer theta role and *-re* ‘herself’ is assigned Theme theta role. The sentence is grammatically correct since the anaphor *-re*

‘herself’ and the antecedent *Akinyi* are bound in the same minimal clause and they are coindexed to show a relationship. These two semantic interpretations are, therefore, dependent on the context presented.

However, Dholuo anaphors occur in some constructions that are ungrammatical or do not make sense. In testing grammaticality, the sentences pass the case filter and Binding requirements as they are case marked and anaphors appropriately bound. These sentences also fulfil the theta criterion as all the arguments are assigned theta roles satisfying the theta criterion requirement but may be ambiguous. It is at this point that the context of utterance allows us to get the right interpretation of what the speaker meant. For example, *yien oringo ir Auma monang’ore* ‘the tree ran towards Auma and licked itself.’ In this sentence, the anaphor *-re* refers to the argument, antecedent *Auma*. In real sense a tree cannot run and it is an inanimate being. A tree also does not have a tongue and so cannot lick itself. Grammatically, the sentence is correct since the antecedent *yien* ‘tree’ and anaphor *-re* ‘itself’ are bound to each other. The PP is not a barrier thus allows the anaphor to get reference from the higher clause where the antecedent is. The verb *nang’o* ‘lick’ assigns theta role of Agent to *yien* ‘tree’ and Patient to anaphor *-re* ‘itself’. The listener still wonders what is actually meant. When the context presented is a very thin person running towards *Auma* and the speaker uttered the words; we can connect that the thin person is the referent of *yien* ‘tree’. Then the anaphor *-re* would be herself not itself. It is this context that enables us get the right interpretation. Otherwise, the sentence can be said to be illogical.

Consequently, when a situation was presented to respondents, the utterances differ depending on the knowledge, experience or thoughts that come to them. The anaphoric

responses are connected with the sound of thunder and what each respondent thought in connection to thunderstorm. The interpretation of these anaphoric utterances involved use of different situational contexts. These enhanced the interpretations which were grammatical and made sense, though the meanings presented needed to be clarified by use of context. Uniquely, the response on *koth* 'rain' pouring on itself taken literally does not make sense. It, therefore, called for contextual interpretation to be clear. In this case *koth* 'rain' and anaphor *-re* are assigned two thematic roles of Agent and Patient respectively. Besides, thunder is assigned covert Agent role since it is the cause of the rain. This interpretation brings to light two types of arguments covert 'thunder' and overt *koth* 'rain' which are assigned the same theta role.

In conclusion, the findings confirm that Dholuo anaphors are interpretable at three linguistic levels. Though in some cases the syntactic and semantic level tend to mislead the listener in terms of interpretation, the inclusion of pragmatic interpretation provided a vivid picture of the relevant interpretation. The next chapter presents summary of findings, conclusion and recommendations based on the foregoing data analysis and interpretation.

CHAPTER SEVEN

SUMMARY, CONCLUSION AND RECOMMENDATION

7.0 Introduction

This study examined the interface of Dholuo anaphors based on Government and Binding Theory and Relevance Theory. The study set out to answer four research questions: How are Anaphors configured in Dholuo? What is the syntactic structure of Dholuo Anaphors? How does semantics and pragmatics determine the interpretation of Dholuo Anaphors? How does Relevance Theory and GB Theory account for the interface of Dholuo Anaphors? From the analysis, a summary of the findings is given based on the four research questions. Thereafter, the conclusion is provided showing how the analysis has provided answers to the research questions and the general implication of these findings for the syntax-semantics and pragmatic theories. The final section focuses on issues that this research did not address fully although such issues demand a fuller understanding and attention. The study winds up by pointing to future directions in research on Dholuo Anaphor.

7.1 Research Findings

This section provides findings on Dholuo anaphors based on the analysis in Chapters four, five and six. The findings are presented based on the study's objectives.

