Possessive Structures in Ende: a Language of Eastern Indonesia[1]

Bradley J. McDonnell
Arizona State University
bradley.mcdonnell@asu.edu

1. Introduction

In this treatment of Ende possession, I will demonstrate how the Determiner Phrase (DP) parallels the structure of the Complementizer Phrase (CP) in Ende. This is based on the analysis of Abney (1987), Sczabolcsi (1994), and Nguyen (2004) and references cited therein. I provide an analysis for attributive possession in Ende occurs in the DP. I will look at further implications for movement within the DP and address the possible movement in the DP.

1.1. Background

Ende, an Austronesian language of eastern Indonesia, is classified as a Bima-Sumba language by Esser (1938) within the Central Malayo-Polynesian (CMP) subgroup (Blust 1993). Ende currently has no grammatical description and has received little linguistic attention.[2] The Ethnologue groups four languages under Ende-Lio: Ende, Lio, Ngada (Djawanai 1983) and Keo (Baird 2002). Within this small group of languages, Ende is considered a dialect chain with Lio. Baird (2002) notes that what makes these languages unique among other Austronesian languages is their highly isolating nature.

My data is a collection of elicited sentences from a native speaker of Ende, currently living in Surabaya. The analysis of the data came with the help of Fariz Gesiradja, also a native speaker of Ende, living in Arizona. All of the Ende data in this paper are from these sources because there is no other data available. Both of the informants mentioned now use Indonesian in their daily lives. I, therefore, still seek more complete data on which to base my research.

Ende is SVO and extemely isolating. Ende marks tense through adverbials and aspect by using separate words. Many words from Indonesian have been borrowed into the language, even though there are monolingual speakers of Ende living in the villages of the Ende region in eastern Indonesia (Gesiradja, pers. comm.).

2. Outline

In this paper, I provide a description of predicative and attributive possession in Ende as well as possible explanations for attributive possession in Ende. In § 3, I provide a description of Ende predicative possession. I give some examples of null copula construction (§3.1) and *rhatu* predicative possessive constructions (§3.2). I also provide a description for Ende attributive possession in §4. I give examples of Ligature (*ko'o*) and Juxtaposed possession (§4.1) as well as

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[1] The abbreviations for this paper are as follows: 1PL.EXCL – First Person Plural Exclusive, 1PL.INCL – First Person Plural Inclusive, 1SG.LIG – First Person Singular Adnominal Ligature, 2SG.LIG – Second Person Singular Adnominal Ligature, 3SG.LIG – Third Person Singular Adnominal Ligature, COP- Copula, POSS – Possessive Particle, PROS – Prospective Aspect, PSSD – Possessed Nominal, PSSR – Possessor Nominal, SPEC – Specificity Marker

[2] Needham (1969) and Nakagawa (1995) have published articles on anthropological work in Ende. Aoki and Nakagawa (1993) has also worked on an unpublished Ende-English Dictionary.

Adnominal Ligature possession (§4.2).   In §5, I look at the DP structure from Abney (1987). I then provide   the structure of Juxtaposed (5.1) and Ligature (*ko'o*) Possession (§5.2-5.3) using Abney (1987). I provide evidence from Szabolcsi (1994) for the parallelisms of the CP and DP in Ende possession in §6-6.1. In §6.2-6.3, I argue that the adnominal ligature structure is essentially the same as the juxtaposed possessive structure. In §8, I look at future research. I use Nguyen's (2004) structure of the Vietnamese DP to analyze Ende. I also discuss theoretical problems with this approach.

3. Ende Clausal Possession
　　Possessive clauses in Ende are closely related to existential clauses. Ende uses two different constructions: the null copula and the *rhatu* copula.

3.1. Null Copula Constructions
　　The null copula is widely used, even in simple clauses as in (1) and possessive clauses in (2) and (3).

(1) Na   Ø   oto
　　that   COP   car
　　'that is a car'

(2) Ana ja'o imu   rua, seimu   ghi   ata   fai,   seimu   ghi
　　child 1SG. person two individual 3SG.LIG person   female individual 3SG.LIG

　　ata   aki
　　person   male
　　'I have two children, one girl, one boy.'
　　 (lit. My children are two people, one is a girl, one is a boy.)

(3) Ari   ja'o imu   rua, ata   aki   mesa
　　sibling.younger 1SG. person two   person male both
　　 'I have two younger brother, both are male'
　　 (Lit. 'My younger siblings are two, both are male')

In both of these cases a possessive nominal phrase is in subject position. This is always so in null copula constructions.

