Possession and syntactic categories: An argument from Äiwoo*

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Abstract This paper argues that possession is syntactically a category-flexible notion. While it's clear that in many languages possession is mostly grounded and operates in the nominal extended projection (Szabolcsi 1983, Kayne 1993), I show that this cannot be universal. The empirical part of this article is a case study of Äiwoo, which I argue has an inherently verbal counterpart of English *'s*, an abstract transitive verb I label POSS. This verb can be used by itself to form clausal possession: "I POSS the boat" ≈ "the boat is mine". Possessed DPs also contain the verb POSS: the object of this verb is extracted, forming a relative clause. Informally described, "my boat" really is "the boat$_i$ [that I POSS $\_\__i$]" ≈ "the boat that is mine". Given this, Äiwoo simply lacks true nominal possessives. The theoretical consequence is that possession can be mapped onto different syntactic categories in different languages. This is a welcome result, as it makes the syntax-semantics mapping as flexible as it needs to be: if possession is just a tool to assert that a certain relation holds between two entities, nothing in our theory of grammar predicts that such a notion should only be limited to a specific syntactic category.

1 Introduction

1.1 Possession and syntactic categories

This paper is about how possession is mapped onto syntactic categories cross-linguistically. In general, "possession" is essentially a way to assert that some kind of asymmetric relation holds between two entities. In English and many other languages, the main syntactic tool at one's disposal to express possession – if not the only one, depending on one's analysis of *of, have,* etc. – is a functional head part of the nominal extended projection (a D head in the classic analysis; Abney 1987, Chomsky 1995)[1]:

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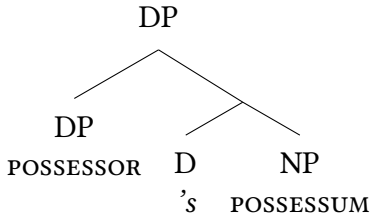
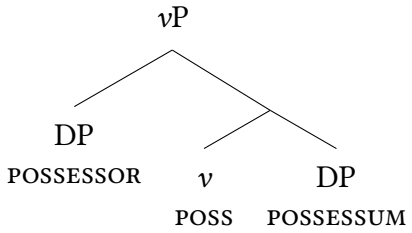
1 The tree in (1) is meant to be a simplified/abbreviated structure, with room for more intermediate projections between NP and D. The same applies to the tree in (2).

(1) **Possession as part of the nominal extended projection**:



A rather obvious thought at this point is that a D head is not the only syntactic tool human languages have to put two nominal constituents in some asymmetric relation with each other. A clear alternative would be something like a transitive verb (2). One could conceive of a verb, which I abstractly call "POSS" here, that would take the possessor as its external argument and the possessum as its internal argument, but that would otherwise have the exact same semantics – whatever that be – as the nominal head in (1): ⟦POSS⟧ = ⟦*'s*⟧[2].

(2) **Possession as part of the *verbal* extended projection**:



One can then ask the (empirical) question of how possession is mapped onto syntactic categories cross-linguistically, that is, whether we actually do find a verb like (2) in natural languages. At first glance, a potential candidate for this would be English *have* or its cross-linguistic equivalents, including related structures like 'be at', etc. (henceforth collectively referred to as HAVE). However, an influential family of analyses (Szabolcsi 1981, 1983, 1994, Freeze 1992, Kayne 1993) argue that the various types of clausal possession structures (HAVE, BE AT, etc.) are not in fact an instance of (2), but rather derive from an underlying non-verbal constituent more akin to the one in (1) (a DP for Szabolcsi, a PP for Freeze, a mixed category DP/PP for Kayne). The stronger of these claims, Freeze's, maintains that this is a syntactic universal: *all* clausal possession, cross-linguistically, has the same underlying structure. This has several advantages and merits: (i) it accounts for a number of particular properties of HAVE, which are otherwise unexplained under a view where it's a simple run-of-the-mill transitive verb; (ii) it reduces surface-level cross-linguistic variation to a universal structure (restricting the space of alternatives for the learner).

