Possession and Agentivity in Nukuoro*

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Abstract

A two-way possession distinction is common throughout Polynesian languages, traditionally described as a distinction between alienable and inalienable possession. Loosely, alienable possession describes things that can transfer ownership, like material goods (e.g. my pen), while inalienable possession describes things that cannot transfer ownership, like body parts and family members (e.g. my arm, my father). For Nukuoro, a Polynesian language of Micronesia, I argue that the possession distinction does not mark alienability, as traditionally assumed, but agentivity: nominals that are actively possessed are marked with a, while nominals that are inactively possessed are marked with o. This claim is supported by the Genitive Relative Clause construction in Nukuoro, which uses a to mark agents and o to mark non-agents. Although Baker (2012) claims that these two distinctions are separate, these systems in Nukuoro appear to be one and the same. Furthermore, in order for genitive pronouns to mark agentivity, there must be some element of the noun phrase that can assign a theta role to the possessor. Building upon Szabolcsi (1983) and Abney (1987), and following Huang & Jenkins (2014), I conclude that the possessive head is a semantic predicate that assigns theta roles to the possessor and possessee.

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1 Introduction

In this paper I present the two-way possession distinction of Nukuoro, which is traditionally assumed to be alienable and inalienable possession. Loosely defined, alienable possession describes things that can transfer ownership, like material goods (e.g. my pen), while inalienable possession describes things that cannot transfer ownership, like body parts and family members (e.g. my arm, my father). However, like many Polynesian languages, Nukuoro has a number of exceptions to the general rule. Rather than simply extending the definitions of alienable and inalienable possession, as many have done, I attempt to reconcile the exceptions by proposing a different underlying distinction for these two possession classes. Using data from Nukuoro relative clauses, which also use the genitive pronoun, I propose that the possession distinction in Nukuoro is related to agentivity. Building upon the parallel structures of clauses and nominal phrases presented by Szabolcsi (1983) and Abney (1987), I conclude that possession itself is a predicate that can assign a theta role.

Nukuoro [NKR] is a Polynesian Outlier language within the larger Austronesian family; it is primarily spoken in Pohnpei, Micronesia and on Nukuoro atoll, 480 km southwest of Pohnpei. All of the Nukuoro data presented in this paper, unless otherwise cited, comes from my own fieldwork in Kolonia, Pohnpei.

In Nukuoro, the two classes of possession are marked on the possessor by a change in vowel, a distinction that appears in many Polynesian languages including Tongan, Māori, and Hawaiian. These two types of genitives, formed with either an a vowel or an ō vowel, will henceforth be referred to as a- or o-class genitives. A list of Nukuoro genitive pronouns is provided in Table 1, illustrating the morphological distinctions between the two classes for both singular and plural possessed nouns. In some cases, particularly when the possessed noun is singular, the distinction between the two classes has been lost and the two forms have become identical; this is also the case for the 2nd person dual and plural genitives. These forms are simply idiosyncratic, often retaining the a-ō distinction when the possessed noun is plural.

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Table 1: Nukuoro genitive pronouns.

Traditionally, a-class genitives are considered alienable, possessing things like pens, crops, pets, and most material goods (1). On the other hand, o-class genitives are considered inalienable and are used to possess body parts, family members, and permanent qualities of the possessor such as height (2). In the words of Nukuoro speakers, o-class genitives possess things that are “closest” or “dearest” to the possessor; everything else is possessed by a-class genitives.

(1) A-class possession:

   a. *dagu*  *biimi*
      GEN.1SG  pen
      ‘my pen’

   b. *dagu*  *bela*
      GEN.1SG  taro.patch
      ‘my taro patch’

   c. *dagu*  *gaadu*
      GEN.1SG  dog
      ‘my dog’

(2) O-class possession:

   a. *dogu*  *lima*
      GEN.1SG  arm
      ‘my arm’

   b. *dogu*  *damana*
      GEN.1SG  father
      ‘my father’

   c. *dogu*  *looloa*
      GEN.1SG  tall
      ‘my height’
1 INTRODUCTION

This loose definition of “closeness” provided by speakers is by no means universal — in fact, there are a large number of items that can be possessed using either class or that obligatorily take the “wrong” class. For example, all kinship terms take a-class genitives except for children, which unexpectedly require a-class genitives (3a). Grandchildren, however, follow the pattern and require o-class genitives (3b).

(3) a. *dagu* *dama*
   GEN.1SG child
   ‘my child’

b. *dagu* *mogobuna*
   GEN.1SG grandchild
   ‘my grandchild’

Houses, fishing tools, and boats, among other items, may take either a- or o-class genitives, and sometimes speakers are unsure which form to use. It is unusual that any of these items should allow an o-class genitive, given that they are no “closer”, literally or figuratively, than one’s children. Furthermore, the fact that a single noun can take either genitive class indicates that the distinction extends beyond the inherent qualities of the noun itself. I explore this issue further in §2, where I discuss the traditional conceptualization of alienability, and I describe the Nukuoro a-o distinction in further detail in §3.

The distinction between a- and o-class genitives is further complicated by the presence of the genitive in Nukuoro relative clauses. This structure, known as a Genitive Relative Clause (henceforth GRC), requires the syntactic subject to be in genitive case, unless the subject itself has been relativized. An example of a Nukuoro GRC is provided in (4b), where the direct object *de gaago* ‘the chicken’ appears in clause-initial position and the 1SG subject appears in genitive case. The canonical word order of the clause (SVO) is provided in (4a).

(4) a. *Au ne gidee de gaago.*
   1SG PST see DET chicken
   ‘I saw the chicken.’

b. *de gaago aagu ne gidee*
   DET chicken GEN.1SG PST see
   ‘the chicken that I saw’

The usage of the genitive in a relative clause differs from simple possession in several ways. Firstly, the placement of the genitive pronoun is not the same — in simple possession, pronominal possessors almost always appear before the possessed noun; in GRCs, possessors almost
always appear after the relative head. Secondly, it is unclear what is being possessed in the GRC, if the genitive is indicating possession at all. Syntactically, the Nukuoro genitive does appear to possess the relative head, as proposed by Otsuka (2010) and Herd et al. (2012). Semantically, however, the genitive seems to have a closer relationship to the relative clause. In §4, I describe the Nukuoro GRC and present the structural analyses of Otsuka and Herd et al., concluding that the genitive in the GRC does not denote semantic possession of the relative head. §4.3 provides data to suggest that a-class genitives in Nukuoro GRCs mark agentivity of the genitive subject.

My conclusions about agentivity within the GRC have precedent in the literature — Chung (1973) notes the influence of theta roles on class selection in Polynesian nominalizations, and Baker (2012) mentions briefly that the a-o distinction in Hawaiian GRCs marks agentivity. However, both authors discuss simple possession and GRCs separately, even asserting (as Baker does) that the two are completely independent mechanisms. While there are clear differences between the two, I argue in §5 that possessive modification and genitive marking in the relative clause are fundamentally similar — namely, that the a-o distinction universally marks agentivity.

