TWO ATTRIBUTIVE POSSESSIVE CONSTRUCTIONS IN PAGU:
THE DOUBLE AND SINGLE MARKING

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Abstract
This paper discusses two different attributive possessive constructions in Pagu, a West Papuan language spoken in Halmahera. Syntactically, the two pose complex relations between the possessor (PSR) and possessee (PSE). Morphologically, they can be categorized into a double and single marking. Semantically, the former construction allows only human possessor, while the latter both non-human and human – with a restricted use for human on the core kinship relations only. Other than discussing the features of the PSR and PSE, this research also aims to explicate the morphosyntactic natures of the constructions under a theoretical framework, namely Role and Reference Grammar’s Layered Structure of the Noun Phrase. It also helps us see the functions of each possessive marker and the relation between the PSR and PSE. The paper also discusses the definiteness of the PSR or PSE in each construction, which I argue result from the familiarity of both the PSR-PSE after being introduced in the discourse. It also allows either the PSR or the PSE to occur alone. The data were taken from several interviews and elicitations where the informants were asked to judge the grammaticality of certain attributive possessive examples involving the word order and the absence/appearance of the possessive elements (PSR, PSE and possessive markers).

Keywords: possessive construction, definiteness, familiarity, human possessor.

Abstrak

Kata kunci: konstruksi kepemilikan, definiteness, familiarity, human possessor
INTRODUCTION

Pagu is a non-Austronesian (Papuan) language spoken in the southeastern end of the northwest peninsula of the Halmahera Island, eastern Indonesia (see Figure 1 below). It is grouped together with nine other languages as a sub-family of the West Papuan family, North Halmaheran family (Figure 2) adapted from Voorhoeve 1983:19.

Figure 1. Indonesian map with an arrow that points to the Pagu area

Figure 2. The North Halmaheran Languages

Pagu and six other languages, including Galela, Loloda, Tobaru, Modole, Tobelo and Sahu are spoken in the Northern part of the Island (Mainland group). The three others i.e., West Makian, Ternate and Tidore on the other hand, are spoken in islands to the west of Halmahera.

Possessive constructions in the language family have been discussed by different researchers in their respective studied language i.e. Tobelo (Holton, 2003), Ternate (Hayami-Allen, 2001), Pagu (Wimbish, 1991), Tidore (van Staden, 2000) and Pagu (Perangin-Angin 2018). While most of them mostly discuss the word order and possessive markers in nominal/attributive possessive, the last two mentioned above, offer more in-depth discussions namely that they cover both attributive and predicative possessive, the different types of relationship between the possessor and possessee (alienable vs inalienable), possessive-like constructions, different types of attributive and predicative constructions, etc.

Typologically, there also has been a study on attributive possessive constructions in this language family among other languages of Wallacea Austronesian and Non-Austronesian languages that occupy the Papuan Head, Halmahera, Sumba, Alor-Pantar, Timor, Buru and Seram.
(Schapper and Gasser 2023). The researchers focus on the comparison among the word order, the position and function of possessive markers, alienable vs inalienable possessive, and other functions of possessive markers.

In this paper, I will focus on attributive possessive constructions (hence APC) in Pagu. In the world typological perspective following Aikhenvald (2013), APC can be categorized into five: (A) word order, (B) marking on possessor, (C) marking on possessee, (D) marking on both possessor and possessee and (E) using an independent marker. Following all characteristics of each given categories, Pagu APCs can be categorized into type D and E. Each of the two types is morpho-syntactically complex and worth a thorough discussion: while the D type has two different markers (a particle on the possessor and a cross-referencing pronoun prefix on the possessee), the E type has a marker that has a dual function i.e., as a related noun marker and a definite marker. Moreover, pragmatically each of the markers makes either of the constructions able to produce a single NP to occur alone i.e., a possessor or a possessee only once the relationship has been determined in the discourse.

Semantically, the relations between the possessor (PSR) and the possessee (PSE) also differ among the two. While the D type allows a human possessor only, the E type selects a non-human with an exception on the core kinship relations namely those that are considered (specific to the Pagu culture) as ‘part of each other (in the family)’ such as mother-son relationship (part of each other) but not among cousins (not part of each other). Also following Aikhenvald (2013:3) the PSR-PSE relationship of the two constructions can be classified as the following: type E follows “whole-part relations” that exclude human body parts and yet include special kinship relations, and type D follows “ownership of properties”, “body parts” as well as “(all) kinship relations”.

In this paper, I call the D type double marking APC and the E type single marking APC, due to the number of possessive marker occurrences in the construction. Each of them is exemplified by (1) and (2) below respectively.

(1) to Tiliₚₚ awiₚₚ-buuku
PSR.M Tili 3MS.POSS-book
‘Tili’s book’

(2) o namo ma you
NRNM chicken RNM leg
‘a/the chicken’s leg’

The double marking APC is exemplified by (1), where the PSR Tili is preceded by the possessor marker to and the PSE buuku ‘book’ is attached by a Possessive Pronoun Prefix (PPP) awi- that cross-references with the PSR (marked with the (ₚ) coindexation. The marking system on the PSE is parallel to the Pagu clause structure because it is also an instance of a head-marking (in the sense of Nichols 1986) where its head predicate (the possessee) is compulsorily marked by a pronoun prefix that cross-references with the subject (the possessor) (Perangin-Angin 2018).

The single marking APC on the other hand, occurs with the particle ma (2). It relates both the possessor you ‘leg’ and the possessed namo ‘chicken’ to have a possessive relation. When the relationship has been set in the discourse, each of the them (either PSR or PSE) can stand alone whenever preceded by ma. Because of this relationship too, the NP is always interpreted as definite (see for instance Barker 2000). Following Holton’s (2003) analysis on the ma particle in NPs in Tobelo, I call it Related-Noun Marker (RNM) and the o particle Non-Related Noun Marker.
(NRNM) because the latter just marks a newly introduced noun. See (3) that exemplifies a single NP with *ma* with a possessive as well as definite interpretation.

