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Flavors of *-ga*: A possession class suffix in O'dam

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Flavors of *-ga*: A possession class suffix in O'dam

by

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Table of Contents

Acknowledgments iv

Abstract v

List of Tables viii

List of Figures ix

Chapter 1. Introduction 1

Chapter 2. O'dam and Uto-Aztecan 3

Chapter 3. Possession and Possession classes 7
3.1 Typology of Alienability Marking . . . 19

Chapter 4. Structure of the O'dam DP 23
4.1 Determiners and Quantifiers . . . 23
4.2 Adjectives . . . 27
4.3 Adjunct DPs . . . 28

Chapter 5. Attributive Possession in O'dam 30
5.1 Pronominal Possession . . . 30
5.2 Adjectival Possession . . . 32

Chapter 6. Possessed Noun Classes 35
6.1 Alienable *-ga* . . . 36
6.2 Identifying Inalienable Nouns . . . 38
6.2.1 Inalienable Nouns . . . 43
6.2.2 Properties of the inalienable class . . . 47
6.3 Cognates of *-ga* and attributive possession across Uto-Aztecan . . . 56
6.3.1 Alienable possession in Tepiman . . . 60
6.4 Irregular alienable nouns . . . 69

Chapter 7. The Possessive Pronouns 74

Chapter 8. Conclusion 80

Abbreviations 82

References 84

Vita 91

List of Tables

5.1 Pronominal possessor affixes 31

6.1 Paradigms of the three possession classes in O'dam 35
6.2 O'dam reclassified nouns with comparative data 43
6.3 O'dam reclassified nouns with proposed Proto-Tepiman forms 44
6.4 O'dam Kinship terms and people 45
6.5 O'dam Body parts 46
6.6 O'dam Part-whole and spatial relations 46
6.7 O'dam Culturally relevant possessed items 47
6.8 Tohono O'odham Alienable Nouns 65
6.9 Tohono O'odham Inalienable Nouns 66
6.10 Distribution of inalienable and alienable possession in Tohono O'odham . . . 68

7.1 Pronominal markers in O'dam 75

List of Figures

2.1 Uto-Aztecan family tree (Haugen 2017) 3
2.2 Geographic spread of Southern Tepehuan (Moreno 2016: 13) 6

4.1 Flat structure of the O'dam DP 23
4.2 Proposed O'dam QP constituency structure 26
4.3 Linear word order for a full NP 29

6.1 Abridged Uto-Aztecan family tree 56

7.1 Possessive pronoun template 74
7.2 Northern Tepehuan possessive pronoun template 78
7.3 Proto-Tepiman possessive pronoun template 79

Chapter 1

Introduction

O'dam[1] morphologically distinguishes three classes of possessed nouns in attributive possession, the majority of nouns fall into either the ALIENABLE possession class, which acts as a default marker for all nouns that are not in the other two possession classes, or the INALIENABLE possession class, which includes nouns that are commonly cross-linguistically inalienable: kinship terms, body parts and culturally basic possessed items. The alienable noun class is characterized by the presence of *-ga* only on the 3SG possessed forms, while inalienable class is defined by the absence of *-ga* in any part of a noun's possessed paradigm. The IRREGULAR ALIENABLE noun class reflects the original distribution of the Proto-Tepiman alienable marker across all attributive possession contexts. This class is made up of nouns that were likely historically alienable, but were frequently possessed enough to maintain the original marking on their full possessed paradigm, despite the general loss of this marking on all other alienable nouns. A *-ga* suffix also appears as a possessed entity pronoun in possessive pronoun constructions , which developed out of the functional slot replacement of a possessive pronoun template that is found across Tepiman.

In previous literature, all three realizations of *-ga* have been analyzed as the realization of a single suffix (e.g. Willett & Willett 2015; Willett 1991). However, here I argue that such an analysis does not accurately depict the language as it currently stands. In §2 I will overview the sociolinguistic situation of O'dam, previous literature on the language and O'dam's place within the Uto-Aztecan family and the Tepiman subgroup. In §3 I will discuss previous work on (in)alienable possession, including a typology of its marking patterns (§3.1).

[1]In previous linguistic literature, O'dam is generally referred to as Southeastern Tepehuan. I use O'dam due to speaker wishes (Inocencia Arrellano Mijarez p.c.).

In §4 I describe the structure of the O'dam DP. In §5 I turn towards attributive possession constructions in O'dam and then describe the three possessed noun classes in §6. In §6.3 I specifically consider attributive possession and the use of cognates of the O'dam *-ga* suffixes in Uto-Aztecan and Tepiman (§6.3.1). Finally, in §7 I describe the properties and templatic structure of the possessive pronouns in O'dam and compare them to possessive pronoun templates in other Tepiman languages.

Chapter 2

O'dam and Uto-Aztecan

O'dam is a Uto-Aztecan language on the Tepiman branch, this is shown in Figure 2.1, nodes with question marks are controversial, italics indicate a spoken language.

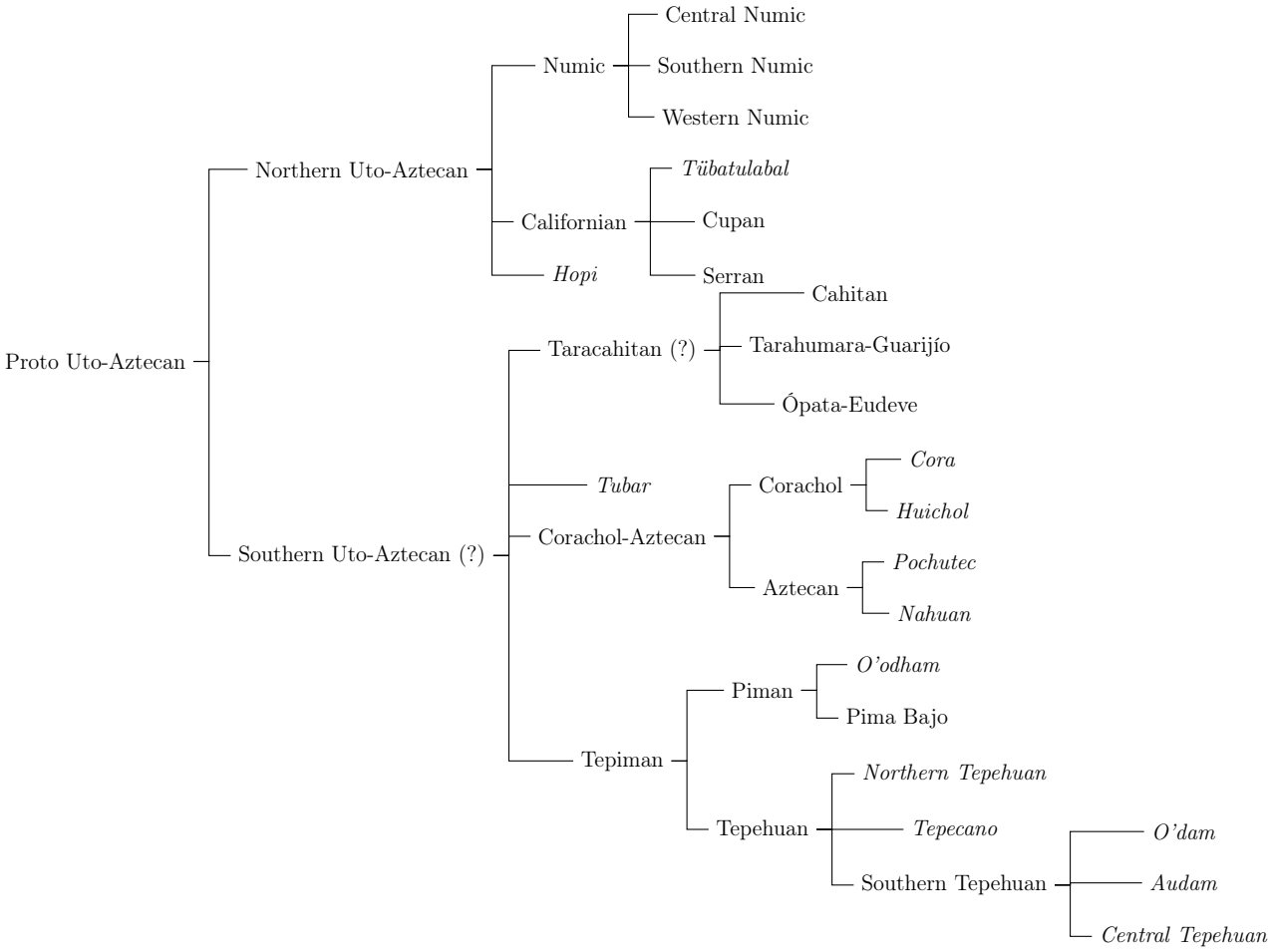

Figure 2.1: Uto-Aztecan family tree (Haugen 2017)

While there are several controversial subgroups in the Uto-Aztecan family, Tepiman has been relatively uncontroversial since it was first proposed by Kroeber (1934) and Mason (1936). There has been some debate as to whether or not Tubar is a member of Tepiman but the core languages, shown in the tree above, are uncontroversial. The subgroup has several sound changes that provide strong evidence for them being a single clade.

(1) Tepiman sound changes (Hill 2011)[1]

a. Glide hardening: Proto Uto-Aztecan **y > Tepiman[2] *d, Proto Uto-Aztecan **w > Proto-Tepiman[3] *g∼gw

b. Proto Uto-Aztecan **c > Tepiman[4] *s

c. Proto Uto-Aztecan **s > Tepiman[5] *h

d. Proto Uto-Aztecan **h > Tepiman[6] *ʔ

e. Proto Uto-Aztecan **k^w > Tepiman[7] *b

f. Proto Uto-Aztecan **p > Tepiman[8] *v∼w / #___

The Tepiman languages are spoken from northwestern Mexico to the U.S. Southwest. The Piman branch is spoken in the North American Southwest (which includes some of Chihuahua and Sonora). Northern Tepehuan is spoken in the southern part of Chihuahua. As of the Estadística y Geografía (INEGI) (2015) census there are about 36,000 registered speakers of Southern Tepehuan, which includes speakers of Audam (also called Southwestern Tepehuan) and Central Tepehuan. Southern Tepehuan languages are primarily spoken in the Mexican

[1]On an orthographic note, <c> here represents the voiceless alveolar affricate /ts/. Note also that /b/ and /v/ are represented in the O'dam orthography as <bh> and <b>, respectively.

[2]Tohono O'odham *daha* 'be seated' < **yasa 'to sit'; *doom* 'to copulate with obj' < **yoma 'to copulate'; O'dam *kooda* 'kill.PL' < **ko'-ya 'kill-CAUS'; *daak* < **yaka 'nose'; *duuk* 'rain' < **yuku 'to rain'.

[3]O'dam *gook* < **wo:; *gaki* < **waki 'dry'; *gɸ'* < **wɨʔɨ; Tohono O'odham *gi:gi* < **wip 'fat'.

[4]Tohono O'odham *sa:kum* 'to catch, grasp' < **cakwi 'to hold'; *siw* < **cipu 'bitter'.

[5]Tohono O'odham *ha:hag* 'leaves' < **sawa; *hia* 'sand dune' < **siHa 'sand'; *hɨ:pi* 'to become cold, of weather' < **sɨp 'cold'; *hoñig* 'wife' < **soʔni; *hu:tʃ* 'claw, nail' < **sutɨn.

[6]Tohono O'odham *'aki* 'arroyo' < **haki; *'i:'i* < **hi; *'i:ka* 'to be in shade' < **hɨka; O'dam *'iibhɨ* < **hi:kwisi 'to breathe'; *'uup* 'skunk' < **hupa.

[7]O'dam *bhai* < **k^wasi; *bhan* < *banai < **k^wana; Tohono O'odham *baʔa* 'to swallow obj' < **k^waʔa 'to eat'; *behe* 'to get obj' < **k^wɨsiC 'to take, get'

[8]Northern Tepehuan *váákɨi* < **pakiC; *vaági* < *vaagi 'wet' < **paa 'water'; *váíka* < **pahayu; O'dam *bɨɨt* < **pɨtɨ; Pima Bajo *vu(h)i* < **pusi 'eye'.

state of Durango, although there are smaller communities of speakers in the states of Nayarit and Zacatecas (García Salido 2014a: 9). Most speakers live in towns in the Sierra Madre Occidental, especially in the El Mezquital municipality, although they are increasingly moving to nearby cities, such as Durango City (García Salido 2014a: 22–3). The map in (2.2) shows the Southern Tepehuan communities in the Sierra Madre Occidental. It does not include Central Tepehuan because the language is only just beginning to be documented and, to my knowledge, has no reliable information on its geographic spread. Most O'dam speakers are bilingual in Spanish and O'dam, although there are certainly monolingual O'dam speakers (García Salido 2014a; Willett & Willett 2015; Willett 1991). My work here contains data from my own fieldwork in the summer of 2017, and via email since then, with two speakers: Martha Arellano Mijarez, who is from the town of Teneraca (called *Chianarkam* in O'dam) and Elizabeth Soto Gurrola, from the town of Santa María de Ocotán (called *Juktɨr* in O'dam). Both towns are in the El Mezquital municipality of Durango. Both speakers were trained by Gabriela García Salido in transcribing and translating texts and they have been instrumental in my work.

Previous work on O'dam (e.g. the two descriptive grammars Willett & Willett 2015; Willett 1991) has focused on speakers from Santa María de Ocotán, although there has been some work with Teneracan speakers, mostly by Gabriela García Salido. Speakers are generally aware of variation in pronunciation and lexicon across communities, especially of the Santa María variety because it is the most prestigious. Gabriela García Salido has authored numerous studies on the syntax of the language (e.g. García Salido 2012, 2014a,b, 2017a,b,c; García Salido & Reyes Valdez 2015). Thomas Willett has contributed much of the descriptive work on the language, writing the reference grammar (Willett 1991) and numerous other studies (e.g. Willett 1981, 1984, 1987, 1994, 2002, 2006, 2007), he also worked with Elizabeth Willett on a reference dictionary of the Santa María variety that includes a grammar sketch (Willett & Willett 2015). Elizabeth Willett has done much of the work on O'dam phonology (Willett 1982, 1985) as has José Moctezuma Zamarrón (1988; 2000), and Lilián Guerrero (2001).

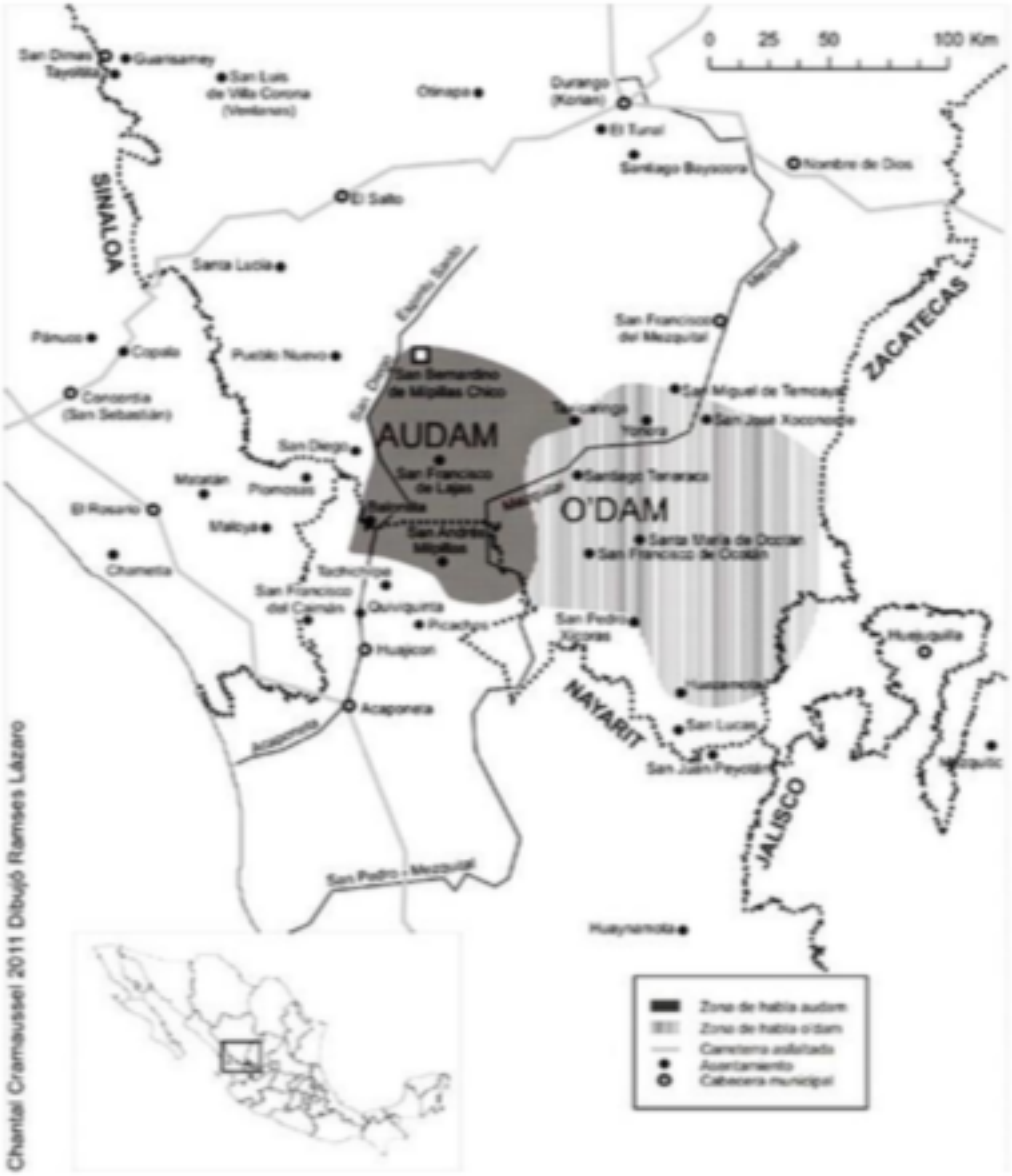

Figure 2.2: Geographic spread of Southern Tepehuan (Moreno 2016: 13)

Chapter 3

Possession and Possession classes

The dichotomy of alienable and inalienable possession broadly refers to the distinction between two types of possessive constructions in a given language. These are generally differentiated by a more marked and a less marked construction, with inalienable constructions generally being less marked (Nichols 1988: 579; Aikhenvald 2013; Chappell & McGregor 1996; Haspelmath 2008; Koptjevskaja-Tamm 2006; Mithun 2001). I say construction because languages vary in how analytic or synthetic the markedness distinctions are. Throughout this paper, I will use the terms POSSESSUM and POSSESSOR to refer to participants in possessive relationships and I follow the definitions in Ortmann (2018: 101). The former refers to the referential argument of the head noun in the possessive construction (i.e. the possessed noun). The latter refers to an attributive dependent of the possessum, which combines properties of a modifier (i.e. restricts the set of denotation of the possessum) an argument (as with relational nouns which entail possession in their semantic structure) and a determiner (because their e.g. definiteness properties spread to the possessum in many languages).