This presents a challenge to the current conceptualizations of nominal structure, as proposed by Szabolcsi (1983) and Abney (1987). While these two analyses propose that nominal structure parallels sentential structure, the proposed structure for nominal phrases has no element that can assign a theta role. The Nukuoro a-o distinction, which marks agentivity, therefore calls for a revision of this nominal structure. In §5, I discuss the analyses of Szabolcsi and Abney, concluding that the possessive head itself is a semantic predicate that can assign a theta role to the possessor. Furthermore, I propose that Case is assigned by a feature [± AGENTIVE] in the nominal structure, which is analogous to [± TENSE].

2 Alienability

Many languages, including most Austronesian languages, make a distinction between “alienable” and “inalienable” possession, also described as a distinction between “indirect” and “direct” possession, respectively. Given that most Oceanic linguists use the former terminology, I will adopt the terms “alienable” and “inalienable” to refer to this phenomenon. There are
2.1 Arbitrary Noun Class Theory

many theories about what characterizes these two forms of possession — as Velázquez-Castillo (1996:38) notes, “the significance of the alienable category seems to be limited to functioning as the complementary class of a specially marked inalienable category.” Inalienability is therefore more clearly defined, characterized as inseparable, inherent, non-transferable, or non-subordinate. Kin terms and body parts are prototypical examples of inalienable nouns. On the other hand, alienable nouns are described as the exact opposite — separable, transferable, or subordinate — and encompass a wide range of items, particularly material goods.

Wilson (1976) divides theories about alienability into three categories: syntactic noun classes, semantic noun classes and relational theories. Non-semantic analyses of alienability propose that different forms of possession represent arbitrary noun classes, which are differentiated by underlying representations in the syntax. Simple semantic analyses, like the general overview above, propose that noun classes are defined by inherent semantic properties of inalienable and alienable nouns. Lastly, non-lexical semantic analyses suggest that alienability distinctions are characterized by different types of possession relationships. §2.1 and §2.2 argue that the first two theories, both of which propose some sort of noun class, prove to be inadequate in accounting for data cross-linguistically. The third hypothesis, a relational theory of alienability as described in §2.3, seems to capture the important theoretical features of possession while allowing for the types of variation that we see across the world’s languages.

2.1 Arbitrary Noun Class Theory

Fillmore (1968) and Nichols (1988), among others, propose that the distinction between inalienable and alienable possession is simply memorized, a realization of arbitrary lexical classes like the gender distinctions in German or French. Often, this hypothesis is an attempt to account for alienability entirely within the syntax. Fillmore (1968), working within the theory of generative grammar, suggests that inalienable nouns select for a Determiner complement where alienable nouns take a sentential complement. These variations in underlying representation are encoded in the grammar “as lexical features of the Ns themselves” (Fillmore 1968:95). In a similar manner, Nichols (1988) correlates inalienability with a particular syntactic structure known as head-marking, where the possessed noun is marked for the genitive rather than the possessor. Both authors cite lexical exceptions to prototypical semantic categories as evidence
that alienability is “basically not a semantic matter” (Nichols 1988:575). Instead, Fillmore and Nichols account for lexical exceptions by claiming that each noun, regardless of semantic features, selects for a particular structure in the underlying representation.

This hypothesis is ultimately inadequate. Firstly, a purely syntactic theory must accommodate the vastly different morphosyntactic structures of alienability that arise typologically, which forces such a theory to be so deliberately general that it does not have much explanatory power. Secondly, Velázquez-Castillo (1996) notes that a non-semantic hypothesis cannot explain why the same semantic categories — primarily kin and body parts — are targeted cross-linguistically. She also argues that lexical exceptions do not rule out a semantic hypothesis, since “no...universal set of mappings can exist, and therefore no uniform form-meaning correlation is expected” (Velázquez-Castillo 1996:30).

Thirdly, and most importantly, an arbitrary noun class hypothesis cannot account for all data. In Nukuoro, a single noun can take either “inalienable” o-marking or “alienable” a-marking, corresponding with a difference in interpretation. Example (5) demonstrates this phenomenon using the word boose ‘boat’, which takes a-marking when it is a possession and o-marking when it is a home.

(5)  
\[
\text{dogu boose} \quad \text{‘my boat (that I live on)’}
\]
\[
\text{dagu boose} \quad \text{‘my boat (that I bought)’}
\]

The fact that a single noun requires different genitive classes in different contexts refutes the theory that alienability is determined by an inherent grammatical property of the noun itself. An arbitrary, non-semantic noun class hypothesis is thus theoretically unsound and descriptively insufficient.

### 2.2 Semantic Noun Class Theory

In order to account for the widespread semantic uniformity of inalienable possession, many linguists accept a semantic noun class hypothesis to account for alienability distinctions. In this system, inherent *semantic* features of the possessed noun, rather than grammatical features, determine which type of possession is used for that noun. Krupa (1994:177) and Lynch (1997) give overviews of the proposed semantic categories for alienability in Polynesian languages².

²Krupa (1994:177) describes the semantic distinctions of o and a in Hawaiian, Māori, Marquesan, Tahitian, Rennelless, and Tongan. Lynch (1997) describes the semantic distinctions of Proto-Oceanic, Proto Polynesian,
which I have summarized in part below:

**Inalienable:**
- KIN
- PART-WHOLE
- INHERITED
- CULTURALLY IMPORTANT
- TRANSPORT

**Alienable:**
- FOOD AND DRINK
- PORTABLE
- SUBORDINATE
- GENERAL

A semantic noun class theory, while it captures some aspects of alienability that an arbitrary noun class theory does not, is still an inadequate system. Wilson (1976:41) notes that multiple conflicting features may be present in a single noun, yet these semantic features have not been ranked for importance to predict a single marker. For example, the intoxicating ritual drink *sakau* is [FOOD AND DRINK] and [PORTABLE], which suggest alienable *a*-marking, but also [CULTURALLY IMPORTANT], which indicates inalienable *o*-marking. From these conflicting semantic features, it is not clear which marker *sakau* should take. Without any kind of hierarchical ranking of semantic features, the semantic noun class system is unclear.

These proposed semantic categories also make incorrect predictions in almost every language, demonstrated here using Nukuoro examples. Kin supposedly take inalienable *o*-marking, but *dagu dama* ‘my child’ uses *a*-marking. Clothing is [PORTABLE], and thus should use *a*-marking, but *malo* ‘clothing’ typically appears with inalienable *o*-marking. For this reason, a hierarchical ranking of features would not remedy this theory entirely. Furthermore, recall that a single word may take either marker in Nukuoro, yielding slightly different semantic connotations. This refutes the idea that alienability markers are determined based on inherent semantic qualities of the possessed noun — rather, the choice of possessive marker seems to depend on the manner of possession in a particular semantic context.

