The Syntax of Anaphors in Ki-Imenti: A Bantu Language Spoken in Kenya

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Abstract

This paper is an investigation of the distribution of anaphors in Ki-Imenti. Ki- Imenti is a Bantu language spoken in Meru Central, North Imenti and Buuri sub-counties, Meru County. It is one of the dialects of Kimeru. The objective of this paper is to determine the syntax of anaphors in

Ki- Imenti. The study is guided by Chomsky's Binding Theory. The binding theory divides noun phrases into three basic categories anaphors, pronouns and R-expressions. This theory develops three binding principles to explain the distribution of these noun phrases. These are the binding principle A, binding principle B and binding principle C. This study is only limited to the distribution of anaphors. The study adopts a qualitative study research design as it gives detailed descriptions and explanations of the phenomena studied. The researcher generated the data for the study herself using self-introspection and the data was corroborated by ten native speakers who were purposively sampled. The paper has established that Ki-Imenti conforms to the binding principles. Anaphors are bound in their binding domain, whereby the binding domain is the inflectional phrase or the noun phrase containing the anaphor. This paper will make a contribution to the knowledge of the syntax of anaphors in Ki- Imenti and the description of the syntax of Bantu linguistics in general.

Keywords: Domain, C-Command, Anaphors, Co-Indexing, Binding Theory.

1. Introduction

The distribution of noun phrases in all languages is governed by the binding principles. These binding principles determine the distribution of anaphors, pronouns and R- expressions. The binding theory divides noun phrases into three basic categories anaphors, pronouns and R-expressions. Chomsky (1981) in his Binding Theory develops three binding principles to explain the distribution of these noun phrases. These are the binding principle A, binding principle B and binding principle C. This paper was, however, limited to the syntax of anaphors in Ki- Imenti. Carnie (2006) defines anaphors as noun phrases that obligatorily get their meaning

from another noun phrase. They include reflexives (such as themselves, herself, and itself) and reciprocals (each other, one another). The binding principle that governs the distribution of anaphors is called binding principle A. It states that an anaphor must be bound in its binding domain. Carnie (2013) defines a domain as a syntactic unit that is clause-like. Binding requires two conditions to be met. One, the anaphor and the antecedent (a noun phrase that gives meaning to it) must be co-indexed and two, the antecedent must c- command the anaphor. The antecedent c- commands the anaphor if every node dominating the antecedent also dominates the anaphor and neither the antecedent nor the anaphor dominate the other. The way two noun phrases are indicated to be co-referential is by means of an index, usually a subscripted letter.

2. Theoretical Framework

This paper is guided by Binding Theory by Chomsky (1981). This is the part of the syntactic theory that shows how the interpretation of noun phrases is constrained by syntactic considerations. According to Chomsky (1981), the distribution of anaphors is determined by **Binding principle A** of this theory which states that:

**Anaphors are bound in their binding domain. For this to happen, there are two conditions that must be met.**

The first one is that an anaphor must have a local (nearby) antecedent. Thus, *Timothy$_i$ washed himself$_i$* obeys Condition A: the antecedent of *himself*, which is *Timothy*, is in the same clause with the anaphor. In contrast, * *Timothy $_i$ asked Sylvia to wash himself$_i$* is unacceptable, because the reflexive and its antecedent are in different clauses. This is one of the conditions for anaphors, that the anaphor must find an antecedent in the same clause.