7.1.1 Configuration of Dholuo Anaphors

The analysis in Chapter Four reveals that Dholuo has a number of elements that perform the function of an anaphor. Dholuo anaphor occurs as either a bound morpheme attached

to the verb or as an independent lexical item. The morpheme *-r* followed by a personal pronoun is used to represent the reciprocal and the reflexive. Other elements like pronouns, for example, *-e* ‘him/her’ and demonstratives, for example *mano/mane* ‘that’ which function as anaphors appear as lexical words. There are also nouns that refer to different parts of the body like the head, body and soul that function as anaphors in Dholuo. The body part anaphors pointed to action happening to self which is general referent or specific part of body affected by action of self. These body part anaphors focus on individuals and groups and refer to parts of head, body or soul affected by the action. For instance, *onenore* ‘he/she saw himself/herself’ could imply the person saw a reflection of himself or herself using an instrument like a mirror. It also implies that the person was interested in seeing a particular part of his/her body. It could be the face, head or any body part.

In addition, some anaphors in Dholuo refer to actions happening to self. The action could have been initiated by the thing or some other forces hence called inherent anaphors. For example, *Opondo olierore* ‘Opondo shaved himself’ indicates the action of shaving happening to the person *Opondo* and also performed by *Opondo* to himself. Dholuo has another form of anaphor *ruok* ‘self’. This form of anaphor is used to mean something happening to somebody, though the use of *ruok* ‘self’ is not common as *-re* ‘self’. Moreover, *ruok* ‘self’ cannot be used with some verbs in Dholuo. For instance, *luokruok* means one washing himself or herself or *wuondruok* meaning that someone is pretending or cheating herself or himself or it can also mean some people cheating themselves or each other in anaphoric relations or binding contexts.

7.1.2 Dholuo Syntactic Structure

Similarly, findings on the syntactic structure of Dholuo indicate that Dholuo anaphors do not occupy subject positions and neither do they appear in isolation. These anaphors are attached to the verbs. They also agree in number and person in the structures where they are used. When tested for grammaticality using Case Theory, Dholuo anaphors are assigned case morphologically. This is because Dholuo anaphor appear attached to personal pronouns which changes form. The antecedents are assigned nominative case by INFL, while the verb assigned accusative case to the anaphor. Whenever a preposition was present, it assigned oblique case to its object. There were also cases of Exceptional Case Marking (ECM) of the arguments. This ECM was possible where the maximal projection was an infinitival phrase since it is not a barrier to government. This meant that an anaphor was assigned case by a verb from a higher clause. However, some problems arose when the maximal projection was a barrier like a PP or CP. As a result, the anaphor could not be case marked by the verb from the higher clause. In most cases the sentence was ungrammatical or the interpretation was based on the assignment of case within the IP.

In addition, grammaticality was also tested using Binding Theory whereby anaphors that were bound within the minimal clause with their antecedent where they are coindexed satisfying Binding Principle A. However, there were instances of ungrammaticality where the anaphor occupied the subject position or the presence of a barrier blocked an anaphor from getting reference from the antecedent, thus violating Binding Principle A. Consequently, the anaphor and the pronoun were found to be in complementary

distribution, in that, where an anaphor occurs the pronoun does not occur. The pronouns are free everywhere according to Binding Principle B and their interpretation is varied depending on context. In some instances, the pronouns are interpreted anaphorically satisfying Binding Principle A when they get referent from the antecedent and they corefer.

7.1.3 Semantic and Pragmatic Interpretation of Dholuo Anaphors

The findings regarding semantic interpretation were done using Theta Theory which depends on two principles: theta criterion and the projection principle. These two principles worked hand in hand. The projection principle accounted for both subcategorization properties of the lexical and theta roles. For example, a verb that takes an Agent subject cannot take a Theme or Goal subject. It was found that Dholuo anaphors occur as NP complements or NPs embedded in CP verb complements in the sentences. These NPs are the arguments which are assigned thematic roles. Since Dholuo anaphors are assigned morphological case, the verb and preposition assign theta roles to the arguments which they theta mark. For example, in *Peter_i onegore_i* ‘Peter killed himself’, first, the verb *nego* ‘kill’ is a two-place predicate which requires two arguments, *Peter* and *-re* ‘himself’. The action verb *nego* ‘kill’ assign theta role of Agent to the antecedent *Peter* and Patient to the anaphor *-re* ‘himself’. On the other hand, in *mpira_i ong’ielore_i kochiko pap* ‘the ball rolled towards the field’, the sentence has three arguments *mpira* ‘ball, *-re* ‘itself’ and *pap* ‘field’. The verb *ngielo* ‘roll’ takes two arguments *mpira* ‘ball’ and *-re* ‘itself’, hence two-place predicate; while preposition *kochiko* ‘towards’ takes the argument *pap* ‘field’. The verb *ng’ielo* ‘roll’ assign theta role of Experiencer to the