### 2.3 Relational Theory

Based on the data presented so far, it appears that alienability markings denote the level of inherency or closeness between possessor and possessed, which may change depending on semantic context. Many linguists have thus rejected a noun class hypothesis in favor of a several varieties of Fijian, and Rotuman.
relational hypothesis, noting that “inalienability is not simply a property of things in the world... [it] applies to the manner of interpreting or constructing reality” (Velázquez-Castillo 1996:32). In contrast to a semantic or grammatical noun class theory, a relational theory implies that “the choice of [alienability] marker only takes place upon the level of speech”, rather than being an *a priori* distinction in the noun itself (Krupa 1994:177). A relational theory best accounts for paradigms like those found in many Polynesian languages, where the same possessed noun can take either an alienable or inalienable construction. Take, for instance, the Māori example in (6). One’s own head is inalienably possessed with o-marking, as is expected of all body parts; on the other hand, the head of an enemy, which one has acquired as a war trophy, is alienably possessed with a-marking. The choice of marking depends on the type of relationship between the possessor and the head, rather than any inherent semantic or grammatical feature of the lexical item *uupoko* ‘head’.

(6) Māori:

\[
\begin{align*}
\text{tooku uupoko} & \quad \text{‘my head (on my shoulders)’} \\
\text{taaku uupoko} & \quad \text{‘my head (a war trophy)’}
\end{align*}
\] (Krupa 1994:178)

In most cases, relational theories of alienability identify semantic features similar to those in a semantic noun class hypothesis. Krupa (1994:180) argues that the most important distinguishing feature for alienability in Polynesian languages is the integrity of the relationship, although he also identifies politeness and level of importance to be factors as well. Wilson (1976:43) has a slightly different analysis, proposing that in Hawaiian, “relationships which are not controlled by the possessor” and “relationships which involve the use of the possessed by the possessor as a location” are inalienable, and all other relations are alienable. For instance, the relationship between a human and his leg is not controlled by the possessor, so this relation is inalienable. Things like mats, lipstick, and umbrellas — where the ultimate goal is to position them in spatial relation to oneself — use inalienable marking as well, while all other objects receive alienable marking.

In her overview of grammatical possession, Velázquez-Castillo (1996) reinterprets traditional alienability as relational, providing a thorough analysis of inalienability and its defining characteristics. She argues that inalienability is contextual and revolves around a perceived notion of conceptual closeness, which she breaks down into four subcategories: conceptual dependence,
inherency, inseparability, and permanency. These notions seem to center around the prototypical examples of kin and body parts, which are inherently relational — these things simply do not exist without a possessor. A mother only exists by virtue that she has a child; a hand only exists by virtue that it is a part of the human body, even if it appears alone. This inherent relationality should not be confused with any inherent inalienability, because we have already seen that body parts can be possessed by those to whom they do not belong. Furthermore, there are many examples of inalienability that are not inherently relational, like clothing, houses, and weapons in many languages. Thus, the concept of inalienability is derived separately from the noun in question; in Nukuoro, the distinction between a and o reflects a quality of the possession itself.

3 Nukuoro Possession

Nukuoro is a head-initial SVO language with very little inflectional morphology — there is no overt nominative or ergative system, and there is little to no agreement. However, the Nukuoro possessive construction involves an unusual degree of morphosyntactic variation.

In Nukuoro, pronominal possessors typically appear before the possessed noun, as in (7), where the first word appears to be composed of the determiner de and the morpheme maa‘1DU’. This construction is preferred, if not obligatory, for pronominal possessors in conversational speech.

\[
\text{(7) } \text{demaau abaaba} \\
\text{GEN.1DU door} \\
\text{‘our door’}
\]

It is also possible, at least in citational speech, for the pronoun to appear after the noun. In example (8), the determiner de remains in its canonical position before the noun, while the morpheme maa‘ appears after the noun along with the genitive morpheme o. This construction is very similar to the of-construction in English, as in a friend of his.

\[
\text{(8) } \text{de abaaba o-maa‘} \\
\text{DET door GEN-1DU} \\
\text{‘our door’}
\]

When the possessor is a proper name, it always appears post-nominally along with the genitive morpheme (9a). All attempts to formulate a pre-nominal equivalent, like example (9b), are
ungrammatical. Similarly, when the possessor is a common noun, the genitive phrase must appear postnominally as well (10).

(9) a.  
* de abaaba o Soni  
DET door GEN Johnny  
'Johnny’s door’

b.  
* de o Soni abaaba  
DET GEN Johnny door  
'Johnny’s door’

(10) a.  
de abaaba o de hale  
DET door GEN DET house  
'the house’s door’

b.  
* de hale abaaba  
DET house door  
'the house’s door’

We have already seen that in Nukuoro, a-class genitives tend to be used with body parts, kin terms, and permanent characteristics of the possessor. Additionally, a-class genitives are generally used with part-whole relations (11), emotional states (12), and clothing (13).

(11) de abaaba o de hale  
DET door GEN DET house  
'the door of the house’

(12) dogu malangilangi  
GEN.1SG happy  
'my happiness’

(13) dogu singilidi  
GEN.1SG t-shirt  
'my t-shirt’

Most (if not all) nouns can take either marking, as demonstrated in (14) and (15). An a-class genitive with the word hale ‘house’ indicates that the possessor built the house and does not necessarily live in it; an a-class genitive with the word bodobodo ‘short’ implies that the possessor is hunching over and has become short, not that the possessor is typically short.

(14) a.  
dogu hale  
GEN.1SG house  
'my house (that I live in)’

b.  
dogu hale  
GEN.1SG house  
'my house (that I built)’
When creative works are possessed, the choice of genitive marker indicates what type of relationship the possessor has with the work. *O*-class genitives indicate that the work was written for or about the possessor; *a*-class genitives indicate that the possessor either authored the work or has purchased the work.

Section 2.3 summarized several common hypotheses regarding the distinction between “alienable” and “inalienable” possession, particularly in Polynesian languages. These hypotheses are presented succinctly in (18).

(18) Hypothesis 1: Integrity of the relationship (Krupa 1994)
    Hypothesis 2: Conceptual closeness (Velzquez-Castillo 1996)
    Hypothesis 3: Control or domination over relationship (Wilson 1976)

Krupa (1994) states that the Polynesian *a*-*o* distinction relies on integrity, with *o*-class genitives denoting an integral or permanent relationship between possessor and possessee. The strongest argument for this hypothesis is the part-whole relationship, which typically uses *o*-marking. There are drawbacks to this analysis, however. Integrity is a gradable quality, which blurs the line between *a* and *o*; it is difficult to split the continuum of relational integrity into
two distinct parts. Furthermore, in Nukuoro, there are examples that do not support Krupa’s hypothesis. For example, the noun *singilidi* ‘t-shirt’ generally takes o-marking, indicating, according to Krupa, that the relationship between a man and the clothing he wears is more integral or permanent than a-marked relationships. Meanwhile, the relational noun *dama* ‘child’ generally takes a-marking. It is difficult to make the case that the relationship between a man and the clothing he wears is more integral or permanent than the relationship between parent and child, particularly since ‘child’ is an inherently relational noun — a child cannot exist without parents.

(19) \[ \text{dogu singilidi} \]
\[ \text{GEN.1SG t-shirt} \]
\[ \text{‘my t-shirt’} \]

(20) \[ \text{dogu dama} \]
\[ \text{GEN.1SG child} \]
\[ \text{‘my child’} \]

With regard to this puzzle, Krupa claims that inherent kin, such as parents, aunts, and uncles, are possessed using o-marking, while acquired kin, such as children, are possessed using a-marking. However, this prediction is not borne out in Nukuoro. Grandchildren, younger siblings, and spouses, which are acquired kin, are typically possessed using o-marking.