3.2. *Rhatu* Constructions
　　Rhatu constructions on the other hand display a lot of variability in structure and meaning. The simplest *rhatu* construction is intransitive as in (4).

(4) Ngga'e rhatu
　　God   exist
　　'God exists'

Rhatu is also used as the existential proform as in (5).]In the pre-clausal position, *rhatu* acts as the proform and is interpreted as such.

(5) Rhatu   metu   mbana-mbana   rheka   tembok
    exist   ant   walk.around   on   wall
    'There is an ant walking around on the wall'

Rhatu can also act as a 'be' copula as seen in (6) and a have copula as seen in (7).

(6) Ka'e   ko   oro-imu   jo   rhatu   ata   mbingu
    sibling.older   POSS   friend   1SG.LIG   COP   person   crazy
    'My friend's older brother is crazy'

(7) Kai   rhatu   rako
    3SG.   have   dog
    'She has a dog'

The constructions in (6) and (7) differ in their interpretation based on the possessive element in the subject position. When *rhatu* is used in conjunction with possessive nominals in the subject possession, it appears to act as a 'be' copula. When *rhatu* acts in conjunction with non-possessive nominal it acts as a 'have' copula. From (7) the pattern for the clausal possession is Possessor *rhatu* Possessed, which as we will see, is the opposite of the attributive possessive structure.

    The *rhatu* constructions deserve more attention, which I am unable to give at this time; further implications for *rhatu* in regards to Freeze (1992) is needed.

4. Ende Attributive Possession

    Ende has three attributive possessive structures: juxtaposition, ligature, and adnominal ligature possession. In all of these structures the Possessed element always precedes its Possessor. Ende does not have a special set of pronouns to mark possession, but utilizes a different word order in attributive possession; namely, the Possessed always precedes the Possessor.

4.1. Juxtaposed and Ligature (*ko'o*) Constructions

    In juxtaposed structures (8), the Possessed is juxtaposed with the Possessor. The order is always Possessed Possessor. The possessor in juxtaposed constructions is most commonly pronominal, but is not required.

    In ligature possession, pronominal elements may also be used, as in (9). These constructions use the ligature (or possessive particle) *ko'o,* often shortened to *ko*[3], between the *Possessed* and the *Possessor*. The ligature possessive construction is most often used with proper names and other nominal elements, especially in complex constructions involving two or more possessed elements as in (10). In complex possessive phrases like (10), it is necessary to use *ko'o.* It is not possible to juxtapose more than one Possessor. The order remains the same in both juxtaposed and ligature constructions: Possessed *(ko'o)* Possessor.

(8) Ana ja'o
    child 1SG.
    'My Child'

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[3]*Ko* is most commonly used in rapid speech. In this paper I will use both *ko* and *ko'o.* I will make no distinction between them. I will refer to *ko* as a ligature and a possessive particle, which are both vague terms to describe the same element.

(9) Ana   ko'o   ja'o
   child POSS 1SG.
   'My child'

(10) Ka'e   ko'o   oro-imu ja'o.
    sibling.older POSS   friend   1SG.
    'My friend's older brother'

    In Keo, a closely related language, Baird (2002:207) argues that there is not a clear alienable/inalienable distinction. Rather she claims that alienability operates on a continuum. Juxtaposition is a more common strategy in inalienable possession and the use of ligatures (*ko'o*) is a more common strategy for alienable possession.
    In Ende, this is not so clear. My informant claims that the use of *ko* in a possessive structure is more explicit than juxtaposition (Gesiradja, per. comm.). This could correlate to an (in) alienable distinction. However, I do not have enough evidence yet to claim this for Ende, so I will not address the nature of the distinction here.

4.2. Adnominal Ligature Possession
    Adnominal ligatures in Ende refer to *jo* (1SG.), *ghu* (2SG.), and *ghi* (3SG.). The nature of the adnominal ligature is referential. The adnominal ligature references a nominal phrase and always occurs after a noun, as in (11).

(11) Kai   nggae   ine   mere ghi
    3SG. look.for aunt big   3SG.LIG
    'He is looking for his aunt' (Lit. He is looks for aunt of him)

Ghi in (11) references the 3SG. pronoun *kai* 'he'. *Ghi* can also refer to a full noun phrase as in (12).