(3a)  
*ma namo*

RNM  chicken  
‘the chicken’s’  
(referring to its legs)

(3b)  
*ma you*

RNM  leg  
‘the legs’  
(referring to the chicken’s)

Both (3a) and (3b) are derived from (2) above. Each of them is preceded by *ma*. In (3a), the PSR *namo* ‘chicken’ is preceded by *ma* (that replaces *o* in the original construction as in (2)) in order to retain its relationship with the PSE *you* ‘leg’. Thus, ‘the chicken’s’ can only refer to ‘the legs’. The PSE *you* ‘leg’ in (3b) as well can only refer to the PSR *namo* ‘chicken’.

Likewise, either the PSR or the PSE of the double marking APCs can also stand alone in an NP when their relationship has been established in the discourse that *Tili* is the owner and *buuku* ‘book’ is the possessed, where *awi-* is a PPP that refers (agree in number and gender) to the owner. See (4).

(4a)  
*to Tili*

PSR.M  Tili  
‘Tili’s’  
(referring to his book)

(4b)  
*awi-buuku*

3MS.POSS-book  
‘his book’

Both (4a) and (4b) result from (1). In (4a), the possessor *Tili* preceded by the possessor marker *to* can only mean ‘Tili’s’ (where the possessed noun can only be ‘the book’). This is because the PSR-PSE relationship has been introduced in (1). With the same reason, the PSE *buuku* in (4b) that is preceded by the PPP *awi-* can only refer to the PSR *Tili*.

The word order of the two APCs is the same, where the PSR precedes the PSE. Table 1 below outlines the word order and the types of the possessors of the two constructions.

<table>
<thead>
<tr>
<th>Construction type</th>
<th>Possessive Word Order</th>
<th>Type of possessor</th>
</tr>
</thead>
<tbody>
<tr>
<td>Double marking</td>
<td><em>TO</em> PSR PPP-PSE</td>
<td>Human PSR only</td>
</tr>
<tr>
<td>Single marking</td>
<td>PSR <em>MA</em> PSE</td>
<td>Human and non-human PSR</td>
</tr>
</tbody>
</table>

In the single NP APC on the other hand, the NP must occur with a Possessive Marker: either *to*, *ma* or a PPP. Table 2 below outlines the two different Single NP APCs that are derived from the two APCs stated above.
This paper aims to discuss four linguistic issues: i.e. (i) different relationships between the PSRs and the PSEs, (ii) different types of PSRs, (iii) the definiteness of NP after being introduced as a PSR or PSE in the discourse, and (iv) the syntactic functions of the nominal particles o, ma, to and the PPPs.

THEORETICAL BASIS

In this paper, I make use of the Role and Reference Grammar’s (RRG) the Layered Structure of the Noun Phrase (LSNP) as the framework (Van Valin & LaPolla 1997 and Van Valin 2005). This will help account for the syntactical phenomena of the two constructions. Both constructions have a similar structure like a sentence namely that a PPP functions like a pronoun prefix in the predicative sentence because it also cross-references with the possessor just like the subject and the ma nominal particle functions like an operator (definite marker) and also as a linker (related-noun marker).

Taking this framework will also allow a consecutive discussion on the predicative possessive constructions in Pagu in the future. Other than LSNP, Role and Reference Grammar (RRG) also offers Layered Structure of Clause (LSC). Both are based from the same principles of relationship between constituents that in the core structure any predicate must have an argument. When a subject in a clause is the argument of the predicate, in NP as well the possessor can be the argument of the possessee. In Pagu, this principle morpho-syntactically is supported because either the possessee or the predicate is obligatorily marked by a cross-referencing pronoun prefix. RRG proposes that the layered structure is a universal feature of NPs and sentences across languages. This means all languages, regardless of their word order or other syntactic features, can be analyzed using this layered approach.

Both layered structure of the NP and Sentence have two main parts: Constituent and Grammatical projection. The Constituent Projection focuses on the core meaning of the NP or Sentence. It consists of a nucleus containing the head word (Noun in NP; and Verb in Sentence) and Core Arguments that specify the modifier such as the possessor in NP and subject in Sentence. Grammatical projection on the other hand, deals with grammatical functions and other modifiers. It includes a Periphery surrounding the constituent projection and can contain elements like articles, determiners, adjectives, adverbs, and prepositional phrases.

The layered structure allows for a clear distinction between the core meaning elements (Nucleus and Core Arguments) and the grammatical modifications (Periphery). In the NP attributive possessive construction in Pagu, both the double and single marking, the head PSE should project inside the CORE (and Nucleus) whereas the PSR as periphery. Its flexible nature of the Core and Periphery also allows the different possible orders of the PSR and PSE.
RESEARCH METHOD

This paper is an elaboration of the two types APCs and the single NP APCs, discussed in chapter four “Nominal Structure” of my PhD dissertation “A Descriptive Grammar of the Pagu Language” accomplished at the University of Hong Kong (Perangin-Angin 2018). The data used in this paper is thus the same from the dissertation. It is comprised of both natural data transcribed recordings of natural conversations in the ELAN annotation program (Wittenburg et.al. 2006). Additionally, the data were gained also from interviews and elicitations conducted three times from 2014 to 2017 with four different native speakers, the elders whose language proficiency is recommended by the community leader. The judgments from different speakers ensure whether any given examples including the attributive possessive constructions with various word orders as well as the short forms (the appearance of the PSR or PSE only) are all ‘grammatically correct’.

For example, in the double marking construction the attributive possessive ‘Tili’s house’, there are four different ways to express it: (a) double possessor: o Tili to una awi-wola (NRNM Tili PSR.M 3SM 3SSM.POSS-house) (b) single possessor: o Tili awi-wola (NRNM Tili 3SSM.POSS-house), (c) possessee only: awi-wola (3SSM.POSS-house), and (d) possessor only: to Tili. The participants were asked several questions regarding the word order and the appearances of the articles in these four ways of expressions, such as (i) whether the word order is strict or not i.e. is it possible to say to una o Tili awi-wola or awi-wola to una o Tili, and (ii) whether the articles o and to are compulsory i.e. is it possible to say Tili awi-wola or awi-wola una (without the occurrence of o or to, etc).

The participants were given several APCs of the double and single marking forms to give the grammaticality of the different word order and the presence/absence of the possessive elements i.e. o, to, ma and PPPs. The single marking clearly does not give many options for different word order, as it only allows three different word order: PSR MA PSE, MA PSE or MA PSR. The double marking in contrast, is much more complex because it allows different expressions shown above. The summary of the possible word order of the double marking construction is provided in Table 5.