(21) \[ \text{dogu mogobuna} \]
\[ \text{GEN.1SG grandchild} \]
\[ \text{‘my grandchild’} \]

(22) \[ \text{dogu daina gauligi} \]
\[ \text{GEN.1SG sibling small} \]
\[ \text{‘my younger sibling’} \]

(23) \[ \text{dogu bodu} \]
\[ \text{GEN.1SG spouse} \]
\[ \text{‘my spouse’} \]

Taking this data into account, it appears that Hypothesis 1 does not entirely account for the Nukuoro possession distinction.

Velázquez-Castillo (1996) outlines Hypothesis 2, proposing that inalienable relationships are characterized by “conceptual closeness”, which she breaks down into the notions of conceptual dependence, inherency, inseparability, and permanency. This is a fairly complex characterization of inalienability, which allows it to account for the possession distinctions in many
languages, but its breadth also renders it so general that it does not make clear predictions. For instance, children fit into two of the four semantic categories. Children are conceptually dependent on their possessors — their parents — the relation between children and parents is permanent; however, children are separable from their parents and the relationship is not inherent. From this definition, then, it is unclear whether children should be possessed using a- or o-class genitives in Nukuoro. While Velázquez-Castillo’s hypothesis descriptively accounts for the data, it fails to make sound predictions about unfamiliar lexical items. A more specific hypothesis could account more elegantly for Nukuoro possession.

Hypothesis 3, proposed by Wilson (1976), states that a-marking in Polynesian languages denotes that the possessor has control or domination over the possession relationship itself. This hypothesis accounts nicely for the marking of part-whole relationships, permanent characteristics, and creative works. Hypothesis 3 also accounts for the fact that children are generally possessed using a-class genitives — since the possessor controls the creation of his children — while maintaining that grandchildren are generally possessed using o-class genitives. Still, there are a few examples that do not seem to support this hypothesis. As mentioned earlier, the noun *badu* ‘spouse’ is typically possessed with an o-class genitive; this is not predicted by Wilson’s analysis, given that spouses generally have some control over their marital relationships. Possessors also seem to have control over their relationship with the house they live in (they can move away), and with the clothing they wear (they can sell it), but these two nouns can use the o-class genitive as well.

(24) *dogu* hale  
GEN.1SG house
ʽmy houseʼ

(25) *ogu* malo  
GEN.PL.1SG clothing
ʽmy clothingʼ

None of the aforementioned hypotheses can fully account for Nukuoro possession. Hypothesis 1, which relies on the concept of integrity, does not predict the correct markings for children or grandchildren in Nukuoro. Hypothesis 2, built on the notion of conceptual closeness, is primarily descriptive in nature and thus too general to make sound predictions about genitive marking. Hypothesis 3 can account for most Nukuoro data, including the possession of children.
and grandchildren, using the concept of control over the possession relation, but this seems to predict that material goods will always use a-marking, which is not the case in Nukuoro. An investigation of more data is necessary to clarify the a-o distinction in Nukuoro and indicate which hypothesis, if any of these, comes closest to accounting for Nukuoro possession.

4 Genitive Relative Constructions

Genitive case is known to appear in relative constructions cross-linguistically, most notably in Japanese, Turkish, and several Polynesian languages (Miyagawa 2011; Kornfilt 2003, 2008; Otsuka 2010; Herd et al. 2004, 2011). This phenomenon, known as a Genitive Relative Construction (GRC), has been likened to genitive clausal nominalization in English.

(26) a. He (nominative) destroyed the evidence.

b. his (genitive) destruction of the evidence (Herd et al. 2011:1252)

In Nukuoro, the GRC is used to form both relative clauses (27) and questions (28). There appears to be no complementizer — to form a relative construction, the head of the relative clause moves to the initial position and the subject switches to genitive case. The case of the syntactic subject distinguishes a GRC from a topicalized construction (27b), which does not use a the genitive.

(27) a. Au ne gidee de gaago.
   1SG PST see DET chicken
   ‘I saw the chicken.’

b. de gaago au ne gidee
   DET chicken 1SG PST see
   ‘the chicken, I saw’

c. de gaago aagu ne gidee
   DET chicken GEN.1SG PST see
   ‘the chicken that I saw’ (relativized)

(28) a. Gidaadeu ne tugi Soni.
   1PL.INCL PST hit Johnny
   ‘We hit Johnny.’

b. Go ai adaadeu ne tugi?
   FOC who GEN.1PL.INCL PST hit
   ‘Who did we hit?’
4.1 The Nukuoro GRC

Recall that in simple Nukuoro possession, it is possible (if not mandatory) for the genitive to appear before the noun if the possessor is pronominal. Throughout conversational speech, pronominal genitives primarily appear before the noun, while proper names and common nouns always appear after the noun. In GRCs, however, the genitive usually appears after its apparent possessum, regardless of whether the possessor is a pronoun, common noun, or proper noun.

(29) de gaago aagu ne gidee
    DET chicken GEN.1SG PST see
   ‘the chicken that I saw’

(30) de gaago a de gaadu ne gidee
    DET chicken GEN DET dog PST see
   ‘the chicken that the dog saw’

(31) de gaago a Soni ne gidee
    DET chicken GEN Johnny PST see
   ‘the chicken that Johnny saw’

When the genitive is pronominal, speakers do occasionally produce GRCs with preposed genitives, exemplified in (32b). However, this construction appears so infrequently that it is clearly dispreferred.

(32) a. de gahudi aau e gai naa
    DET banana GEN.2SG NPST eat by.you
    ‘the banana that you’re eating’

    b. dau gahudi e gai naa
        GEN.2SG banana NPST eat by.you
        ‘the banana that you’re eating’

Thus far, we have only seen examples of GRCs relativizing direct objects. It is also possible to relativize subjects and oblique NPs in Nukuoro; however, these relative constructions utilize
slightly different relativization strategies, which must be accounted for in any general analysis of the GRC.

Oblique relatives are derived almost identically to object relatives: the relative head appears in the clause-initial position and the subject receives genitive case. The difference between oblique relatives and object relatives is the presence of the resumptive pronoun *ai, which appears directly after the verb when a non-object is moved from its canonical position. Rather than indicating the location from which an element has moved (i.e. an overt trace), the resumptive pronoun *ai appears to be a verbal element that indicates the displacement of a verbal adjunct. This pronoun is mandatory for oblique relatives, shown in (33) and (34), and ungrammatical for object relatives (35).

(33)  *de laangi a Soni ne tugi *(ai) au
      DET day GEN Johnny PST hit RES.PR 1SG
      ‘the day that Johnny hit me’

(34)  *de momee a Soni ne tugi *(ai) au
      DET place GEN Johnny PST hit RES.PR 1SG
      ‘the place where Johnny hit me’

(35)  *tangada a Soni ne tugi ai
      DET.person GEN Johnny PST hit RES.PR
      ‘the person that Johnny hit’

Subject relatives are markedly different from other GRCs. In fact, when the relative head is the subject of the clause, there is no genitive pronoun at all (36b). Since Nukuoro also does not have an overt complementizer, and since the movement of a subject to initial position is vacuous in Nukuoro, the only way to identify a subject relative is by the presence of a verbal morpheme *ina. Similarly to the resumptive pronoun *ai, the morpheme *ina appears post-verbally to indicate the extraction of the subject argument. The specifics of *ina are not relevant here — more important is the lack of genitive marking on the subject.