Another condition indicated in the Binding principle A for anaphors is that anaphors must be c-commanded by their antecedent. Radford (2009) elaborates this condition. He explains that binding is a means of assigning reference and when one DP C- commands and is coindexed with another DP, the first is said to bind the other. A binds B iff (if and only if)

i)   A c-commands B

ii)   A is co-indexed with B

A c- commands B iff every node dominating A also dominates B. In a nutshell this means a node c- commands its sister and everything its sister dominates. Therefore it follows that the antecedent must be in the subject position to c- command the anaphor. This is illustrated in sentence (a) and the syntactic tree in (b)

(a) Moses$_i$ loves himself$_i$

(2) **TP**

TP → NP$_i$, T'
NP$_i$ → N → Moses
T' → T (Ø), VP
VP → V',
V' → V (loves), NP$_i$
NP$_i$ → N → himself
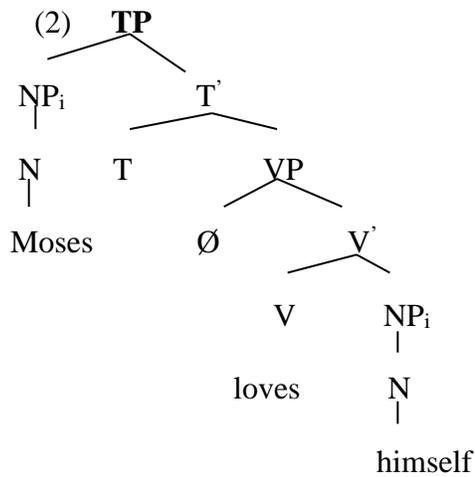
In example (a) *Moses* is the antecedent of the reflexive *himself.* The antecedent is in the same clause with the reflexive and it is in a structural position where it c- commands the reflexive, that is every node dominating the antecedent also dominates the reflexive and this is the TP node as shown in (b). The antecedent and the reflexive corefer and they are appropriately coindexed.

The Binding theory was helpful in establishing the binding relationship that holds between the anaphors in Ki- Imenti and the antecedents. This was done by analyzing the syntactic space in which anaphors must find their antecedents. Further the arguments that anaphors can refer to was investigated.

3. Research Methodology

The researcher generated the data herself using self-introspection. This is because the researcher is a Ki-Imenti native speaker. She is therefore competent and qualified to generate some of the data needed for analysis. Radford (1988) notes that for practical purposes, most linguists describing a language of which they are native speakers rely on their own intuitions and thus the grammar they devise is essentially the grammar of their own idiolect, which they assume is a representative of the language as a whole. The choice of this method was motivated by the fact that the researcher is a native speaker of the language under study and knows what she is looking for. This saves a lot of time and prevents the possibility of unwanted data. For further verification, the researcher counter checked with ten other Ki-Imenti native speakers.

4. Findings

This section presents the environment in which an anaphor must find an antecedent and the kind of relationship that holds between anaphors and their antecedents. To illustrate this relationship, syntactic trees have been drawn. Also discussed are the arguments that anaphors can refer to.

4.1 The Binding of Anaphors in Ki-Imenti

The reflexive in Ki- Imenti is bound in its binding domain. This is in accordance with the binding principle A (Chomsky 1981). The reflexive in Ki- Imenti must find an antecedent in its local domain as shown in sentence (1).

(1) Mwitimi$_i$ na-ra-**ci**$_i$-gũr- ĩr-e ngari.

   Mwitimi sm-past-refl-bought-appl-fv car

   Mwitimi$_i$ bought himself$_i$ a car

In sentence (1) the reflexive morpheme –*ci*- derives its interpretation from the antecedent *Mwitimi* in the same clause. The reflexive in Ki- Imenti cannot be co-indexed with an antecedent outside its local domain as illustrated in (2).

(2) *Arimũ$_i$ be-tĩkĩti-e atĩ mwana i-ba-ci$_i$-endet-e

    Teachers$_2$ sm-believe-fv that child f-sm-refl-fv

    The teachers$_i$ believe that the child loves himself$_i$.

Sentence (2) is wrongly coindexed because the reflexive morpheme –*ci*- cannot have *Arimu* as its antecedent because they are not in the same clause. This conforms to the binding principle A which requires anaphors to be bound in their own domain.

Further the reflexive in Ki-Imenti cannot be coindexed with a noun phrase embedded inside the subject noun phrase as shown in (3a).