antecedent *mpira* ‘ball’ and Theme to the anaphor *-re* ‘itself’ while the preposition *kochiko* ‘towards’ assigns theta role of Goal to *pap* ‘field. Once the arguments are identified and theta roles are assigned to the arguments, theta criterion and projection principle are fulfilled.

The findings from pragmatic interpretation of Dholuo anaphors reveal that the participants involved in communication are all important in the interpretation of an utterance. These participants can attach the meaning to the context presented to them at the time of utterance. With the help of the body language, facial expressions, tone, intonation, and pitch of voice paralinguistic features, the interpretations become clear. In addition, context which included linguistic (co-text) and situational (physical place, time, participants) was also vital. Some utterances with Dholuo anaphors attracted two interpretations. In order to disambiguate and get the relevant meaning, Relevance Comprehension Procedure was used to derive at the most relevant meaning without using a lot of effort. With this procedure, the mind stops at the arrival of the right interpretation. This means that there could be many other interpretations based on the context presented.

In the analysis, it was noted that different contexts (linguistic and situational) attracted assignment of different theta roles. This brought in an interface between semantics and pragmatics in that assignment of theta roles is dependent on the pragmatic interpretation of an utterance. An utterance like *Peter_i onegore_i* ‘Peter killed himself’ if interpreted as Peter committed suicide, *Peter* is assigned theta role of Agent and anaphor *-re* ‘himself’ assigned theta role of Patient. This is based on the grammatical interpretation since the anaphor and the antecedent are related and corefer and bound within the minimal clause. But, if the utterance is interpreted as Peter overworked himself, the roles changes, in that,

Peter is assigned Experiencer theta role while anaphor *-re* ‘himself’ is assigned theta role of Theme. This interpretation is based on the physical context and the body language of *Peter*. All these interpretations are dependent on the grammar, hence an interface of syntax, semantics and pragmatics. Grammatically, *Peter* and anaphor *-re* ‘himself’ are bound to each other within the minimal clause and are coindexed.

In the same manner, when a situation was presented to the respondents concerning the sound of thunder, there were varied responses. For instance, the response *koth dwa chwere* ‘rain will pour on itself’ literally does not make sense. This response required context (pragmatics) to interpret to be meaningful. *Koth* ‘rain’ and anaphor *-re* ‘itself’ are assigned theta roles of Agent and Patient respectively. Besides, ‘thunder’ is assigned covert Agent theta role since it is the cause of the rain. This interpretation brings to light two types of arguments, covert ‘thunder’ and overt *koth* ‘rain’ which are assigned the same theta roles.

In the same vein, Relevance Theory enabled the speaker and the listener to come up with as many assumptions as possible. These assumptions were important as they help in settling on the implied meaning. In situations where the sentence is ungrammatical, ambiguous or does not make sense, Relevance Theory helped to explain the utterance and provided the right interpretation. It was observed that in some cases, some words were used metaphorically to refer to things or people. This was the case with the utterance, *yien_i oringo ir Auma monangore_i* ‘the tree ran to Auma and licked itself’. Physically, *yien* refer to a ‘tree’, but metaphorically it was used to refer to a very slender person who ran towards *Auma*. This interpretation was arrived at as a result of the context of a slender

person presented running and performing the act of licking herself or himself. This then changed the perspective of a thing which is inanimate to an animate being.