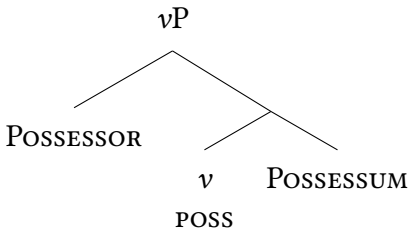
However, even if we accept this kind of reductionist analysis of HAVE, it would still be a mystery *why* the universalist claim should hold. In other words: why shouldn't we expect to find a structure like (2) in a language or another? After all, there's absolutely nothing ill-formed about it. It's a transitive verb, taking two arguments, and expressing

2 For now I abstract away from the difference between relating two DPs, as in (2), vs. relating a DP and an NP, as in (1). This issue is taken up in section §7.

the fact that some kind of relation holds between them. Moreover, it would be just another instance of parallelism between clausal and nominal structures, with the possessor and the possessum hierarchically ordered like external and internal arguments. In fact, Szabolcsi's (1981, 1983) original arguments were precisely in this direction, highlighting how possessors are similar to clausal subjects in various ways. In other words: even if the universalist claim were empirically true, our theories have no principled way to prevent something like (2) from existing, so we wouldn't be in a position to understand *why* this universal should hold (see Boneh & Sichel 2010 for a similar point).

In this paper, I offer an empirical argument that (2) does in fact exist. I present a case study from the language Äiwoo (Oceanic < Austronesian; Solomon Islands), where I show that a verbal POSS not only exists but is, in fact, the only way at all to express possession in the language. Äiwoo simply lacks any possession head that's part of the nominal extended projection, like (1). Concretely, I propose that Äiwoo POSS has exactly the argument structure outlined above and repeated here in (3a), with the semantics very approximately sketched in (3b). A concrete example is given in (4) (the word order here is OVS). To stay maximally neutral and avoid any associations with HAVE, I stick to the label POSS (in fact, I argue that POSS is different from HAVE in important ways; see below[3]).

(3) a.



b. ⟦(3a)⟧ ≈ 'POSSESSUM is POSSESSOR's'.

(4) *boat nogo Pita*[4]
boat POSS:TOOL.3MIN Peter
'The boat is Peter's'; lit. 'Peter POSS the boat'

The way we know POSS is a transitive verb is that it really just does what Äiwoo transitive verbs do. It can be used by itself, in a simple matrix transitive clause like (4), which conveys the semantics in (3b). The lack of a nominal possessive head doesn't rule out the existence of possessed DPs. When all you have is a possessive verb, what you can do is create a

3 I discuss the relation between the translation "DP is POSSESSOR's" and the underlying transitive Äiwoo syntax in §1.4. For more details about the semantics of POSS and its relation to 'have', see §7.

4 I adopt the working Äiwoo orthography that is also used in other recent published literature (Næss 2006 et seq.) and the dictionary (Næss 2017a). Most symbols have their predictable IPA value, with the exception of ⟨ä⟩ = /æ/, ⟨â⟩ = /ɑ~ɒ/, ⟨j⟩ = /ⁿdʒ/, ⟨ng⟩ = /ŋ/, ⟨ny⟩= /ɲ/. All voiced stops are prenasalized (/ᵐb, ⁿd, ⁿdʒ, ᵑg/).

The abbreviations conform to the Leipzig Glossing Rules, with the addition of: 12 'first person inclusive', ASP 'aspect', AUG 'augmented number', AV 'actor voice', BN 'bound noun', CNJ 'conjunct order', DIR 'directional', GEN 'generic' IC 'initial change', INV 'inverse' L 'linker', LOC 'locational', MIN 'minimal number', OBV 'obviative', PRT 'particle', RELM 'relational marker', TA 'transitive animate' TAM 'tense/aspect/mood', UA 'unit-augmented number', UNM 'unmarked case', UV 'undergoer voice'.

relative clause by extracting the object of this verb. For example, from the transitive clause '[Peter] POSS [the boat]' ("the boat is Peter's; Peter owns the boat"), one can derive 'the boat$_i$ [(that) Peter POSS $\_\_i$]', that is, "the boat that is Peter's", more idiomatically translated to "Peter's boat". I argue that, in fact, all possessed DPs in Äiwoo contain a relative clause. This is all based on strictly empirical arguments: the simple ideas that possessives are verbal and not nominal can account for a number of interesting (and, at times, apparently odd) properties of the possessive system of the language.

The existence of Äiwoo POSS bears on our understanding of the cross-linguistic mapping of possession onto syntactic categories. Following Szabolcsi (1983), Freeze (1992), and Kayne (1993), we know that certain examples of clausal possession (HAVE) actually derive from underlying non-verbal structures. However, the Äiwoo case can't be reduced to this, because it's the other way around: instead of building clausal possession from a non-verbal constituent, the basic structure is a transitive clause, and possessed DPs are built out of that. This is thus a clear instance of an inherently verbal possessive structure. Given what our theory of UG allows, the Äiwoo structure is, in fact, something we *should* expect to exist. Its absence from natural languages, rather, would be a mysterious gap.