(3a) *{M̲ũ̲c̲o̲r̲e̲ wa [mary]$_i$} na-ci$_i$-endet-e

     Friend$_1$ of Mary sm-refl-love-fv

     {[Mary's]$_i$ friend} loves herself$_i$

The appropriate coindexing is as indicated in (3b), where the whole subject noun phrase *(Mucore wa Mary)* is the antecedent for the reflexive.

(3b) [Mũcore wa mary]$_i$ na-ci$_i$-endet-e

Friend of Mary sm-refl-love-fv

[Mary's friend]$_i$ loves herself$_i$

(3a) is ruled out because the NP "Mary" does not c-command the antecedent.

To bind the reflexive, the antecedent has to be in the subject position as shown in (4a) and if it is

not the sentence becomes ungrammatical as shown in (4b).

(4a) John na-ci-endet-e

John sm-refl-love-fv

John loves himself

(4b) *na-ci-endet-e John

Sm-refl-love-fv John

He loves himself John

In 4(b) the sentence is ungrammatical because the antecedent *John* is not in a subject position but

an extraposed position.

In Ki- Imenti reciprocals must be bound locally as shown in (5)

(5) Aana$_i$ i-ba-kũ-rum-an$_i$-a

Children$_2$ f-sm-pres-insult-rec-fv

The children$_i$ are insulting each other$_i$.

In sentence (5) the reciprocal *–an-* is bound by the antecedent *aana* in the same clause through

the pronominal affix *ba.* If the reciprocal does not find an antecedent in the same clause the

sentence becomes ungrammatical as illustrated in (6).

(6) *Gatwiri na Koome$_i$ be-tĩkĩti-e atĩ mwana ba-ka-ũr-an$_i$-ĩr-a nguo

Gatwiri and Koome sm-believe-fv that child$_1$ sm-tns-wash-rec-appl-fv clothes$_{10}$

Gatwiri and Koome$_i$ believe that a child will wash clothes for each other$_i$.

Sentence (6) is ungrammatical because the reciprocal –*an*- cannot get its interpretation from the subject *Gatwiri and Koome* given that this antecedent is very far from the reciprocal because they are in different clauses.

Further the reciprocal morpheme cannot have a noun phrase embedded in the subject noun phrase as its antecedent as indicated in sentence (7b). The right coindexing is as indicated in (7a) where the whole subject noun phrase is coindexed with the reciprocal.

(7a) {Athingatĩri ba arimũ}$_i$ i-ba-men-en$_i$-e

     Supporters of teachers$_2$ f-sm-hate-rec-fv

     The supporters of teachers hate each other.

(7b) *{Mũthingatĩri wa [arimũ]$_i$} i-ba-men-en-e

     Supporters of teachers$_2$ f-sm-hate-rec-fv

     The supporters of teachers hate each other.

(7b) is ruled out because the NP does not c-command the reciprocal.

4.2 Binding of Anaphors in Applicative and Causative Constructions.

Double object constructions in Ki- Imenti can be formed from derived ditransitives known as applicative and causative constructions. The causative and applicatives are multiple object constructions. A causative verb therefore, is the verb that shows a causative situation between two events, the causing and the caused (Kullikov, 1994). Robert (2008) defines causation as a valence increasing operation that adds a causer argument which acts upon a cause to perform an action or cause a change of state of a non-volitional event. The introduced causer is believed to be one responsible for the event occurring. It is a form indicating that someone or

something makes someone or something to perform an action or cause a change of state of a non-volitional event.

Muriungi (2010) notes two types of causative morphemes in his study of Kiitharaka causation. These are the transitive *–i-* which he calls an internal cause and the *–ithi* referred to as the synthetic causer. He observes that when the causative *–i-* is suffixed to the verb, it introduces a causer argument and makes the verb take an object hence transitivizing it. He notes the synthetic causer *–ith-* is suffixed to transitives and agentive intransitives thereby introducing a causer.