7.1.4 Dholuo Anaphors at Linguistic Interface

With regard to interface, the findings show that Dholuo anaphors were interpretable at the syntax, semantic and pragmatic linguistic levels. These three linguistic levels depended on each other for explicit understanding of the utterances. For instance, in the interaction of syntax and semantics, Theta Theory and Case Theory worked hand in hand. This is because only arguments that were visible and case marked are the ones that could be assigned theta role. Therefore, the grammaticality and interpretation of the sentences was assured. Similarly, pragmatics also depended on the syntax and semantics to understand the illogical sentences. Before context is presented, the mind first records that the anaphoric utterance is grammatical and interpretable. Thus the interface of the three linguistic fields.

As a consequence, other elements that function as anaphors also exhibited the same ability to be interpreted within the interface. The only difference is that in disambiguating an utterance that has, for example, an anaphoric pronoun, one of the interpretations lacks the anaphor. This meant that it behaves more as a pronoun than an anaphor. This was noticed especially when the contexts were presented. This helped to explain the need for presentation of the context because in terms of grammar and semantics, all the conditions were fulfilled.

7.2 Conclusion

From the research findings, it is possible to draw specific conclusions based on our research questions. First, Dholuo anaphors were configured to appear as lexical or non-lexical elements. The lexical anaphors consisted of nouns, pronouns and demonstratives that function as anaphors in a sentence, and the non-lexical anaphor is *-re*, the morpheme *-r* ‘self’ or ‘each other’ followed by a personal pronoun *-e*. Dholuo anaphor *-re* ‘self’ or ‘each other/one another’ is attached to the verb and is used as either a reflexive or a reciprocal with plural personal pronoun in the third person in different contexts.

Second, Binding Theory and Case Theory were used to identify the syntactic structure of Dholuo anaphors. The anaphors in Dholuo appeared in the object position where they were bound to the antecedent within the minimal clause and coindexed to satisfy Binding Principle A. Dholuo anaphors that occupied subject position or were detached from the verb violated the Binding Principle A, and so the constructions rendered ungrammatical. Consequently, Dholuo anaphors were assigned morphological case where the antecedent was assigned nominative case while the anaphor assigned accusative case. There were also instances of exceptional case assigned where the IP was an infinitive. But, some problems arose when there was a barrier like PP or CP. The anaphor could not get reference from the antecedent making the utterance ungrammatical.

Third, Dholuo anaphors were interpreted semantically by being assigned theta roles. The anaphor and the argument antecedent were assigned theta roles depending on the verb used in the sentence. The action verbs assigned Agent and Patient theta roles to the antecedent and anaphor respectively, while verbs of emotions assigned Experiencer theta

role to the antecedent and Theme theta role to the anaphor. Besides, objects of the preposition were assigned Goal or Location theta roles.

Fourth, utterances with anaphors were interpreted pragmatically by including different contexts. There were different assumptions, but the hearer and speaker used the context presented to derive the meaning implied by use of minimal effort with reference to Relevance Comprehension Procedure (RCP).

The last research question was achieved as Dholuo anaphors were interpreted within the three linguistic areas of syntax, semantics and pragmatics using Relevance Theory and Government and Binding Theory. The sentences with anaphors were analysed syntactically and interpreted to be meaningful, hence grammatical. However, some utterances that were grammatical, but could not make sense. In order to understand these utterances, context was included. With the inclusion of context, there was the interface of semantics and pragmatics as theta roles were pegged on the different interpretations. On the other hand, syntax was also taken into consideration as the mind must first record that the sentence is grammatical.

However, there were shortcomings and limitations noted during the analysis. For instance, Relevance Theory involved a consideration of the speaker and the listener to make the interpretation of anaphoric utterance clear. It also involved inclusion of linguistic and situational contexts together with the body languages, facial expressions and tone of voice to get the different interpretations. This meant that some utterances that lacked the two participants in vicinity could be misinterpreted. In addition, the interpretation that required a lot of effort could be the most relevant though the theory focuses on the Relevance Comprehension Procedure (RCP) that require little effort to

derive meaning. Moreover, contexts change and so does the interpretation. This may cause confusion in the interpretation as different contexts are presented.