DISCUSSION

This section is divided into two subsections where each will discuss an APC type, the double and single marked construction respectively. Each of the subsection will also elaborate into different discussion namely its syntactic, morphological and semantic features as well as structures within the RRG framework.

The double marking attributive possessive construction

The characteristics of the PSR and PSE of the double marking attributive possessive constructions (hence DM-APC) differ: (i) the PSR must be human, whereas (ii) the PSE can be either human or non-human.

The PPPs that obligatorily attaches to the PSE are categorized by the number (singular vs plural), gender (female and male), clusivity (exclusive vs inclusive) and person (first, second and third persons). See the PPP inventory in Table 3 below.
The PSE of this type can have: (i) ownership of properties (**buuku modidi** ‘two books’) (5a) (ii) body parts **giama modidi** ‘two hands’ (5b) and (iii) kinship relation **ngoaka modidi** ‘two children’ (5c).

(5a)  
\[\text{to ngeweka gena}_p \ami_p \text{buuku modidi} \]  
\[\text{PSR.M woman that 3SF.POSS-book two} \]  
‘that woman’s two books’  
(non-human alienable PSE)

(5b)  
\[\text{to una}_p \awi_p \text{giama odidi} \]  
\[\text{PSR.M 3SM 3SM.POSS-hand two} \]  
‘his two hands’  
(non-human inalienable/body part PSE)

(5c)  
\[\text{to muna}_p \ami_p \text{ngoaka modidi} \]  
\[\text{PSR.M 3SF 3SF.POSS-child two} \]  
‘her two children’  
(human inalienable/kinship PSE)

The PSR on the other hand, can be in the form of a common noun such as **ngeweka gena** ‘that woman’ like (5a), a pronoun **una** ‘he’ and **muna** ‘she’ (5b and 5c respectively) and also a proper (personal) noun as exemplified by (6) below. In (6), the PSR is a (proper noun) personal name **Tili** that is the reference of the possessor.

(6)  
\[\text{to Tili}_p \awi_p \text{lako modidi} \]  
\[\text{PSR.M Tili 3SSM.POSS-eye two} \]  
‘Tili’s two eyes’

In addition to these forms of PSR however, it is also possible to have double possessors in the construction, where the possessor pronoun cooccurs with its reference. Literally their translation can become something like ‘**Tili** his house’ or ‘**Tri** her book’ (see example (11) below).

The DM-APC and one-place predicate clauses

Morpho-syntactically, there is a similarity between the DM-APC and intransitives/one-place predicate clauses in Pagu, i.e., both must have a cross-referencing pronoun prefix. The subject of the predicate must be cross-referenced with a pronoun prefix that attaches to the predicate. See (7) below.
The verb of (7a) and (7b) are both a one-place predicate; where the former is an active *leal* ‘run’ the latter a stative *barija* ‘smart’. Each of the predicate is obligatorily marked by a pronoun prefix *wo-* and *mo-* that cross-reference with each of their subject i.e., *o Yusak* ‘Yusak’ and *o ngo Tri* ‘Tri’ respectively.

In addition, similar to the Single APC (the head-marked one like (3b)), these predicative clauses also allow the predicate to occur alone (without the occurrence of the subject) like in (8) below.

(8a)  
wo-leal  
3SSM-run  
‘he ran.’ (where *wo-* ‘he’ can only refer to ‘Yusak’ the subject of (7a))

(8b)  
mo-barija  
3SSF-smart  
‘she is smart.’ (where *mo-* ‘she’ can only refer to ‘Tri’ the subject of (7b))

Unlike the Single APC however, the subject of the predicative clauses cannot occur alone while still keeping its relationship with the predicate.

The single NPs of the DM-APC

Either the PSR or the PSE of the DM-APC can occur alone when their relationship has been established in the discourse. Let me first discuss the PSE occurrence in the single NP construction. Like the predicate of the clause in (8) which can occur without the subject, the PSE can also occur without the PSR as it is attached by a pronoun prefix. See (9) below. Each of the single NPs below (9a), (9b) and (9c) is derived from omitting the PSR of the DM-APC in (5) above i.e., *ngeweka gena* in (5a) and *una* (5b) and *Tili* (6) respectively.

(9a)  
*ami-buaku*  
3SSF.POSS-book  
‘her two books’

(9b)  
*awi-giama*  
3SSM.POSS-hand  
‘his two hands’

(9c)  
*awi-lako*  
3SSM.POSS-eye  
‘his two eyes’

Each of the PSEs above cross-references with a certain PSR, as it is attached by a PPP *ai-* (9a) and *awi-* (9b) and (9c). Each PSE can only refer to the PSR *ngeweka gena* ‘that woman’ (5a)
and *una* ‘he’ (5b) and *Tili* ‘Tili’ (6) respectively because their possessive relationship has been established in the discourse.

Now, let us see the construction where PSR that can occur alone in the single NP. When the PSR occurs alone, it must be preceded by *to* in order to retain its relationship with a specific PSE. Thus, for the APCs like in (5a), (5b) and (6) above, the PSR must occur with *to* as in (10a), (10b) and (10c) respectively.

(10a)  
*to* (o) *ngeweka gena*  
PSR.M NRNM *woman* that  
‘that woman’s’

(10b)  
*to* (o) *una*  
PSR.M NRNM 3SM  
‘his’

(10c)  
*to* (o) *Tili*  
PSR.M NRNM *Tili*  
‘Tili’s’

The PSR *ngeweka gena* ‘that woman’ (10a), *una* (10b) and *Tili* (10c) must be preceded by *to*, whereas the particle *o* (those in the double brackets) is optional. The nominal particle *to* functions as a possessor marker (hence PSR.M) i.e., to mark the entity it precedes as a possessor of specific nouns (*buuku modidi* ‘two books’, *giama modidi* ‘two hands’ and *lako modidi* ‘two eyes’ respectively).

In Pagu, *to* + a (human) pronoun results a possessive pronoun (see 1 – 8 in Table 4 below), and *to* + a personal name yields a possessive genitive, equivalent to the English ‘s (9 – 11).