(36)  a. Tama-ahine ne gai de mamu.
      child-female PST eat DET fish
      ‘The girl ate the fish.’

      b. tama-ahine ne gai *ina de mamu
          child-female PST eat INA DET fish
          ‘the girl who ate the fish’
4.2 General Structure

Given that clausal subjects typically appear in non-genitive case, the presence of the genitive in relative clauses must be triggered by some feature of the relative clause structure. However, subject relatives do not use genitive marking. This paradigm indicates that the trigger for genitive marking is present with object and oblique relatives but not with subject relatives.

Thus, an analysis of the Nukuoro GRC must be able to account for: (a) the presence of genitive marking in the GRC, (b) the differences between relativization and topicalization, (c) the preference for genitive postposing in the GRC, and (d) the absence of genitive marking in subject relatives. With these four descriptive facts in mind, I do not propose any particular structural analysis of the Nukuoro GRC, primarily because it does not affect the analysis of a- and o-class genitives. Rather, I turn to Otsuka (2010) and Herd et al. (2011), who provide detailed structures to account for GRCs in Tongan and Niuean, respectively. While the intricacies of these structures are specific to their target languages, the general constituency that they propose gives a good overview of the Polynesian GRC and captures the four descriptive facts noted above for Nukuoro.

4.2 General Structure

Disregarding specific phrase labels and intermediate nodes, Otsuka and Herd et al. both propose the same general schema for GRCs, with the constituency displayed in (38). For clarity, these structures use an English gloss (37) to demonstrate word order. Example (38a) represents a structure with a pre-nominal genitive, and example (38b) derives a structure with a post-nominal genitive by having the relative head move to a position above my.

(37) de bēebaa aagu ne dau
book my that read
‘the book that I read’

(38) a. Prenominal Genitive GRC: b. Postnominal Genitive GRC:

In both analyses, the genitive is base generated in a position above the relative head, syntactically “possessing” the relative head. However, Otsuka and Herd et al. both ensure that
the genitive c-commands the verb, allowing it to be interpreted as the semantic subject of the relative clause rather than the semantic possessor of the relative head.

The semantic interpretation of the genitive within the GRC has been debated on both sides. Since the construction is morphologically identical to simple possession, Wilson (1976a) and Hawkins (2000) argue that the genitive subject of the Polynesian GRC semantically possesses the relative head. On the other hand, Baker (2012) provides evidence from Hawaiian that suggests a closer relationship between the genitive and the relative clause.

Abstractly speaking, a possession relationship between the genitive and the relative head in a GRC does not seem to capture the denotation of a relative clause. The English relative clause “the book that I read” does not entail that the book belongs to the speaker, and relative clauses like “the book that I do not own” specifically reject a possession relationship between the subject and the relative head. Still, there are examples in English where possession is used to express non-ownership relations. The phrase “This is my song!” does not necessarily mean that the song was written by the speaker, or written about the speaker, or purchased by the speaker; often, this phrase indicates that the speaker is extremely fond of the song, with no traditional possession relation implied.

Empirically speaking, however, there is evidence to support the argument that genitives in the GRC do not semantically possess the relative head. Most convincingly, the GRC allows for the presence of two genitives that relate to the same noun, a construction that is not permissible with simple possession. Simple possession only allows each noun to co-occur with one possessive head; if two possessors have the same possessee, the possessors must be coordinated with the word ma ‘and’.

(39) Go tama a Mina a Soni ne tugi.
FOC child GEN Mina GEN Johnny PAST hit
‘It was Mina’s daughter that Johnny hit.’

(40) a. * tama a Mina a Soni
child GEN Mina GEN Johnny
‘Mina’s and Johnny’s daughter’

b. tama a Mina ma Soni
child GEN Mina and Johnny
‘Mina’s and Johnny’s daughter’

In (39), the first genitive a Mina is interpreted as the semantic possessor of the relative head.
4.3 The A/O Distinction in the GRC

$tama$ ‘the child’; the second genitive $a Somi$ is interpreted as the subject of the relative clause. This indicates that there are two positions within the GRC that use the genitive: a position for a semantic possessor and a position for the genitive subject of the relative clause.

Example (41) also uses two genitives, with the true possessor appearing before the relative head and the subject of the relative clause appearing after the relative head. These two pronouns use different genitive classes, despite the fact that they both syntactically possess the speaker; the difference in marking suggests that these genitives represent two distinct semantic relationships with the relative head.

\[(41)\quad \text{dogu} \quad \text{ingoo aagu} \quad \text{gu ngalo laa} \]
\[\text{GEN.1SG name GEN.1SG PST forget PST} \]
\[\text{‘my name that I forgot’}\]

Structurally, the subject of the relative clause “possesses” the relative head, as Otsuka and Herd et al. claim; semantically, however, the relationship between the relative head and the subject is not traditional possession.

4.3 The A/O Distinction in the GRC

Although the genitive does not appear to mark semantic possession in the GRC, a distinction is still made between $a$- and $o$-class genitives. Without a possession relation to characterize, the question arises: what do $a$ and $o$ mark in the GRC?

We have already seen in §2 that the same possessed noun can take either genitive class, and the same holds true of GRCs. The two relative clauses in (42) demonstrate that the choice of genitive class does not reflect any inherent quality of the relative head, since $boose$ ‘boat’ appears with both $o$- and $a$-class genitives.

\[(42)\quad \text{a. de boose oogu e noho ai} \]
\[\text{DET boat GEN.1SG NPST live RES.PR} \]
\[\text{‘the boat that I live on’}\]

\[\text{b. de boose aagu ne hagau} \]
\[\text{DET boat GEN.1SG PST buy} \]
\[\text{‘the boat that I bought’}\]

As we saw in Example (41), there are two relations that can be expressed using the genitive in a GRC: a possession relation with the relative head and a subject relation with the relative
4.3 The A/O Distinction in the GRC

clause. If these two relations use two different genitive classes, a difference in genitive marking can change whether the genitive pronoun is interpreted as a possessor or as the subject of the relative clause.

(43) a. De abaaba omaau nogo lloga.
   DET door GEN.1DU PST.PROG lock
   ‘Our door was locked.’

b. de abaaba omaau nogo lloga
   DET door GEN.1DU PST.PROG lock
   ‘the door that we locked’

If the a-o distinction does not depend on the relative head, it must rely on some quality of the following relative clause. The same VP can occur with two different genitive markings, as shown in (44), ruling out a hypothesis where a and o mark an inherent quality of the verb. However, the two clauses in (44) have different interpretations — in (44a), the genitive is interpreted as the agentive subject of the relative clause, while in (44b), the genitive is interpreted as the non-agentive object.