Mwangi (2001) indicates that there are two causative affixes, the *–i-* and the *–ith-* in Gikuyu, Kiembu and Kikamba. In Gikuyu, and Kiembu they are realized in these forms regardless of the phonological structure of the verbs to which they are affixed, but in Kikamba phonological processes affect the realization thus *–i-* is also realized as *–y-, -e-,* and *–sy-* while *–ith-* is also realized as: *-ethy-* or *–ithy-*. In many languages, causation is expressed morphologically by use of affixes in the verb (Mwangi, 2001).

The causative is marked by the morpheme *–ith-* or *–i-* in Ki- imenti.

The applicative licenses a wide range of object roles that include the beneficiary, recipient, maleficiary, goal, instrument, reason and location (Ngonyani, 1998).

The applicative is marked by the morpheme *–ir-* in Ki- Imenti. In Kiswahili the applicative is marked by the morpheme *–i-* (Marten, 1999). In Chichewa, the applicative affix has two allomorphs: *-il-* and *–el-* (Mchombo, 2004). The allomorphs that is selected and affixed to the verb is constrained by rules of vowel harmony.

Just like the causative the applicative adds an extra argument to the sentence. The prototypical thematic role of the argument added by applicative is the beneficiary

(Mchombo, 2004). The beneficiary is a participant for whose benefit the action expressed by the verb is performed.

4.2.1   Reflexives and Causatives

In reflexive causative constructions in Ki- Imenti, binding is only possible between the causer and the external argument (8a). The external argument and the object cannot be coindexed (8b).

8. Kĩmathi$_i$ a-ra-ci$_i$-ũrag- ĩ th-ir-i-e   Karĩmi

  K I mathi sm-past-refl-kill-coerce-ic-fv Karimi

(a)   Kimathi$_i$ forced himself$_i$ to kill Karimi.

(b) * Kimathi forced Karimi to kill herself

The observation in (8) means that the interpretation of a reflexive causative construction is that the agent forced himself to do a particular action as indicated in (8a). The reflexive marker cannot be interpreted as the object of the verb root as indicated in (8b).

4.2.2 Reflexives and Applicatives

In applicative constructions involving the reflexive, binding is possible between the subject and the applied argument as shown in (9a). Binding is also possible between the subject and the direct object (9b). However, binding is not possible between the applied and direct object (9c)

(9) Kĩmathi a-ra-ci-ũrag-ĩr-ĩr-e   Karĩmi

   Kimathi sm-past-refl-kill-appl-pfc-fv Karimi

  (a) Kimathi_i killed Karimi for himself_i

  (b) Kimathi_i killed himself_i for Karimi.

  (c) *Kimathi killed Karimi_i for herself_i

In (9a) the interpretation of the reflexive applicative construction is that subject is the beneficiary

of the action of the verb while in (9b) the subject initiated an action upon himself for another

person's benefit. The interpretation in (9c) is not possible, that the subject initiated an action

upon another person for that persons benefit.

4.2.3 Reciprocals and Causatives

        In reciprocal causative constructions in Ki- Imenti, binding is possible between the

external argument and the direct object as shown in (10a). The causee and the external argument

cannot be coindexed as shown in (10b). Further the causer and the direct object cannot be

coindexed (10c).

10. Arimũ   i-ba-ra-rũ-ĩth-an-ĩr-i-e   aciari.

   Teachers_2 f-sm-pst-fight-coerce-rec-appl-ic-fv parents_2

   (a) The teachers caused the parents_i to fight each other_i

   (b) *The teachers_i caused each other_i to fight the parents.

   (c) *The teachers_i caused the parents to fight them_i

In (10) the reciprocal morpheme is interpreted as the object root as indicated in (10a). The

reciprocal in (10) cannot be interpreted as the object of the causativised verb stem as indicated in

(10b). Therefore reciprocal morpheme is interpreted as the basic object of the verb which refers back to the external argument (causee).