7.3 Recommendations

This study has important implications for the linguistic community. First, that anaphors can be configured in different syntactic structures and, the fact that there are lexical and non-lexical anaphors in an African language like Dholuo. Second, Dholuo anaphors are interpretable within the Binding Theory. On the basis of case assignment in Case Theory, Dholuo anaphors are assigned morphological case unlike English anaphor which is assigned abstract case. English abstract case assignment is due to the fact that there are pronouns used in the nominative and accusative. However, in Dholuo, there are no specified pronouns used in the nominative and accusative. In essence, in Dholuo, the antecedent is assigned an abstract nominative case while the anaphor is assigned an accusative morphological case. This morphological case assignment is a realization of the abstract case since the anaphor and antecedent corefer.

With regard to different contexts presented, Relevance Theory principles, enabled the different interpretations of Dholuo anaphoric utterance to be understood explicitly. The different contexts meant that theta role assignment to the arguments vary from one interpretation to the other. This implies that in the assignment of theta roles alone to get the semantic meaning, we may miss out on the right interpretation when context is left out. Moreover, theta assignment which work hand in hand with the projection principle are dependent on the syntax that allows the right lexical item in an utterance. Therefore, these theories were adequate enough in the interpretation of Dholuo anaphors in utterances.

The study analysed Dholuo anaphors at the linguistic interface of syntax, semantics and pragmatics. Dholuo anaphors which appeared as morphemes attached to the verb were interpretable. A similar study could also be done using a different Nilotic or Bantu language. Though, this would be better established if a study is conducted on morpho-syntax analysis of Dholuo using another theory from syntax-morphology interface or from morphology.

Next, in identification of Dholuo anaphors, another form of anaphor *wuon* ‘self’ or ‘each other’ was observed to occur in the language. Apparently, this form of anaphor was found to have some resemblance with Maasai reflexive *wan* ‘self’. These two languages were found to be sisters due to this resemblance. Therefore, it would be interesting to conduct a comparative study of the related Nilotic languages to establish the anaphor in the cognate languages.

Furthermore, the findings on the interpretation of anaphors would be of good use to the general public, language teachers, individuals and students. This is because any utterance requires that it is given the right interpretation before settling into conclusion. The inclusion of context would enable the different stakeholders including language policy makers to put into consideration the different environment in arriving at an interpretation.

In addition, in the study we observed that the semantic interpretation depended on the different contexts provided by pragmatics. These interpretations were recorded to be grammatically correct in the mind. This meant that there was an interface of syntax, semantics and pragmatics. Therefore, the lexicographers need to take into consideration the different meaning of words as presented in different contexts as they include them in the dictionaries either physically or electronically.

Lastly, Dholuo anaphors were found to be ambiguous posing misinterpretation of utterances. The native speakers need to be aware of this fact and be clear in what they mean during an interaction. This could be done by linguists engaging in talks on language use in Dholuo radio and TV stations such as Ramogi and Lolwe. These talks will make Dholuo speakers listening or watching the programme aware of anaphors and their ambiguity.

7.4 Suggestions for Further Research

The theories used were adequate enough to help understand the interface syntax, semantics and pragmatics of Dholuo anaphors. Though, it would be necessary if the same study is conducted using different theories to ascertain the interface.

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APPENDICES**Appendix I: Consent Form**

06

Letter of Introduction


Dear Respondents,

My name is Janet Onyango. I am a PhD student at Kenyatta University, Kenya. I am carrying a research as a requirement for my academic accomplishments. The research is part of the study of interpreting Dholuo anaphors at interface, syntax, semantics and pragmatics.

If you accept to take part in the study voluntarily, you will be required to participate in face to face interviews. There are no known risks to you by participating in this study. However, you can choose to withdraw from the study at any time without any penalty.

The information given will only be absolutely used in this study. Data will be treated with utmost confidentiality and anonymity and only group data will be reported.

Please without writing your name or anything which may identify you, sign below if you accept to participate in the survey as a respondent.