(12) Fu   kita   werna ghi   mite
    hair 3PL.INCL color   3SG.LIG black
    'Our hair is black' (Lit. Our hair the color of it is black.)

From (12), we can see that the 3SG. *ghi* references and agrees with *fu kita* 'our hair' and not just the *kita* '3PL.INCL'. The antecedent of *ghi* in (12) is the full NP, *fu kita*. In some cases the antecedent of *ghi* is dropped in discourse and is inferred in the context of the discourse as in (13).

(13) Baba ghi   rasi bha
    father   3SG.LIG wash plates
    'His father washes the plates.'

If the antecedent is not clear in the discourse, (13) would be considered ungrammatical, while (14a) and (14b) are completely grammatical.

(14) a. Baba   kai   rasi bha.
      Father   3SG. wash plates.
      'His father washes the plates.'

    b. Baba ko'o kai rasi bha.
       Father POSS 3SG. wash plates.
       'His father washes the plates.'

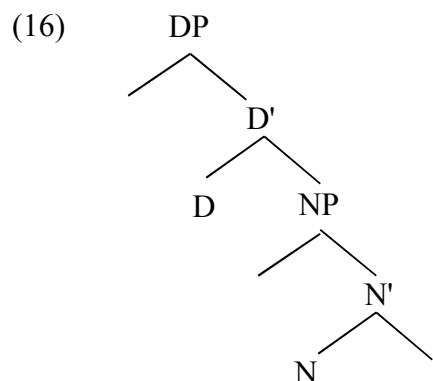There are also structures in which *ghi* has multiple antecedents as in (15).

(15) Oro-imu ja'o tembo ghi   rembo, tapi ari   ghi   tembo noko
     friend   1SG. body 3.SG.LIG fat   but brother.younger 3SG.LIG body skinny
     'My friend is fat, but his younger brother is skinny.'

The first and second *ghi* in (15) refer to the NP *oro-imu ja'o* 'my friend'. It is expected that it would be necessary to have a *ghi* between *tembo* 'body' and *noko* 'skinny'. It is grammatical to put *ghi* in this position, but is not necessary (Gesiradja, pers. comm.).
    In this section, I provided a description of three attributive possessive constructions: juxtaposed, ligature, and adnominal ligature possession. In the next section, I will provide an analysis for juxtaposed and ligature possession within the structure of the DP.

5. The DP Structure
    Abney (1987), along with others, proposed the functional head of the NP is the Determiner Phrase (DP). His claim is that the Inflection Phrase (IP) is parallel to the DP, which both functionally head lexical phrases: the VP and the NP. His structure for the DP is in (16).

(16)

```
            DP
           /  \
              D'
             /  \
            D    NP
                /  \
                    N'
                   /  \
                  N
```

5.1. The Structure of Juxtaposed Constructions
    In § 4.1, I provided the basic structure of the juxtaposed construction: Possessed Possessor. I also suggested that pronouns were most commonly possessors in juxtaposed constructions. From the description of juxtaposed constructions in §4.1, I provide the structure of (8) below. In this structure, I follow Abney (1987) that pronouns are heads of DPs, but will label them NPs here for sake of explanation. I argue then that the NP that is headed by the pronoun *Ja'o* '1SG.' is in SPEC,DP.

(8)

```
                        DP
                       /  \
                      /    \
                    D'      NP
                   /  \     Ja'o
                  /    \    1SG.
                NP      D
               /\       Ø
              /  \
            Ana
            child
```

'my child'

The structure of ligature possession appears to be different than juxtaposed possession because of the status of *ko'o* in ligature possession. Since the status of *ko'o* within the DP is uncertain in Ende, I will use evidence from Keo to claim *ko'o* is in fact the head of the DP.

5.2. The Status of *Ko'o*

The nature of *ko'o* in Ende is not completely clear. In §4.1, I have referred to the *ko'o* as a ligature and a possessive particle. Neither of these terms are really descriptive of *ko'o*. I will, therefore, provide evidence that *ko'o* is the head of the DP from Keo.

From Keo, Baird (2002) shows that *ko'o* is a specificity marker, a possessive marker, and a deontic mode marker. She claims that *ko'o* as a deontic mode marker occurs before the predicate as in (17).