The consequence of the existence of Äiwoo POSS is that a better theory of grammar holds the mapping of possession onto syntactic categories to be flexible, on a language-specific basis. In fact, a similar idea is briefly entertained in passing by Adger (2013). Based on syntactic differences between Scottish Gaelic and several other languages, he mentions how it's conceivable that the functional head that encodes (certain types of) possession, which he labels ק or more specifically ק$_{poss}$, might extend into the nominal projection in some languages and into the verbal projection in others. Here, I present explicit empirical arguments that this must indeed be the case.

The core empirical part of the paper (§§3–5) has the general structure of an extended "if it walks like a duck, and it quacks like a duck" argument. I will show that Äiwoo transitive verbs in undergoer voice (UV) show some particular phenomenon *P*, and then show that *P* also happens in the exact same way in the possessive system. To ease exposition, for every phenomenon I will first present a brief summary of the core points, and then provide richer empirical details both in the verbal domain and in the possessive domain. The reader who is not necessarily interested in a very detailed exposition of the data might want to focus on the introductory parts of these sections.

In the rest of this introductory section, I present some basic background about Äiwoo, its possessive system, and a summary of my proposal. In §2 I show that the word-order syntax of possessive structures is compatible with an analysis of them as containing an UV verb and relativization. Then, in §3 I present the first strong piece of evidence: the object agreement pattern of UV verbs replicates perfectly in possessive structures, which show "possessum agreement". After that, §4 shows how a particular type of voice-related morphology has the same behaviour on UV as verbs as in possessive structures. The final empirical argument is made in §5: the agreement morphology on possessives is (almost) the same as on UV verbs. Section §6 presents a few cross-linguistic parallels to what I argue for in Äiwoo, and explores a few predictions of my analysis. Then, §7 discusses the

semantic relationship between POSS and English 'have' (and its Western European equivalents). Finally, §8 discusses the implications of my analysis of Äiwoo for our syntactic theories of possession. Section §9 concludes.

1.2 Background about the language

Äiwoo is an Oceanic (Austronesian) language spoken in the Solomon Islands, more specifically on the Reef Islands in the Temotu province, with about 8 400 speakers (Ross & Næss 2007). The data this work builds on consists of a corpus of natural speech (approximately 75 000 words) collected by Åshild Næss over several fieldwork trips (2004–2018), whom I thank for making it available to me. Inflectional paradigms have been collected independently through targeted elicitation, also by Næss. Because of the nature of the elicitation process, neat minimal pairs are mostly not available, nor is negative evidence (i.e., unacceptability judgments). In addition, a translation of the Gospel of Mark has been consulted. Due to logistical issues, unfortunately we have no direct access to native speakers at the present time, so that some datapoints that would allow to (dis)confirm certain predictions are unavailable; this will be pointed out when relevant throughout the text.

Äiwoo is an underresearched language, and there is no published grammar. This paper builds on and extends the available description and analysis of the language, mostly carried out by Åshild Næss (Næss 2006, 2015b, 2018, 2021, Næss & Boerger 2008, Ross & Næss 2007, a.o.). I proceed now to present a few background facts about the grammar of the language, indispensable to follow the argumentation of this paper.

First, a few terminological remarks are in order. Throughout the text, I use the terms 'subject' and 'object' in a loosely defined pre-theoretical sense, equivalent respectively to 'external/internal argument' or '(proto-)agent' and '(proto-)patient/theme' (cf. the labels A and O/P often used in the typological literature). With this, I do not make any claims about the nature of grammatical relations in Äiwoo (see Næss 2015a,b for a detailed discussion in a functionalist/typological framework). In the Minimalist framework I adopt (Chomsky 2000, 2001), 'subject' and 'object' are not a primitive or in any way technical notion (McCloskey 1997), so my adopting these labels is purely for ease of exposition. See also Harley (2011) for an overview of grammatical relations in Minimalism.

The number system of Äiwoo is a so-called minimal-augmented one (Næss 2006). Simplifying coarsely, the number labels 'minimal', 'unit-augmented' and 'augmented' loosely correspond to 'singular', 'dual' and 'plural' respectively. For ease of exposition, I'll simply illustrate the whole pronominal paradigm in table 1, with idiomatic English translations. The interested reader can refer to Corbett (2000), Cysouw (2003), Harbour (2016), and references therein for more details about minimal-augmented number systems.

Finally, like other Austronesian languages, Äiwoo has a symmetrical voice system (Næss 2015b). The main contrast is between Actor Voice (AV) and Undergoer Voice (UV). The voice morphology itself is highly idiosyncratic and often not segmentable, so I gloss it as fused to the verb stem itself (see Roversi 2019: §3.2 for discussion). To avoid cluttering the examples, I will only gloss voice when relevant.