Attributive possession is defined as possession occurring within a possessor phrase,[1] while predicative possession occurs at the clausal level (Heine 1997: 86). Compare the examples in (2) and (3) from English. In (2) possession is expressed by the entire clause, either by a possessive pronoun following a copula (2a) or by the verb *have* (2b). In (3) possession is expressed within the object DP and not by the entire clause. Notice in (3b) that possessive pronouns can be used attributively or predicatively.

[1] By "possessor phrase" Heine (1997) means a noun phrase

(2) Attributive Possession

a. The red car is mine.

b. I have a car.

(3) Predicative Possession

a. I drove my car over the cliff.

b. Mine is at the bottom of the cliff.

O'dam has both predicative and attributive possession constructions. In (4) we see that the possessed noun *kuxiir* 'knife' is the object of the of the sentence. Possession is expressed attributively through the 3SG possessor suffix *-'n* and is presupposed[2] rather than asserted by any elements of the sentence. In addition, because *kuxiir* is an alienable class noun, it is also marked with the alienable *-ga*.

(4) O'dam Attributive possession

Ba-p-xidha	***gu***	***kuxiir-ga-'n***	*gu*	*chioñ*
CMP–IT–put	DET	knife-AL-3SG.POSS	DET	man

'The man put his knife (somewhere).'

In (5a) possession is expressed by the verb *bia'* 'have' in the bolded phrase. The possessor is the verbal subject and the possessum is the object, both are zero marked on the verb. Importantly for this paper, no possession marking appears on the possessum *tumiñ* 'money'. Likewise, no possession marking appears on the possessum *kabai* 'horse' in (5b), instead possession is indicated by the possessive pronoun *añga'n* 'mine' and the copula *jir-*. The third type of predicative possession construction appears to be through zero-deriving a denominal verb where verbal morphology attaches directly to a noun (often the durative and stative affixes), this is shown in (6).[3]

[2]Mithun (2001) notes that attributive possession typically presupposes possession while predicative possession typically asserts possession.

[3]García Salido (2014a: 107) glosses the *-iñ* suffix on *kora'* 'parent' as a 1SG possessor marker, however, the 1SG possessor marker is always realized as the prefix *jiñ-*. I argue this is the 1SG subject suffix because it phonologically matches the verbal suffix and is consistent with the zero derivation of a denominal verb for predicative possession.

(5) O'dam Predicative possession

a. *Mɨkkat* *sap* *ba'* ***na-pai'dhuk*** ***mui'*** ***ba-bia'*** ***dɨlh*** ***gu*** ***tumiñ***
after REP.UI SEQ SUB–ADVR a.lot CMP–have only DET money
ja'p *sap* *up* *jum-a'n-da*
DIR REP.UI IT 3R/M–think–CONT

'After, when he had a lot of money, he started thinking like that.' (García Salido 2014a: 236)

b. ***Dhi*** ***kabai*** *jir-añ-ga-'n*
DEM horse COP=1SG.SBJ–N.POSS–3SG.POSS

'This horse is mine'

(6) O'dam denominal verb possession

a. *Na=ch* *cham* *agren* *nui'* ***tu-ma∼mar-ka'***
SUB=1PL.SBJ NEG on.purpose a.lot DUR–PL∼offspring–EST

'To not have a lot of children.' (García Salido 2014a: 112)

b. *gu* *jax* *dhu* *na-gu'* *cham* ***tu-bu∼pui-ka-t*** *jia*
DET how EVID.DIR SUB–ADVR NEG DUR–PL∼eye–EST–IMPF RET

'Well, as he did not have eyes, right?' (García Salido 2014a: 128)

c. *a'-iñ* *cham* ***tɨgɨ'kora'-iñ***
think–1SG.SBJ NEG parent–1SG.SBJ

'I think that I have no family' (García Salido 2014a: 107)

In this paper I will focus on attributive possession in O'dam because predicative possession does not appear to interact with the *-ga* suffixes examined here, except where possessive pronouns are concerned. That possession class marking and alienability is limited to attributive possession in O'dam, rather than predicative possessive constructions, is typologically common (Herslund & Baron 2001). As I will discuss in §6.3, the properties of *-ga* in O'dam provide some evidence for Haugen's (2017) position that the suffix has always been an attributive possession marker **-wa*, so that O'dam *-ga* may have simply narrowed in its contexts.

Alienable and inalienable constructions are generally distinguished by their morphological and syntactic properties. Semantic properties generally form the basis for determining

the nouns that tend to, or must, appear in each construction type, even if they do not diagnose the constructions (Ortmann 2018). Alienability distinctions are also language specific, although there are noted overlapping qualities across languages (Chappell & McGregor 1996; Dahl & Koptjevskaja-Tamm 2001; Herslund & Baron 2001; Nichols 1988; Ortmann 2018; Stolz et al. 2008). Inalienable possessive constructions often express an inherent or semantically close connection between a possessor and possessum, such as a body part (Velázquez-Castillo 1996). Inalienable possession usually expresses relations where the possessor does not choose to initiate a relation nor does the possessor have "control" over the possessum, such as with kinship relations (Prince 2016), more on control later in this section. Inalienable possessive constructions are often more constrained in which nouns can appear in them than in alienable constructions (Nichols 1988). Conversely, alienable possessive constructions typically express relationships where the possessor has control over the possessum, including the choice to initiate or dissolve the relation. For example, a pencil has no agency if I decide to pick it up and use it to write in a Cyrillic or Latin script or to throw it away.

Often languages allow certain nouns to alternate between alienable and inalienable constructions. Maltese allows such "fluid classification" (Lichtenberk 2009: 273ff) as shown below. In (7a), the possessum *ras* 'head' is still attached to the possessor *Basilju* and appears in an inalienable possession construction, marked by simple juxtaposition. In (7b) the possessum is semantically alienated, or detached, from the possessor and, thus, appears in an alienable construction, marked by the possession particle *ta'*.

(7) Maltese (Semitic; Fabri 1993: 161ff)

a. *ras* *Basilju*
head Basil

'Basil's head'

b. *ir-ras* ***ta'*** *l-istatwa* *waqa-t*
DEF–head POSS DEF–statue fall–3FSG.PFV

'The head of the statue fell down.'

While Maltese allows typically inalienable nouns (e.g. head) to appear in alienable constructions without special marking, Slave requires a "de-relational" prefix (Ortmann 2018: 134).

This prefix reclassifies a typically inalienable possessum as belonging to but unattached to its possessor. Body parts are normally inalienably possessed in Slave, which is expressed by direct prefixation of a possessor prefix onto the possessum, as in (8a). In (8b) we see the use of the de-relational prefix to reclassify the possessive relation between the possessor and possessum as alienable, or unattached. Finally, in (8c) we see a secondary possession construction where the secondary possessor is prefixed outside of the de-relational prefix to indicate that the hide is alienated from its primary possessor (caribou) and is controlled by a secondary possessor (me).

(8) Slave (Athapaskan; Rice 1989: 228)

a. *se-dhéh*
1SG–(caribou).hide

'my skin (body part)'

b. *ʔe-dhéh*
DEREL–caribou.hide

'caribou hide'

c. *se-ʔe-dhéh*
1SG–DEREL–caribou.hide

'my caribou hide'

In (9), from (Rice 1989: 214ff), we see the alternation of the typically alienable *tu* 'water' between inalienable and alienable constructions. In (9a) water is marked for inalienable possession by a floating high tone, along with the expected inalienable semantics that the water is apart of the possessor's body. In (9b) we see water marked for alienable possession with the possession suffix *-é* and the expected relation whereby the possessor owns the body of water but it is not apart of their body. Notably, water in (9b) does not require the de-relational prefix because it is not typically inalienable.

(9) a. *se-tú*
1SG–water.INALIENABLE

'my water (from my body)'

b. *se-tué*
1SG–water.ALIENABLE

'my water, my lake'

Similarly, languages like Navajo also require special alienation strategies when possessing a typically inalienable noun in an alienable context. In (10a) we see *be'* 'milk' in an inalienable context, where the milk is a product of its possessor's body. In (10b), We essentially see a secondary possessive construction where the possessum requires an unspecified possessor prefix *'a-* in addition to the alienable possessor.

(10) a. *bi-be'*
3SG–milk

'her milk' (i.e. the milk she gave) (Nichols 1988: 565)

b. *be-'a-be'*
3SG–UNSP–milk

'her milk' (e.g. the cow's milk that she bought at the store) (Nichols 1988: 565)

In a study of languages that morphologically distinguish between alienable and inalienable possession, Nichols (1988) finds that languages where possession is generally head-marked (i.e. on the possessum) almost always have an inalienability distinction.[4] The languages in her sample that only mark dependents in possession constructions, do not have inalienability distinctions. O'dam follows the tendency for head-marking languages to have alienability distinctions. Notice in (11) that possession is marked on the possessum, and the language is strongly head-marking elsewhere (e.g. verbal arguments are marked on the verb). Possessive pronouns, as in (12), are formed by marking the possessor, or dependent. I will elaborate on the structure of possessive pronouns in §7, but for now it is notable that the possession marking in O'dam can appear on heads or dependents. However, it is also notable that head-

[4] (Nichols 1988: 576) notes that in in her sample of 47 languages from North America, only five (Chinookan, Coos, Natchez, Wakashan, Salishan) regularly head-mark possession and are not described as having an alienability distinction.

marking possession in O'dam also indicates the person and number of the possessor, while dependent marking possession carries no information about the possessum.

(11) *Gu* ***ja****-ju∼juus* *gu* *Pedro* *gio* *gu* *Marco*
DET 3PL.POSS–PL∼sickle DET Pedro COORD DET Marco

'Pedro and Marco's sickles'

(12) *Gu* *juus* *jir-Pedro-****ga-'n***
DET sickle COP=Pedro–N.POSS–3SG.POSS

'The sickle is Pedro's'

Nichols (1988) also finds asymmetric correlations among the presence of certain semantic groupings. For example, many languages only had inalienable kinship or body part terms and no others.[5] The presence of part-whole or spatial relations correlated strongly with the presence of kinship or body part terms but not vice versa.[6] Finally, the presence of items that Nichols calls "culturally basic possessed items" (572) as inalienable also strongly correlated with kinship or body part and part-whole or spatial relations in the same possessed category, but not vice versa.[7] The "culturally basic possessed items" category most commonly contains items such as 'arrows' and domestic animals but otherwise consists of nouns that do not fit into the other groups. Nichols presents the implicational hierarchy shown in (13) to represent the asymmetric correlations among the aforementioned semantic groupings. However, not all languages follow Nichols's (1988) implicational hierarchy, for example Navajo apparently treats kinship terms and body parts as inalienable along with nests, burrows and lairs, but not spatial or part-whole relations (Young & Morgan 1980).

(13) Kinship terms & body parts > Part-whole & spatial relations > Culturally basic possessed items

Nichols (1988) and Haspelmath (2008) argue that the diachronic process motivating alienability distinctions (and their nominal membership) involves tighter bounding of pos-

[5]For example, Washo (Jacobsen Jr. 1964: 391–2), Luiseño (Bright 1968: 3; Kroeber & Grace 1960: 83), Chimariko (Dixon 1910: 323), and Haida (Swanton 1911: 257), see Nichols (1988: 572) for the full list.

[6]For example, Nanai (Avrorin 1959: 122), and Nunggubuyu (Heath 1984: 213, 225, 545ff), see Nichols (1988: 572–3) for the full list.

[7]For example, Northern Tepehuan (Bascom 1982), and Daakaka (Prince 2016)

sessive markers, because inalienable constructions are overwhelmingly less marked across the world's languages. For Nichols (1988) and Haspelmath (2008), this tighter bounding is an overt one, with more or fewer morphemes marking the relation, others, though, argue that the bounding difference is in the underlying structure (e.g. Barker 1976; Bernstein & Tortora 2005; Cardinaletti 1998; Chung 1991; Dikken 1999; Español-Echevarría 1997; Heather et al. 2018; Kanerva 1987; Kayne 1993; Myler 2016; Vergnaud & Zubizarreta 1992). Those who argue for a difference in the underlying structure point towards languages like Budukh, which equipollently distinguish between alienable and inalienable constructions using different cases. For Budukh the locative case is used for inalienable constructions and the genitive case is used for alienable constructions. This case alternation is consistent with studies that have posited a difference in the underlying structure of alienable or inalienable possession. For example, either the absence of a PossP or that the PossP is incorporated directly into the N^0, and thus the P^0 is not overtly realized (Heather et al. 2018; Kanerva 1987; Myler 2016). If the genitive case is the realization of some element of a PossP, then the lack of a PossP either at all or above the N^0 would be consistent with the use of the locative case marking in (14a), because some other XP would be necessary to introduce the possessive relation.

(14) Budukh (Lezgic; Alekseev 1994: 282)

a. **Inalienable**
gəčild-a *penʒe*
cat–LOC paw

'the cat's paw'

b. **Alienable**
gəd-o *kitab*
boy–GEN book

'the boy's book'

In explaining the diachronic change, Nichols (1988) and Haspelmath (2008) attribute the tighter bounding mostly to the frequency with which classes of nouns are possessed. That is, they predict that inalienable nouns should generally be those that are most often possessed by a group of speakers and the difference between languages' inalienable classes

are due to these frequency differences. It should be emphasized, however, that frequency alone does not explain all alienability systems. While it undoubtably plays a role in their development, ultimately language specific cultural logics for alienability splits elaborate the system as a whole.

Prince (2016) argues the notion of control is often important in deciding which nouns are alienable and which are inalienable. Alienably possessed nouns are ones where the possessor has control over the possessum, while possessors in inalienable constructions do not have control. Prince (2016: 85) admits that 'control' does not yet have a definition that is cross-linguistically consistent, however, the starting point of the possessor's ability "to manipulate [the possessum] and to abandon it or transfer ownership" works for her case study of Daakaka.

Alienable possession in Daakaka is expressed through the use of linkers and classifiers, while inalienable possession involves the transitivizer *=ne*. We see in the minimal pair below with the noun *bura* 'blood', the body part (inalienable) reading shows the cliticized transitivizer and the non-body part (alienable) reading shows the classifier plus linker strategy.

(15) Daakaka alienability minimal pair (Prince 2016: 76)

a. *bura=ne* *vyanten* *en=te*
blood=TR person DEM=MED

'this person's blood' (body part)

b. *bura* *∅-e* *vyanten* *en=te*
blood CL2–LINK person DEM=MED

'this person's (animal) blood'

Prince (2016) notes that in Daakaka, inanimates[8] rarely occur as alienable possessors, the only attested examples in her data are shown in (16). Von Prince argues that both of these examples involve giving agency to the inanimate nouns so that they do have control over the possessum. In (16a) the iron wood tree has duties and responsibilities to agentively perform. In (16b) we see that 'road' is expressed via an alienable possession construction,

[8]For Daakaka, this apparently means non-humans and non-animals.

Prince (2016) notes that studies on English (Dabrowska 1998; Rosenbach 2008) have argued that machines, especially ones that somewhat move themselves are often given properties of animate entities so that the cars are, in reality, an animate possessor and can have control.

(16) Daakaka inanimate alienable possessors

a. *gyes=an* ***s-an*** *lewovya* *mu* *puo*
work=NMLZ CL3–LINK ironwood.tree REAL be.many

'the ironwood tree has many duties.' (Prince 2016: 80)

b. *seli* *s-an* *trak*
way CL3–LINK car

'road' (lit. 'the trail of the cars') (Prince 2016: 80)

While Daakaka generally follows Heine's (1997) notion of control, the ability to manipulate, transfer ownership and abandon the possessum, other languages appear to pick out certain parts of the definition and ignore others. Ameka (1996) finds that the alienability distinction in Ewe depends on control but only in terms of the possessor's ability to manipulate the possessum, not transfer ownership. This is because body parts pattern with alienable nouns rather than with inalienable nouns, because a person can move their body parts even if they are difficult to transfer. In Hawaiian, a possessor is alienable (has control over the possessum) if the possessor can initiate the possessive relationship (Lichtenberk 1983; Wilson 1982). This explains why the chief and hand in (17) are inalienable possessors (shown by the O classifier) while the deceased in (18) are an alienable possessor (shown by the A classifier). While the chief has control over their subjects, chiefs in Hawaiian culture do not initiate their own role (Lichtenberk 1983; Wilson 1982; Prince 2016: 85). Likewise, a person has control over their hand but humans are not conceived of as initiating the possessive relation with their body parts, they are simply born with them (Lichtenberk 1983; Wilson 1982; Prince 2016: 85). Conversely, while a possessor cannot manipulate their descendants, they brought their children into the world and, thereby, initiated the relationship.

(17) Alienable (marked with O classifier)

a. *nā* *kānaka* *o* *ke* *ali'i*
ART people CLASS ART chief

'the people of the chief' (Prince 2016: 85)

b. *k-o-na* *lima*
ART–CLASS–his hand

'his hand' (Prince 2016: 85)

(18) Inalienable (marked with A classifier)
nā *mamo* *a* *ka* *mea* *make*
ART descendant CLASS ART thing dead

'the descendants of the deceased' (Prince 2016: 85)

Returning to Nichols's (1988) position, that noun classes become inalienable through frequency of possession, frequency has very likely played a role in establishing the classes in Daakaka, Ewe and Hawaiian. However, it must be stressed that other notions like control (albeit currently inadequately defined) are often necessary to synchronically describe a language's alienability distinction, a point which is still consistent with Nichols's (1988) and Haspelmath's (2008) position that frequency is crucial for establishing which nouns are treated (in)alienable.