(17) Kami   weta nala   ngara bhodhu bhodu ko   lita ne'e   Keo
     1PL.EXCL   sister brother if   sit   sit   must cry with

     kami   muri susa.
     1PL.EXCL live difficult
     'We siblings, if we hang out we (have no choice but to) cry about us living in difficultly'

Furthermore, *ko'o* as a specificity marker precedes the noun phrase that it specifies (Baird 2002) as in (18).

(18) Kami   mo   mbeta ko   pale, mbeta jawa, kami   'ana go'o   Keo
     1PL.EXCL PROS buy   SPEC rice   buy   corn 1PL.EX child small
     'We were going to buy rice, buy corn, us little kids.'

Baird (2002) further claims that the demonstrative is the definite marker, so that it is possible to have a DEFINITE, SPECIFIC NP. Thus, the specificity marker precedes the NP and the demonstrative follows, as in (19).

(19) ko   nasi ke   Keo
     SPEC   rice   that
     'the rice' (Specific and Definite)

The *ko'o* as a ligature is the same in Keo and Ende in which the standard structure is Possessed *ko'o* Possesor outlined in §4.1. and (20) below.
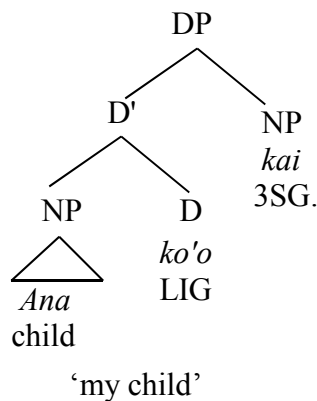
(20) Ae   ko'o   kami   Keo
    water POSS 1PL.EXCL
    'Our Water'

In a footnote, Baird (2002) draws a connection between the ligature and the deontic mode marker from Heine (1997). As Heine (1997) had mentioned a connection between possessive structures and deontic mode markers, so Baird (2002) suggests that this may be true in light of ambiguities in these constructions. Baird (2001) also suggests that the *ko'o* may have began as a possessive ligature then to a specificity marker and lastly a deontic mode marker. There is not much evidence to make this clear in Keo. The similarities in *ko'o* as a possessive particle and a specificity marker provide evidence that *ko'o* is the head of the DP.

5.3. *Ko'o* as the head of the DP
Since *ko'o* is the head of the DP, I provide a separate structure than the juxtaposed structure of (8) in §5.1. I, therefore, provide the structure of the ligature possession in (9) below. *Ko'o* is the head of the DP, while the Possessor is in SPEC,DP. To make the explanation of these structures more clear, I will label the Possessed and Possessor as NP instead of making the distinction between NP and DP.

(9)

```
              DP
             /  \
           D'    NP
          / \    kai
        NP   D   3SG.
       /\    ko'o
     Ana    LIG
    child
```

'my child'

In §5, I have described the DP structure for juxtaposed possession with pronouns and ligature possession. In the next section, I will describe the relationship between the CP and DP, with predicative and attributive possession. I will also provide an explanation of adnominal ligature possession.

6. The CP and the DP
Since Abney (1987), others have claimed that the DP parallels the CP rather than the IP (Valois 1991, Siloni 1990). I adopt Szabolcsi's (1994) argument for the parallelism of D and C. Szabolcsi (1994) provides evidence from Hungarian that the Complentizer and the Determiner are parallel. She argues that D and C change a proposition into an argument in the nominal phrase and in the clause. I adopt Szabolicsi's (1994) structure here.

6.1 The CP and the DP in Ende
    In Ende, the difference between a full clausal argument (21) and a nominal argument (22) depends on the word order.

(21) na Ø   ana
    this COP child
    'This is a child' (Clausal Argument)

(22) ana   na
    child this
    'This child' (Nominal Argument)

The null copula in (21) makes it clausal, while (22) has no copula. This is also the case in (23) and (24).

(23) Ana   Ja'o   Ø   ata   rua.
    child 1SG. COP people two
    'I have two children' (Lit. My children are two people)

(24) Ana   rua Ja'o
    child two 1SG.
    'My two children'

Furthermore, this is true with other examples of predicative and attributive possession with *rhatu* (in predicative) in (25) and *ko'o* (in attributive) in (26).