(44) a. de laangi aagu ne haanau ai
   DET day GEN.1SG PST birth RES.PR AGENT/SUBJECT
   ‘the day I gave birth’

b. de laangi oogu ne haanau ai
   DET day GEN.1SG PST birth RES.PR PATIENT/OBJECT
   ‘the day I was born’

This minimal pair suggests two potential hypotheses: the a-o distinction either reflects the thematic role or the syntactic category of the genitive subject.

Baker (2012) makes the case that a and o in the Hawaiian GRC mark agentivity. In nominalizations, no matter what the relative head is and what marker it usually takes in simple possession, the genitive is a-class “if and only if the possessor is specified as agentive” (Baker 2012:59). In this case, the ‘possessor’ refers to the person or entity marked with the genitive.

Chung (1973) writes that the distinction between a and o in most Polynesian nominalizations is a realization of ergative case — in other words, subjects of transitive verbs are marked with a, while objects of transitives and subjects of intransitives are marked with o. She does note, however, the role of agentivity in a-o selection in the group of Samoic-Outlier languages, of which Nukuoro is a member. In these languages, Chung claims that subjects and objects of
transitive verbs are marked using a and o to indicate syntactic category; subjects of intransitive verbs use a and o based on agentivity.

Nukuoro appears to be undergoing a shift between two different systems of a-o marking in the GRC, as indicated by the grammaticality judgements of older and younger speakers. Older speakers seem to use a- and o-class genitives as a realization of ergativity, in the manner that Chung describes. This is apparent from the use of o-marking with agentive subjects of intransitive verbs (45c).

(45) Older speakers:

a. Subject of transitive:

   de laangi aagu ne haanau ai
   DET day GEN.1SG PST birth RES.PR
   ‘the day that I gave birth’

b. Object of transitive:

   de laangi oogu ne haanau ai
   DET day GEN.1SG PST birth RES.PR
   ‘the day that I was born’

c. Subject of intransitive:

   de laangi oogu ne anu ai
   DET day GEN.1SG PST dance RES.PR
   ‘the day that I danced’

By contrast, younger speakers (around age 35 and below) consistently use a and o to mark agentivity rather than ergativity. For agentive subjects of intransitive verbs, younger speakers preferred to use a-class genitives (46c).

(46) Younger speakers:

a. Subject of transitive:

   de laangi aagu ne haanau ai
   DET day GEN.1SG PST birth RES.PR
   ‘the day that I gave birth’

b. Object of transitive:

   de laangi oogu ne haanau ai
   DET day GEN.1SG PST birth RES.PR
   ‘the day that I was born’
4.3 The A/O Distinction in the GRC

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4 GENITIVE RELATIVE CONSTRUCTIONS

c. Subject of intransitive:

\[
\begin{align*}
\text{de laangi } & \text{ aagu } \neq \text{ anu } \text{ ai} \\
\text{DET day } & \text{ GEN.1SG PST dance RES.PR} \\
\text{‘the day that I danced’}
\end{align*}
\]

The shift away from an ergative a-o system is perhaps due to the fact that Nukuoro has no overt case marking in matrix clauses — in most clauses, it is impossible to tell whether Nukuoro is an accusative language, like Māori, or an ergative language, like Tongan. For speakers who never receive formal instruction in their native language, it would be very natural to reinterpret a syntactic a-o distinction as semantic, given that Nukuoro has no other case marking.

While the a-o distinction for older speakers does not always mark agentivity, the distinction does not appear to be entirely syntactic either. While providing examples of GRCs, a Nukuoro speaker in his 60s explained that an a-class genitive marks "something that you did", while an o-class genitive indicates that "something was done to you". Furthermore, a-class pronouns are semantically incompatible with passive constructions (47), where the genitive represents the syntactic subject but is not agentive.

(47) a. \(\text{Go } \text{anahee o Soni } \neq \text{ duugia } \text{ ai?} \)
   FOC when GEN Johnny PST hit.PASS RES.PR
   ‘When was Johnny hit?’

b. * \(\text{Go } \text{anahee a Soni } \neq \text{ duugia } \text{ ai?} \)
   FOC when GEN Johnny PST hit.PASS RES.PR
   ‘When was Johnny hit?’

Additionally, the subjects of transitive verbs do not always use a-marking. For speakers of all ages, transitive subjects use o-marking when they are non-agentive. Example (48) uses the verb hedae ange ‘meet’, which describes a non-volitional act on the part of the subject; often, this verb in Nukuoro is used to describe a chance encounter with somebody on the street. Since the subject is not an agent of this action, the genitive uses o-marking.

(48) \(\text{Go a } \text{amaau } \neq \text{ hedae ange ai } \text{ laa?} \)
   FOC who GEN.1DU PST meet RES.PR PST
   ‘Who did we meet?’

Verbs of emotion also use o-marking, which is expected of an agentivity analysis. Emotions are experienced by the possessor, not agentively created; subjects therefore do not receive the
agent theta role. Subjects of verbs like *aloha* ‘love’, *kino* ‘hate’, and *lodo* ‘want’ consistently receive o-marking in GRCs regardless of the age of the speaker.

(49) *tangada oogu e aloha ai*
   DET.person GEN.1SG NPST love RES.PR
   ‘the person that I love’

(50) *tangada oogu e kino ai*
   DET.person GEN.1SG NPST hate RES.PR
   ‘the person that I hate’

(51) *de biini oou e lodo ai*
   DET pen GEN.2SG NPST want RES.PR
   ‘the pen that you want’

Therefore, while there is a hint of ergativity in the choice between a and o for older speakers, a generally marks agents and o generally marks non-agents.

5 Agentivity in Simple Possession

Baker (2012) claims that the a-o distinction in simple possession and the a-o distinction in relative constructions are distinct. In his analysis of genitive classes in Hawaiian, Baker writes that a-marking in the GRC indicates agentivity of the genitive subject, exactly as we have seen in Nukuoro. In simple possession, however, he maintains that a-marking denotes the traditional concept of alienability.

Given that there is no morphological difference between these two genitive functions, the simplest analysis is that a and o denote the same distinction in all positions. If the distinction marks agentivity in GRCs, a simply marks agentive possession and o marks non-agentive possession. This section recounts the Nukuoro data we examined in §3 to determine whether an agentive analysis of a- and o-marking can account for the data more efficiently than the three hypotheses of Krupa (1994), Velázquez-Castillo (1996), and Wilson (1976).

If we compare Example (5) to Example (42), both reproduced below, it appears that a- and o-marking in simple possession appear in the same semantic contexts as a- and o-marking in the GRC. Clearly, the same relation is expressed in simple possession somehow, even if the relative clause is absent.
(5) *dogu* *boose* ‘my boat (that I live on)’
*dagu* *boose* ‘my boat (that I bought)’

(42) a. *de* *boose* *oogu* *e* *noho* *ai*
   DET boat GEN.1SG NPST live RES.PR
   ‘the boat that I live on’

   b. *de* *boose* *aogu* *ne* *hagau*
   DET boat GEN.1SG PST buy
   ‘the boat that I bought’

Body parts, permanent characteristics, and part-whole relations display what Velázquez-Castillo describes as the concept of inherency. Inherent relations, like the relationship between a man and his arm, are not agentively created or maintained by the possessor — they simply exist as a fact of the possessor’s existence. An agentivity hypothesis correctly predicts that inherent relations should be possessed using *o*-class genitives, since the possessor is not an agent.