That each language has a different internal logic for their alienability distinctions means that each section of Nichols's (1988) hierarchy is not necessarily proportionally elaborated across the world's languages. For this reason Chappell & McGregor (1996) argue against such a hierarchy as being a poor representation of the world's morphological alienability systems. As I will discuss further in §6.2.1, O'dam's inalienable class only contains one member of the part-whole and spatial relations category, *kob* 'front' because all other such relations are expressed non-nominally and, thus cannot be possessed. However, the culturally relevant basic possessed items category contains 47 identified members so that it is vastly over-represented compared to the part-whole and spatial relations category. The culturally relevant category is more on par with kinship and body part terms, which have 29 and 54 identified members, respectively. This is notable because the culturally basic possessed item

category is generally very small in comparison to all of the other categories across the world's inalienability systems (Nichols 1988), while it makes up almost half of the O'dam system.[9]

While some previous work, has argued that (in)alienability is a property of nouns (e.g. Aikhenvald 2013; Chappell & McGregor 1996; Koptjevskaja-Tamm 2006; Mithun 2001; Nichols 1988; Seiler 1983), other studies have argued that a better description is that (in)alienability is a property of "a construction by which a conceptually grounded opposition is maintained" (e.g. Velázquez-Castillo 1996; Ortmann 2018: 103). The latter argument is based on the pattern in many languages for nouns to alternate between alienable and inalienable constructions with the expected semantic alternations, so that such alienability could not be a property of the nouns themselves. Although, the alienability feature could still arguably be a feature of the noun for languages like Slave and Navajo, which require special markings in order to alienate inalienable nouns. In describing the possession classes of O'dam, I must follow Nichols (1988)'s position that possession class membership is a feature of the entity rather than the relation. As will be discussed later §6.1, *-ga* marking (which distinguishes the alienable and inalienable classes) is non-alterable and is not passed through derivation or compounding. Thus, an entity that is morphologically marked as inalienable maintains the same marking, even if it occurs in a typically alienable context. Notice in (19) that *toon* 'leg' does not take the alienable marker *-ga*, even though they are alienably possessed by Pedro and Marco.

(19) *Pedro* *pintaru=t* *gu* ***tona-'n*** *jix-bɨ'* *gio* *Marco*
Pedro paint=3SG.SBJ.PFV DET leg–3SG.POSS COP=red COORD Marco
pintaru=t *gu* ***tona-'n*** *jix-chuk*
paint=3SGSBJPFV DET leg–3SG.POSS COP=white
'Pedro painted his (table) leg red and Marco painted his (table) leg white.' (112817_MA_ME)

Let us now turn to the cross-linguistic typology of markedness differences between alienable and inalienable possession.

[9] As I will discuss in §6.2, the set of inalienable nouns presented in this paper is almost certainly incomplete. There are likely inalienable class nouns that are simply unattested and the phonological shape of a word can make it difficult to identify as alienable or inalienable class.

3.1 Typology of Alienability Marking

An alienability distinction can be realized in a number of different ways across languages. As I will elaborate on in §6.2, O'dam marks inalienable possession by attaching the 3SG possessor suffix directly to the possessum, while alienable possession is marked with an intervening alienable possession suffix. Languages can vary greatly in how they distinguish alienable and inalienable possession, I will focus here on marking strategies that are relevant to understanding O'dam's.

In Koyukon, inalienable possession is indicated by juxtaposing the possessor and possessum (20a), while alienable possession requires the possession suffix *-e'* on the possessum (20b).

(20) Koyukon (Athabaskan; Thompson 1996: 600,655)

a. **Inalienable**
John *lo'*
John hand

'John's hand'

b. **Alienable**
Dick *leeg-e'*
Dick dog-POSS

'Dick's dog'

As previously mentioned, languages vary in whether alienability is marked synthetically or analytically. In Ewe, the possession marker *ɸé* is not morphologically bound to either the possessor or possessum but does mark alienable possession, notice that it is absent from the inalienable construction in (21a).

(21) Ewe (Kwa; Ameka 1996: 791)

a. **Inalienable**
kofí *srɔ* *eve-á-wó*
Kofi spouse two–DEF–PL

'the two wives of Kofi'

b. **Alienable**

kofi *ɸé* *awu*
Kofi POSS garment

'Kofi's garment'

While O'dam seems to require relational nouns to be possession but inalienable nouns on the whole are well attested in unpossessed contexts, nor are all relational nouns inalienable. However, Kampan languages generally require all inalienable nouns to appear with a possessor. In order to appear without a possessor, most Kampan languages use an alienating strategy (Michael 2012: 153–6). For example, in Matsigenka inalienable nouns require the alienator *-tsi* suffix to appear unpossessed, as shown in (22).[10]

(22) Matsigenka (Kampan; Michael 2012: 153)

a. **Inalienable**
no- *gito*
1SG– head

'my head'

b. **Non-possessed**
gito *-tsi*
head –ALIEN

'head'

Not all languages only distinguish alienable and inalienable. Kayardild exhibits a 3-way distinction where inalienable possession is indicated through simple juxtaposition, alienable possession is marked by the genitive case and the ablative case is used to mark possession through inheritance or manufacture.

(23) Kayardild (Pama-Nyungan; Evans 1995: 247)

a. **Inalienable**
kunawuna *kirrk*
child face

'the child's face'

b. **Alienable**

[10]Michael (2012) notes that other Arawakan languages, of which Kampan is a subgroup, use a cognate of the Matsigenka *-tsi* for similar alienator uses.

dangka-karra *dulk*
man–GEN country

'the man's country (that he has a right to)'

c. **Ablative**
ngamathu-na *wunkurr*
mother–ABL grass.shelter

'mother's grass shelter (that she made)'

English does not use uniquely (in)alienable possessive constructions (Koptjevskaja-Tamm 2003: 624; Ortmann 2018: 110–1). Instead, inalienably possessed nouns in English show different syntactic behavior, for example, they are incompatible with definite determiners. The sentences in (24) are ungrammatical on the reading where the *hand* is John's attached hand. Conversely, in (25) we see that the same sentences are grammatical if the possessum is read as alienably possessed.

(24) a. *John raised **the** hand.

b. *John gave **the** hand to Mary.

(25) a. John raised **the** pencil.

b. John gave **the** pencil.

c. John raised **the** plastic hand.

(Guerón 2008: 592, emphasis is my own)

Partee & Borschev (2003: 69) additionally find that a diagnostic for relational nouns (typically inalienable) is that they do not occur as a subject predicative, while one-place nouns can combine with a predicative possessor. In the examples below, *that book* is a one-place noun, and thus can appear with a predicative possessor *John*, while *brother* is a relational noun and, thus is odd with a predicative possessor. In (26c), *favorite* is an inherently relational adjective and, thus disallows the possessor *John* in predicative position (Partee & Borschev 2003: 70).

(26) a. That book is John's

b. #That brother is John's

c. #That favorite book is John's

After overviewing cross-linguistic semantic and structural tendencies in alienable and inalienable possession, let us now turn towards the structure of the O'dam DP.

Chapter 4

Structure of the O'dam DP

This section is not intended to fully describe the structure of O'dam DPs, instead I restrict my analysis to aspects that are relevant to O'dam attributive possession. The basic flat structure of a DP in O'dam in shown in (4.1) and an example DP without a quantifier is shown in (27).

Quantifier | Determiner | Adjective | Noun | Adjunct DP(s)

Figure 4.1: Flat structure of the O'dam DP

(27) *Gu* *jagɨ'* *ubii* *gu* *Maria*
DET old woman DET María
'the old woman, María' (García Salido 2014a: 90)

4.1 Determiners and Quantifiers

All nouns in O'dam require the use of one of two determiners: *dhi* and *gu*. Notice that all of the examples below have determiners before their nouns. Notice also in (28) that names require determiners too,[1] (28a) only differs from (28b) in the presence of *gu*.

(28) a. *Dhi'* *jir=joñ-ga'n* ***gu*** ***Pedro***
3SG.SBJ COP=esposa–3SG.POSS DET Pedro
'She is Pedro's wife'

b. **Dhi' jir=joñ-ga'n ∅* ***Pedro***

[1]This suggests that, as with Italian, there is no N to D movement (Longobardi 1994).

(29) *Tɨbañ-dha-'-ap* ***dhi*** *alhi* *na* *cham* *bhai'* *dhɨr* *ji-guɨxi-a'*
lower–APPL–IRR–2SG.SBJ DEM child SUB NEG DIR from INC–fall–IRR

'Get that child down so he won't fall from up there.' (Willett 1991: 182)

(30) *Jax* *chu'm* *ñi'ok=kɨ'n* *tu-'aga-'am* ***dhi*** *ja'tkam*
which look language=with DUR–speak–3PL.SBJ DEM people

'What language are those people speaking?' (Willett 1991: 207)

(31) *Jaisa* ***gu***-*ñ̃* *ami'* ***gu*** *taas*
break.PL.OBJ DET=1SG.POSS friend DET glass

'My friend broke the glass'

(32) *Jix=tɨtbi-m-iñ,* *bia'-ap=a* *ma'n* ***gu*** *pilot?*
COP=play–DES–1SG.SBJ have–2SG.SBJ=Q one DET ball?

'I want to play [a game], do you have a ball?'

I follow Willett's (1991: 206–7) analysis of *dhi* as a non-pronominal demonstrative where the referent must be definite and within sight, although distance may be variable, as in (29). This makes the typologically common link to the demonstrative pronoun *dhi'* (Dryer 2013), which indicates a singular proximal referent and is phonologically distinguished by the final glottal stop.[2]

Aside from the demonstrative determiner, *gu* is analyzed as a general 'determiner' and appears more broadly before nouns that are not necessarily visually accessible (although they can be). While *dhi* indicates that a referent is both visually accessible and definite, the definiteness of *gu* seems to depend on context and the presence or absence of quantifiers. The visual accessibility of a noun marked with *gu* seems best described as underspecified. In all examples of *gu* appearing before a noun without a quantifier, it marks a definite noun, as in (31). However, quantifiers appear to bring out its underspecified definiteness, we will see more examples of quantifiers with *gu* shortly, however, consider (33) from Willett (1991: 206). In Willett's (1991: 85) original sentence, the patient is indefinite, the sentence is glossed as

[2]The demonstrative *gui'*, plural *gui'm*, is used for distal referents but does not appear to have a non-pronominal counterpart.

in (33a), however, both of my consultants agreed that (33b) is a possible reading.

(33) *Ba-mu'a-im-'am* *ma'n* *gu* *chio'ñ*
CMP–kill–PROG3PL.SBJ one DET man

a. 'They are killing one/a man'

b. 'They are killing the one man'

The definiteness ambiguity in (33) suggests that *gu* on its own pragmatically links to a definite reading without further context, but that quantifiers can shift the preference to an indefinite reading (see Zubin & Li 1986 for further discussion). Conversely, *dhi* may appear with quantifiers but maintains its definiteness. Notice the indefinite readings in (34b) and (35b) are not possible for the given sentences.

(34) *Gok* *dhi* *su∼ssak* *jix=a'∼bhar-am*
two DEM PL∼sandal COP=PL∼pretty–3PL.SBJ

a. 'These two sandals are beautiful'

b. *'Some shoes are beautiful'

(35) *Gɨ'k* *dhi* *alhii* *jir=tɸ'∼tɸb-am*
some DEM child COP=PL∼tall–3PL.SBJ

a. 'Some of those children are tall'

b. *Some children are tall'

The two determiners, *dhi* and *gu*, are in contrastive distribution, obligatory and are the locus of definiteness; this suggests that they are D^0s. Quantifiers always precede the determiner but, as shown above, DPs do not require quantifiers. Numerical quantifiers, such as *ma'n* in (32) generally maintain their numerical value. Only *ma'n* 'one' and *gok* 'two' can refer to general quantities, meaning 'some, a few' and 'several', respectively.

(36) *Ba-x=kaim* *a* *gu-m* *gaa* *ku=p* ***gok***
CMP–COP=ripe CFR DET=2SG.POSS milpa SUB=2SG.SBJ two
jiñ-ga'lh-idha-' *(gu* *junba')*
1SG.OBJ–sell–APPL–IRR DET corn^field

'Is your cornfield ripe yet? (How about) selling me several ears?' (Willett 1991: 86)

(37) *Dhi* *su∼ssak* *na* *mi'bɨt,* ***gok*** *jir=añ-ga-'n*
3PL.SBJ PL∼sandal SUB DIR two COP=1SG.SBJ–N.POSS–3SG.POSS

'two of those sandals are mine'

In (36), the speaker is not asking for two ears of corn, instead they are asking for several ears, although both are possible readings of the sentence. The speaker could also use *ma'n* if they only wanted a few or any other number for a specific number of ears. Similarly, (37) could also mean 'several of those sandals are mine'. To further show that *gok* 'two' in (36) and (37) is a quantifier, the only other words that appear in that slot are more canonical quantifiers, as in (38) and (39).

(38) *Mi* *jai'ch* ***mui'*** *gu* *libros*
DIR EXIST many DET books

'There are many books'

(39) ***Gɨ'k*** *gu=ñ* *ma∼mar* *jir=tɸ'∼tɸb-am*
some DET=1SG.POSS PL∼offspring COP=PL∼large–3PL.SBJ

'Some of my children are tall.'

Quantifiers in O'dam cannot precede nouns without an intervening determiner (*gu* or *dhi*). This suggests that they are not heading a DP, but rather acting as heads of a Quantifier Phrase (QP). This is also semantically consistent with quantifiers' aforementioned effect specifically on the definiteness of *gu*, I show a tree of the O'dam QP structure in (4.2).

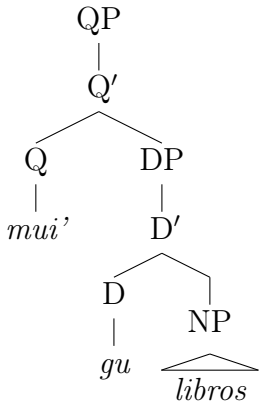

Figure 4.2: Proposed O'dam QP constituency structure

4.2 Adjectives

O'dam appears to have a very small set of true adjectives and a more general class of statives. True adjectives can occur between the noun they modify and its determiner and only due so if they are acting attributively. True adjectives only require a copula when they occur predicatively, although they can appear under a copula in attributive contexts. Notice in (40) that *jagɨ'* 'old' immediately precedes the noun *ubii* 'woman' and both are morphologically unmarked. Compare (41), where the adjective is used predicatively, requires the copula and follows the noun it is modifying.

(40) *Sap* *ba'* ***gu*** ***jagɨ'*** ***ubii*** *mu* *jii* *mummɨ* *sap* *ba'*
REP.UI SEQ DET old woman DIR move.PFV DIR REP.UI SEQ
pui=p *ba-tɨtda*
SENS=ITCMP–say

'According to the old woman, he went over there, over there he told him again.' (García Salido 2014a: 52)

(41) *Dhi'-ñi* *ba'ak* ***jir-jagɨ'***
DEM–VIZ house COP=old

'This house is old' (García Salido 2014a: 90)

Compare the predicative use of true adjectives with statives which require a copula regardless of whether they are being used predicatively or not. Notice in (42) that both *chotob* 'white' and *bhai'* 'good' appear under copulas yet *chotob* is acting attributively (i.e. is restricting the set denoted by *u'ji'* 'birds'), while *bhai'* 'good' predicates a property of the referent birds and does not restrict their set (McNally 2016).

(42) *Gu* *u'∼ji'* *jix=cho∼tob* *jix=bhai'* *jum-tat-am* *na* *joidham*
DET PL∼bird COP=PL∼white COP=good 2R/M–feel–3PL.SBJ SUB make
tanor *jix=chu-juk* *ba'*
sun COP=DUR–hot SEQ

'The white birds are happy because it is a good day and the weather is nice.' (García 2009)

In the attested data, multiple statives can occur under copulas outside of the NP, as in (43a), but more than one adjective inside the NP is ungrammatical, as in (43b). However,

adverbs modifying the adjective can occur within the NP, as in (44). This suggests that while the modification under copulas is relatively unconstrained, the true adjective slot only allows for one adjectival phrase (AdjP).

(43) 'The tall grey horse'

a. *Gu kabai jix=tɸb jix=kooma'*
DET horse COP=tall COP=grey

b. **Gu tɸb kooma' kabai*
DET tall grey horse

(44) *Gu [io'm jagɨ'] ubii*
DET very old woman
'The very old woman'

4.3 Adjunct DPs

Finally, adjunct DPs in O'dam appear to be able to take on several roles, but they are characterized by immediately following the head noun and semantically modifying the preceding DP, as opposed to another argument slot in the sentence. When adjunct DPs occur in possession, they most often occur to specify the possessor, as in (45a). Notice that *gu jagɨ' ubii* is not an argument of the verb *ba'k-cha* 'build a house', but rather the possessor of *ba'ki-'ñ̃* 'the built house'. As evidence that *gu jagɨ' ubii* is not simply a sentence-level adjunct, notice in (45c) that it is ungrammatical for *gu Pedro* to appear between the possessum and possessor.[3] While S and O order is free following the verb in O'dam (Willett 1991), that *gu Pedro* cannot interrupt the possessor and possessum in (45c) suggests that the possessor and possessum are part of the same constituent.

[3]Notably here, both Eli and Martha said that (45c) only works if Pedro possesses the house or both Pedro and the woman are other arguments of the verb. Neither said that it was simply difficult to get the intended reading.

quantifier | determiner | AdjP | noun | DP adjuncts

Figure 4.3: Linear word order for a full NP

(45) a. *Ba'k-cha* *gu* *Pedro* *[gu* *ba'ki-'ñ* *gu* *jagɨ'* *ubii]*
house–VBLZ DET Pedro DET house–3SG.POSS DET old woman

'Pedro built the old woman's house'

b. *Ba'k-cha [gu ba'ki-'ñ gu jagɨ' ubii] gu Pedro*

c. **Ba'k-cha [gu ba'ki-'ñ **gu Pedro** gu jagɨ' ubii]*

As evidence that the DP adjuncts occur quite high in the nominal structure, consider the utterance in (46). Notice that *mui' gu ja'tkam* is the possessum yet the possession marking appears on the quantifier *mui'* rather than the possessed noun *ja'tkam*. In (46) the quantifier *mui'* 'many' refers to the possessum: one woman has many men. Therefore, it seems that the DP under *mui'* has been elided and the possessum marking appears on the Q^0 and *gu ja'tkam* is syntactically a DP adjunct, rather than the head of the possessum.[4]

(46) *Jup-kaich-dha-'* ***mui'-ga-'n*** *gu* *ja'tkam* *na* *mi* *ja'p* *ba-bhiiya-'*
IT–say–APPL–IRR many–ALPOSSD DET people SUB DIR DIR CMP–pass–IRR
ba' *mɨkkat* *dhu* *pu-ch* *separaru-mɨ-t*
SEQ after EVID.DIR SENS=1R/R/M separate–3PL.SBJ–PFV

'He says: she has many men when he passes, and after, they separated us.' (García Salido 2014a: 237)

The linear word order for a full noun phrase in O'dam is shown in Figure 4.3.