**Table 4. The non-possessive and possessive pronouns in Pagu**

<table>
<thead>
<tr>
<th>Non-possessive entities</th>
<th>Possessive entities</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 <em>ngoi</em> ‘I/me’</td>
<td><em>to ngoi</em> ‘mine’</td>
</tr>
<tr>
<td>2 <em>ngona</em> ‘you’ (single)</td>
<td><em>to ngona</em> ‘yours’ (single)</td>
</tr>
<tr>
<td>3 <em>una</em> ‘he/him’</td>
<td><em>to una</em> ‘his’</td>
</tr>
<tr>
<td>4 <em>muna</em> ‘she/her’</td>
<td><em>to muna</em> ‘hers’</td>
</tr>
<tr>
<td>5 <em>ngone</em> ‘we/us’ (inclusive)</td>
<td><em>to ngone</em> ‘ours’ (inclusive)</td>
</tr>
<tr>
<td>6 <em>ngomi</em> ‘we/us’ (exclusive)</td>
<td><em>to ngomi</em> ‘ours’ (exclusive)</td>
</tr>
<tr>
<td>7 <em>ngini</em> ‘they/them’</td>
<td><em>to ngini</em> ‘theirs’</td>
</tr>
<tr>
<td>8 <em>nagoona</em> ‘who/whom’</td>
<td><em>to nagoona</em> ‘whose’</td>
</tr>
<tr>
<td>9 o Yusak ‘Yusak’</td>
<td><em>to Yusak</em> ‘Yusak’s’</td>
</tr>
<tr>
<td>10 o ngo Maria ‘Maria’</td>
<td><em>to Maria</em> ‘Maria’s’</td>
</tr>
<tr>
<td>11 o Yusak de o ngo Maria ‘Yusak and Maria’</td>
<td>*to Yusak de (to) Maria ‘Yusak and Maria’s’</td>
</tr>
</tbody>
</table>

The pronouns and personal names in the left column in Table 4 above are all non-possessive (they are not a possessor of a specific NP). Those in 1 to 8 in the table above are the seven different human pronouns in the Pagu inventory, including the question pronoun. Each of them can become a possessive pronoun including a possessive question pronoun (see the right column) when it is preceded by the particle *to*. Additionally, the non-possessive proper noun i.e., a male person 9, female 10 and plural 11 also can become a possessor when preceded by *to*. 
The word order in complete and short form of DM-APC

We have seen in the examples (5) and (6) above that the PSR of the DM-APC can be represented by either a human pronoun or a personal name reference. This type of construction can also host a double possessor, where both the pronoun and its reference cooccur. This is exemplified by (11) below (the PSRs are boldfaced and the PSEs underlined).

(11a)   o Tili₁ to una₁  awi₃-wola
         NRNM Tili   PSR.M 3SM  3SSM.POSS-house
   ‘Tili’s house’
Lit. ‘Tili’s his house’

(11b)   o ngo Tri₁ to muna₁  ami₅-buuku
         NRNM FM T  PSR.M 3SF  3SSF.POSS-book
   ‘Tri’s book’
Lit. ‘Tri’s her her book’

Each of the two possessive NPs in (11), has a double possessor, i.e., the pronoun to una and its reference o Tili (11a) and the pronoun to muna and its reference o ngo Tri (11b). The PPP that attaches to the PSE i.e., awi- (11a) and ami- (11b) cross-references with each of them.

Let us consider the DM-APC with the double possessor like in (11) as the maximum complete form, as it includes both the possessor pronoun and the possessor reference as well as the possessed noun. Such a complete form in (11) can result from answering such questions in (12) below. The possessive NP in (11a) and (11b) are a possible answer for the possessive question in (12).

(12)   to nagoona  manga-wola/buuku  gena?
         PSR.M who  3PL.POSS-house/book  that
   ‘whose house/book is that?’

As long as the word order is concerned, the maximum complete DM-APC like in (12) allows a free order. For instance, (11A) above can have five different possible orders as in (13) below.

(13a)   to una o Tili  awi₃-wola
         PSR.M 3SM NRNM Tili  3SSM.POSS-house
   lit. ‘his Tili his-house’

(13b)   awi₃-wola o Tili to una
         NRNM Tili  PSR.M 3SM  3SSM.POSS-house
   lit. ‘his-house Tili his’

(13c)   awi₃-wola to una o Tili
         PSR.M 3SM NRNM Tili  3SSM.POSS-house
   lit. ‘his-house his Tili’

(13d)   o Tili  awi₃-wola to una
         PSR.M 3SM NRNM Tili  3SSM.POSS-house
   lit. ‘Tili his-house his’

(13e)   to una awi₃-wola o Tili
         PSR.M 3SM NRNM Tili  3SSM.POSS-house
   lit. ‘his his-house Tili’

As we can see in (13): (i) the possessor pronoun to una can precede or follow the reference o Tili, while the PSE occurs in the final position (see (11a) and (13a)), (ii) the reference or the pronoun can precede or follow each other while the PSE is in the initial position (see (13b) and (13c)), and (iii) both the reference and the pronoun can split either in the final or initial position while the PSE occurs in the middle (see (13d) and (13e)).

Similarly, the DM-APC with a single possessor (either the pronoun or the reference) allows a free word order as well. The DM-APC in (11a) above can have a single possessor like in (14) or (15).
Those in (14), the PSR is represented by the reference *o Tili*, whereas in (15) by the pronoun *to una*. While in (14a) and (15a) the possessor is in the initial position, those in (14b) and (15b) is in the final position. Other than the *complete* forms of DM-APC like in (11) above, as we have seen in the previous subsection, Pagu also allows a *short* form, where either the PSE or the PSR occurs alone. Example (11A) above can have short forms like in (16) and (17).

\[(16)\] *awi-wola* lit. ‘his-house’ (‘his’ refers to Tili)

\[(17a)\] *to una* lit. ‘his’ (‘his (Tili’s) house’)

\[(17b)\] *to (o) Tili* lit. ‘Tili’s’ (‘Tili’s house’)

Example (16) exemplifies a short form of the DM-APC where the PSE *awi-wola* occurs alone. Example (17) on the other hand, exemplifies a short form where the PSR occurs alone; (17A) represent the possessor pronoun *to una*, and (17B) the reference *to o Tili*.