Table 1: Äiwoo pronominal paradigm (Næss 2006: 272)

	Minimal	
1	*iu*	'I'
12	*iuji*	'You and I'
2	*iumu*	'You'
3	*inâ, ine*	'S/he (DIST, PROX)'
	Unit-Augmented	
1	*iungole*	'I and another person; we.EXCL two'
12	*iudele*	'You, I, and another person; we.INCL three'
2	*imile*	'You and another person; you two'
3	*ijiile*	'S/he and another person; they two'
	Augmented	
1	*iungo(pu)**	'I and others; we.EXCL'
12	*iude*	'You, I, and others; we.INCL'
2	*imi*	'You and others; you.PL'
3	*ijii*	'S/he and others; they'

* The form *iungo(pu)* alternates freely with *ingo(pu)*, even within the same sentence. The same applies to the unit-augmented form *iungole~ingole*.

AV and UV clauses are illustrated in (5)-(6) respectively. Word order is fairly strict: the pivot (the argument selected as the most salient one in each voice) is sentence-initial[5]. AV has SVO order, and the verb carries person/number prefixes (5). Intransitive verbs also pattern like AV ones (of course, without an object). UV, on the contrary, has OVS order, and the verb carries person/number suffixes instead of prefixes (6a). The position of the non-pivot argument – the object in AV, the subject in UV – is asymmetrical with respect to a template-like series of particles that cliticize phonologically to their left, here represented by the TAM clitics *=to* and *=jo*. AV has S V=CL O order (5), whereas UV has O V S=CL order (6b). (Keep in mind that Äiwoo, like most languages of the area, shows frequent drop of any nominal argument, as long as it's recoverable from the discourse.)

(5) **Actor Voice**: S V=CL O, φ-prefixes
[*pe-sime-engâ*]$_S$ *li-epave=to* [*sii=kâ*]$_O$
COLL-person-DIST 3AUG-cook.AV=TAM fish=DIST
'The people cooked fish'

(6) **Undergoer Voice**: O V S=CL, φ-suffixes
a. [*sii*]$_O$ *lâ* *ki-epavi-i=to=wâ*
fish DIST IPFV-cook.UV-3AUG=TAM=DIST
'They cooked the fish'

5 With the exception of pronominal objects in UV, which are post-verbal instead of sentence-initial; see §??.

b. [*nupo*]$_{O}$ *lâ* *i-pa-kä-∅* [*gipiä*]$_{S}$*=jo=wâ*
net DIST ASP-fetch.UV-DIR3-3MIN br.in.law.3MIN=TAM=DIST
'His brother in law took the net'

I assume that in UV the subject is base-generated above and asymmetrically c-commands the object, despite the surface OVS word order, which I assume to be a result of later movements. Although we lack data to run classic c-command tests (such as anaphors, binding, etc.), this can still be shown to be the case in an indirect way. UV has a rather complex agreement system, described in §3.1. Roversi (2020) argues that the only way to successfully model this system is to posit a φ-probe that first targets the subject, and then the object. Assuming uniformly downward agreement (Preminger 2014, Preminger & Polinsky 2015, Deal 2015, 2022a,b, Polinsky & Preminger 2019, Rudnev 2021, Bárány & van der Wal 2022, Keine & Dash 2022 a.o., *contra* Bjorkman & Zeijlstra 2014, 2019 a.o.), this is only possible if the probe asymmetrically c-commands both arguments, and the subject asymmetrically c-commands the object.

1.3 Äiwoo possessives: a first description

The Äiwoo possessive system shows an alienability split, as do many languages of the same family and geographical area (Lynch et al. 2002: §2.7). In the Oceanist literature, the two different constructions used with the two groups of nouns are commonly referred to as "direct possession" (for inalienable nouns) and "indirect possession" (for alienable nouns)[6]. Here, I will use the less language-specific terms "inalienable" and "alienable".

Inalienably possessed nouns take a suffix indexing the possessor's φ-features, attached directly to the noun itself. This group consists, chiefly, of kinship terms and body parts. Some inflected forms of 'father' are shown in (7) (see appendix A for a full paradigm).

(7) **Inalienably possessed nouns**:

a. *tumo-**mu***
father-**2MIN**
'Your father'

b. *tumo-**de***
father-**12AUG**
'Our.INCL father'

c. *tumwä*
father.**3MIN**
'His/her[7] father'

d. *tumwä-**i***
father-**3AUG**
'Their father'

6 The Äiwoo possessive system also comprises a "third member", the so-called 'relational markers', which I exclude from the discussion due to their being poorly understood; see appendix D for a brief comment.