[4]Interestingly, when asked, Martha said that *gu ja'tkam* could not be elided, as in the sentence below. As this is the only example of this in my texts, I can only speculate that either attributive possession always requires a possessum in the NP or that there is some other unknown process at work.

jupkaichdha' mui'ga'n* ~~*gu ja'tkam***~~ *na mi ja'p babhiiya' ba' mɨkkat dhu puch separarumɨt*

Chapter 5

Attributive Possession in O'dam

After analyzing the structure of the O'dam DP, as it is relevant to understanding attributive possession, I will now describe the attributive strategies that O'dam employs. The two attested strategies are defined as shown below.

- **Pronominal possession:** where the possessor appears as a pronominal possessor affix on the possessum.
- **Adjectival possession:** where the possessor appears as a bare noun immediately preceding the possessum, which appears in its possessed form, if the noun is irregular.

5.1 Pronominal Possession

The possessed noun classes discussed here primarily arise in pronominal possession, where the possessum is marked with one of the pronominal possessor affixes shown in Table 5.1. This is illustrated in (47) and (48a) where the possessums receive possession marking. Notice in (48a) that *bhai* 'thing' receives the 3PL possessor prefix even though the possessor *chichioñ* 'men' also appears in the sentence. Note that *gu chichioñ* could be syntactically bound to the verbal 3PL subject suffix *-am* or the *ja-* 3PL possessor pronoun, the linear order in the example is ambiguous between the two structures and the referents of both pronouns are the same. The sentence could be reordered, as in (48b), to remove the structural ambiguity, because then *chi∼chioñ* cannot be embedded under the DP *gu ja-bhai*. This ordering would still maintain the same meaning as the gloss in (48a) because S and O order is free in O'dam following the verb.

	Singular	Plural
1	*(ji)ñ*	*(ji)ch-*
2	*(ju)m-*	*jam-*
3	*-'n*	*ja-*

Table 5.1: Pronominal possessor affixes

(47) *Jaroo* *ba'* *mi'* *dhɨr* *ba-jim* *nas* *jiñ-babolh*
who SEQ DIR DIR CMP–move seem 1SG.POSS–aunt

'Who is the one coming there? It seems like my aunt.' (García Salido 2014a: 116)

(48) a. *Ba-p-xidha-am* *gu* *ja-bhai* *gu* *chi∼chioñ*
CMP–IT–put–3PL.SBJ DET 3PL–thing DET PL∼man

'The men only put their thing (somewhere)' (García Salido 2014a: 46)

b. *Ba-p-xidha-am* ***gu*** ***chi∼chioñ*** *gu ja-bhai*

If the word immediately preceding a possessor prefix is vowel final then the /jV$_{\text{high}}$/ portion is deleted and the remaining consonant cliticizes onto the preceding word. This is shown in (49) where the 1SG possessor prefix cliticizes onto the determiner because it in vowel final. Compare (47) where we see the full version of *jiñ-* because the immediately preceding word *nas* is consonant final. This process also affects the copulas and object prefixes but apparently no other morphemes.

(49) *Gu=**ñ*** *jikulh* *na-jaroi'* *bha-daa-ka-t* *bhurru-ta'm* *jim-da'*
DET=1SG.POSS uncle SUB–REL DIR–sit.SG–EST–IMPF donkey–on go–CONT

'My uncle, who was sitting there, went (around) by donkey.' (García Salido 2014a: 157)

Glottal stops do not appear to consistently block the aforementioned cliticization process. Notice in (50) that the 1SG possessor prefix cliticizes onto the evidential *dhi'* even though it has a final glottal stop. However, in (51), the 1SG possessor suffix remains affixed to the possessum, thus treating the preceding glottal stop as a consonant.

(50) *Añ* *chiɨ* *xi-ja-chiañ-im* ***dhi'=ñ*** *ma∼mar*
1SG.SBJ INT.NR IMP–3PL.OBJ–cure–PROG DEM=1SG.POSS PL∼son

'I am curing my sons (Lit. I am trying to cure my sons).' (García Salido 2014a: 58)

(51) *No'=ñ* *jix=bhai'* *jix=chu-dui-ñ-dha'* ***jiñ**-ki'am*
COND=1SG.SBJ COP=good COP=DUR–do–APPL–CONT 1SG.POSS–house

'If I can take care of my house' (García Salido 2014a: 65)

This cliticization process seems to be somewhat optional, both of my consultants are aware of when it happens and can produce sentences without the cliticization so that the speaker in (51) simply decided to not cliticize the possessor prefix. It may also be that speakers vary in their treatment of glottal stop as a true consonant.[1]

5.2 Adjectival Possession

The second strategy for marking attributive possession is adjectival possession, which consists of a possessor as a bare noun appearing between the possessed noun and its determiner.

(52) *Gu* *Mike* *onaa-'*
DET Mike salt–IAL

'Mike's salt'

Adjectival possession is notable because neither the possessor nor the possessed noun is marked for possession except for with irregular alienable nouns where the possessum is marked, e.g. *on* 'salt' in (52). Moreover, this construction is special because the possessor noun must appear as a bare noun, no other phrasal elements are allowed. In (53) we see that a determiner in not allowed and in (54) we see that even possessor affixes are disallowed.

(53) **Gu* *[gu* *Mike]* *onaa-'*
DET [DET Mike] salt–IAL

(54) **Gu* *jiñ-ami'* *onaa-'*
DET 1SG.POSS–friend salt–IAL

Adjectival possession differs from adjectival modification in three ways. Adjectival modification does not license the *-ga* suffix on irregular alienable nouns; adjectival possession

[1] It is notable that complex codas are only allowed if they begin with a glottal stop.

allows a bare noun to occupy a slot otherwise reserved only for true adjectives; adjectival modification allows an adjectival phrase, while adjectival modification only allows a bare noun possessor. Because of the constraints on both constructions only one of the constructions can occur at a time on a given noun.

The sentences in (55) are all equivalent, however in (55a) we see adjectival possession where the possessor appears in between the determiner and possessum, the adjective *chua* 'white' appears under a copula and the possessum shows possession marking because it is an irregular alienable class noun. In (55b) and (55c) we see adjectival modification where the adjective appears between the determiner and possessum and two strategies for marking the possessor. In (55b) the possessor appears as a possessor pronoun so that no possession marking appears on the possessum at all, while in (55c), the possessor simply appears as a DP adjunct and possession is marked on the possessum.

(55) a. *Gu* ***Pedro*** ***onaa-'*** ***jix=chua*** *jix=mes-ta'm-da*
DET Pedro salt–IAL COP=white COP=table–above–CONT

'Pedro's white salt is on the table'

b. *Gu* *chua* ***on*** *gu* *Pedro-ga-'n* *jix=mes-ta'm-da*
DET white salt DET Pedro–N.POSS–3SG.POSS COP=table–above–CONT

'The white salt, Pedro's, is on the table'

c. *Gu* *chua* ***on-ga-'n*** *gu* *Pedro* *jix=mes-ta'm-da*
DET white salt–IAL–3SGPOSS DET Pedro COP=table–above–CONT

'His white salt, Pedro's, is on the table'

In (56) we see that we cannot use both the adjectival modification and adjectival strategies on the same noun in any order. Both strategies have a one element maximum, either one adjectival phrase or bare noun possessor so that using the strategies together violates both of their constraints.

(56) a. **Gu* ***Pedro chua onaa-'*** *jix=mes-ta'm-da*

b. **Gu* ***chua Pedro onaa-'*** *jix=mes-ta'm-da*

Having discussed the attributive possession strategies, I will now discuss the possessed

noun classes in O'dam.

Chapter 6

Possessed Noun Classes

A noun's possession class membership is determined by the appearance, or absence, of *-ga* in one or more parts of its possessed paradigm. Table 6.1 shows the complete possessed paradigms of three nouns, representing each class, the marking patterns of which are not alterable. The inalienable class paradigm is illustrated by *maar* 'son', where *-ga* never appears. The alienable class paradigm is illustrated by *jaraax* 'crab', where alienable *-ga* only appears in the 3SG form. Finally, *on* 'salt' illustrates an irregular alienable paradigm, where all possessed forms show a fossilized reflex of *-ga*, but it is realized as [ʔ] in final position. Notice that 3SG possessors are the only ones marked by a suffix *-'n* meaning that that is the only context where *-ga* is not realized in word-final position.

	maar 'son'	*jaraax* 'crab'	*on* 'salt'
1SG	*jiñ-maar*	*jiñ-jaraax*	*jiñ-onaa'*
2SG	*jum-maar*	*jum-jaraax*	*jum-onaa'*
3SG	*maara-'n* **maar-ga-'n*	*jaraax-ga-'n* **jaraaxi-'ñ*	*onga-'n* **onaa-'n*
1PL	*jich-maar*	*jich-jaraax*	*jich-onaa'*
2PL	*jam-maar*	*jam-jaraax*	*jam-onaa'*
3PL	*ja-maar*	*ja-jaraax*	*ja-onaa'*

Table 6.1: Paradigms of the three possession classes in O'dam

In each of the following sections I describe the morphophonological properties of each possessed noun class followed by the semantic properties of its members. In §6.3 I consider attributive possession, alienability and the possession classes discussed here in the context of the entire Uto-Aztecan family, which is helpful in understanding the irregular noun class, described in §6.4.

6.1 Alienable *-ga*

The ALIENABLE *-ga* suffix only occurs in pronominal possession contexts with the 3SG possessor suffix *-'n* and such marking is fixed for each noun. As is the case for all syllabic suffixes, it does not affect stress placement but can, in rare cases, affect the shape of the stem (Willett 1982). Most nouns behave like *jaraax* 'crab', where the root maintains the citation form through all possessed forms. However, some nouns, like *baiñum* 'iron' realize a different root shape with a 3SG possessor suffix. This is due to the ordering of vowel deletion rules, where word-final vowels are deleted before vowels immediately following stress, which are preserved if their deletion would cause an illicit coda such as [ñm]. In (57) the /i/ of the underlying form is deleted in all forms because it is in word-final position, (57a) and (57b), and immediately follows stress (57c). Conversely, the final /i/ in (58) is deleted in word-final position, (58a) and (58b), but the /u/ is deleted in (58c) because it immediately follows stress. I will discuss these phonological processes more in depth in §6.2.

(57) /jaˈraaxi/

a. *jaraax* 'crab'

b. *ja-jaraax* 'their crab'

c. *jaraax-ga-'n* 'her/his crab'

(58) /ˈbaiñumi/

a. *baiñum* 'iron'

b. *jiñ-baiñum* 'my iron'

c. *baiñmi-ga-'n* 'her/his iron'

That alienability marking is fixed in O'dam is demonstrable in two ways. First, expected inalienably possessed forms of alienable nouns do not exist, e.g. **jaraaxi-'ñ* and *baiñmi-'ñ* are unacceptable. Second, certain alienable nouns are attested in prototypically inalienable contexts. For example, in (59) *upsu* 'stinger' is alienable but it refers to a body part and all other body part terms are inalienable. In context, the stinger is still part of the scorpion's body so that the relation between the possessor and possessum is contextually inalienable, yet the noun receives alienable *-ga* marking.

(59) *Upsu-ga-'n=ki'n* *ti-kiki'* *gu* *naksir*
stinger–AL–3SG.POSS=with DUR–bite DET scorpion

'The scorpion stings with its stinger.' (Willett 1991: 211)

The noun *ami'* is relational, in (60b) the 'friends' walking are friends necessarily of each other. Thus we might expect *ami'* to be treated inalienably (Partee & Borschev 2003), but it realizes alienable *-ga* marking in (60a).

(60) a. *Gu* *ami'n-ga-'n* *jir=tɸb*
DET friend–AL–3SG.POSS COP=tall

'His friend is tall'

b. *Gu* *a'∼mi'* *jim-chu'-am*
DET PL∼friend go–CAUS–3PL.SBJ

'The friends are walking'

It is not entirely clear why *ami'* 'friend' would be the only attested relational noun that is alienable. First, other Spanish loans are inalienable, e.g. *abuil* 'grandmother', *biisalh* 'great-grandmother', *bhuru'x* 'donkey', *komaalh* 'godmother', *kompaalh* 'godfather'. Bascom (2003: 16) lists *amiigú* 'friend' as alienable in Northern Tepehuan as well,[1] which suggests that Spanish *amigo* was simply never incorporated into the system. Although it should be noted that Northern Tepehuan and O'dam do not appear to have the same inalienability systems §6.3.1.

I use the term "alienable" to describe this class because some nouns in the class are not frequently possessed (e.g. both of my consultants found the idea of owning a crab odd) and they are controllable according to all parts of Heine's (1997) definition of control: transferabile, manipulabile and able to be abandoned (e.g. *mees-ga-'n* 'her/his table', *pilot-ga-'n* 'her/his ball'). I also use the term alienability to contrast with the inalienable class which contains many nouns with meanings that are commonly associated with inalienability. To illustrate this opposition, I will now discuss the inalienable noun class.

[1]Bascom (2003: 16) lists the 3SG possessed form of Northern Tepehuan *amiigú* as *amiigú-ga-di*, where *-di* is the 3SG possessor suffix and is cognate with O'dam *-'n*.

6.2 Identifying Inalienable Nouns

Inalienable possession is characterized by the lack of the alienable *-ga* suffix on any parts of the possessed paradigm. This means that the non-syllabic 3SG possessor suffix *-'n* must attach directly to the nominal stem and often requires the underlying final vowel of the stem to appear. Final short vowels often do not appear without non-syllabic suffixes due to stress-induced vowel deletion (Willett 1982). In (61) we see the citation form, 1SG possessed form and 3SG possessed form. Notice the shape of the root is the same in (61a) and (61b) but not in (61c). Compare this to the alienable noun *saba'n* 'bought thing' in (62), where the root maintains the same shape in all forms.[2]

(61) a. *i̵'i̵i̵r* 'blood'

b. *jiñ-i̵'i̵i̵r* 'my blood'

c. *i̵'ra-'n* 'her/his blood'

(62) a. *saba'n* 'bought thing'

b. *jiñ-xaba'n*

c. *saba'n-ga-'n* 'his/her/its bought thing'

The difference in the realization of the root in (61c) is due to vowel deletion immediately following a stressed syllable, except where that deletion would cause an illicit coda. In O'dam, stress appears on either the first or second syllable of the root, depending on which is heavy,[3] only roots can bear stress, prefixes never do (Willett 1982). If both syllables are heavy or light, then stress appears on the first syllable. O'dam also seems to organize its syllables so that every syllable receives an onset where possible (Willett 1982). The underlying form of 'blood' is shown in (63a). The first syllable only consists of a short vowel /i̵/ because the glottal stop can be the onset of the second vowel. The second vowel is long so that the second

[2]The /s/ > [x] change in (62b) is due to palatalization, which affects alveolar consonants that are immediately adjacent to /i/ or a palatal consonant /x ch dh ñ/.

[3]A light syllable in O'dam is one only consisting of a consonant and short vowel. A heavy syllable is one consisting of a coda, diphthong, or long vowel. It is not clear if syllables with codas and diphthongs or codas and long vowels constitute super heavy syllables because, thus far, there is no attested case of a root with the phonological shape CV{C/V}CVVC where there is an initial heavy syllable followed by a super heavy syllable. For now, then, I must conservatively say that all heavy syllables are equally weighted.

syllable is heavier than the first and, therefore, receives stress. Because the final /a/ of the underlying form is immediately following the stress, it is deleted (Willett 1982), causing the syllabified citation form in (63b) with primary stress on the second syllable.

(63) a. /ɨ'ɨɨra/
VCVVCV

b. [ɨ. 'ɨɨr]
V. 'CVVC

Similarly, the underlying form of *saba'n* is shown in (64a). notice that the first syllable is light (CV) while the second syllable has a coda and is therefore heavy and receives stress. Finally, in coda position /d/ > ['n], producing the attested syllabified form in (64b).

(64) a. /sabada/
CVCVC

b. [sa. ba'n]
CV. 'CV?C

When the 3SG suffix attaches to the underlying form in (63a), it causes stress to fall on the first syllable. O'dam has a phonological constraint where the only licit complex codas are of the shape [?C]. Therefore, if we follow the same derivation as above, then we cause a form with an illicit [CCC] coda, shown in (65). In order to compensate for this, O'dam shortens the underlying underlying long vowel of the second syllable. The first syllable then receives stress instead of the second because both are now equally light. Now that the second vowel is immediately following stress so it is deleted and the glottal stop becomes the coda of the first syllable. Because the final vowel of the root no longer immediately follows the primary stress, it can surface and break up the illicit coda in (65). These processes produce the surface form in (66).

(65) *[ɨ. 'ɨɨr'n]
*V. 'CVVCCC

(66) [ɨ'. ra'n]
'VC. CV?C

The alienable noun *saba'n* does not need to resyllabify in the 3SG possessed form because the alienable suffix *-ga* is syllabic and attaches inside of the 3SG possessor suffix. Therefore,

it prevents an illicit coda from occurring on the root.

(67) [sa. ba'n. ga'n]
CV. CV?C. CV?C

The form in (67) also shows us that there is no underlying final-vowel in the root. Word-final vowels that are short always delete, regardless of stress placement. When deleting vowels, O'dam first deletes final-vowels before syllabifying the root and placing stress (Gouskova 2003; Kager 1997). Thus, the 3SG possessed form shows us that there is no final vowel in the underlying root because that would cause the first and second syllables of the root to be equally light when the alienable possession suffix would cause the root-final vowel to be in final position and, thus, stress would fall on the first syllable, deleting the second vowel and producing the unattested form [*sabdVga'n].

The same phonological processes act on all of the inalienable nouns, although vowel final inalienable nouns maintain the same syllabification in the 3SG possessed form because the suffix does not cause an illicit coda. Notice in (68) that the root maintains the same shape in the citation form, prefixed possessed form and 3SG possessed form.