(25) Ja'o rhatu muku   wunu
     1SG. have banana leaf
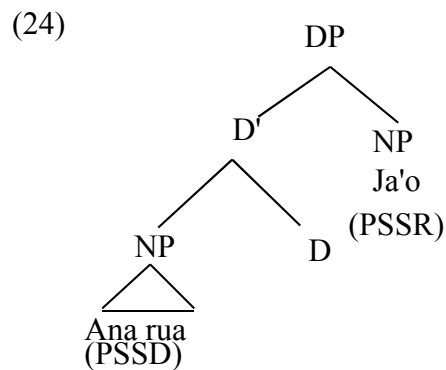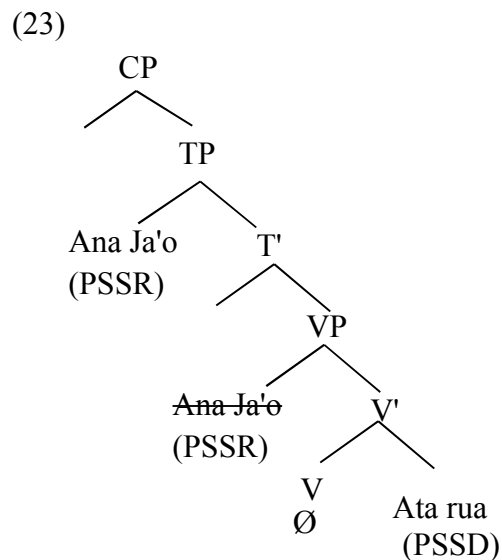   'I have a banana leaf' (Lit. To me exists a banana leaf)

(26) Muku   wunu ko'o   Ja'o
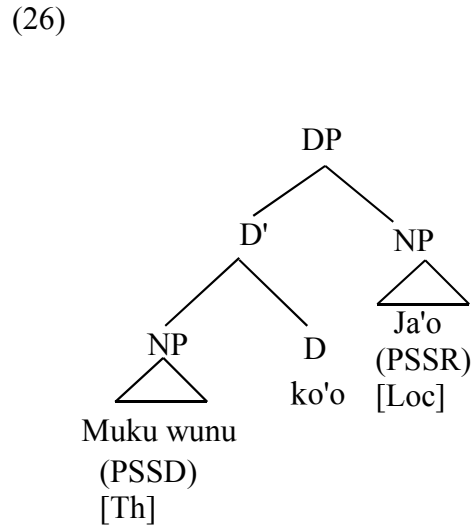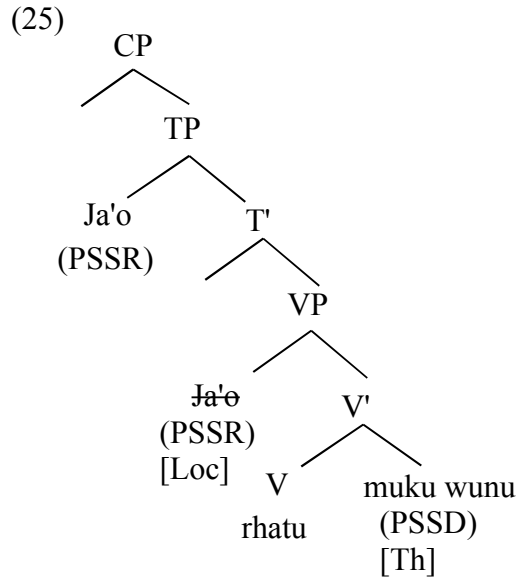   banana leaf POSS 1SG.
     'My banana leaf'

The clear structure of predicative possession (25) is Possessor *rhatu* Possessed. The clear structure in attributive possession (26) is Possessed *ko'o* Possessor. When the structures have *rhatu* and *ko'o*, the relationship is clear, but as was seen in (23) and (24) the word order is critical in null copula or juxtaposed possession.
    As Szabolcsi (1994) previously noted the similarities in meaning in DPs and CPs, I show the similarities in (25) and (26). In both constructions the Possessed and Possessor are on either side of the Verb (V^0) or the Determiner (D^0). The structures for the Ende DP and CP are mirror images and asymmetrical. The possessed, in both cases, is sister to the D^0 and V^0 respectively. The possessors in both cases are in SPEC,DP and SPEC,VP (or SPEC,TP according the VP-Internal Hypothesis). As demonstrated in (27) and (28), the structures show the asymmetry of attributive and predicative possession.