7 Äiwoo pronouns and agreement markers do not make any gender distinctions. In this paper, I will consistently use of the forms 's/he' and 'his/her' for 3MIN forms in the free translation line of glossed examples, instead of a gender-neutral 'they(.SG)' (Bjorkman 2017, Conrod 2019, 2022a,b). Because of the nature of the data under discussion, the reader would face the task of reliably distinguishing between 'they.SG hit them.PL' vs. 'they.PL hit them.SG', 'their.SG dog' vs. 'their.PL dog' vs. 'their.SG dogs', etc. This may reduce the readability and clarity of the paper, at times drastically. Therefore, I choose the variants 's/he' and 'his/her' as a clearly less than optimal solution, despite the fact that they may actively contribute to enforcing a strictly binary conception of social gender. I thank Kirby Conrod (p.c.) for precious advice about this.

There is no non-inflected or non-possessed form of inalienable nouns. I follow Næss' practice of using the 3MIN form as the citation form.

Alienably possessed nouns (the rest) can't take a possessor-indexing suffix directly. Instead, they are followed by a possessive classifer to their right, which takes (almost) the same paradigm of suffixes seen on the inalienably possessed nouns. Some illustrative forms are shown in (8).

(8) **Alienably possessed nouns**:

a. *nenu* *na-**mu***
coconut POSS:FOOD-**2MIN**
'Your coconut'

b. *nenu* *na-**i***
coconut POSS:FOOD-**3AUG**
'Their coconut'

c. *nenu* *numo-**mu***
coconut POSS:DRINK-**2MIN**
'Your coconut'

d. *nenu* *numä-**i***
coconut POSS:DRINK-**3AUG**
'Their coconut'

e. *nenu* *no-**mu***
coconut POSS:GEN-**2MIN**
'Your coconut'

f. *nenu* *no-**i***
coconut POSS:GEN-**3AUG**
'Their coconut'

There are six possessive classifiers, whose use depends on the intendeed construal of the relation between the possessor and the possessum noun[8]. For example, the coconut in (8a,b) is one that the speaker construes as an edible object, the one in (8c,d) is one that is intended to be drinkable (as in, at the ripening stage where one drinks the coconut water, but doesn't eat the flesh), and the one in (8e,f) only has more generic possession semantics (e.g., it could be a piece of decoration in the house). The six classifiers are the following: (i) general; (ii) food; (iii) drinks; (iv) betelnuts and betelnut-related objects (gear, parts of the plant, etc.); (v) tools and utensils (including generically "useful things"); (vi) "real estate" and other locational nouns (houses, gardens, earth ovens, paths and trails, beaches, reefs, etc.). The full series of classifiers, each with its full φ-paradigm, is shown in table 7 (§5).

1.4 The empirical proposal in a nutshell

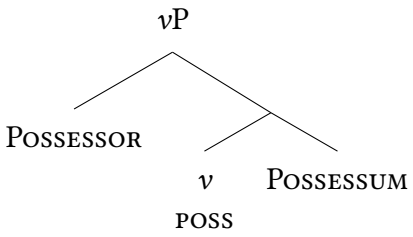
After having described what the possessive system looks like on the surface, in this section I will flesh out the empirical part of my proposal in greater detail. As presented in the introduction, the core idea is that Äiwoo has only one abstract possession verb, which I label POSS. This predicate is at the base of every possessive construction in the language, whether DP-internally (possessed DPs, both alienable and inalienable) or predicatively (i.e., to convey meanings like 'I have DP' or 'DP is mine'). In other words: unlike more familiar languages, Äiwoo doesn't have possessive pronouns/determiners like *my/mine*, anything like a Saxon genitive construction, or anything like a verb HAVE.

First, I will introduce the basic argument structure and syntactic properties of POSS. I argue that it is an UV verb, which lacks an AV counterpart. This is not unique to POSS:

8 These classifiers are only used to express possession, and not for example in combination with numerals as in many East Asian and South East Asian languages.

other verbs are also not attested as having an AV form, such as *kää* 'know' and *te* 'see', though we currently don't know exactly why this is the case (or whether the AV forms actually exist but are simply extremely infrequent in usage, so that they don't appear in our natural speech corpus). POSS takes the possessor as its external argument, and the possessum as its internal argument. This is illustrated in (9a), repeated from (3a) above. The asymmetric c-command relation between possessor and possessum follows from the argument structure of UV clauses in general, where the external argument c-commands the internal one; see the end of §1.2 for an argument.

(9) a.



b. ⟦(9a)⟧ ≈ "POSSESSUM is POSSESSOR's".