(68) a. *bapoo* 'body hair, fur, plumage'

b. *jum-bapoo* 'your body hair'

c. *bapoo-'n* 'it's fur, plumage; her/his body hair'

There are a number of inalienable nouns which I believe have been misclassified as alienable in previous literature. These nouns have been analyzed as having a truncated root plus the alienable *-ga* suffix in the 3SG possessed form. However, based on the phonological processes discussed above along with historical evidence, I will argue that they are inalienable and that the [ga] string is, in fact, part of the root. Before I continue it must be noted that in word-final position, [ʔ] can either be the surface form of an underlying /ʔ/ or and underlying /g/. Compare the forms of *jo'* 'leather, skin' in (69), where the final [ʔ] of the citation form is underlyingly a /g/, to *mo'* 'head' in (70), where the surface [ʔ] matches the underlying phoneme.[4]

[4]The 3SG possessed form of head replaces the initial /o/ of the underlying form with /a/ due to a regular rule in O'dam where /o/ > [a] / ___ (ʔ)Co.

(69) a. /jogi/ ‘leather, skin’

b. *ja-jo’* ‘their leather/skin’

c. *jogi-’ñ* ‘his/her/its leather/skin’

(70) a. /mo’o/ ‘head’

b. *jiñ-mo’* ‘my head’

c. *ma’oo-’n* ‘his/her/its head’

While *jo’* is unarguably inalienable (the alienable suffix is never realized as [-gi]) let us examine one of the nouns that have been misclassified as alienable *jooñi’* ‘wife’.

Notice that if we classify *jooñi’* as an alienable noun and analyze the [ga] string in (71) as the alienable suffix, then the root in 3SG possessed form (71) appears truncated compared to the roots in the citation and 1SG possessed forms in (72). However, as discussed above, the alienable possession suffix never requires nominal stems to modify (because it is syllabic) and truncation is only attested in O’dam for forming the perfective forms of verbs, therefore we must analyze the truncation as a suppletive process.

(71) **jooñ-ga-’n* ‘his wife’

(72) a. *jooñi’* ‘wife’

b. *jiñ-jooñi’* ‘my wife’

I posit the underlying form shown in (73), where the final glottal stop in the forms in (72) is underlyingly /g/.[5] Using the previously discussed phonological processes, this underlying form derives the morphological analysis in (74) and the roots in (72) no longer undergo suppletive truncation.

(73) /jooñiga/

[5]Note that the non-suffixed forms of /jooñiga/ do not realize the final vowel because that is deleted first and, therefore, the vowel immediately following stress is required to prevent the illicit [C?] coda.

(74) *jooñga-'n*

In the first step, there are no final vowels so the word is syllabified. The first syllable of the root is heavy so stress occurs there. The stress placement deletes the second vowel and causes the onset consonant of the second syllable to become the coda of the first.

(75) /jooñiga-'n/
↓
ˈjoo. ñi. ga'n
ˈCVV. CV. CV?C
↓
ˈjooñ. ga'n
ˈCVVC. CVC

Thus, the underlying form with [ga] as an element of the root correctly derives the attested 3SG form and removes the need for a suppletive truncation process. We can also motivate the posited underlying form by looking historically, Hill (2014) reconstructs Proto-Tepiman **hooniga* 'wife' based on the O'dam form as well as the forms in (76) from other Tepiman languages. Notice that all of the Tepiman forms have a final /g/ and Northern Tepehuan maintains the final *a of the proto-form.

(76) a. Tohono O'odham: *hooñig*

b. Pima Bajo: *hooñig*

c. Northern Tepehuan: *ooñíga*

Thus, the above reanalysis of *jooñi'* also has the benefit of maintaining the full Proto-Tepiman form. The alternative analysis, where the [ga] is the alienable possession suffix, requires positing that O'dam lost *g form the proto-form. While proto-vowel loss is attested in O'dam, *h is the only consonant that O'dam lost in specific conditions (Willett 1991).

Extending the analysis of *jooñi'* to other nouns were we have comparative data corroborating the underlying forms with [ga] as a part of the root, we can safely classify the words shown in Table 6.2 as inalienable.[6]

[6]In the interest of space I will use the following language abbreviations in this table: TO = Tohono O'odham; PB = Pima Bajo: NT = Northern Tepehuan; PUA = Proto Uto-Aztecan.

O'dam citation form	3SG possessed form	Proto-Tepiman	Other Tepiman
jooñi' 'wife'	*jooñga-'n*	**hooniga*	TO: *hooñig* PB: *hooñig* NT *ooñíga*
a'aa' 'horn'	*a'ga-'n*	**aaga* < PUA ***awat*	TO: *aʔag* PB: *ag* NT: *aagá-dɨ* (possessed)
jo' 'leather, skin'	*jogi-'ñ*	**hogi*	TO: *hogi̥* PB: *hog* NT: *ógi*
tuuku' 'body, flesh'	*tuukga-'n*	**tuukuga*	TO: *chuukug* NT: *tuukkúga*
jaa' 'leaves'	*jaaga-'n*	**haga*	TO: *haahag* PB: *haahag* NT: *áága*
yooxi' 'flower'	*yooxga-'n*	**hiosigai*	TO: *hiosig* PB: *hioš* NT: *yoošigai*

Table 6.2: O'dam reclassified nouns with comparative data

However, there are also a number of other nouns that appear to undergo the same false truncation, but for which we do not have comparative data. Assuming that suppletive truncation does not happen on O'dam nouns, I use the same phonological derivation as *jooñi'* 'wife' and propose the following reconstructions.

Now that I have discussed the processes for identifying inalienable nouns, in the next section I show the full list and then discuss the semantic properties of the class.

6.2.1 Inalienable Nouns

The nouns which have been identified as inalienable class nouns are shown below. I have split these into the groups that Nichols (1988) included in her implicational hierarchy: Kinship terms, Table 6.4; body parts, Table 6.5; Part-whole & spatial relations, Table 6.6; Culturally basic possessed items, Table 6.7.[7]

[7]A note on the culturally basic possessed item category, I have placed the insults *jupaabkam* 'one who does not have the right to order someone else' and *alhiokam* 'one who has less authority than another' in the

O'dam citation form	O'dam 3SG possessed form	Proposed Proto-Tepiman Reconstruction
baraa' 'corresponding liquid'	*barga-'n*	**varagV*
bi̵i̵na' 'companion'	*bi̵nga-'n*	**vi̵nagV*
tajaañi' 'descendant'	*tajaañga-'n*	**tahanigV*
boorda' 'sweat'	*boordaga-'n*	**vor(V)dagV*
xubu'da' 'gallbladder'	*xibu'nga-'n* or *xibudaga-'n*	**xibudagV*
iibhaidha' 'fruit'	*iibhai'ñga-'n*	**iibahi-dagV* (from **iibahi* 'pickly pear fruit')
osbha' 'tree sap'	*osbhaga-'n*	**usabadag* (based on TO *usabdag* 'tree sap')
koidhara' 'favorite food'	*koidharga-'n*	**ko(h)idarag*
iaptara' 'saddle blanket'	*iaptarga-'n*	**iahap(V)taragV* (based on O'dam *iata'* 'tell a lie' < Proto-Tepiman **iahatagi*)

Table 6.3: O'dam reclassified nouns with proposed Proto-Tepiman forms

O'dam	Gloss	O'dam	Gloss
abuil	'grandmother'	*baboolh*	'father's younger sister'
biisalh	'great-grandmother'	*bi̵i̵na'*	'partner, companion (people or things)'
boxii'	'great-grandfather'	*daa'n*	'mother-in-law'
dhixiik	'mother's younger sister	*gɸ'taat*	'grandfather'
gi̵'kora'	'father, parents'	*jaaxmakar*	'someone who is being treated like a doll'
jaduuñ	'relative'	*jiikulh*	'father's younger brother'
jooñi'	'wife'	*ki̵lhii'*	'father's older brother'

culturally basic rather than the kinship and people category because, as I will discuss in §6.2.2 the possessor is the referent rather than a relation, thus they appear to be a relation between a referent/entity and a status, rather than a relation between two entities/people.

O'dam	Gloss	O'dam	Gloss
kompaalh	'godfather'	*komaalh*	'godmother'
kuulsi	'grandfather, man's grandson'	*kuuxi'*	'mother's older brother'
maar	'offspring'	*naan*	'mother'
nuuchix	'sibling-in-law'	*oogax*	'husband of mother or father's sister'
o'kix	'mother's older sister'	*paasulh*	'father's older sister'
s~~i~~ip'ñ	'younger sibling'	*taat*	'father'
taatalh	'mother's younger brother'	*tajaañi'*	'descendent'
xiix	'older sibling'		

Table 6.4: O'dam Kinship terms and people

O'dam	Gloss	O'dam	Gloss
atpor	'buttock'	*a'aa'*	'horn (of animal)'
a'oo	'bone'	*bak*	'esophagus'
bapoo	'body hair, fur, plumage'	*book*	'stomach'
boorda'	'sweat'	*bui*	'eye (body part or of needle), knot'
bhai	'tail'	*bhaixk~~i~~lh*	'spinal column'
bhiich	'excrement, manure'	*bhuut*	'belly'
chiñ	'mouth, beak'	*chiñbo*	'facial hair'
daak	'nose, snout'	*i'mda'*	'soul, life'
~~i~~s	'elbow'	*~~i~~'~~ii~~r*	'blood'
jabkalh	'lung'	*jamk~~i~~s*	'lower jaw'
jano'm	'rib'	*jijii*	'intestines'
jik	'belly button, navel'	*jiktob*	'armpit'
ji'	'urine'	*j~~ii~~bo*	'eyebrow, eyelash'
jo'	'leather, skin'	*jur*	'heart'
juraab	'waist'	*juut*	'claw, nail'
kaam	'cheek'	*kai*	'thigh'
karbo	'wing (bird)'	*k~~ɬ~~lh*	'ankle'
kom	'back, shell, bark'	*kotbo*	'shoulder'
kui	'larynx, throat'	*kusuup*	'nape'
kuup	'hair (head)'	*kuxbo*	'neck, throat'
mo'	'head'	*naak*	'ear, hearing'
ni~~i~~n	'tongue'	*nob*	'arm, hand'
obaa'	'brain, animal fat'	*olhia'*	'knee'
sasoo'	'mucus'	*son*	'stump (of tree)'
taatam	'tooth'	*tak*	'root'

O'dam	Gloss	O'dam	Gloss
tataa'	'tendon'	*tikbo*	'heel'
timaich	'calf (leg)'	*toon*	'leg, foot'
tor	'chest (bird)'	*tubuulh*	'hip'
tuuku'	'body'	*upua*	'crown, stem'
xibu'da'	'gallbladder'		

Table 6.5: O'dam Body parts

O'dam	Gloss
kob	'front'

Table 6.6: O'dam Part-whole and spatial relations

O'dam	Gloss	O'dam	Gloss
alhiokam	'one who has less authority than another'	*askich*	'ixtle cloth'
atuulh	'atole'	*baalh*	'basket'
bañ	'cover (made of leather or hard plastic)'	*bakua*	'gourd, squash'
baraa'	'corresponding liquid'	*ba'aak*	'house'
bib	'tobacco'	*bii'm*	'milk'
biñkar	'bagasse (pulpy residue left after extracting juice from sugar cane)'	*bosaa'*	'healer's flask (made of zoyate, to keep ceremonial arrows)'
bhii	'food'	*bhuru'x*	'donkey'
daasara'	'handle (of tool)'	*duiñkar*	'pipe'
gaamkar	'case'	*gaat*	'bow (weapon and musical instrument)'
gaa'	'milpa (corn field)'	*iaptara'*	'saddle blanket'
iibhaidha'	'fruit'	*ipuur*	'skirt'
jaa'	'leaf'	*jannulh*	'fabric'
jaraar	'plow'	*jooxia'*	'plate'
jupaabkam	'one who does not have the right to order someone else'	*kai*	'seed'
ki'aam	'house, home'	*koi'dhara'*	'favorite food'
kos	'nest'	*kutuun*	'blouse, tunic'
kuupara'	'plug'	*maiñ*	'straw mat'
ñi'ook	'language, speech (of a person)'	*osbha'*	'tree sap'

O'dam	Gloss	O'dam	Gloss
saasbikar	'musical instrument'	*sapaatuix*	'shoe'
sa'ua'	'blanket'	*soi'*	'domestic animal'
suusak	'sandal'	*t̶imkalh*	'tortilla'
t̶irbiñ	'rope'	*t̶itbikar*	'toy'
tuisap	'pinole (type of grain)'	*u'uan*	'sheet (of paper), letter, notice, writing, letter (way of writing)'
u'uu'	'arrow (for bow or ceremony)'	*yooxi'*	'flower'

Table 6.7: O'dam Culturally relevant possessed items

6.2.2 Properties of the inalienable class

The class membership of the aforementioned inalienable nouns is not alterable. The example in (77) was elicited using an inalienable context (where the bone is still apart of Pedro's body) although it could also read as Pedro's alienably possessed bone. As expected given the inalienable class membership of the noun, there is no alienable *-ga* marking on the possessum. In (78), the sentence makes it clear that the bone possessed by Pedro is one that he found and not part of his body, yet the morphological marking is the same. Likewise, in (79), the legs are alienated from their possessor table in context but the possessum still receives inalienable marking.

(77) *Gu* ***a'oo-'n*** *gu* *Pedro*
DET bone–3SG.POSS DET Pedro
'Pedro's bone (from his body)'

(78) *Ni̶i̶ra-ich* *gu* *Pedro* *na* *bha* *ua'-da'* *gu* ***a'oo-'n***
wait–1PL.SBJ DET Pedro SUB DIR bring–CONT DET bone–3SG.POSS
na=t *ti̶i̶ti̶b*
SUB=PFV look.for.PFV
We're waiting for Pedro to bring his bone that he found'

(79) *Jax=na=t* *ba'* *jiñ-ma* *ma'n* *gu* *mes* *gio* *na=t*
how=SUB=PFV SEQ 1SG.OBJ–give one DET table COORD SUB=PFV
cham *jiñ-ma* *gu* ***totna-'n*** *gu* *mes?*
NEG 1SG.OBJ–give DET leg–3SG.POSS DET table
'Why did he give me a table and not the table legs?'

In terms of the logic of the inalienable class, first of note is that the class seems to contain all kinship terms and all human, animal and plant body parts. To illustrate that one feature of the inalienable class seems to be kinship, I use the alternation between two words for 'child' the kinship term *maar* and its more general counterpart *alhii*. *maar* is obligatorily possessed and specifically, entails a kinship relation between possessor and possessum. The example in (80) can only describe a mother-child relation, as opposed to a non-kinship relation (e.g. child-teacher).

(80) *Dhi* *jir=mara-'n* *gu* *ubii*
DEM COP=offspring–3SG.POSS DET woman
'S/he is the child of the woman'

alhii is generally attested as unpossessed, as in (81), but can be possessed in limited contexts. In (82) it appears in a verbalizing context and seems to indicate a kinship relation. Neither speaker accepted *maar* in the same context nor is *maar* attested in derivational contexts, outside of the verbalizing strategy of predicative possession, shown in (83). The possessed context in (82) may be a due to *alhii* being more productive in derivational contexts.

(81) *Mi'* *dhɨr* *ji* *na=m-pai'* *jupak* ***gu*** ***a'∼alh*** *mi'* *ji*
DIR DIR FOC SUB=3PL.SBJ–ADVR go.out DET PL∼child DIR FOC
jiñ-chɨgia'-am
1SG.OBJ–see–3PL.SBJ
'Of where children come, they will check me there.' (García Salido 2014a: 113)

(82) ***Jiñ-alhii****-chu-k* *dhi'* *tu'* *na* *pɨx* *pasar-ka'* *ora* *mui'*
1SG.POSS–boy–CAUS–PNCT DEM something SUB MIR happen–EST now a.lot
chumiñ-kɨ'n *na=ñ* *ba-dependero'*
money–with SUB=1SG.SBJ CMP–depend

'Something is going to happen to my son, now with a lot of money, I help him.' (García Salido 2014a: 75)

When asked further about *maar* and *alhii* both Eli and Martha say that *maar* is ungrammatical to use without a possessor in the sentence. The only example I have of *maar* without possession marking is in (83), where possession is expressed predicatively, and, thus no possession marking occurs on the possessum.

(83) *Ma'n* *añ* *tu-maar* *na* *jix=chu-maat*
one 1SG.SBJ DUR–offspring SUB COP=DUR–know

'I have an intelligent son' (lit. I have a son who knows)

For *alhii*, Eli and Martha said that it is somewhat rare to use in a possession context but that the sentence in (84) translates best as a non-kinship relation, i.e. where the child is human and is closely associated with the horse or somehow the horse owns the child.

(84) *Gu* *alhii-ga-'n* *gu* *kabai*
DET child–AL–3SG.POSS DET horse

'The child of the horse' (Elisabeth Soto 09/23/17; Martha Arrellano 09/29/17)

Ultimately, *maar* 'offspring' and *alhii* 'child', are quite similar in meaning but differ in their possession class membership. *maar* appears to be a typologically canonical inalienable noun (relational and expresses kinship), while *alhii* does not appear to entail a relation and is not commonly used to express kinship, although in certain cases it can do so.

The only relational noun I have found that is not in the inalienable class is *ami'* 'friend', which is borrowed from Spanish *amigo*[8]. I will discuss this further in the following

[8]In fact, Hill (2014) does not list any reconstruction for Tepiman 'friend' and Stubbs (2011: 278) incorrectly lists *jaduuñ* as 'friend' in O'dam, when it means 'relative'. However the cognate *adúúñi* in Northern Tepehuan apparently does mean 'friend' so O'dam may have innovated the semantic change.

section §6.1. Willett & Willett (2015: 33) list *bhai' kai'chdham* as relational and meaning 'friend'. They list the 3SG possessed forms as either *bhai' kai'chdham-ga-'n* 'alienable' or *bhai' kai'chdhamu-'n* 'inalienable'. However, it is not clear where this determination comes from, the only illustrative example is shown in (85) which only shows that the noun is not an irregular alienable noun, because it has a 1SG possessor.

(85) *Aañ* *ja'pni* *tɨi* *kai'chɨ-t* ***jiñ-bhai'*** ***kai'ch-dham,*** *no'=p*
1SG.SBJ so see.PFV say–IMPF 1SG.POSS say–NMLZ COND=2SG.SBJ
cham tu' *jax* *bua-da'* *gɨt* *na=p* *jiñ-jiika-'*
NEG how make–CONT SBJV SUB=2SG.SBJ 1SG.OBJ–cut–IRR

'I would like you to cut my hair, my friend, if you have nothing else to do' Willett & Willett (2015: 33)

In addition, both Eli and Martha say that (85) is an odd sentence because of the possessive use of *bhai' kai'chdham*. As shown in (85), the word is a nominalization of *bhai'* 'good' + *kaich* 'say' so that it is compositionally "good talker". For Eli and Martha, the word essentially means 'nice person' and they prefer its use like that in (86), where it is a quality predicated onto a subject, rather than a relation.