Finally, it is also possible where a double possessor to occur alone in the short DM-APC as exemplified by (18) below (the short forms of (11a) above). While in (18a) the reference *o Tili* precedes the pronoun *to una*, in (18b) it is vice versa.

\[(18a)\] *o Tili to una* lit. ‘Tili his (house)’

\[(18b)\] *to una o Tili* lit. ‘his (house) Tili’

Combining all the possible word orders of all the answers to the possessive question in (12A) above in either the complete or short forms (from (11a) and (13) to (18)), we have in total of fifteen different word orders or occurrences. This is outlined in Table 5 (the PSRs (either the reference or the pronoun) are *boldfaced* while the PSEs are not).

| Table 5. Fifteen possible word orders in both complete and short DM-APC |
|---|---|---|---|---|
| **Complete form Double possessor** | PSR.REF | PSR.PRO | PSE | (11a) |
| PSR.PRO | PSR.REF | PSE | (13a) |
| PSE | PSR.REF | PSR.PRO | (13b) |
| PSR.REF | PSE | PSR.PRO | (13d) |
| PSR.PRO | PSE | PSR.REF | (13e) |
| **Complete form Single possessor** | PSR.REF | PSE | (14a) |
| PSE | PSR.PRO | (14b) |
| PSR.PRO | PSE | (15a) |
| PSE | PSR.REF | (15b) |
| **Short form Double possessor** | PSR.REF | PSR.PRO | (18a) |
| PSR.PRO | PSR.REF | (18b) |
| **Short form Single possessor** | PSE | (16) |
| PSR.PRO | (17a) |
| PSR.REF | (17b) |
The structure of the DM-APC

This section is divided into two i.e., *complete* (the occurrence of both the PSR and PSE), and *short* DM-APC (the occurrence of either the PSR or the PSE only).

The structure of the complete form of DM-APC

Before discussing the structure of the DM-APC including the function of the particle *to* and the PPPs in the RRG’s Layered Structure of the NPs (LSNP), let’s review the RRG’s Layered Structure of the Clause (LSC) because both DM-APC and the clause share a similarity namely the head-marked feature.

Within the RRG framework, the LSNP resembles the LSC in that it also has the ‘predicate argument’ relationship. Let us first see the LSC of a Pagu clause (represented by the examples (7a) and (8a)) in figure 3, by (19) and (20)).

![Figure 3. LSC of a Pagu clause with a one-place predicate](image)

The predicate of the clause in (7a) above (repeated in (19)) is *leal* ‘run’ and it has one argument (the subject) *o Yusak*. As shown in (19) the predicate projects within CORE. It consists of the pronoun prefix *wo-* that sits in the ARG (considered as the argument within CORE) and the predicate itself considered as the nucleus (NUC) of the clause. The subject argument of the predicate *o Yusak* sits in the Subject NP (S NP). It functions as the sister of CORE where both project within CLAUSE. When speakers are familiar with the subject NP it can be omitted, so we can have (20). The only difference with (19) is that S NP is absent – which is possible because the subject is represented by the pronoun prefix *wo-* in the ARG.

The Pagu DM-APC with a double possessor like in (11A) above can have the LSNP as in figure 4 below repeated as (21).
In the RRG, the PSR-PSE relationship of both head-marked and dependent-marked APC can be treated like the subject and predicate of the clause (Van Valin 2005:23-30). The headmarked NP construction in particular, such as the Pagu DM-APC in (21) can have an analogous construction where the PSE wola ‘house’ and the cross-referencing prefix awi- appear as sister within CORE. It cross-references with the possessor in the NP\textsubscript{poss} that functions as the argument of the predicate PSE. Therefore, it is sister of CORE. The NP\textsubscript{poss} is a complex NP that consists of the NP reference (NP\textsubscript{ref}) o Tili, and the NP pronoun (NP\textsubscript{pro}) to una, both of which the PPP cross-references to as a single entity.

The order of the double possessor is free in the complete DM-APC. When the double PSR precede the PSE like in (21) above, the PSR reference can either precede or follow the PSR pronoun. In the latter case, in the structure, the NP\textsubscript{ref} node can just switch position with the NP\textsubscript{pro}.

The double PSR can also occur on the right hand of the predicate (exemplified by (13b) and (13c) above). This structure is shown in Figure 5 repeated as (22). The PSR reference can follow the PSR pronoun or vice versa. So, both the NP\textsubscript{ref} and NP\textsubscript{pro} can switch position too.

Finally, based on the examples in (12) above, we can also have two more different word orders in the maximum complete DM-APC in where the PSE is spanned by both the PSR pronoun and PSR reference (one is on the left and the other on the right) (13d) and (13e). The structure of this position can be represented by figure 6 below (23), i.e., the PSR reference o Tili is in the initial, the PSR pronoun to una is in final position, or vice versa.
In Pagu, spanning double possessors in the DM-APC is possible as long as either the PSR reference or the pronoun is not mentioned twice. If it is, the second one will be considered to belong to a different NP. For example, [NP o Tili awi-wola to una] [NP to una] ‘(Tili) his house, his’ or [NP to una awi-wola o Tili] [NP o Tili] ‘(his) Tili’s house, Tili’s, the second to una or o Tili must belong to a separate NP. It suggests that as long as each of the PSR reference and the pronoun is mentioned once (even though in a different position) both belong to the same NP. I propose the two shadowed NP_{POSS} nodes (as shown by the dashed lines), that show that each of them can ONLY consist of either the PSR reference or the pronoun that cross-references (shown by the arrows) with the other pronoun/reference in the other side.

The structure of the short form of DM-APC

In this section, I will discuss the structure of the DM-APC with the PSR or PSE only. Additionally, I will also discuss the function of the particle to and o in the structure. The examples of short DM-APC are represented in (16), (17) and (18) above, repeated in (24), (25) and (26) below respectively (with the glossing).