Given its transitive argument structure, it might be tempting to conceptualize POSS as the Äiwoo equivalent of HAVE. However, this would be inaccurate, and I explicitly refrain from doing so. The main reason is that HAVE poses a definiteness restriction on its object that POSS doesn't share. An English sentence like *Alex has the boat* is simply infelicitous under the standard ownership reading of HAVE, and can in fact only have a temporary possession reading (roughly, 'the boat is available to Alex [at a contextually salient time]'). Differently from HAVE, Äiwoo POSS has no troubles with definite objects. A more detailed discussion of the semantics of POSS and HAVE and their possible relation is given in §7. English doesn't have a clear example of a transitive possession verb that works like POSS in being compatible with a definite object. There exists no hypothetical verb *nave* such that ⟦Alex naves the boat⟧ = ⟦the boat is Alex's⟧[9]. Therefore, in this paper I will mostly keep the translation "DP is POSSESSOR's" in the third line of glossed examples, simply because it often happens to be the most idiomatic or natural one in English. However, it ought to be explicit that this translation is not meant to be reflective of Äiwoo syntax. Although Äiwoo POSS is most readily translated into English with an intransitive/copular construction, it's a fully transitive verb. In order to avoid confusion, the reader should keep in mind the detachment between the syntactic structure of Äiwoo POSS and that of its most idiomatic English rendition (just like, for example, Italian *ho fame* 'have.1SG hunger' is better rendered as 'I'm hungry' rather than 'I have hunger', despite the fact that the latter mirrors the original argument structure and the former doesn't).

In addition to its generic possession semantics, I assume that POSS is a phonologically null verb. I assume that the possessive classifiers (8) are nothing other than the

9 Verbs like 'possess' and 'own' wouldn't be good alternatives, because their semantics are restricted to possession as strict ownership. This contrasts with the wide range of relations that can be conveyed by e.g. the Saxon genitive. This is true of Äiwoo POSS as well, so that 'possess' is not a good translation choice.

spell-out of POSS when combined with six different roots, carrying various richer semantics. The results are six morphologically complex possessive predicates with the meaning 'POSS.as.food', 'POSS.as.drink', etc. Moreover, I argue that this line of thinking can and should be extended to the inalienable possessive system: POSS can also be adjoined to kinship (and body parts) roots. Consistently, the result is another array of complex possessive predicates, with the meaning 'POSS.as.son', 'POSS.as.mother', etc.[10].

The question arises now of how Äiwoo can express the semantics of a possessed DPs, like 'my boat' or 'my son', given that the only item with possession semantics in the whole language is a transitive verb. I argue that this is done through relative clause formation. Intuitively: 'my boat' in Äiwoo really has the syntax of 'the boat that is mine/that I possess'. More formally, given a transitive UV clause 'I POSS boat' (10a), we can extract the theme, and thus derive 'boat$_i$ [(that) I POSS $\_\_{}_i$]' (10b).

(10) a. **Baseline transitive clause**:
⟦I POSS.as.tool boat⟧ ≈ "the boat is mine"

b. **Possessed DP via relative clause formation**:
⟦boat [that I POSS.as.tool $\_\_$]⟧ ≈ "the boat that is mine" ≈ "my boat"

Once again, I argue that the syntax of inalienable possessive constructions is entirely parallel. What looks like an inflected noun (*ginou* 'son.1MIN' = "my son") is in fact not a simple noun, but a headless relative clause. Given a basic UV transitive clause 'I POSS.as.son him' (≈ "he's my son"), we can extract the theme and create the DP 'he$_i$ [(whom) I POSS.as.son $\_\_{}_i$]' ≈ "my son". An alternative analysis of this, perhaps superficially more intuitive, would posit the kinship noun as the object of POSS, which gets extracted and is the head of the relative clause: "my son" would be the reading of the structure 'son$_i$ [whom I POSS $\_\_{}_i$]'. However, I explicitly argue against such an analysis in §3.2.3.

The possibility of extracting the theme is obviously tightly connected to POSS being an UV verb. Äiwoo follows the canonical Austronesian extraction restriction, whereby Ā-movement is restricted to the voice-selected argument (see Chen & McDonnell 2019 for an overview and extensive references). Only subjects (agents) can be extracted from AV clauses, and only objects (patients/themes) can be extracted from UV clauses (Næss 2015b, though see §§2.1/6.2). Therefore, the fact that POSS is UV is perfectly expected[11].