(27)

```
        CP
       /  \
          TP
         /  \
     PSSR    T'
            /  \
               VP
              /  \
         P̶S̶S̶R̶    V'
                /  \
               V    PSSD
```

(28)

```
              DP
             /  \
           D'     NP
          /  \    /\
        NP    D  PSSR
        /\
      PSSD
```
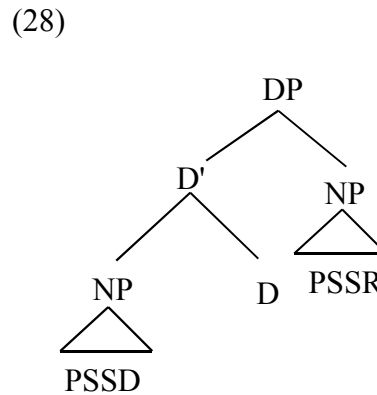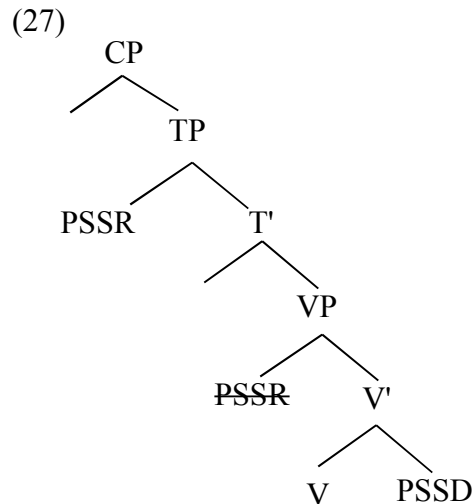
For juxtaposed constructions (attributive possession) and null copula constructions (predicative possession), I claim that the CP and the DP are present. In (23), even though the attributive possessive phrase *Ana Ja'o* 'My child' is to the left of the null copula, it is still the POSSESSOR. While *ata rua* 'two people' is to the right of the verb and is in the possessed position. It is also relevant that the numeral *rua* 'two' goes with the possessed in the both cases.

(23)

```
         CP
        /  \
           TP
          /  \
    Ana Ja'o   T'
    (PSSR)    /  \
                  VP
                 /  \
           A̶n̶a̶ ̶J̶a̶'̶o̶   V'
           (PSSR)   /  \
                   V    Ata rua
                   Ø    (PSSD)
```

(24)

```
              DP
             /  \
           D'     NP
          /  \    Ja'o
        NP    D  (PSSR)
        /\
     Ana rua
     (PSSD)
```

(25)

```
         CP
         /\
          TP
         /\
  Ja'o      T'
 (PSSR)    /\
            VP
           /\
     Ja̶'o̶      V'
    (PSSR)    /\
    [Loc]    V   muku wunu
            rhatu  (PSSD)
                   [Th]
```

(26)

```
            DP
           /\
         D'    NP
        /\     /\
     NP    D  Ja'o
    /\   ko'o (PSSR)
  Muku wunu   [Loc]
  (PSSD)
  [Th]
```

6.2. Adnominal Ligatures

The adnominal ligature construction is the least clear of the three nominal possessive constructions, however, I argue here that the adnominal ligatures *jo* 1SG.LIG, *ghu* 2SG.LIG, and *ghi* 3SG.LIG in Ende are essentially the same structure as the juxtaposed construction. However, it appears that the adnominal ligature constructions encode both the *ko'o* and the pronominal. I claim this based on native speaker perception, which is *jo = ko'o ja'o* (Gesiradja, pers. comm.). This is also clear in what is considered ungrammatical in relation to the adnominal ligatures. So far, I showed that it is possible to have the *ko'o* in ligature possession or not have the *ko'o* in juxtaposed constructions. I will now provide evidence for adnominal ligatures as the head of the DP.

(29) Ana   ko'o   Ja'o
    Child POSS   1SG.
    'my child'

(30) Ana   Ja'o
    Child 1SG.
    'my child'

6.3 The Status of Adnominal Ligatures

As noted in §4.2, the adnominal ligature is dependent on an anaphor and must agree with the anaphor as in (31) through (33).

(31) Kai   nggae   ine   mere   ghi
    3SG. look.for aunt big   3SG.LIG
    'He is looking for his aunt' (Lit. He is looks for aunt of him)

(32) Kau seka rhima ghu   ne   piso
    2SG. stab hand 2SG.LIG with knife
    'You stabbed your hand with a knife'

(33) Ja'o ka koro   mbiraka dhu   tuka   jo   ro
    1SG. eat vegetables.spicy too.many until   stomach 1SG.LIG   hurt
    'I ate many spicy vegetables until my stomach hurt'

In (31) the anaphor of *ghi* is *kai.* In (32) the anaphor of *ghu* is *kau.* In (33) the anaphor of *jo* is *ja'o.* As I mentioned in §4.2, the anaphor may not be clear from a single sentence, but may be clear in the discourse as in (34).