(24) awi-wola
    3SSM.POSS-house
    lit. ‘his-house’ (‘his’ refers to Tili)

(25a) to una  lit. ‘his’ (‘his (Tili’s) house’)
    PSR.M 3SM

(25b) to (o) Tili  lit. ‘Tili’s’ (‘Tili’s house’)
    PSR.M NRNM Tili

(26a) o Tili to una  lit. ‘Tili his (house)’
(26b) to una o Tili  lit. ‘his (house) Tili’

The structure of (24) and (26) are represented in Figure 7 and 8 respectively. While the former consists of the PSE only, the latter the PSR only, where both the reference and the pronoun cooccur.
The structure in Figure 7 on the left represents (24) where the PSR (both the pronoun *to una* and the reference *o Tili*) is omitted. The one in Figure 8 on the other hand, represents (26) where both the PSR reference and pronoun cooccur and the PSE (*awi-wola*) is omitted. Note that for the free order of the possessor pronoun and reference as I have discussed above (the possessor reference precedes the pronoun (26a) or vice versa (26b)) the NP_{poss} hosts two nodes with a flexible position (e.g., NP_{pro} can also appear front of NP_{ref}).

Below I will discuss the structure of DM-APC with a single possessor either the pronoun or reference (like in (25) above). Before we proceed however, let us first discuss the function of the particle *o*.

The particle *o* functions as a ‘non-related noun marker’ (NRNM), that is to mark any noun that has no possessive relationship with any other noun in the discourse (Perangin-Angin 2018). As shown by (27) below, the noun can be any types of nouns, such a pronoun *una* ‘he’, a personal name *Yakobus*, a common noun *namo* ‘chicken’ and a proper noun *Jakarta* etc.

(27)  

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NRNM 3SSM  NRNM Y  NRNM  chicken  3SSM.S-buy  
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**(He) Jacob bought the chicken in Jakarta**

The structure of each of the NPs with *o* in (27) can have the structure like Figure 9 below. Note in the structure below that, (similar to the LSC) the LSNP has operator projections, those are the mirror image of the constituent projections (that consist of NP, CORE, NUC, etc.). These projections provide slots that host operators that indicate the scope of constituents they modify in the NP.
Each of the nouns i.e., una, Yakobus, namo and Jakarta can occupy N within the NUC. The particle o on the other hand, appears as an operator, which functions to inform that the noun it precedes is a noun that is not related with any other nouns in the discourse (non-related noun marker NRNM). Its scope is NUC, namely on the noun itself.

Now, let us discuss the structure of the short DM-APC with the possessor only i.e., both the double possessor like (26a) and (26b) as well as the single possessor like (25a) and (25b) above. See figure 10 and 11 below respectively. In Figure 10, (28a) represents a double possessor NP where the reference o Tili precedes the pronoun to una, and (28b) the latter mentioned precedes the former. Figure 11 on the other hand hosts the single possessor, where (29a) represents the pronoun to una only and (29b) the reference to o Tili only.

The particle to, just like o, functions as an operator that marks the noun it precedes a PSR. It differs from o in its scope. While o takes scope over NUC, to takes a wider scope, NPPOSSR. This means that it includes both the NP reference and pronoun (both refer to the same entity possessor of the same PSE). This applies to any of the two possible orders; either the reference precedes the pronoun (28a) or vice versa (28b).

In the short DM-APC where it contains only a single possessor like in (29) below, to must occur in front of the possessor, i.e., in front of the pronoun (29a) or the reference (29b). Like in the double possessor construction to always takes the scope over NPPOSSR. When the PSR is the pronoun, to is the only operator in the construction (29a). However, when the PSR is the reference (29b) it can cooccur with o.
The single marking attributive possessive construction

The Single Marking Attributive Possessive Construction (SM-APC) has PSR MA PSE order. Unlike the DM-APC that allows a human possessor only, this construction allows a non-human possessor, with just some exception on a special possessive relationship, namely the core kinships. The PSR and PSE of this construction have the “whole-part relation” more specifically,
‘the PSE is a part of the PSR’. Consider the set of examples with a specific relation for each in (30) below.

(30a) \( o \) sikola \( ma \) buuku
\( \text{NRNM school RN M book} \)
‘the book of the school’

(30b) \( o \) ngoaka \( ma \) ela
\( \text{NRNM child RN M mother} \)
‘the mother of the child’

(30c) \( o \) namo \( ma \) you
\( \text{NRNM chicken RN M leg} \)
‘the leg of the chicken’

(30d) \( o \) bole \( ma \) soka
\( \text{NRNM banana RN M leaf} \)
‘the leaf of the banana’

(30e) \( o \) papago \( ma \) cita
\( \text{NRNM cloth RN M color} \)
‘the color of the shirt’

(30f) \( o \) igono \( ma \) sononga-ku
\( \text{NRNM coconut RN M side-downward} \)
‘the side downward from/of the coconut tree’

As exemplified by the six attributive possessive phrases in (30), all can have a whole-part relation, where each respectively has the following specific relation: (a) non-human ownership, (b) human inalienable kinship, (c) (non-human) animal body part, (d) (non-human) plant body part, (e) nature of something and (f) orientation of something.

Among the six different PSR-PSE relations, one of them allows human relationship (30b).

It is however, restricted to the core kinship relations with only four types: (i) the children/parents/children (31a), (ii) grandparents-grandchildren /grandchildren-grandparents (31b), (iii) husband-wife (31c), and (iv) among siblings (31d).

(31a) \( o \) ngoak \( ma \) eyea / \( o \) ngeweka \( ma \) ngoak
\( \text{NRNM child RN M father} \) / \( \text{NRNM woman RN M child} \)
‘the child’s father’ / ‘the woman’s child’

(31b) \( o \) ngoak \( ma \) edet / \( o \) naulu \( ma \) danong
\( \text{NRNM child RN M grandparent} \) / \( \text{NRNM man RN M grandchild} \)
‘the man’s grandchild’ / ‘the child’s grandparent’

(31c) \( o \) ngeweka \( ma \) lokat / \( o \) naulu \( ma \) ekat
\( \text{NRNM woman RN M husband} \) / \( \text{NRNM man RN M wife} \)
‘the woman’s husband’ / ‘the man’s wife’
All of them have a ‘mutual’ relationship that ‘they are part of each other’ or ‘they have each other’ within the core relationship (see figure 12 below). For example, a mother is part of her son in the core body (and vice versa), a brother is part of his sister/brother in the core body, a grandpa is part of his grandchild in the core body, and a wife is part of the husband in the core body. All of them belong to one single body, the core.

Extended kinship relationships (or any farther relationship; those that are not mentioned above) on the contrary, such as: among uncles/aunties and their nieces/nephews or vice versa (see (32a) below), or sibling in-law relationships are not possible in the SM-APC (see (32b)).