4.2.4 Reciprocals and Applicatives

In applicative constructions, that have reciprocals binding is possible between the subject and the applied argument (11a). It is also possible to coindex the subject and the basic object (11b). The basic object and the applied object cannot be coindexed (11c).

11. Aciari   i-ba-ra-og-an-ĩr-e   twana

Parents$_2$ f-sm-tns-tie-rec-appl-fv children$_2$

(a)The parents$_i$ tied the children for each other$_i$

(b) The parents$_i$ tied each other$_i$ because of the children.

(c) *The parents tied the children$_i$ for each other$_i$

From the observation of anaphors and multiple argument involving applicatives and causatives, the binding generalization is that binding is between the closest arguments. Further in reflexive and reciprocal constructions in Ki- imenti, only one of the objects of the causative is involved in the binding process. This is the causee. In applicative constructions on the other hand any of the objects is involved in binding. That is either the basic or the applied verb. This aspect makes Ki- imenti both an asymmetrical and symmetrical object language. In an asymmetrical object language in the context of multiple object constructions like applicatives and causatives only one of the objects can behave like a real object. This is in contrast to symmetrical object languages whereby in multiple object constructions, both objects are given the same status such that any object can be involved in binding process, (Bresnan, 1990).
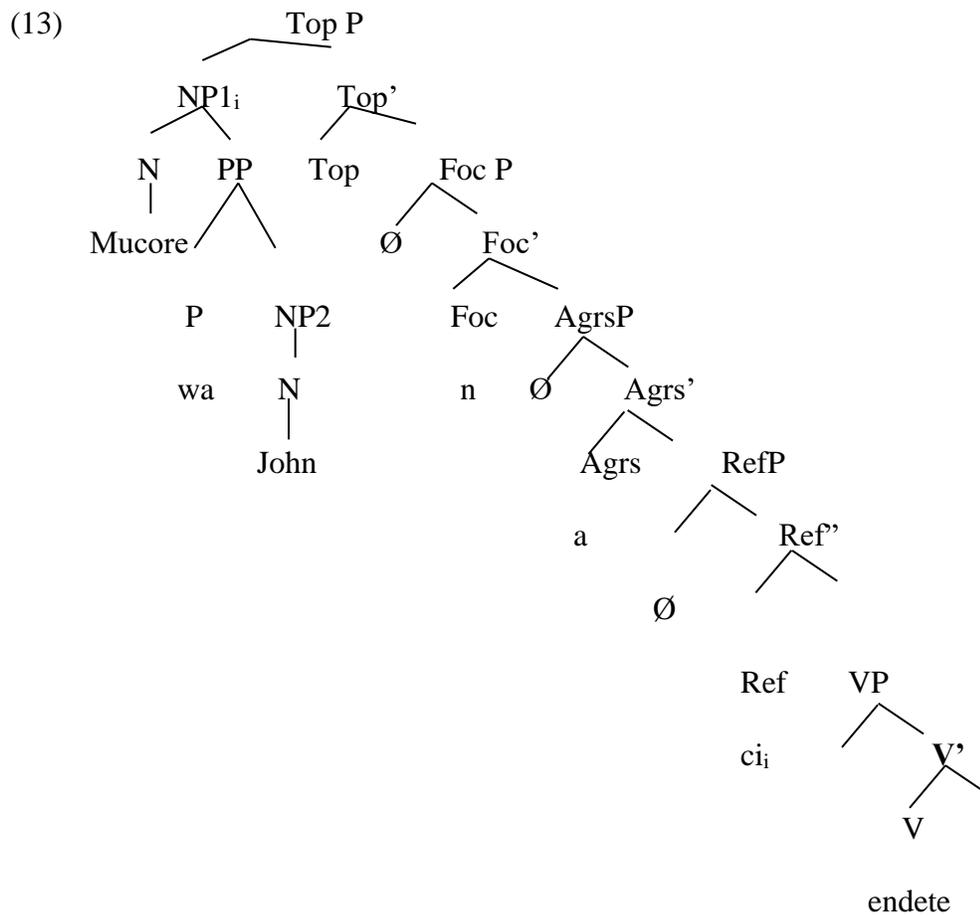
5. Discussion of Findings