10 An alternative to this would be to not segment out POSS from its putative modifiers. Instead of a single abstract POSS verb that can be modified by a series of roots, one would have a list of more semantically specific POSS verbs. I'm not sure either of these options is clearly better than the other. In both cases, approximately the same amount of arbitrary information needs to be listed somewhere: either "the verb POSS can incorporate roots *a, b, …*", or, "the lexicon contains the verbs POSS$_a$, POSS$_b$, …". I thank Amy Rose Deal (p.c.) for this insight. For concreteness, in this article I opt for the first approach, where there is one POSS verb and several modifiers, although this does not have bearings on my proposal.

11 I remain agnostic about the various analyses of Austronesian voice in the literature (Richards 2000, Aldridge 2004, 2008, Rackowski & Richards 2005, Foley 2008, Erlewine 2018, Chen & McDonnell 2019, a.o.). What matters is the correlation between the voice morphology of POSS and its syntactic extraction possibilities.

2 Syntax and word order

First, let's establish that the syntax and word order of possessive structures is not only compatible with a relative clause-based analysis, but in fact exactly what we expect given the syntax of relativization and UV in general. Although these facts might be interpreted in different ways, here I simply establish that the clausal analysis is viable in the first place. If the word order weren't compatible, then this kind of analysis would be a no-go from the start.

As showed in §1.2, UV clauses have unmarked O V S=CL order, where =CL identifies a fixed series of clitic-like particles of different kinds. One of these clitics is the negative particle *=gu* (11)[12]. Since sentences with two overt DPs are fairly rare in our natural speech corpus, here I show the position of both arguments with two distinct sentences.

(11) **Negative clitic *=gu*:**

a. **[O] V (S)=CL:**
[*nubo*]$_{O}$ *ba* *ki-ve-i=**gu***
ground NEG IPFV-pay.UV-3AUG=**NEG**
'They don't buy land'

b. **(O) V [S]=CL:**
ba *i-te-kä-∅* [*sime*]$_{S}$*=**gu***
NEG ASP-see.UV-DIR3-3MIN person=**NEG**
'No one saw (him)' (lit. 'No person saw'; object is pro-dropped)

Interestingly, the O V S=CL order in UV has an exception: when the object is a (overt) pronoun, then the order is V S=CL O. Consider (12), where the object pronoun *ijii* 'them' appears to the right of the same negative particle *=gu*:

(12) **V (S)=CL [O$_{\text{PRON}}$]:**
ba *i-te-kâ-mu=**gu*** [*ijii*]$_{O}$*?*
NEG ASP-see.UV-DIR3-2MIN=**NEG** 3AUG
'Haven't you seen them?'

Having established the basic word order patterns in UV clauses, let's now turn to possessives. In predicative constructions, when possessives convey the semantics "POSSESSUM is POSSESSOR's", the attested word order has the possessum in sentence-initial position, and the possessor immediately right-adjacent to the possessive classifier.

(13) [*sapulâu*] *tä* [*penyibe*]
men's.house POSS:LOC old.men
'The *sapulâu* house belongs to the elders', or '… is [the elders']'

(14) [*nelo*] *tä* [*sii*]
sea POSS:LOC fish
'The sea belongs to the fish', or '… is the place of the fish'

12 Negation is bipartite, with a pre-verbal particle *ba* co-occuring with *=gu* (Roversi & Næss 2019).

This is entirely what we expect if we hypothesize that POSS is an UV verb with the possessum as its internal argument and the possessor as its external argument: it reduces to OVS order. In fact, we can conclude that an overt possessor DP is in the same structural position as overt UV subjects, as both appear to the left of the negative particle *=gu*:

(15) [*lovävei enge ngâgu-de*] *ba nogo* [*miluwopa*]***=gu***
system this to-12AUG NEG POSS:TOOL Europeans=**NEG**
'[This system/arrangement for us] is not of [the Europeans]'

Once again: presented on their own, the data in (13)-(15) don't provide very strong evidence that POSS is indeed a transitive predicate. In fact, they would be easily amenable to an alternative analysis that is closer to the English translation: the possessum is the subject of an intransitive clause (with a null copula). Äiwoo freely allows non-verbal predicates, so this wouldn't be surprising. The position of the overt possessor DP in (15) would only entail that the possessor classifier and a possessor DP form a constituent together, so that the bipartite negation structure needs to flank it. However, so far I only want to point out that the word order facts are both entirely compatible with, and in fact correctly predicted by, an analysis of POSS as an UV predicate. In the sections below I will present further arguments strengthening my analysis.