![Figure 12. The core and extended kinship relationship scheme in Pagu](image)

This specific selection of certain kinship relation in Pagu shows that possessive construction is often determined by such a specific cultural pattern. See relevant issues for example from Martuthunira’s kinship relations, a western Australian language (Dench, 2013).

The particle *ma* with a single NP

The particle *ma* can occur in front of a single NP (i.e., MA NP) where it functions like a definite marker. This definite reading of the NP I argue results from its familiarity to the speakers which
develops via two different relationships: (i) a familiar noun in the discourse and (ii) possession (through the PSR MA PSE relationship). Let us discuss the MA NP construction that is derived from its association with another noun and the possessive relationship below respectively.

The particle *ma* can occur in front of an NP when the NP is a *familiar* noun (see for instance Heim 1982 and 1983 and Schwarz 2009) to the speakers in a sense that it is associated with a specific thing in the discourse. The two examples in (33) below illustrate the function of *o* as a non-familiar and *ma* as a familiar marker respectively.

(33a) *ih, o kalacece o bebeno-ka!*

EXCL NRNM lizard NRNM wall-LOC.there

‘hey, (there is) a gecko on the wall’

(the speaker is surprised when seeing a gecko on the wall; probably he just barely sees a gecko in that house)

(33b) *ih, ma kalacece o bebeno-ka!*

EXCL RNM k.o.gecko NRNM wall-LOC.there

‘hey, (there is) the gecko on the wall’

(the speaker is surprised when seeing a particular gecko that he and also hearer(s) have seen before, e.g. known from its remarkable spots/size/color/etc.)

In the two sentences in (33) above both express a surprise as the speaker sees a noun *kalacece* ‘gecko’. The speaker’s astonishment is however different in each of the sentences, i.e. (i) ‘he saw a gecko for the first time’; so, it is preceded by the particle *o* (33a), and (ii) ‘he saw a gecko that is familiar to him’ (that is recognized through its remarkable spots/size, etc.); therefore, it is preceded by the particle *ma* (33b). Thus, the one with *o*, is a non-familiar noun in the discourse. The one with *ma* on the other hand is a familiar one that can be interpreted as a definite noun. Either the PSR or the PSE of the SM-APC can occur alone with *ma* forming MA PSR or MA PSE. It will produce a familiar hence definite NP interpretation because, both the PSE and the PSR have been introduced in the discourse.

When the relationship of the PSR and the PSE in the SM-APC has been established, either the PSR or the PSE can occur alone when it is preceded by *ma*, i.e., MA PSE, or MA PSR. Let us discuss the MA PSE structure first. All the six possessive relationships of the PSR MA PSE construction in (30) above can have a MA PSE construction as shown in (34) below.

(34a) *ma buuku*

RNM book
‘the book’

(34d) *ma soka*

RNM leaf
‘the leaf’

(34b) *ma ela*

RNM mother
‘the mother’

(34e) *ma cita*

RNM color
‘the color’

(34c) *ma you*

RNM leg
‘the leg’

(34f) *ma sononga-ku*

RNM side-downward
‘the downward way’

The PSE of each of the NPs in (34) has a possessive relationship with the PSR in the possessive construction in (30). Each of them can only relate to that specific PSR to which it has been introduced in the phrases, i.e., ‘the book (of the school)’ (34a), ‘the mother (of the child)’
(34b), ‘the leg (of the chicken)’ (34c), ‘the leaf (of the banana tree)’ (34d), ‘the color (of the shirt)’ (34e), and ‘the downward side (of the coconut tree)’ (34f). The SM-APC can also yield a MA PSR construction. Consider (35) below.

(35a) o ngoi to-tibo ma namo, ma ma ode-wa
NRNM 1SG 1SS-buy RNM chicken but RNM pig-NEG
‘I bought the chicken’s (legs), but not the pig’s (legs).’
(the speaker is telling a situation in a butcher shop)

(35b) ma Tofafen nena dai o beleul-oka
RNM Tofafen this seaward NRNM delta-DAS
‘Tofafen’s is seaward at the delta’
(a folk story about a turtle named Tofafen who just planted a banana tree near a delta. So, it refers to Tofafen’s banana).

Each of the MA PSR phrases above (those underlined), i.e., ma namo ‘the chicken’s and ma ode ‘the pig’s’ (35a) and ma Tofafen ‘Tofafen’s’ (35b) is derived from the PSR MA PSE construction. The PSE of each is known from the context given above, i.e., ‘the chicken’s legs’, the pig’s legs’ and ‘Tofafen’s bananas’. Thus, from the given context, each is derived from the following phrase in (36a, b and c) respectively.

(36a) o namo ma you
NRNM chicken RNM leg
‘a/the chicken’s leg’,

(36b) o ode ma you
NRNM pig RNM leg
‘a/the pig’s leg’

(37c) o Tofafen ma bole
NRNM Tofafen RNM banana
‘Tofafen’s banana tree’

In order for the PSR to retain its relationship with the omitted PSE the particle ma must occur in front, resulting in MA PSR order.

The structure of the SM-APC

Above, we have seen that the particle ma has a dual function. Firstly, it functions as a related noun marker that is to relate the two NPs in the SM-APC and at the same time relate one NP that occur in the construction (MA NP) to the other NP in the discourse. As a related-noun marker ma retains the possessive relationship of the NP (either the PSR or the PSE). Secondly, it functions as a definite marker because the NP it precedes is a familiar one. This familiarity can come in two ways: (i) their possessive relationship in the discourse or (ii) the NP has been noticed in advance. In the SM-APC ma always functions as both a related-noun marker and a definite marker: see figure 13 for the structure of PSR MA PSE, figure 14 for MA PSR, and figure 15 for MA PSE. In the familiar NP by contrast, ma always functions as a definite marker only (see Figure 16).

Figure 13 demonstrates the structure of SM-APC where both the PSR and PSE cooccur. In the construction, the PSE is also treated as a predicate and the PSR its argument. Therefore, both the PSR and PSE must project within COREN. Similar to the structure of the DM-APC, the
PSE you ‘leg’ also sits in NUCN (noun) like a predicate, and the PSR namo ‘chicken’ appears as its ‘argument’ sits in ARG within COREN (equivalent to the PPP that also sits in ARG).