As it has been demonstrated, an anaphor in Ki- Imenti must be bound within its binding domain according to binding principle A (Chomsky, 1981). For this to happen, first the antecedent must c- command the anaphor. The antecedent c- commands the anaphor if every node dominating the antecedent also dominates the anaphor and neither the antecedent nor the anaphor dominates the other. This is demonstrated in sentence (12) with the syntactic representation in (13).

(12) Mucore wa John n-a-ci-end-et-e

Friend$_2$ of John   f-sm-om-love-pfc-fv

John's friend loves himself.

(13)

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                        Top P
                   /            \
              NP1_i              Top'
             /    \            /      \
          N      PP        Top        Foc P
          |     /  \                 /     \
       Mucore /     \               Ø      Foc'
            /        \                    /      \
          P          NP2              Foc        AgrsP
          |           |                |        /    \
         wa           N                n       Ø      Agrs'
                      |                       /      \
                    John                   Agrs      RefP
                                            |        /    \
                                            a       /      Ref''
                                                   /       /    \
                                                  Ø
                                              Ref     VP
                                                     /   \
                                              ci_i       V'
                                                        /  \
                                                       V
                                                     endete
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In diagram (13) the antecedent of the reflexive morpheme –*ci*- can only be understood to be the whole NP1 phrase *Mucore wa John*. This is because the node that dominates NP1 also dominates the node that has the reflexive. This is the Top P node. This phrase qualifies to be an appropriate antecedent because it c- commands the reflexive according to the binding principle A. However the reflexive in diagram (13) cannot have *John* as its antecedent. This is because *John* does not c- command the reflexive. There are two nodes that dominate *John* that is the PP and NP1, which do not dominate the reflexive node. Thus binding principle A does not allow *John* to be an appropriate antecedent to the reflexive.
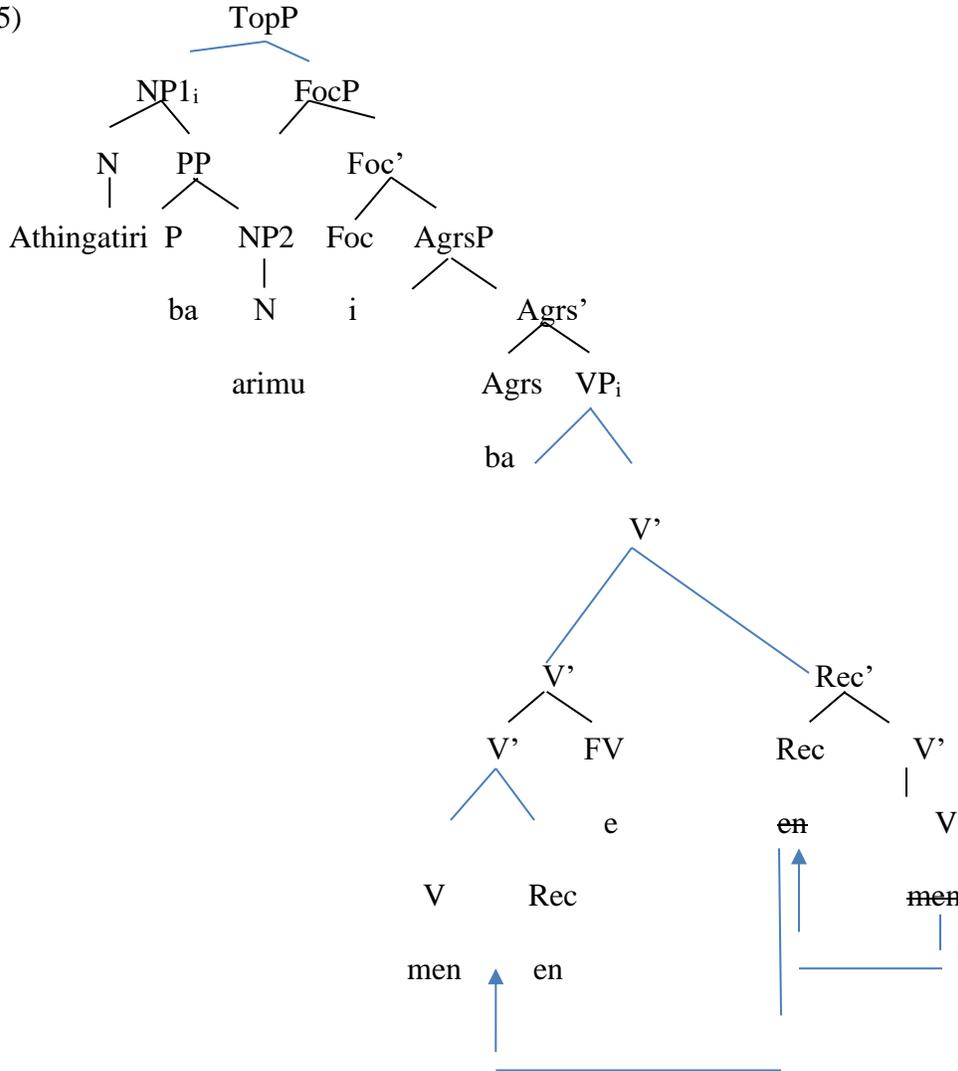
In the same way as relexives, a reciprocal must be c- commanded by an antecedent as shown in sentence (14) with the syntactic tree (15).