Speaker 1:

(34) a. Q1: Kai   ana ko   sai?
           3SG. child POSS   who
           'Whose child is this?' (Lit. He is child of who?)

    b. Q2: Ine-baba   ghi   ngara ghi   sai ?
           mother-father 3SG.LIG name   3SG.LIG who
           'What are his parents names?' (Lit. Parents of him name of them is what?)

Speaker 2:

    c. A1: Kai ngara   ghi   Rhowo.
           3SG. name   3SG.LIG R.
           'His name is Rhowo' (?Lit. He name of him is Rhowo)

    d. A2: Ine   ghi   Whoro Gadi, baba   ghi   Kerhi Djou
           mother 3SG.LIG W.   G.   father   3SG.LIG K.   D.
           'His mother is Whoro Gadi. His father is Kerhi Djou'
           (Lit. Mother of him is Whoro Gadi. Father of him is Kerhi Djou)

    This short exchange outlines the nature of *ghi* in discourse. In (34a), the first *ghi* refers to the anaphor *kai* '3SG.' in Question 1. The second *ghi* in (34b) refers to the *ine-baba* 'parents'[4]. Every *ghi* in the answer refers to the *kai* '3SG'.

    Even in this exchange, the status of adnominal ligatures is not completely clear and the scope of adnominal ligature is still not clear. However, there are certain instances in which the adnominal ligatures *jo, ghu* and *ghi* are ungrammatical. These examples provide evidence that these adnominal ligatures act as heads in the DP. In all of the examples of *ghi,* it can never co-occur with the possessive particle *ko'o.* This is to say that (35) through (37) are ungrammatical.

(35) *rako ko   ghi
   dog POSS 3SG.LIG
    'his dog'

---

[4]   Since there is no adnominal ligature for 3PL. e*be,* the use of *ghi* can either mean that the *ine-baba* is considered singular in this situation or that the *ghi* can be used for singular and plural forms of 3rd person.

(36) *rako ko   ghu
    dog POSS   2SG.LIG
    'your dog'

(37)*rako ko   jo
    dog POSS 1SG.LIG
    'my dog'

It is clear from the examples above that the *ghi* in (35), the *ghu* in (36), and the *jo* in (37) are heads of the DP and do not allow the *ko* because the head position is already filled. Therefore, I propose the structure of the adnominal ligature DP in (38). D is filled by the adnominal ligature, while the SPEC,DP is empty.

(38)

```
            DP
           /  \
         D'
        /  \
      NP     D
      /\    jo/ghu/ghi
     /__\
    PSSD
```
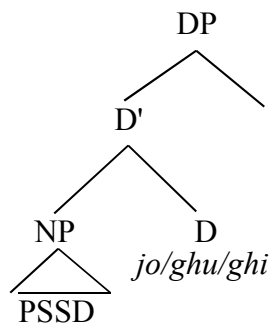
7. Conclusion

In this paper, I have provided a description of Ende predicative possession (§ 3). I gave examples of null copula construction (§3.1) and *rhatu* constructions (§ 3.2). I also provided a description for Ende attributive possession (§4). I gave examples of ligature (ko'o) and juxtaposed possession (§4.1) as well as adnominal ligature possession (§ 4.2). In §5, I looked at the DP structure from Abney (1987) and then looked at the structure of Juxtaposed (§5.1) and Ligature (*ko'o*) Possession (§5.2-5.3). I provided evidence from Szabolcsi (1994) for the parallelisms of the CP and DP in (§6-6.1). In §6.2-6.3, I argued that the adnominal ligature structure is essentially the same as the juxtaposed possessive structure. I now turn to possibilities for future research.

8. Future Research

In the following section, I will look at possibilities for future research. I will look at Nguyen's (2004) structure of the Vietnamese NP as well as his typological analysis of Southeast Asian Nominal Phrases. I, then, look at theoretical problems with movement within the Ende DP.

8.1. Nguyen (2004): The Structure of the Vietnamese NP

Nguyen (2004) claims for an extended structure of the Vietnamese NP that is based on the following order and headed by the DP.