The PSR namo ‘chicken’ is preceded by the particle o that functions as an operator. It tells us that it is not related with any other NP in the discourse. The PSE you ‘leg’ on the other hand, is preceded by ma which has dual function, (i) a related-noun marker and a definite marker. As a related-noun marker, I propose it to sit in RNM.

![Diagram of the LSNP of the SM-APC with o and ma](image)

The RNM node here is similar to CLM (Clause Linkage Marker) (Van Valin and LaPolla 1997: 470-477). The different is while CLM modifies CLAUSE, RNM modifies NP. In other words, RNM takes scope over of NP PSR. Consider (37).

(37) [NP  o namo [COREN i-lamok gena]] ma you
  NRNM chicken 3NHS-big that RNM leg
  ‘that big chicken’s legs’ or ‘the legs of that big chicken’

The PSR and PSE in (37) are the same with those in figure 13 (or in (36A) above) where ma also intervenes as an RNM. The only difference is that the PSR o namo is modified by ilamok gena. In the RRG, a modifier is always treated as a periphery (adjunct) which in the NP must appear as a COREN periphery. Because ma relates the noun and also its modifier it must take scope over NP. This relating system of ma is shown by a vertical dashed line and an arrow that points to NP. As definite marker/operator on the other hand, ma marks that any noun that it precedes is a definite one. This is marked with DEF and the dashed line and arrow. The arrow shows the scope of the operator that is the entire NP.

A piece of evidence shows that ma takes the NP scope is that the fact that it can be followed by a clause modifier that also projects within the same NP. Consider (38).
In (38) the MA PSR *ma namo* refers to the same one in (36A) (or Figure 13 and also (38)). Here it is modified by a clause *o Tili wa-tibo o pasar-oka* that still also project within the same NP. The whole clause modifier must also be considered as a periphery that modifies CORE\textsubscript{N}. Let us see now the structure of MA PSR and MA PSE in Figure 14 and 15 respectively.

We have seen previously also that a noun is marked by *ma* because it is already familiar to speakers like the one in (33b) above i.e., *ma kalacece* (RNM gecko) ‘the gecko’ or (35a) *ma namo* (RNM chicken) ‘the chicken’ and *ma ode* (RNM pig) ‘the pig’. The structure of this NP does not have RNM because the noun does not have any possessive relationship with any other NP in the discourse. It requires DEF to mark its definiteness only as shown in Figure 16 below.
Finally, the PSR in SM-APC can also be marked by *ma* when it is a familiar one such as *ma namo ma you* (RNM chicken RNM leg) ‘the legs of the chicken’ or ‘the chicken’s legs’. In this phrase, we have two instances of *ma* where the first one is a definite marker and the second one is both a related-noun marker and definite marker. The structure is shown in Figure 17 below.

**CONCLUSION**

This paper has discussed two different constructions of attributive possession in Pagu: the double marking and single marking. While in the former both the possessor and the possessee are marked, i.e., by the possessor marker *to* and a cross-referencing prefix respectively, in the latter in contrast
both are related by *ma* that functions as a related noun marker and a definite marker simultaneously. Each of the possessor and the possessee can also stand alone and yet still retain the possessive relationship due to their familiarity as constructed through introduction in the possessive constructions and marked by a corresponding possessive marker.

The two constructions select different types of possessors: while the former select human possessor only, the latter non-human possessors only but include certain type of human possessor namely the *core* kinships. The latter construction demonstrates a specific facet of the possessor-possessee relationship in the Pagu culture that is it shares the same relation despite the different type of possessor: “whole-part relationship” ('one is a part of the other').

The rest of the paper theoretically exposes the structure of the two constructions within the framework of the RRG’s Layered Structure of the Noun Phrase (LSNP). It has helped account for the similarity between the Subject-Predicate and the Possessor-Possessee relationship. The double marking APC in particular, that share similar morphological characteristic with the clause structure as a head-marked construction, has its possessee marked (just like the predicate) that cross-references with the possessor (like the subject). The structure treats the constructions in the same manner as a predicate-argument relation namely that the predicate sits in NUC together with the cross-referencing pronoun prefix within CORE. Together they take the possessor (argument) as their sister node. Analogously, the relation of the possessor and the possessee in the single marking APC should also be treated the same i.e., the possessor and the possessee are sisters within NP.

All the particles that appear in the two constructions *o*, *to*, and *ma* on the other hand should be treated as an *operator* namely that it shows a syntactic-pragmatic function of each in the construction i.e., a non-related noun marker, possessor marker and related-noun marker respectively. These operators, just like the cross-referencing pronoun prefix of the head-marked construction, pragmatically behave alike that they retain the possessor-possessee relation in the discourse allowing the possessor or the possessee to stand alone whenever preceded by a corresponding possessive marker.

**List of abbreviations**

1SG    first singular pronoun  
1SS    first singular subject  
3NHS    third non-human subject  
3PL    third plural  
3SSF    third singular subject female  
3SSM    third singular subject male  
3SF    third singular female  
3SM    third singular male  
ARG    Argument  
DAS    Direction Away from Speaker  
DEF    Definite  
EXCL    Exclamation  
FM    female person marker  
DM-APC    Double Marking Attributive Possessive Construction  
LINK    Linker
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i) Other than the attributive possessive construction, Pagu also has the predicative possessive construction (PPC). In Pagu, the PPCs literally have an existential meaning e.g. ‘with Tili is a book’ (‘Tili has a book’) or locational existential e.g. ‘with Tili is a book there’ (‘Tili has a book;). While the former makes uses of the word *demaena* ‘exist’ the latter with the preposition *de* ‘with’ and the locational suffix -*oka*. I will discuss the different SCPs in a different paper. The fact that Pagu has both the attributive and predicate possessive construction is against van Staden’s claim (2009:336) where she claims that Tidore and any North Halmaheran languages do not distinguish between APC and PPC.

ii) Pagu *ma* has similar functions of Tobelo *ma* (Holton 2006). According to Holton *ma* in Tobelo marks an NP that has relation with another NP in the NP MA NP construction. Like in Pagu *ma* can also occur alone with the second NP (the PSE). Holton however does not discuss whether *ma* in Tobelo can have the MA PSR construction.