(52) *dogu* *lima*
   GEN.1SG arm
   ‘my arm’

(53) *dogu* *looloa*
   GEN.1SG tall
   ‘my height’

(54) *de* *abaaba* *o* *de* *hale*
   DET door GEN DET house
   ‘the door of the house’

One puzzle of Nukuoro *a*- and *o*-possession is the classification of kin terms, which seems to resist a large number of traditional theories. Under an agentivity analysis, all kin terms should use *o*-class genitives because they are not possessed by any agentive action of the possessor — except children, that is, which are actively created by the possessor. This hypothesis accounts nicely for the unusual classification of children and grandchildren.

(55) *dogu* *dama*
   GEN.1SG child
   AGENTIVE
   ‘my child’

(56) *dogu* *mogobuna*
   GEN.1SG grandchild
   NON-AGENTIVE
   ‘my grandchild’
Spouses are generally possessed using o-class genitives, which may seem incongruent with an agentivity analysis of possession. However, the noun bodu ‘spouse’ is generally understood in terms of loving (aloha) or being with (noho), not necessarily agentively marrying. In fact, when spouses are possessed in terms of marriage, an a-class genitive is more appropriate.

(57) a. dogu bodu  
GEN.1SG spouse  
‘my spouse (that I am with or that I love)’

b. dagu bodu  
GEN.1SG spouse  
‘my spouse (that I married)’

c. tangada aagu ne hai bodu  
DET.person GEN.1SG PST make spouse  
‘the person that I married’

Emotional states are non-agentive because they are experienced, not actively created, which is reflected by the fact that emotions like malangilangi ‘happiness’ are generally possessed using an o-class genitive.

(58) dogu malangilangi  
GEN.1SG happy  
‘my happiness’

Clothing and houses are also typically possessed using o-class genitives, primarily because they are generally understood in the context of wearing (gahu) or living (noho). These two verbs are considered to be non-volitional in Nukuoro, so the o-class genitive reflects this non-agentive relationship. When the speaker wishes to convey an agentive possession of clothing or housing, an a-class genitive can be used with these nouns.

(59) a. dogu singilidi  
GEN.1SG t-shirt  
‘my t-shirt (that I wear)’

b. dagu singilidi  
GEN.1SG t-shirt  
‘my t-shirt (that I made or purchased)’

(60) a. dogu hale  
GEN.1SG house  
‘my house (that I live in)’
b. *dagu hale*
   GEN.1SG house
   ‘my house (that I built)’

Traditional items like boats and spears also generally use o-class genitives because they are often passed down or bestowed upon the possessor, rendering the possessor non-agentive. When these items are possessed by an a-class genitive, it denotes increased agentivity of the possessor.

(61) a. *dogu boose*
   GEN.1SG boat
   ‘my boat’

b. *dagu boose*
   GEN.1SG boat
   ‘my boat (that I made or purchased)’

(62) a. *dogu dao*
   GEN.1SG spear
   ‘my spear’

b. *dagu dao*
   GEN.1SG spear
   ‘my spear (made by me)’
   (Carroll 1965:216)

The choice of genitive marker with creative works is easily understood in terms of agentivity. O-class genitives indicate that the work was written for or about the possessor, rendering the possessor non-agentive; a-class genitives indicate that the possessor either authored the work or has purchased the work, indicating that the possessor has an agentive role in the possession of the work.

(63) a. *dogu beebara*
   GEN.1SG book
   ‘my book (that is about me)’

b. *dagu beebara*
   GEN.1SG song
   ‘my book (that I wrote or bought)’

(64) a. *de kai o Vave*
   DET story GEN Vave
   ‘the story about Vave’

b. *de kai a Vave*
   DET story GEN Vave
   ‘Vave’s story (i.e. the one he made up or tells)’
   (Carroll 1965:216)
An agentive analysis of possession can thus account for Nukuoro data simply and efficiently, while also unifying the distinction between a and o in possession and in the GRC.

6 Nominal Structure and Possession

The above analysis of a- and o-class genitives carries certain implications for our current understanding of nominal structure. In order for simple possession to mark agentivity, there must be a theta role assigner within the nominal phrase. It is reasonable for GRCs to mark agentivity because there is clear theta role assignment from the verb of the relative clause; in simple possession, however, there appears to be nothing capable of assigning a theta role. In this section, I adopt the analysis of nominal structure as proposed by Szabolcsi (1983) and Abney (1987), who claim that nominal structure functions almost exactly like sentential structure.

It has often been noted that noun phrases crosslinguistically seem to have a sentential quality to them. Event nominals, like destruction, and their larger phrases, like his destruction of the city, have verbs or entire sentences embedded within them — these noun phrases commonly make use of the genitive to mark the “subject” of the noun phrase. Fu et al. (2001) and Zhang (2008) analyze event nominals (or ‘derived nominals’) as noun phrases that contain clausal or verbal structure.

Sentences and clauses are generally believed to have the structure pictured in (65). Clausal structure is headed by Inflection (INFL), which encompasses both Tense and Agreement (AGR). The clausal subject (SUBJ) is in the Specifier position (Spec) of IP, while the verb phrase is the complement of INFL and contains any verbal objects or adjuncts within it.

(65) IP
    SUBJ I’
        I VP

Szabolcsi (1983) claims that nominal phrases do not simply contain a verb phrase — instead, she proposes that the structure of a nominal phrase mirrors verbal structure. She notes clear similarities between tense and possession, using Hungarian and English as case studies. In
Hungarian, the possession morpheme acts like INFL in that it “governs the subject and assigns it nominative Case” (1983:90). Abney (1987) provides a thorough exploration of this analysis in English, Hungarian, Turkish, Mayan, and Central Alaskan Yup'ik, concluding that the maximal projection of the noun phrase is, indeed, a projection similar to INFL.

The parallel structure proposed by Abney (1987), which is almost identical to that proposed by Szabolcsi (1983), is depicted by the two trees in Figure 1. The nominal phrase parallels clausal structure, with some item $X$ similar to sentential INFL as the maximal projection. Henceforth, this item $X$ will be referred to as “nominal INFL”. The subject is replaced by the possessor (PSSR) in Spec of XP, and the Verb Phrase is replaced by a Noun Phrase (NP) as the complement, which contains the possessed “object”.

![Figure 1: Parallel structures proposed by Abney (1987:19).](image)

In clausal structure, theta roles are assigned by the verb. A parallel nominative structure must have a similar theta-assigning element to ensure that possessors are assigned a theta role, as indicated by the distinction between $a$ and $o$. Nouns cannot assign theta roles, which complicates matters; only predicates can be theta role assigners. However, there is reason to believe that possession denotes a predicative relationship.