Figure 1. Extended structure of the Vietnamese NP
[DP [DemP [NumP [CLP [NP]]]]

Nguyen (2004) provides three intermediate phrases between the NP and the DP in Vietnamese

for various reasons. For example, because Vietnamese uses definite articles alongside demonstrative (Art-NP-Dem), he argues that demonstratives are heads. He also uses the SPEC positions of these phrases as landing sites for various elements. For the DemP, he argues there is obligatory movement from the extended nominal phrase to the Spec,DemP. He uses movement in the DP to allow an underlyingly right-branching DP under the Antisymmetry Approach (Kayne 1994).

In the following sections, I will look at some of Nguyen's approaches as well as his typological overview. In future research, I would like to look at how Ende adnominal possessive structures could be underlyingly right branching. In the following sections, I will not argue for the intermediate phrases, DemP and CLP. These phrases are not necessary present in possessive structures.

8.2. Nguyen (2004): Typological Overview

Nguyen (2004) provides four nominal word order patterns in Southeast Asian Languages in Table 1.

Table 1. Nominal word order in Southeast Asian languages

Type 1:	Dem Num CL N A	Dem [Num CL [NP]]
Type 2:	Dem N A Num CL	Dem [[NP] Num CL]
Type 3	Num CL N A Dem	[Num CL [NP]] Dem
Type 4:	N A Num CL Dem	[[NP] Num CL] Dem

Indonesian and Vietnamese are Type 3, while Ende and Keo are Type 4[5]. The rest of the analysis will focus on Type 4 Noun Phrases.
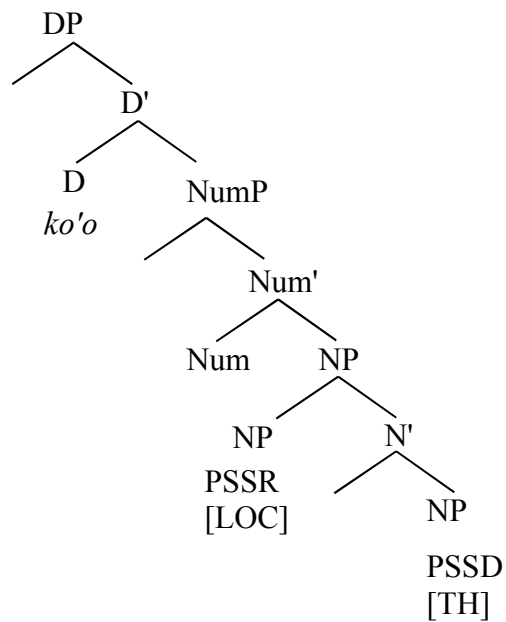
8.3. Nguyen's (2004) Analysis of Type 4 Languages

Nguyen (2004) argues that Type 4 languages have the same obligatory XP movement he claimed for the other three types of movement in (39).

(39) I. The NP raises to SPEC,NumP
      II. The whole NumP to Spec, DemP.

Using movement, Nguyen's (2004) analysis is more consistent in regards to branching direction. Furthermore, it provides a nice parallel structure for the CP and the DP. I assume that the underlying structure of the Ende DP is in (40). In this situation the NP and VP have the same underlying structure POSSESSOR precedes POSSESSED. This is not a problem for Nguyen (2004) because he claims that the POSSESSED POSSESSOR relationship is in the Prepositional Phrase. I also adopt a structure more closely related to Ritter (1991) because I have not evidence for a separate Demonstrative Phrase (DemP).

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[5]   The classifier in Keo occurs before the numeral, not after the numeral (Baird 2002). Since Keo only has classifiers for numerals we will analyze everything else in these clauses.

(40)

```
                    DP
                   /  \
                      D'
                     /  \
                    D    NumP
                  ko'o    /  \
                        Num'
                        /  \
                      Num   NP
                           /  \
                          NP    N'
                         PSSR  /  \
                         [LOC]   NP
                                PSSD
                                [TH]
```

However, Nguyen (2004) does not provide a possessive structure similar to Ende because Vietnamese attributive possession is prepositional. To be able to derive the surface structure in Ende possession (POSSESSED POSSESSOR), a phrase will need to pass over a phrase, thus violating the locality principle. Because of this theoretical problem, I am unable to provide a right branching structure for the Ende DP. In future research, I seek to find an analysis that allows for a surface structure for (40).

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