Signature  Date 5/08/2019

Appendix II: Interview Schedule for Respondents

The purpose of this interview is to get your views on the interpretation of sentences with Dholuo Anaphors in different contexts. Any information that you will give will be treated with confidence and will be used for the success of this academic research.

1. How would you say something being done to you or to something else?
(give at least two sentences)
2. How would you express in a sentence the act of people doing things to each other?
3. Which word in the sentences refer to the person or thing being talked about?
 - i. Nyithindo onenore.
 - ii. Auma go Opiyo ogore.
 - iii. Nyithindo ogwarore.
 - iv. Atieno paro ni Akinyi ohero pakre.
 - v. Awino owacho ni apuko nyuka to mano ok atimo.
 - vi. Apidi ne oneno ng'at mane ogoye.
 - vii. Agoyane oneno ng'at mane ohinyore.
4. What is the difference between the use of the anaphors 'r' in the following sentences?
 - i. Ben ohinyore
 - ii. Nyithindo gore
5. Say whether the following sentences are correct or not correct.
 - i. Peter onegore.
 - ii. Onegore Peter
 - iii. Auma onenore.
 - iv. Nyithindo owacho ni Auma onenore.
 - v. Nyithindo nomiyore nyiero.
 - vi. Nyithindo okokre.
 - vii. Re ose wiro.
 - viii. Re ose tedo.
 - ix. Re mine go.
6. What is the meaning of the following sentences?
 - i. Auma oherore.
 - ii. Odongo gi Opiyo oherore.
 - iii. Anenora kuomi.
 - iv. Onenore kamora-a-mora.
 - v. Achwanyora.

7. Which body part does the reflexive point to in the sentences?
 - i. Otieno oneno thuol bute.
 - ii. Ruth oneno buk toke.
 - iii. Achwanyora.
 - iv. Omondi ohinyore.
8. State the meaning of the expressions:
 - i. Atudo oringo ir Auma monang'ore.
 - ii. Ir atudo Auma oringore.
 - iii. Yien oringo ir Auma monangore.
 - iv. Naneno Daudi nyoro. Raura nok oparo ting'o lepa.
9. What are the thoughts that would come to your mind when you hear thunderstorm while sitting in the house? (examples of actions of wind, thunder)

Appendix III: Raw Data from Respondents

1.
 - a) Auma/Apondi oherore
 - b) Nyithindo omienore gi chuodho.
 - c) Amondi oluokone Odongo leuni.
 - d) Yawuoyi oluongore.
 - e) Ating'o bandono awuon.
 - f) Jaduong ogo paka moyuagre malit.
 - g) Nyiminegi oritore maber.
 - h) Abuogora kanindo mamit.
 - i) Dhot omukore ka nyithindo tugo.
 - j) Atieno oterone Auma lawe.
 - k) Nyirigi puonjore tuang'o leuni.
 - l) Odno omukre kende kawuono.

2.
 - a) Rawere omuko dhot ka gigore kendgi.
 - b) Mine ohero olimore.
 - c) Nyithindo laure kagilaro tamtam.
 - d) Daudi gi Paula ng'iyore kagibuonjo.
 - e) Joluo/nyithindo yanyore.
 - f) Jogo pidhore chiemo.

3.
 - a) Nyithindo onenore.
 - b) Auma go Opiyo ogore.
 - c) Nyithindo ogwarore.
 - d) Atieno paro ni Akinyi ohero pakre.
 - e) Awino owacho ni apuko nyuka to mano ok atimo.
 - f) Agoya ne oneno ng'at mane ohinyore.

4. Grammaticality of constructions with anaphors
 - a) Peter onegore.
 - b) *onegore Peter.
 - c)* Auma onenore.
 - d) *Nyithindo owacho ni Auma onenore.
 - e) Nyithindo owacho ni Auma onenore gi rang'i.
 - f) Nyithindo nomiyore nyiero.
 - g) Nyithindo okokre.
 - h) * re ose wiro.
 - i) *re ose tedo.
 - j) * re mine go.