(86) *Dhi'* *jir=bhai'* *kai'ch-dham*
3SG.SBJ COP=good say–NMLZ

'He is a nice person'

This all suggests that Willett & Willett (2015) may have found both alienable and inalienable forms simply because, at least for my consultants, the word is so rarely used in possessive contexts and, thus may not have a clear possessive class membership. Another possibility is that some speakers do consider the word a relation, essentially 'acquaintance', and vary on whether the noun is alienable or inalienable.

Outside of relational nouns, a notable feature of the O'dam inalienable class is the relatively small size of the part-whole and spatial relations category compared to the other categories. This is because other spatial relations are expressed using postpositions, hence

they are not the right part of speech to be possessed. Notice in (87) there are two references to the side of something, *baas=dɨr* 'that side (of mountain range)' and *ja'k=dɨr* 'nearer side'. While the entity whose sides are being discussed is not explicitly stated,[9] the spatial relations are expressed by postpositional phrases rather than possessive constructions.

(87) *Jax dhui na dai* ***baas=dɨr*** *ja'k jix=jai'ch gu suudai'*
how EVID.DIR SUB only DIR=from DIR COP=EXISTDET water SUB
na pai'=r gɸ' *ak=kɨ'n.* *Bha* ***ja'k=dɨr*** *ja'k*
where=COP big river=with DIR DIR=from DIR NEG
cham, *na-gu'=r* *alhi'ch* *ak,* *jotmoda'* *ga'-kɨ'*
SUB–ADVR=COP small river quickly dry–PNCT

'There is only water from that side of the mountain range because there is a big river. On this side there is no water because the river is small and dries fast.' Willett & Willett (2015: 12)

Beyond kinship terms and relational nouns, many inalienable class nouns are well attested in unpossessed contexts. This is even true in contexts where some languages would require an unspecified, dummy, or primary possessor.[10] In (88) we see that it is implied that the leaves being discussed are still be attached to their plant, hence the request to 'break off' the leaves. Yet there is no morphological marking of a possessor nor is possession syntactically predicated onto the leaves (e.g. through 'have;), it is only implied. Conversely, *jijii-'ñ* in (88) is marked for possessed but refers to tripe, or disembodied intestines.

(88) *Gook oomsa mɨr gu* ***jaa∼ja'*** *ku=ch ya'ni bhaan daasa-' gu*
two break.PL go DET PL∼leaf SUB=1PL.SBJ DIR on put–IRR DET
ji∼jii-'ñ *na cham dɨrba-ta-'*
PL∼intestine–3SG.POSS SUB NEG dirt–VBLZ–IRR

'go and break off some leaves so we can put [its intestines] on them so they do not get dirt on them' (Willett & Willett 2015: 74)

[9] Willett & Willett (2015: 12) say that *baas=dɨr* is generally used in reference to mountain ranges so that the entity seems to be implied.

[10] For example, Navajo with obligatory unspecified possessors for inalienable nouns (Young & Morgan 1980) or Slave, which uses secondary possession to alienate inalienable nouns (Rice 1989).

Willett & Willett (2015: 74) translate (88) as 'so we can put the tripe...', however both Eli and Martha interpret the tripe in the sentence as having a possessor, which could be an alienable or inalienable 3SG possessor. I have chosen 'its intestines' here because Willett & Willett did not indicate an intended 3SG alienable possessor although it could also be interpreted as 'his/her intestines' where the intestines are owned by the 3SG possessor but no their body part.

One part of the inalienable class seems to consist of typologically common inalienable nouns: kinship and body part terms and spatial relation. However, it is not clear what the overarching logic of the culturally basic possessed item category is, or if there is one. My consultants also did not have intuitions about what might be special about the inalienable nouns. However, there are some semantic groupings, two small semantic groupings are common food items[11] and homes.[12] Clothing also appears to be a semantic grouping.[13] As is ceremonial items.[14]

O'dam subsist on agricultural activities and have done so historically (Mason 1947–1948; García Salido 2014a: 10). The inalienable class contains a number of agricultural elements such as certain tools[15], plants[16] and common plant-based products.[17] However, it is notable that there are agricultural terms that are not included, for example *juus* 'sickle' is a commonly used tool but is alienable (*juus-ga-'n* 'her/his sickle'). The compound *jaraar bhai* 'plow tail (where the plow is held)' is also alienable. This is especially surprising as both *bhai* 'tail' and *jaraar* 'plow' are inalienable class roots, but the compound of them is alienable, as

[11] *bhii* 'food', *koi'dhara'* 'favorite food', *atuulh* 'atole', *bii'm* 'milk', *iibhaidha'* 'fruit', *tɨmkalh* 'tortillas'.
[12] Both words for 'house' *ki'aam* and *ba'aak*, *kos* 'nest'.
[13] As all clothing terms are inalienable, including *iaptara'* 'saddle blanket' and *sa'ua'* 'blanket'.
[14] *u'uu'* 'arrow', *gaat* 'bow', *bosaa'* 'healer's flask', *duiñkar* 'pipe', *bib* 'tobacco', *saasbikar* 'musical instrument' and *yooxi'* 'flower'.
[15] e.g. *jaraar* 'plow', *daasara* 'handle (of tool)' and *tɨrbiñ* 'rope'.
[16] e.g. *bakua* 'gourd, squash', *gaa'* 'milpa', *kai* 'seed', *tuisap* 'pinole'
[17] e.g. *biñkar* 'bagasse', *askich* 'ixtle cloth', *osbha* 'tree sap'.

shown in (89) and (90).

(89) a. *bhai* > *bhai'ñ* 'his/her/its tail'

b. *jaraar* > *jaraaru'n* 'his/her/its plow'

(90) *Gu* *jaraar* *bhai-ga-'n* *gu* *Pedro*
DET plow tail–AL–3SG.POSS DET Pedro
'Pedro's plow-tail (plow handles)'

It is also surprising that *jaraar bhai* is alienable because *daasara* 'handle (of tool)' is inalienable so that one might expect that *jaraar bhai* would be inalienable because its constituent parts are inalienable and it has inalienable analogs, namely agricultural tools and 'handle'. This compound illustrates why I say that inalienable marking is a property of words, rather than roots, because we might expect the inalienable feature of both roots to extend to the compound.

It is also notable that *bhuru'x* 'donkey' and *soi'* 'domestic animal' are the only attested domestic animal terms in the inalienable class. For one domestic animals are often inalienable nouns (Chappell & McGregor 1996; Nichols 1988). The natural coordinator *gam*, which coordinates elements "belonging to the same semantic class" (**[**)183]garcia2014diss, can be used to coordinate donkeys with pigs and goats (91). Such animals are conceived of as a class in terms of coordination, but for some reason not in terms of possession.

(91) *Ba-ñ-jootsa-'am-ji* *na=ñ* *ba-tu-bia'-ra'* *gu*
CMP–1SG.OBJ–order–3PL.SBJ–DC SUB=1SG.SBJ CMP–DUR–take.care–MOV DET
ka∼karbax *gam* *ta∼toxkolh* *gam* *bhu∼'mrux*
PL∼goat COORD PL∼pig COORD PL∼donkey
'They send me to take care of goats, pigs, donkeys.' (García Salido 2014a: 184)

One feature that seems to unite some elements is extreme manipulability. This is surprising because control and manipulability are generally connected to alienability (Ameka 1996; Heine 1997; Prince 2016). However, it may be that extreme manipulability links the

nouns to body parts, which are also inalienable, or is somehow related to close semantic binding, also a feature of inalienability (Velázquez-Castillo 1996). Three insults provide some evidence for this feature, *jaaxmakar*, *jupaabkam* and *alhiokam*, all of which specifically targets the ability for someone to manipulate the referent. Notice in (92) that the 2SG possessor is the person attempting to toy with the speaker. *jaaxmakar* is morphologically *jaaxmada'* 'joke' plus the nominalizer *-kar*. My consultant Martha Arellano (12/10/2017) describes *jaaxmakar* as a person who you treat like a doll or object. Thus, the latter part of the utterance in (92) is perhaps more literally translated as 'I am not your doll'. On either translation, *jaaxmakar* expresses an explicitly manipulative possessive relation between the possessor and possessum, where the possessum is treated as if they have no agency.

(92) *Alh* *jañ* *moo=m* *gi̵i̵'bi-a'* *na=p* *bha* *ja'k*
AFF 1SG.SBJ doubt=2SG.OBJ hit–IRR SUB=2SG.SBJ DIR DIR
jiñ-aa'ñxi'ñ *na=ñ-gu'* *cham* *jir=jum-**jaaxma-kar***
1SG.OBJ–make.fun.of SUB=1SG.SBJ–ADVR NEG COP=2SG.POSS–joke–NMLZ
'I am going to beat you for making fun of me, I am not someone you can joke with.' (Willett & Willett 2015: 75)

The latter two insults, *jupaabkam* and *alhiokam*, act somewhat differently from any other possessed noun, including *jaaxmakar*. Both seem to signify a relation between a possessor human and a low agency status. Notice that in (93) and (94), the possessor is the one bearing the insult, rather than tying some other person to themselves through the insulting status, as in (92). This appears to be a unique feature of these two insults, other properties or statuses are not expressed through possessive relations.

(93) *Jax* *ba'* *ku=p* *ba'* *mu* *pai'* *buam* *ti̵i̵tdada'?* *naas* *ku*
how SEQ SUB=2SG.SBJ SEQ DIR where bad say–CONT NEG SUB
tu'=r *jum-**jupaab-kam***
something=COP 2SG.POSS–imitate–NMLZ
'How dare you speak to him in such a strong way! You have no right to speak to him that way.' (Willett & Willett 2015: 94)

(94) *Cha'=p* *ñioka-t* *mu* *ba-koxia-'.* *nas* *ku=ch*
NEG=2SG.SBJ speak–IMPF DIR CMP–sleep–IRR seem SUB=1PL.SBJ
tu'=r *jum-**alhio-kam*** *ku=p* *ba'* *bha* *ja'k*
something=COP 2SG.POSS–child–NMLZ SUB=2SG.SBJ SEQ DIR DIR
pu=ñ *chɨtda.*
SENS=1SG.OBJ say.PFV

'Leave me alone and go to sleep. you have no authority over me to say things like that.' (Willett & Willett 2015: 6–7)

As with *jaaxmakar*, *jupaabkam* and *alhiokam* are nominalized forms. *alhio-kam* is derived from the word *alhii* 'child' + the nominalizer *-kam* and *jupaab-kam* is derived from the verb *jupaaba'n* 'imitate, personify'. In both cases, the insults indicate that the possessor has very little agency or is highly manipulable, either by being child-like or an imitation.[18] Consistent with this feature of 'extreme manipulability', is perhaps the aforementioned tools (although the class does not include all tools) and *tɨtbikar* 'toy'.

I have no proposal for a single feature to account for all of the members of the inalienable class and exclude non-members and suspect that a single unifying feature may not exist. Rather, there seems to be several features (kinship, body part, spatial relation, clothing, agriculture, homes, ceremony and manipulability) that tie together small groups into the class. However, these features and semantic groupings do not account for all of the inalienable nouns. Possibly the aforementioned classes of nouns each exhibited a high frequency of possession and were separately brought into the inalienable noun class (á la Nichols's 1988 and Haspelmath's 2008 proposals). Additionally, certain nouns are not part of a larger class (e.g. *kuupara'* 'plug') but were frequently possessed enough to be brought in too. Because the inalienable class seems to be a closed one, certain nouns were simply left out by chance. More work is needed on this, and it is likely the correct analysis will be something along the lines of Lakoff's (2008) multiple semantic features tying together

[18]Both of my consultants considered the insults to be semantically composed of their parts.

members of the Dyirbal feminine noun class. Before discussing the irregular *-ga* class, it is necessary to consider attributive possession and alienability systems in the rest of the Uto-Aztecan family.

6.3 Cognates of *-ga* and attributive possession across Uto-Aztecan

Before discussing O'dam's possession marking in light of the Uto-Aztecan family, I present an abridged version of the Uto-Aztecan family tree in Figure 6.1

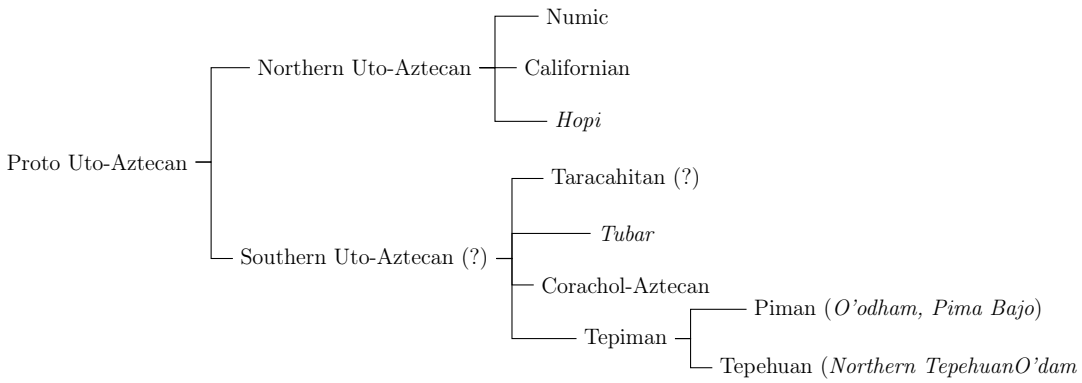

Figure 6.1: Abridged Uto-Aztecan family tree

Many Uto-Aztecan languages, especially Tepiman languages, use suffixes cognate to O'dam *-ga* to mark alienable possession and generally allow nouns to alternate between alienable and inalienable possession marking, given the proper context. Because Tohono O'odham (which joins O'dam as a member of the Tepiman family) allows nouns to alternate between alienable and inalienable marking (Bahr 1986; Saxton 1976; Zepeda 2003), O'dam, which no longer allows such alternations, lost this use of *-ga* as a true alienable relation marker and narrowed it to an alienable class marker. Previous work on Proto Uto-Aztecan morphology has proposed that Tepiman **-ga*[19] is a reflex of either Proto Uto-Aztecan ****-

[19]The O'dam *-ga* suffixes discussed here are reflexes of this Proto-Tepiman suffix.

ka(i) of ***-wa*. I will discuss both here, but I find the argument for ***-wa* as the source of Proto-Tepiman, and O'dam, **-ga* more convincing because it is simpler.

Stassen (2009) and Muchembled (2014) trace the Tepiman alienable **-ga* suffix back to Proto Uto-Aztecan ***-ka(i)*. ***-ka(i)* is reconstructed as a possessive denominalizer (Langacker 1977: 44) due to its use in *have*-possessive constructions, like those in (95) and as verbalizing suffixes in (96).

(95) a. Southern Paiute (Langacker 1977: 44)
*mopi-**'kai**=aŋa*
nose-have=he

'He has a nose'

b. Hopi (Langacker 1977: 44)
*pam ŋahɨ-**'ta***
he medicine-have

'He has medicine'

(96) a. Gosiute Shoshone *-kantɨn* 'have (less permanent)' (Miller 1996: 705)

b. T'umpisa *-kantɨn* 'have (permanent state)' (McLaughlin 2006: 20)

c. Northern Paiute *-ka?yu* 'have or be characterized by N' (Thornes 2003: 131)

d. Southern Paiute *-kai* 'have' (Sapir 1930)

e. Cupeño *-ki* 'acquire by human action' (Hill 2005: 175)

f. Tubar *-k* 'HAVE' (Muchembled 2014: 147 [21], originally from Lionnet 1978: 32)

Haugen (2017) specifically reconstructs Proto Uto-Aztecan **-ka(i)* as marking alienable possession because many Northern Uto-Aztecan languages above (e.g. Gosiute Shoshone and Cupeño) use two different suffixes to distinguish between alienable and inalienable possession and the suffix that is a reflex of **-ka(i)* almost always marks alienable possession. Although notably, Tümpisa (Numic) reverses the semantics of *-katɨn* (reflex of Proto Uto-Aztecan *-ka(i)* and cognate with the Gosiute suffix) to mark inalienable possession (McLaughlin 2006: 20).

However, in regards to the alienable **-ga* suffix in Tepiman, there are two problems with this ***-ka(i)* source proposal. The first is that Tepiman retained Proto Uto-Aztecan **k* so that the /g/ of the suffix is unexpected (Stubbs 2011).

However, Proto Uto-Aztecan roots tended to have open final syllables (Stubbs 2011) and Tepiman languages have largely held on to final vowels.[20] Thus, Proto Uto-Aztecan **-ka(i)* would have generally been in intervocalic environments, making voicing assimilation a possibility. Although to my knowledge intervocalic voicing is not a well attested diachonic process in Tepiman. Another problem for the ***-ka(i)* source proposal is that Langacker (1977) reconstructs Proto Uto-Aztecan **-ka(i)* as a suffix for deriving denominalized possessive verbs. However, there is no evidence that any of the *-ga* cognates in Tepiman have any underlying verbal semantics. In all Tepiman languages, reflexes of Proto-Tepiman **-ga* are strictly nominal attributive possession suffixes. While the languages in (96) have very much maintained the original verbal semantics.

Further evidence against the **-ka(i)* source proposal is that reflexes of **-ka(i)* in Southern Uto-Aztecan languages outside of Tepiman do not appear in possessive constructions, with the exception of Tubar. Haugen (2017) argues that **-ka(i)* has generally been reanalyzed as a perfective marker in Southern Uto-Aztecan languages, e.g. Classical Nahuatl *-ka* PRETERITE, Yaqui *-(e)k* PERFECTIVE and possibly O'dam *-ka* STATIVE. While Uto-Aztecan languages seem to have largely maintained the verbal features of **-ka(i)*, either as a possession or aspectual suffix, the Tepiman languages would have had to uniquely lose the verbal feature. Although Proto-Tepiman would have maintained the alienability semantics of Proto Uto-Aztecan ***-ka(i)*.

[20] This is arguably not the case for certain suffixes in O'dam that only ever occur in final position, where the final vowel would be dropped. For example the 3SG possessor suffix is a reflex of Proto-Tepiman **di*, however in O'dam it is always realized word-finally [ʔn], due to the phonological processes discussed in §6.2. Without suffixes in word-medial environments it is difficult to definitively say whether their final vowels were maintained or not.