In §2, I argued that the alienability distinction relies on the relation between possessor and possessed, rather than any kind of feature of the entities themselves. In other words, all possession appears to be relational, not just the possession of relational nouns like *child* or *friend*. It has often been noted that “semantically, the relationship between relational nouns and their licensors is not modification” — rather, relational nouns are semantic predicates, saturated by their licensors (Zhang 2008:1014). If possession itself is relational, then by extrapolation we can assume that the possessive head itself — English ’s, Polynesian $o$ and $a$ — is a semantic predicate. A predicative analysis of possession has been proposed by Huang & Jenks (2014),
who argue that the Thai word *khaoŋ* ‘possession, belonging’ is a two-place nominal predicate meaning ‘possession of’. Their proposed formal denotation of *khaoŋ chan* is reproduced in (66), where *khaoŋ* is a possessive predicate and *chan* is a 1sg pronoun.

(66)  

\[
\begin{align*}
&\text{a. } [[\text{*khaoŋ chan*}]] \\
&\text{b. } = \lambda x\lambda y [\text{possession-of}(x,y)]( [\text{[chan]}] ) \\
&\text{c. } = \lambda x\lambda y [\text{possession-of}(x,y)](\text{SPEAKER}) \\
&\text{d. } = \lambda y [\text{possession-of}(\text{SPEAKER},y)] \quad (\text{Huang & Jenks 2014:231})
\end{align*}
\]

The possessive predicate has two variables, one for a possessor “subject” and one for a possessee “object”, which are then saturated by their respective entities. For instance, in the phrase *Mary’s pen*, the possessive head ‘s is saturated by the entity *pen*, the possessed “object”, and the entity *Mary*, the possessor “subject”. The semantic similarities between a possessed nominal and a sentence are extremely clear in English; the phrase *Mary’s pen* can easily be reworded into the sentence *Mary has a pen* with no change in semantic denotation. In some languages, such as Papuan Malay, there is no difference between the two — the phrase *Mary punya bolpen* is ambiguous, meaning either ‘Mary’s pen’ or ‘Mary has a pen’ depending on semantic context (Emily Gasser, personal communication, December 12, 2016).

Predicative possession does not inhibit the possession of relational nouns, like kinship terms. In cases where the possessed noun is inherently relational, there are simply two predication relations — the possessive predicate and the nominal predicate. The same is true when a relational noun is the subject or object of a clause. In these situations, the two-place predicate (a possessive head or a transitive verb) is saturated by another predicate, the relational noun. In turn, this relational noun is saturated by its possessor.

If the possessive head is predicative, which it appears to be, possession itself can assign theta roles to its the possessor. Thus VP in the clausal structure is replaced by PossP in the nominal structure, as demonstrated in Figure 2. The “head noun” of the nominal phrase now occupies the object position, below PossP.
This small change makes the parallel between clausal structure and nominal structure even stronger — each structure now has a subject, predicative element, and object. However, this now presents a new problem, because not all nominal phrases have a possessive element. If Figure 2 represents a ubiquitous nominal structure, why doesn’t possession appear in all nominal phrases?

The answer lies in the Theta Criterion, reproduced from Chomsky (1981) below. In general, this criterion states that if a verb has a theta role to discharge, there must be an argument to receive it.

(67) **Theta Criterion:** Each argument bears one and only one theta role, and each theta role is assigned to one and only one argument (Chomsky 1981:35).

When a noun phrase contains no possessor, there is no “subject” argument to receive a theta role from the possessive head. This kind of structure violates the Theta Criterion, because a theta role has gone unassigned, and is therefore ungrammatical. Possessive heads therefore must co-occur with a possessor; if one is not present, the other cannot exist.

The issue of case is also relevant. In sentential structure, InfI is typically expanded as follows, carrying both tense and agreement: InfI → [± TENSE], (Agr)]. Generally, the feature [± TENSE] is thought to assign case to the subject in Spec of IP. Since nominal phrases do not have tense, the feature [± TENSE] cannot exist within the nominal phrase; however, the possessor “subject” in Spec of XP still receives genitive case. Therefore, there must be an equivalent binary feature within the nominal phrase that assigns genitive case to the possessor.

The *a*-o distinction itself is binary, so the underlying characteristics marked by *a* and *o* could reveal a potential case-assigning feature. In Nukuoro, it is not simply that *a* and *o* denote the theta role of the possessor — *o* is used to mark nouns receiving a number of theta roles,
including experiencer, patient, and theme, while a only seems to mark agents. Rather than attribute each individual theta role to o-marking, the distinction is much clearer when defined in terms of AGENT and NON-AGENT — in other words, [± AGENTIVE]. This binary feature could easily replace [± TENSE] as a case-assigner within the noun phrase. If this is a feature of nominal INFL, the positive and negative values of this feature result in different realizations of the possessive head, just as [+ TENSE] has various morphological forms on English verbs.

While Szabolcsi’s (1983) and Abney’s (1987) analyses were unable to account for agentive possession markings in Nukuoro, slight revisions to their parallel structures allow this analysis to account for Nukuoro nominal structure and a-o possession. The possessive head is the nominal equivalent of a verb, acting as a semantic predicate that is saturated by a possessor “subject” and a possessee “object”. A predicative interpretation of possession allows the possessor to receive a theta role, which then allows an agentive analysis of a- and o-marking in simple possession.

7 Conclusions and Further Research

This thesis marks the first full descriptive analysis of Nukuoro possession, a topic that was only briefly explored in Carroll’s (1965) sketch grammar. The Nukuoro data presented here, most of which comes from my own fieldwork with Nukuoro speakers, seems to indicate that the primary distinction between a- and o-marking in Nukuoro is agentivity of the possessor. This distinction is very clear in the Nukuoro GRC, which has an overt verbal element that clearly indicates agentivity (or non-agentivity) of the genitive subject. In applying the conclusions from the GRC to simple possession, it appears that both a-o dichotomies in Nukuoro can be accounted for using the same analysis — not only does this analysis work, but it describes and predicts the data in a simpler manner than other current theories of alienability as proposed by Krupa (1994), Velázquez-Castillo (1996), and Wilson (1976).

An agentive analysis accounts for Nukuoro possession and the Nukuoro GRC, but it may not be applicable to other Polynesian languages. There is a great amount of variation among these languages with respect to a- and o-marking — for instance, in Māori, both children and grandchildren are typically possessed using a-marking, which does not marry nicely with the agentivity hypothesis proposed here. However, the conclusions that can be drawn about
nominal structure are more or less universal. The ability of the possessive head to assign a theta role to the possessor is a claim that should be investigated with larger amounts of data, and further research can explore this phenomenon in other languages.

Abbreviations

<table>
<thead>
<tr>
<th>AGR</th>
<th>Agreement</th>
<th>NP</th>
<th>Noun Phrase</th>
<th>SG</th>
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<tr>
<td>DET</td>
<td>Determiner</td>
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<td>Non-Past</td>
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<td>Passive</td>
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<td>Verb Phrase</td>
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<td>Focus</td>
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<td>PROG</td>
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<td>PSSR</td>
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<td>Third Person</td>
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<td>Inflection</td>
<td>PST</td>
<td>Past</td>
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<td>IP</td>
<td>Inflection Phrase</td>
<td>RES.PR</td>
<td>Resumptive Pronoun</td>
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References