(14)   {Athingatĩri ba arimũ}$_i$ i-ba-men-en$_i$-e

      Supporters of teachers$_2$ f-sm-hate-rec-fv

      The supporters of teachers hate each other.

(15)

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                              TopP
                     NP1ᵢ            FocP
                  N      PP              Foc'
            Athingatiri  P    NP2     Foc    AgrsP
                         ba    N       i          Agrs'
                              arimu           Agrs    VPᵢ
                                               ba
                                                    V'
                                          V'              Rec'
                                     V'      FV       Rec    V'
                                                e     e̶n̶     V
                                   V     Rec                 m̶e̶n̶
                                  men    en
```

The right antecedent for the reciprocal in diagram (15) is the whole phrase *athingatiri ba arimu* in the NP1 node. There is only one node dominating NP1 and that is the TopP. The same node dominates the verbal complex with the reciprocal. Verbal complexes are derived via incorporation that is successive head to head movement (Baker, 1988). Therefore, the verb moves from head to head in the structure, picking up reciprocal and the final vowel affix as shown in (15). Thus the antecedent *athingatiri ba arimu* c- commands the verbal complex (VP) containing the reciprocal that is *menene* The word *arimu* in NP2 cannot be an antecedent to the reciprocal. There is an NP1 node dominating it that does not dominate the reciprocal therefore it

does not c- command the reciprocal. Thus the sentence cannot have the interpretation that it is the teachers who hate each other as shown in (16) with the syntactic tree in (17)

(16)* {Mũthingatĩri wa [arimũ]ᵢ} i-ba-men-en-e

Supporters of teachers₂ f-sm-hate-rec-fv

The supporters of teachers hate each other.

(17)   * TopP
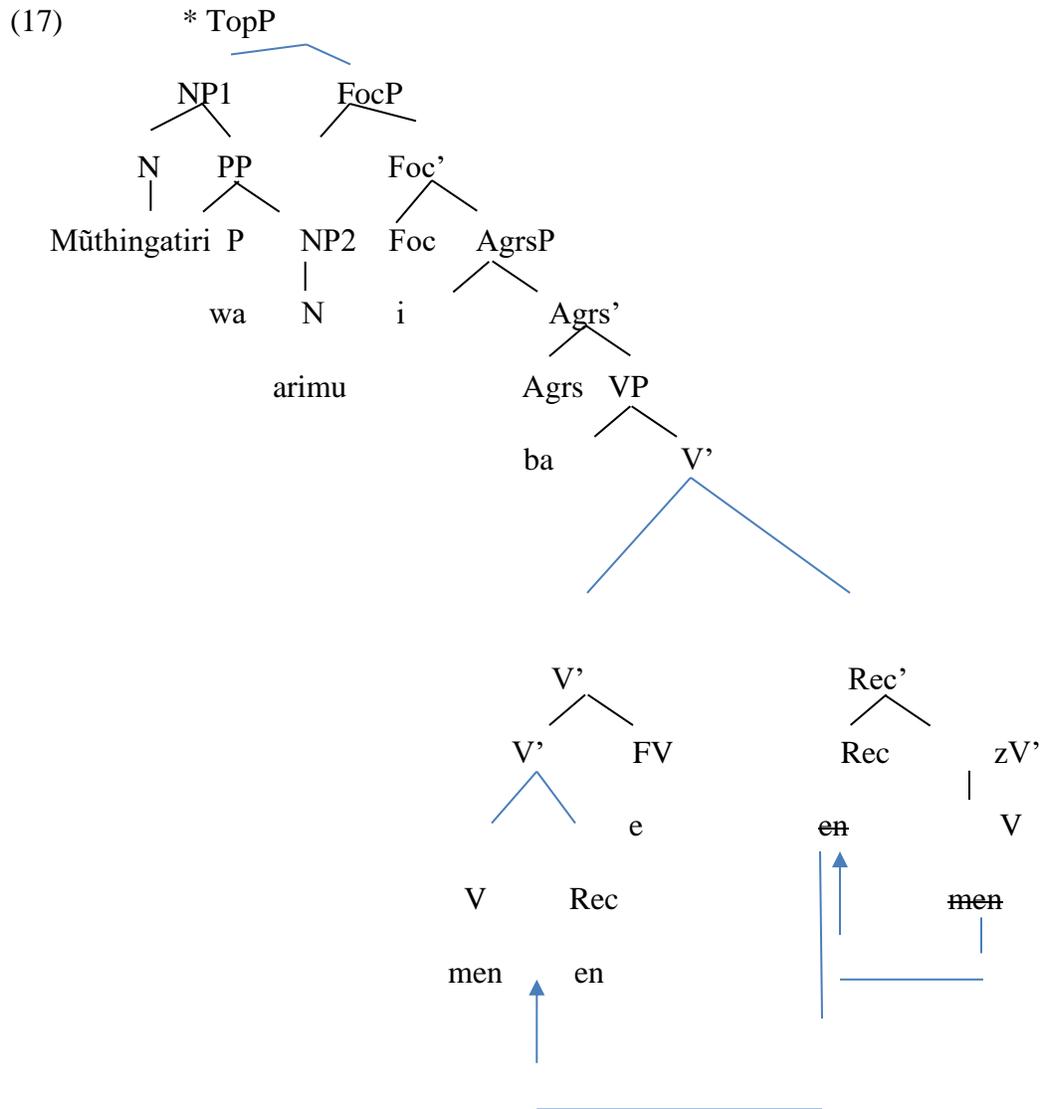
Conclusion

Anaphors, which include reflexives and reciprocals, are governed by the binding principle A. They are bound within their binding domain. Thus they must be c- commanded by their antecedents in the same clause. In multiple arguments involving the applicatives and causatives, the binding of anaphors is between the closest arguments. This proves that the binding of anaphors is local.

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