However, Haugen (2017) offers another reconstruction, which is consistent with known sound changes, and morphosyntactic behavior. He argues that Tepiman **-ga* is a reflex of Proto Uto-Aztecan ***-wa*, which he reconstructs as an attributive possession marker. This reconstruction follows known sound correspondences, Tepiman famously fortified all Proto Uto-Aztecan glides so */-wa/ > /-ga/ is expected. Outside of Tepiman, Haugen (2017: 50–1) finds the following other reflexes of **-wa*:

(97) Luiseño (Californian)
*no-paa-**w**-i*
my–water–POSSD–ACC
'my water (Acc.)'

(98) Yaqui (Taracahitan)
a *tami-**wa**-m*
his tooth–POSSD–PL
'his teeth'

(99) Classical Nahuatl (Aztecan)
*no-siwaa-**w***
my–woman–POSSD
'my wife'

In all cases, proposed reflexes of **-wa* are nominal possession markers and are not involved in verbalization, which almost entirely matches the morphosyntactic behavior of Tepiman **-ga*. In addition, a common source for alienability splits is the narrowing of previously general attributive possession marking to just alienable or inalienable nouns (Heine 1997; Koptjevskaja-Tamm 1996; Nichols 1988). While Langacker's (1977) and Muchembled's (2014) reconstruction of Tepiman *-ga* to Proto Uto-Aztecan **-ka* is not unreasonable, a more parsimonious analysis is to say that Proto-Tepiman narrowed a general attributive possession marker to only alienable relations and made the expected Proto Uto-Aztecan */w/ > Proto-Tepiman /g/. As O'dam *-ga* marking is dependent on the possessed entity, rather than the relation,

O'dam would have then further narrowed the suffix to marking words rather than relations.

Now that I have discussed the place of O'dam *-ga* in the entire family, I focus in on alienability systems in Tepiman languages. Specifically I discuss the alienability distinctions of Tohono O'odham and Northern Tepehuan, because those are the best described.

6.3.1 Alienable possession in Tepiman

Northern Tepehuan, which is on the Tepehuan branch of Tepiman, uses the following possessor affixes, all which are cognate with O'dam's affixes. As with the O'dam system, all of the possessor markers are prefixes except the 3rd person.[21]

(100) **Northern Tepehuan possessor affixes**
(g)iñ- 1SG
(g)ɨr- 1PL
(g)ɨ- 2SG or subject (SG) = possessor
(g)ɨn- 2PL[22]
-dɨ 3rd person[23]
(g)a- unspecified possessor

Bascom (2003: 16) describes the suffix *-ga*, which is cognate with the O'dam suffix discussed throughout this paper, as an alienable possession marker and it is realized on the noun for all possessors in attributive possession constructions. Bascom (1982: 312) says that Northern Tepehuan allows for nouns to alternate between alienable and inalienable marking, although he does not provide examples of the same nominal stem marked alienably and inalienably. In (101) I show an example paradigm of an inalienably possessed noun and in (102) I show two

[21]The *gɨ-* prefix is used for a same subject or 2SG possessor is shown in (i). This sentence is ambiguous for the possessor of the dog, it can either be *Piíli* or the interlocutor.

(i) *Bɨrímɨi* *Piíli* ***gɨ****-sói-ga* *gogóóxi* *ɨɨmádu*
from.there.to.here.come Felipe 2SG–domesticated.animal–AL dog with
'Felipe$_i$ comes here with your/his$_{i/*j}$ dog.' (Bascom 2003: 14)

[22]Bascom (2003: 14) is unsure if this allows for the subject (pl) = possessor reading
[23]This can be used for singular or plural.

example sentences with alienably marked nouns. Notice that Northern Tepehuan realized *-ga* on all attributively possessed forms, even those with prefixed possessors. (102b).

(101) **Northern Tepehuan inalienable paradigm (Bascom 2003: 14)**
giñ-adúúñi 'my relative'
gɨ-adúúñi 'his$_{sbj}$/your relative'
adúúñ-dɨ 'his parent'
gɨr-adúúñi 'our relative'
gɨn-adúúñi 'their relative'

(102) **Northern Tepehuan alienable possession sentences**

a. *giñ-maá* *piid^{y}úru* *gɨ-baví-**ga***
me–gave Peter$_{i}$ his$_{i}$/your–beans–POSSD
'Peter gave me his/your beans' (Bascom 1982: 313)

b. *ga-ma-máátɨ-tul-d^{y}a-dami-**ga***
UNSPEC–RDP–know–CAUS–APPL–AG–POSSD
'someone's teacher' (Bascom 1982: 312)

In (103) and (104) I show the full list of nouns that Bascom (2003) lists as alienable and inalienable, respectively. This list is incomplete and should not be understood as fully representing the Northern Tepehuan alienability system. To illustrate that *-ga* does indeed appear in all parts of an alienably possessed noun's paradigm, I present the nouns with various possessors, the possessor markers are indicated

(103) **Northern Tepehuan Alienable nouns**
amiigú-ga-dɨ 'his friend'
baví-ga-dɨ 'his bean'
dɨvɨ́ɨ́ra-ga-dɨ 'his earth'
laap'ixi-ga-dɨ 'his pencil'
giñunúú-ga-dɨ 'his corn'
ga-mamáátɨtuld^{y}adami-ga 'someone's teacher'
miixítu-ga-dɨ 'his cat'
móúturu-ga-dɨ 'his metate'
onáá-ga-dɨ 'his salt'
paalá-ga-dɨ 'his shovel'
giñ-tɨlíígi-ga 'my wheat'

giñ-íímai-ga ‘my squash’
giñ-yaatávora-ga ‘my potato’

(104) **Northern Tepehuan Inalienable Nouns**
adúúñ-dɨ ‘his relative’
daaká-dɨ ‘his nose’
dɨ́ɨ́-dɨ ‘his mother
gɨ-ooñíga ‘your/his$_{\text{sbj}}$ wife’
giñ-mára ‘my child’
oogá-dɨ ‘his father’
oójakaro-dɨ ‘his pencil’ (oója-karo lit. write-NMLZ‘thing for writing’)
sarúú-dɨ ‘his hoe’
vááki-dɨ ‘his house’
giñ-kií ‘my house’
vóíxikaro-dɨ ‘his broom’

Bascom (1982; 2003) does not offer any discussion on what might be the logic behind the Northern Tepehuan alienability distinction. However, there are certain notable similarities and differences, based on the limited set shown here. First, as mentioned in §6.1, *ami’* ‘friend’ in O’dam is the only attested relational member of the alienable noun class and this seems to be true for Northern Tepehuan too. Additionally, kinship and body part terms are inalienable, as is *vááki* ‘house’ (cognate with O’dam *ba’ak* ‘house’). As some possible evidence for specifically farming tools being a semantic group of the O’dam inalienable class it is notable that *saruúú* ‘hoe’ is inalienable in Northern Tepehuan, while *paalá* ‘shovel’ is alienable. While hoes are used specifically for cultivating plants, shovels are used to divert water flow for irrigation, but not for direct cultivation. The most notable difference between the O’dam and Northern Tepehuan systems is the apparently alienable status of food items. Although, equally notable is that none of the food terms listed in (103) are cognate with the O’dam inalienable food terms so it may be that certain food items in O’dam are alienable. As we will see in §6.4, *juun* ‘corn’ and *on* ‘salt’ may be remnants of an earlier alienability split among foodstuffs because both are irregular alienable nouns and they are cognate with Northern Tepehuan alienable nouns *giñunúú* ‘corn’ and *onáá* ‘salt’.

Tohono O'odham marks inalienable possession by directly suffixing possession marking to the possessum, as shown in (105).

(105) a. *hihi-ǰ̌* *g* *haiwañ*
gut–GEN ART cow

'gut of cow' (Saxton 1976: 187)

b. *ñ-cu:kug*
1SG.POSS–meat

'my flesh' (Bahr 1986: 161)

Alienable possession is indicated using the suffix *-ga* as an alienable possession marker (Saxton 1976: 185–7). Nouns can also be marked for secondary possession using alienable marking outside of inalienable marking, as in (106a). This is used for certain body parts where the source is significant (Saxton 1976).

(106) a. *hihi-ǰ̌-**ga**-ǰ̌* *g* *huan*
gut–GEN–AL–his ART Juan

'the tripe of Juan' (Saxton 1976: 187)

b. *ñ-cu:kug-**ga***
1SG.POSS–meat–AL

'my meat' (Bahr 1986: 161)

As with Northern Tepehuan, alienable *-ga* in Tohono O'odham appears on alienable nouns regardless of possessor. The alienable *-ga* suffix in Tohono O'odham is cognate with the O'dam *-ga* suffixes discussed in this paper, however, nouns do not have fixed alienability marking in Tohono O'odham. Alienability alternations in Tohono O'odham seem to be restricted to body part terms and terms that can refer to metaphorical extensions of the body (Bahr 1986: 166). Notice that the same noun roots appear with alienable and inalienable marking below, as well as in (105) and (106). The inalienably marked forms are predictably associated with inherent body part meanings, while inalienably marked forms are associated with disconnected or non-inherent body parts (e.g. prosthesis).

(107) a. *ñ-cu꞉kug* ‘my-flesh’

b. *ñ-cu꞉kug-ga* ‘my-meat’

(108) a. *ñ-kahio* ‘my-leg’

b. *ñ-kahio-ga* ‘my-prosthesis’

(109) a. *ñ-hiosig* ‘my-heart/soul (poetic)’

b. *ñ-hiosig-ga* ‘my-flower’

Zepeda (2003) breaks down commonly alienable and inalienable nouns into the following categories.

Domesticated Animals	
cucul	‘chicken(s)’
gogs	‘dog’
haiwañ	‘cow’
kawyu	‘horse’
ko꞉ji	‘pig’
mi꞉stol	‘cat’
mu꞉la	‘mule’
pa꞉do	‘duck’
potal	‘bronc’
to꞉lo	‘bull’
towa	‘turkey’
wisilo	‘calf’
wu꞉lo	‘burro’
Domesticated Plants	
ba꞉bas	‘potato’
ha꞉l	‘squash’
hu꞉ñ	‘corn’
mu꞉ñ	‘bean, pot of (cooked) beans’
toki	‘cotton’
Wild Plants	
’auppa	‘tree, cottonwood tree’
ha꞉ṣañ	‘saguaro’
kui	‘mesquite tree’
naw	‘prickly pear’

People	
keːli	‘husband, man’
’oks	‘wife, woman’
Miscellaneous	
hodai	‘rock’
jewe̱d	‘land’
ṣuːdagĭ	‘water’
’uːs	‘stick’
wiːb	‘milk’

Table 6.8: Tohono O’odham Alienable Nouns

Body parts	
ciñ, ceñ	‘mouth’
daːk	‘nose’
kahio	‘leg’
mo’o	‘head, head of hair’
naːk	‘ear’
nowĭ	‘hand’
’oː	‘back’
ta̱d	‘foot’
toːn	‘knee’
wuhĭ	‘eye’
Clothing	
kamiṣ	‘shirt’
kotoñ	‘shirt’
liːwa	‘jacket’
ṣaliwĭ	‘pair of pants’
ṣuːṣk	‘shoe, pair of shoes’
wonam	‘hat’
People	
’alidag	‘child (of a man)’
je’e	‘mother’
ma̱d	‘child (of a woman)’
’oːgĭ	‘father’
weːnag	‘brother/sister’
Tools/Utensils	
cihil	‘pair(s) of scissors’

ha'a	'pot, bottle'
hoa	'basket'
huasa'a	'plate'
nawaṣ	'pocket knife'
pa:la	'shovel'
Miscellaneous	
'ispul	'stirrup'
ki:	'house'
ma:gina	'car'
si:l	'saddle'
'o'ohana	'books'

Table 6.9: Tohono O'odham Inalienable Nouns

Bahr (1986) argues that the alienability distinction in Tohono O'odham is sensitive to two binary features and a "+" in either feature is sufficient to render a noun alienable.

1. Existence before being possessed (by humans)
2. Likely to have successive human owners.

Natural resources and domesticated animals are conceived of as having both a previously unowned state and sequential ownership. Tohono O'odham consider domesticates to be free and unowned prior to being used by humans. For example, cows have their own lives on the range until they are lassoed and corn are viewed as living like wild plants until they are harvested (Bahr et al. 1979). In addition, dried and processed foodstuffs were trade items (Underhill 1939: 90–112; Russell 1908: 92–4), meaning that they would have sequential human ownership through trade. Kinfolk and *kunt* 'husband' and *hoñig* 'wife' are inalienable, although not their respective counterparts *keli* 'old man' and *oks* 'old woman'. As with *maar* versus *alhii* in O'dam, discussed in §6.2.2, the alienable counterparts can be used relationally to mean 'husband' and 'wife' but they are more commonly used non-relationally, thus they are not inherently relational and are conceived of as having a prior unowned state.

Bahr (1986: 166–7) defines artifact as "transformations of natural resources or do-

mesticates: raw material...plus human labor" and "compound artifacts" as those made from simpler artifacts (e.g. a bow is a compound artifact because it is made from a string, which itself is created by human labor). The artifacts category is a mix between *-ga*-taking (alienable) and *-ga*-less (inalienable) forms. Bahr (1986: 167) argues that the components of artifacts (raw materials) generally take *-ga* but the resulting artifact often does not. The artifacts that apparently do take *-ga* are shown in (110) (Bahr 1986: 167).

(110) *lial* 'money'
saːnto 'saint's image'
woːg 'road'
oidag 'field'
wawhia 'well'
wo'o 'pond'
waikka 'dike/ditch'

Recall that Bahr (1986) argues that the Tohono O'odham alienability system is sensitive to two binary features: previous unowned state and sequential ownership. If an object is + for either feature then it is alienable. That artifacts are made from human labor means that they do not have a previous non-possessed form. This conception of artifacts explains the alternation in (111), while both phrases describe entities that are, or could be, attached to the possessor, the latter describes an entity that has likely passed from one owner to another, because the person who needs the prosthesis may not be the one who created it, thus the distinction between alienable and inalienable artifacts lies in the question of sequential ownership.

(111) a. *ñ-kahio* 'my-leg'

b. *ñ-kahio-ga* 'my-prosthesis'

Aside from *lial* 'money', all of the alienable artifacts in Tohono O'odham are collectively owned (e.g. by a community or family) and are made to be durable, in addition, saint's images and fields are passed on when the owner dies, so that they have sequential ownership. Bahr (1986) argues that while many inalienable artifacts exchange hands through trade, only

the ones in (110) pass through inheritance. This means that the original owner dies and, thus, completely relinquishes their ownership over the object. The exception to this is *lial* 'money' (from Spanish *real* a coinage). When a person dies, Tohono O'odham believe in burning most of their possessions, including their money, the reason then that *lial* is considered alienable is because it is involved in repeated exchanges (Bahr 1986: 168). In the table below, I summarize Bahr's (1986) conception of the Tohono O'odham alienability system The major

Classes of nouns	Previous unowned state	Sequential ownership	Alienable (use of *-ga*)
Natural resources	+	+	✓
Domesticated plants	+	+	✓
Domesticated Animals	+	+	✓
Old man, old woman	+	—	✓
Kinfolk	—	—	
Body-parts	—	—	
Most artifacts	—	—	
Some artifacts	—	+	✓

Table 6.10: Distribution of inalienable and alienable possession in Tohono O'odham (Bahr 1986: 165)

difference between the Tohono O'odham and O'dam inalienable systems seems to be in the conception of domesticates. Tohono O'odham marks domesticated animals and plants as alienable, because they are conceived of as being unpossessed until they are appropriated for human use. Conversely, O'dam marks domesticated plants and some domesticated animals as inalienable. It may be that O'dam flips the alienability marking in Tohono O'odham because the O'dam conception of domesticates' wildness before being harvested or lassoed is different from the Tohono O'odham. However, to my knowledge, there has been no study of how domesticates are conceived of in terms of possessed state. Likewise, there has been no study of O'dam inheritance practices so I cannot say anything definitive about why certain artifacts are inalienable (e.g. plows) and why others are alienable (e.g. hoes). However, there is quite a bit of overlap between the Tohono O'odham and O'dam inalienable systems, aside

from domesticates, which suggests that an anthropological study on inheritance practices and the freeness of domesticates before being appropriated for human use. In light of the Northern Tepehuan and Tohono O'odham alienability systems, I now turn to the last possessed noun class in O'dam, the irregular alienable nouns.

6.4 Irregular alienable nouns

The irregular alienable noun class consists of nouns that have maintained the historical distribution of alienable *-ga* on all attributively possessed forms, as evidenced by its use in Tepiman languages. Willett (1991: 210) defined the "status" suffix, his previous name for the O'dam *-ga* suffixes, as marking nouns which are alienably possessed but have an especially close tie to the possessor. This definition cannot be used for the regular use of alienable *-ga*, discussed in §6.1 because many alienable nouns are considered somewhat odd to possess (e.g. crab). However, this definition does likely describe the diachronic emergence of the irregular noun class as alienable nouns that were saliently possessed enough to maintain their historical alienable marking. The irregular alienable nouns are shown in (112). In (113) and (114) I show that *-ga* appears on prefixed and suffixed forms. With prefixed possessors, the *-ga* suffix surfaces as a word-final glottal stop accompanied by a modified noun stem. This may seem phonologically quite distinct from the alienable *-ga* discussed above, but it is phonologically derivable through the rules discussed in §6.2. Word-final short vowels are lost, and /g/ > [ʔ] in coda position.[24] Therefore, if /-ga/ surfaces word-finally, as it does for prefixed possessors, then /-ga/ > [-g] / ___# and /-g/ > [-ʔ] / ___σ.

(112) **Irregular alienable nouns**
toom 'ixtle fiber'
d̵ib̵i̵r 'land (owned, unowned) soil'

[24]This process is almost certainly related to similar rules whereby /d/ > [ʔn], /dh/ > [ʔñ], and /bh/ > [ʔm] in coda position, although, no overarching rule has been proposed.

on 'salt'
suudai' 'water'
tumiñ 'money'

(113) *jiñ-toomi-'* 'my ixtle fiber'
jiñ-dɨrba-' 'my land, soil'
jiñ-onaa-' 'my salt'
jiñ-suu'ngi-' 'my water'
jiñ-tumñi-' 'my money'

(114) *gu toom-ga-'n* 'his/her/its ixtle fiber'
gu dɨbɨɨr-ga-'n 'his/her/its land/soil'
gu on-ga-'n 'his/her/its salt'
gu suu'ngi-ga-'n 'his/her/its water'[25]
gu tumñi-ga-'n 'his/her/its money'

Uto-Aztecan languages that have cognates of O'dam *-ga* realize the suffix with all attributive possessors and Northern Tepehuan and Tohono O'odham use the suffix to mark all alienable nouns with pronominal possessors. Recall also that salt is alienable in Northern Tepehuan (*onáá-ga-dɨ*) and money is alienable in Tohono O'odham (*lial-ga*). This suggests that the members of the irregular noun class consists of historically alienable nouns that were perhaps frequently possessed enough when O'dam narrowed the alienable class marking to just 3SG forms. The distribution of cognates of O'dam *-ga* also suggest that the irregular alienable nouns in O'dam realize *-ga* for all pronominal possessors because they are maintaining the historical distribution of alienable *-ga*.