5. Body part reflexives
 - a) Otieno oneno thuol bute.

- b) Ruth oneno buk toke.
 - c) Achwanyora.
 - d) Omondi ohinyore.
6. a) Atudo oringo ir Auma monang'ore.
- b) * ir atudo Auma oringore.
 - c) Yien oringo ir Auma monang'ore.
 - d) Naneno Daudi nyoro. Raura nok oparo ting'o lepa.
7. a) Puothe biro purre.
- b) udi mit omukore?
 - c) Ondiegi dwa yuagore kawuono.
 - d) Tado biro walore gi yamo.
 - f) Koth dwa chwere aduwa.

Appendix IV: Researcher's Data

The data below was generated by the researcher who is a native speaker of Dholuo.

1. a. Peter onege
 - b. Peter onegore
 - c. Peter onego Otieno
 - d. Peter ne dwaro negore
 - e. *negore Peter
 - f. * re ose wiro
 - g. * re ose tedo
 - h. * re mine go
 - i. Paka odumbore e dapi
2. a. Apiyo gi Adongo oherore
 - b. achwanyora awuon
 - c. gigore giwuon
3. a. Auma oneno guok
 - b. Auma oneno guok kanang'ore
 - c. Guok nang'ore
 - d. * oneno guoke
 - e. *nangore guok
4. Inherent reflexives
 - a. Mpira ong'ielore kochiko pap
 - b. Opondo/Auma olielore
 - c. Opondo olielo tike
 - d. Opondo olielore gi makas
 - e. Oyuere
 - f. Oyueyo dende gi taulo
3. Long distance anaphors
 - a. Nyithindo owacho ne baba ni gituo.
 - b. Otienco oleko ni en gi nyamburko.
 - c. Omondi oyuayo san kochike
4. a. itedruok
 - b. wuondruok
 - c. bul biro gore kawuono
 - d. ng'ato nogore gi bul kawuono
 - e. aluokra
 - f. Auma luokre
 - g. Nyiri oherore
5. Bob ogwarore gi pala

Appendix V: Data from Dholuo Bible

1. Wecheneni ne siro joma ochwanyore. (Job 4:4) p.442
‘Your words encouraged people who felt hurt themselves/ by other people.’
2. Ayub oyuagore ni osiepene. P.423
‘Job pleaded for mercy from his friends.’
3. Ahinyora malit.
‘I hurt myself badly.’
4. gilokore ire mondo giked kode. (p.309) (I Kings 22: 34)
‘each one of them changed to fight him back.’
5. Jaricho pakore kuom gombone maricho. (Psalms 10:3)
‘ A guilty person praises himself/ herself from his/her bad desires.
6. Gipogore lepa e kindgi. (Psalms 22:18)
‘They share my clothes among themselves.’

Appendix VI: Research Authorization Letter

KENYATTA UNIVERSITY
GRADUATE SCHOOL

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OUR REF: C82/37145/16

Date: 2nd February, 2018

The Director General
National Commission for Science,
Technology & Innovation
P.O. Box 30623-00100,
NAIROBI

Dear Sir/Madam,

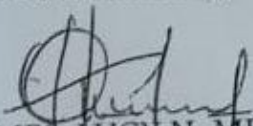
RE: RESEARCH AUTHORIZATION FOR MS. JANET A. ONYANGO REG. NO. C82/37145/16

I write to introduce Ms. Onyango who is a Postgraduate Student of this University. She is registered for Ph.D. Degree programme in the Department of English & Linguistics in the School of Humanities & Social Sciences.

Ms. Onyango intends to conduct research for a Ph.D. thesis entitled, "Anaphors in Dholuo: An Interface Account"


Any assistance given will be highly appreciated.

Yours faithfully,


 MRS. LUCY N. MBAABU
 FOR: DEAN, GRADUATE SCHOOL




Appendix VII: Research Permit from NACOSTI


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Date of Issue: 14/August/2019

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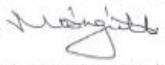



This is to Certify that Ms.. JANET ONYANGO of Kenyatta University, has been licensed to conduct research in Siaya on the topic: ANAPHORS IN DHOLUO:AN INTERFACE ACCOUNT for the period ending : 14/August/2020.

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