In addition to pronominal possession, the irregular alienable noun class also realizes *-ga* in adjectival possession, where a possessed noun normally does not take possession marking (115), but the irregular alienable nouns do (116) (see §5.2). The question is, why do the

[25]This form differs from the citation form of the root for the same reason as *baiñum* in §6.1. The final vowel of the underlying form is only realized when there is a suffix, in which case stress deletes the diphthong /ai/ that surfaces in the citation form. The same is true of *tuumiñ*.

irregular alienable nouns inflect in adjectival possession when the pronominal possessor affixes are absent?

(115) *Gu* *Mike* *pilot*
DET Mike ball
'Mike's ball'

(116) *Gu* *Mike* *onaa-'*
DET Mike salt–IAL
'Mike's salt'

(117) *gu on* 'the salt'
gu ja-onaa-' 'their salt'
gu jam-onaa-' 'your (plural) salt'

Bascom (1982; 2003) does not discuss any type of pronoun-less possessive constructions in Northern Tepehuan, which may mean that they do not exist in that language. However, evidence from Tohono O'odham suggests that the adjectival possession construction is a retention in O'dam. Tohono O'odham does not require the possessor pronoun to affix onto the noun if an overt possessor NP is present but does require alienable *-ga*. The examples in (118) show constructions equivalent to pronominal possession in O'dam, all forms have possessor affixes and *-ga* appears on the two alienable nouns. In (119) we see overt nominal possessors, the pronominal possession marking disappears but the alienable marking remains.

(118) a. *ñ-mi꞉stol-ga*
1SG.POSS–cat–AL
'my cat' (Zepeda 2003: 78)

b. *t-haiwañ-ga*
1PL.POSS–cow–AL
'our cows, cattle' (Zepeda 2003: 78)

c. *kotoñ-ij*
shirt–3SG.his

'his shirt' (Zepeda 2003: 78)

(119) a. *Husi* *jewe̱d-ga*
Joe land–AL

'Joe's land' (Zepeda 2003: 78)

b. *Huan* *kawyu-ga*
John horse–AL

'John's horse' (Zepeda 2003: 78)

Zepeda (2003) also mentions that when the possessed NPs are not initial they are preceded by the determiner *g*. This suggests that the Tohono O'odham constructions in (119) are structurally very similar to the O'dam adjectival possession construction in that the possessor and possessum occur inside the same NP (most likely the possessum NP). If the Tohono O'odham use of *-ga* in its non-pronominal possessive construction also existed on the Tepehuan branch of Tepiman, then the irregular alienable maintained the complete distribution of alienable *-ga*.

With the exception of *di̱bi̱i̱r* 'land, soil', all of the words in (112) are mass nouns and, therefore, cannot be pluralized. Attesting to the irregularity of this class, *di̱bi̱i̱r* seems to be the only attested noun that changes classes when inflected, as opposed to *bhai'* 'tail' and *jaraar* 'plow', which become alienable when compounded. Notice in (120a) that the plural form of *di̱bi̱i̱r* does not realize the *-ga* suffix when there is a prefixed possessor, but does in (120b) when the possessor is suffixed. While the singular *di̱bi̱i̱r* is an irregular alienable noun, the plural is a regular alienable noun.

(120) a. *jiñ-di̱ppi̱r* 'my lands'

b. *di̱ppi̱r-ga-'n* 'her/his lands'

Without further understanding of the cultural features that distinguish the alienable

and inalienable classes in O'dam, it is difficult to truly categorize this class as alienable. They seem to realize alienable *-ga* in the 3SG form. However, that *dɨbɨɨr* changes its possession class when inflected, while no other alienable or inalienable nouns do, suggests that these nouns make up a sort of pocket class of their own. I conservatively consider this group separate from the alienable and inalienable classes, although this may change with better understanding of the alienable and inalienable classes.

Chapter 7

The Possessive Pronouns

The third *-ga* suffix in O'dam occurs in possessive pronouns. In this section, I will describe how possessive pronouns are built in O'dam and use evidence from other Tepiman languages to argue that it has become a pronoun for a possessed entity.

Possessive pronouns in O'dam are an open class, some examples are shown below made with the template in Figure 7.1. Possessive pronouns are the only dependent-marked possessive construction in O'dam. Based on evidence from other Tepiman languages, discussed later in this section, *-ga* in Figure 7.1 seems to be acting as a pronoun for a possessed entity, and *-'n* seems to act as a suffix indicating that this is a possessive construction.

(121) ***Jaroo-ga-'n*** *dhi'*
who–N.POSS–3SG.POSS DEM

'Whose is this?' (Willett & Willett 2015: 302)

(122) *Dhi'* *su∼ssak* *na* *mi'bɨt,* *gok* *jir=**añ-ga-'n***
3PL.SBJ PL∼sandal SUB DIR two COP=1SG.SBJ–N.POSS–3SG.POSS

'Two of those sandals are mine' (Elizabeth Soto 8/8/2017)

(123) *Jir=**Juan-ga-'n*** *dho*
COP=Juan–N.POSS–3SG.POSS EVID.DIR

'It's Juan's' (Willett & Willett 2015: 302)

Nouns and question words in O'dam do not mark case, only personal pronouns, which have

| Noun in subject form | *-ga* 'N.POSS' | *-'n* '3SG.POSS' |

Figure 7.1: Possessive pronoun template

a subject/non-subject (nominative-accusative) split. The subject pronouns have two forms, one is a verbal suffix and the other is a free form used for marking topic (García Salido 2014a: 124–5). The personal pronoun free forms and their affixal counterparts are shown in Table 7.1. Notice in (124) that only the subject clitic form is allowed, the verbal object prefixes and subject suffixes are ungrammatical in the possessive pronoun construction.

	Subject free form	Subject suffix	Object prefix
1SG	*añ*	*-'iñ, -(a)ñ*	*(ji)ñ-*
2SG	*ap*	*-'ap, -(a)p*	*(ju)m-*
3SG	*dhi'*	*-∅*	*-∅*
1PL	*ach*	*-'ich, -(a)ch*	*(ji)ch-*
2PL	*apim*	*(')(a)pim*	*jam-*
3PL	*dhi'am*	*(')(a)m*	*ja-*

Table 7.1: Pronominal markers in O'dam

(124) a. Subject clitic: *Jir-**añ**-ga-'n* *dho.*
COP=1SG.SBJ–N.POSS–3SG.POSS EVID.DIR
'It's mine'

b. Object Prefix: **Jir=**jiñ**-ga-'n dho.*

c. Subject Suffix: **Jir=ga-'n-**'iñ/añ** dho.*

In texts, I do not find any instances where the possessed noun and possessive pronoun appear in the same phrase, and they only overtly occur in the same clause in elicitation, as in (125) and in subsequent main clauses (126) and (127). In (125) we see a case where the possessive pronoun *María-ga-'n* appears under the copula *jir-* and the possessed noun *pilot* 'ball' appears as the subject of the clause. In (126), the possessive pronoun *Pedro-ga-'n* and the possessed noun *on* 'salt' both appear in separate main clauses. there is no subordinator, nor any other indication of clause linkage discussed in García Salido (2014a). Instead, it seems that the two main clauses are juxtaposed and (126) literally translates as 'the salt is white, Pedro's (salt) is on the table'. The structure of (127) is somewhat less clear. Possessive pronouns are not attested as DP adjuncts of a possessum NP. The possessive pronoun *memees-ga-'n* appears to act as the subject of *necesitar* 'need' (borrowed from Spanish), while *ma'n gu ton*

'a leg' appears to be unattached to any clause and seems only to serve as a referent for the possessive pronoun.

(125) *Ma'n* *añ* *bia'* *gu* *pilot* *na=ch* *ki'n* *t̶i̶tbia-'* *gu* *pilot*
one 1SG.SBJ have DET ball SUB=1PL.SBJ with play–IRR DET ball
jir-María-ga-'n
COP=Maria–N.POSS–3SG.POSS

'I have a ball for us to play with, the ball is María's'

(126) *Gu* *on* *jix=chua* *gu* *pedro-ga-'n* *mi* *mes-ta'm-da.*
DET salt COP=white DET Pedro–N.POSS–3SG.POSS DIR table–above–CONT

'Pedro's white salt is there on the table' [lit. The salt is white. Pedro's (salt) is on the table]

(127) *Ma'n* *gu* *ton* *gu* *me∼mees-ga-'n* *necesitar* *na*
one DET leg DET PL∼table–N.POSS–3SG.POSS need SUB
jix-o'-ka'
COP=strong–EST

'A table leg must be strong'

The form for the pronouns is the same no matter the number of the possessed entity. Notice that in (128) *jarooga'n* 'whose' refers to a singular entity, shown by the form *dhi'* as opposed to the plural *dhi'am*. Compare the form in (129) *añga'n* 'mine', which refers to a plural possessum *sussak* 'sandals'. Within the construction, *-ga* is not a pronominalized form for irregular alienable or alienable class nouns, but a general pronominalized possessed entity. This is shown by *susak* 'sandal' in (129) which is inalienable.

(128) ***Jaroo-ga-'n*** *dhi'*
who–N.POSS–3SG.POSS DEM

'Whose is this?' (Willett & Willett 2015: 302)

(129) *Dhi'* *su∼ssak* *na* *mi'b̶i̶t,* *gok* *jir=añ-ga-'n*
3PL.SBJ PL∼sandal SUB DIR two COP=1SG.SBJ–N.POSS–3SG.POSS

'Two of those sandals are mine'

a. *suuska-'n* 'her/his/its sandal'

b. *jiñ-suusak* ‘my sandal’

Looking purely within O’dam, it is quite difficult to say what role *-ga* is playing here and a plausible analysis would be to say that *-ga’n* is simply a possessive pronoun suffix. Willett (1991) and Willett & Willett (2015) analyze the possessive pronouns as being built from what they call the “status” suffix, and the 3SG possessor suffix *-’n*. Recall that in previous analyses all of the instances of *-ga* were analyzed as a single “status” suffix indicating “a close but alterable tie between the possessing and possessed entities” (Willett 1991: 210). As I have argued in previous sections, this is not the case for the alienable class and currently there is not sufficient evidence to definitively group the alienable and irregular alienable as a single class (even though they were historically).

The irregular alienable class marker has a different distribution than the alienable marker, it appears across the full attributively possessed paradigm in the former and only in the 3SG possessed form of the latter. Additionally, the inalienable class (where *-ga* never appears) and the irregular alienable class appear to be quite restricted in their membership, while the alienable class seems to be the default. Thus, the aforementioned analysis of *-ga* as indicating a “close” tie between the possessor and possessum would be more of a claim about when O’dam use attributive possession, rather than a claim about the possession classes themselves. Thus, the previous account at best clumsily handles the behavior of possessive pronouns. It does not predict why *-ga* would appear regardless of the possession class membership of the possessed noun, nor does it offer any explanation as to why the 3SG possessor suffix, appears in the construction. However, looking towards the closely related Northern Tepehuan and Tohono O’odham we see that in fact both *-ga* and *-’n* are playing distinct roles.

Northern Tepehuan and Tohono O’odham both use classificatory noun constructions. In Northern Tepehuan they are used to make possessive pronouns. However, unlike O’dam, Northern Tepehuan does not have a generalized possessive pronoun construction, rather different entity types require different possessive pronouns.

(130) *Ka=mɨí* *áán* ***iñ-tʸúíḓʸa-ga***
already=burned my **my–INAN–POSSD**
‘Mine already burned’ (Bascom 1982: 314)

(131) *go-kı́ı́li* *kı́ı́da-i* ***giñ-šóí-ga***
the-man curse-PRES **my–DOM–POSSD**

'That fellow curses my mule (or any animal I own)' (Bascom 1982: 314)

In (130) we see *tʸúídʸa* 'inanimate object' and in (131) we see *šóí* 'domesticated animal'. These stand in for any inanimate objects or domesticated animals, respectively (Bascom 1982: 313–4). Northern Tepehuan uses the template in (7.2) for its possessive pronouns. The same pattern found in Northern Tepehuan is also found across the Uto-Aztecan family so that O'dam likely froze the 3SG possessor suffix as the general "possessed marker" (Langacker 1977: 86).

| possessor affix | classificatory noun | *-ga* 'possessed' |

Figure 7.2: Northern Tepehuan possessive pronoun template

Unlike both Northern Tepehuan and O'dam, Tohono O'odham does not have dependent-marked possessive pronoun constructions but does use classifier nouns when possessing inanimate objects (132) and domesticated animals (133).

(132) *iida* *miisa* *o=ḍ* ***t-'ɨñi-ga***
this table B=be **1PL.POSS–possession–POSSD**

'This table is ours.' (Langacker 1963, 1964)

(133) *huan* *gogs* ***ṣoi-ga***
Juan dog **pet–POSSD**

'Juan's dog' (Saxton 1976)

In Tohono O'odham, *-ga* marks that the classificatory noun is possessed and pronominal possessor affixes are used if there is no overt possessor NP in the possessum NP, as in (132).[1] Considering the Northern Tepehuan and Tohono O'odham data and comments by previous scholars (e.g. Haugen 2017; Langacker 1977), we can posit that O'dam lost the classificatory noun structure of possessive pronouns. We can then posit that O'dam moved *-ga*, which already denoted general possession, into the position of the classifier noun. *-ga*

[1]Note that apparently the pronominal affixes are sensitive to the NP of the specific possessum, e.g. dog in (133), rather than the classifier NP.

was thus reanalyzed in possessive pronoun constructions from a general possession marker to a pronoun for a possessed entity. We can also posit that *'n* appears on the possessive pronouns because it was extended from a 3SG possessor marker to a general 'possessed' marker in these contexts. It seems likely, although it is by no means definitive, that the reanalysis of *-'n* was driven by the reanalysis of *-ga* in a type of functional slot replacement (see for instance Heath 1997, 1998). Using what seems to be a Tepiman template in Figure 7.3, O'dam reanalyzed the Tepiman *-ga* possession suffix into the pronominal possessum slot. This then left the possession marker slot open, which was filled by extending the 3SG possessor suffix and neutralizing its person-number features.

Possessor | Pronominal possessum | Possession marker

Figure 7.3: Proto-Tepiman possessive pronoun template

Chapter 8

Conclusion

I have described the three possession classes of O'dam and argued that possession class membership is a feature of words, rather than relations or roots. Two of the classes are diagnosed by the distribution of what conservatively seems to be two homophonous *-ga* suffixes. These two suffixes can be traced back to a single Proto-Tepiman alienable possession **-ga*. I have also argued that the possessive pronouns realize a *-ga* suffix that is also a reflex of the Proto-Tepiman **-ga*, but that O'dam has reanalyzed it as a possessed entity pronoun in the possessive pronoun construction.

The alienable noun class of O'dam is characterized by the presence of *-ga* on the 3SG possessed form. It seems to be the default class, in that it contains nouns that are not inalienable or irregular alienable. The inalienable noun class is characterized by the lack of *-ga* on any member of a noun's attributively possessed paradigm. The class seems to contain several semantic groupings that are difficult to tie together under a single logic. The class contains typologically common inalienable nouns (kinship, body parts and spatial relations) and a typologically large "culturally basic possessed item" group that possibly is sensitive to a manipulability feature, but which is likely better analyzed as being sensitive to several features that each bring in their own cluster of class members. The irregular noun class is characterized by the preservation of the Tepiman **-ga* suffix on all members of a noun's attributively possessed paradigm. This includes the appearance of *-ga* on the adjectival possession form where normally no possession marking occurs. This suggests that the adjectival possession strategy is a retention in O'dam and originally realized alienable marking.

Finally, *-ga* appears in possessive pronoun constructions in O'dam as a possessed

entity pronoun. In this use, it is not sensitive to the possession class membership of the possessed entity, nor its number. The reanalysis of *-ga* in O'dam possessive pronouns is an example of functional slot replacement, whereby a language inherits a functional structure (in this case a possessive pronoun template) and replaces the individual elements while essentially keeping the underlying structure intact. Tepiman languages use a template where a classifier noun indicating the semantic class membership of the possessum (e.g. inanimate or domestic) is marked with a possessor affix and a *-ga* suffix indicating general possession. O'dam collapsed the classifier nouns into a single element indicating "possessed entity" and bleached the 3SG possessor suffix to fill the possession suffix slot.

Abbreviations

1	first person
2	second person
3	third person
ABL	ablative
ACC	accusative
ADVR	adverbializer
AFF	affective
AG	agent
AL	alienable
APPL	applicative
ART	article
CAUS	causative
CFR	confirmation
CL	possessive classifier
CMP	completive
COND	conditional
CONT	continuative
COORD	coordinator
COP	copula
DC	dependent clause marker
DEF	definite
DEM	demonstrative
DEREL	derelational
DES	desiderative
DET	determiner
DIR	directional
DOM	domesticated animal
DUR	durative
EST	Stative
EVID.DIR	direct evidential
EXIST	existential
F	feminine
FOC	focus
GEN	genitive
IAL	irregular alienable
IMP	imperative
IMPF	Imperfective
INAN	inanimate
INC	inceptive
INT.NR	non-realized intention
IRR	irrealis
IT	iterative
LINK	possessive linker
LOC	locative
MED	medial distance
MIR	mirative
MOV	movement
N.POSS	possessed noun
NEG	negative
NMLZ	nominalizer
OBJ	object
PFV	perfective
PL	plural
PNCT	punctual
POSS	possessive
POSSD	possessed
PROG	progressive
Q	question particle
R/M	reciprocal/middle
R/R/M	reflexive/reciprocal/middle
RDP	reduplication
REAL	realis

REL	relative	SBJV	subjunctive	TR	transitive
REP.UI	reportative unknown information	SENS	sensorial	UNSP	unspecified
		SEQ	sequential	UNSPEC	unspecified
RET	rhetorical	SG	singular	VBLZ	verbalizer
SBJ	subject	SUB	subordinator	VIZ	visual

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