2.1 Relativization in Äiwoo

Let's now turn to the more common use of possessive classifiers (and inalienably possessed nouns), that is, when these are used within DPs. My claim is that these possessed DPs in fact contain a relative clause. The object of the transitive verb POSS is extracted, and forms the head of the relative clause. Repeating and simplifying slightly from (10):

(16) a. **Baseline transitive clause**:
⟦I POSS boat⟧ ≈ "the boat is mine"
b. **Possessed DP via relative clause formation**:
⟦boat [that I POSS _]⟧ ≈ "the boat that is mine" ≈ "my boat"

In order to show that this is a feasible analysis of possessive structures, let's now look at what relativization in Äiwoo looks like in general. Like several kinds of subordinate clauses in the language, relative clauses show no overt marking of embedding whatsoever; the relative clause is simply juxtaposed to the right of its head noun. Äiwoo also mostly respects the restriction on Ā-extraction commonly found in other Austronesian languages with similar voice systems: only the voice-selected argument of a clause can be extracted. In other words, from AV clauses only the subject can be relativized, and from UV clauses only the object can. Both types are shown in (17)-(18)[13]. Notice how in UV relative clauses (18), the post-verbal position of the non-pivot subject is preserved (in this case *tumwä* 'her father').

13 Although I illustrate relativization graphically with movement arrows in these examples, I don't intend to make any claims as to whether Äiwoo relative clauses are better analyzed as involving operator movement (Chomsky 1977, Jackendoff 1977), matching (Sauerland 1998), or head raising (Bhatt 2002).

(17) **Subject extraction from AV clause: S_i [$\_\__i$ V(=CL) O]**

sime [$_{RC}$ —] *lu-wâ-nubo* *sime*
person 3AUG-[CAUS-die]$_{AV}$ person
'People$_i$ [who $\_\__i$ had killed people]'

(18) **Object extraction from UV clause: O_i [$\_\__i$ V S=CL]**

i-lotolâ-kä=nâ [$_O$ ***dena*** [$_{RC}$ —] *ki-pi-kä-∅* *tumwä=jo*]]
ASP-prepare.AV-DIR3=DIST **food** IPFV-bring.UV-DIR3-3MIN father.3MIN=TAM
'She prepared [food$_i$ [that her father had brought $\_\__i$]]'

Since pivots are sentence-initial, extracting them to the left is linearly vacuous, and since there is no overt marking of embedding, there could in fact be no movement at all. One could thus hypothesize a head-internal relative clause. However, a syntactic peculiarity of Äiwoo lets us see that there is in fact movement. The Austronesian extraction restriction can be violated in Äiwoo in a specific context: when an UV clause has a pronominal object, then the subject can be extracted (19) (Næss 2015b: 290; glossing slightly altered for consistency)[14]. The applicative suffix *-ive* derives UV verbs (Næss 2015b, 2021, Roversi 2019), and that this form is in UV is clearly confirmed by the suffixal φ-marking (as opposed to prefixal). If the head of the relative clause (*sime* 'person') hadn't moved, it would be post-verbal, whereas we see it to the left of the relative clause.

(19) **Subject extraction from UV clause: S_i [V $\_\__i$=CL (O_{PRON})]**

sime [$_{RC}$ *ki-singä-ive-gu-∅* —*=ngâ*]
person IPFV-[lie-APPL]$_{UV}$-3MIN-1MIN =DIST
'The man$_i$ [who $\_\__i$ told lies about me]'

Turning now back to possessives, once again we see that the word order found in possessive structures is entirely compatible with the expected syntax given an UV-based analysis. If the possessum is the extracted object of the UV verb POSS, then it should be to the left of the possessive marker, and it is. Moreover, if the possessor is the in-situ subject of the embedded relative clause (whose verb is POSS), it should be right-adjacent to the possessive marker, and not preceded by any preposition or any other material. This is also borne out, both in alienable (20) and inalienable structures (21):

(20) *box* *no* [*sime* *mi-nubo=kâ*]
box POSS:GEN.3MIN person BN:one-die=DIST
'The coffin of the dead person'

14 I have no explanation of this phenomenon, but it's consistent. Here's an intriguing correlation, which I thank Sandhya Sundaresan for pointing out to me. Subject extraction from a UV clause is allowed when the object is pronominal rather of a full DP. This maps onto a word order differences: full DP objects are preverbal in UV clauses, whereas pronominal objects are postverbal (12). If the extraction restriction is caused by on the arguments' structural height, it might be that in UV only full DP objects raise across the subject, whereas pronouns don't. Extraction would then still uniformly only target the highest argument. See §6.2 for a possible case of subject extraction out of a possessive structure.

(21) *isä* [*Meri*]
mother.3MIN Mary
'Mary's mother'

To summarize: I have shown that the word order and syntax in possessive constructions is compatible with an analysis of possessives as underlyingly containing a transitive UV predicate, thus showing that a clausal analysis of possessives is viable in the first place.

3 Object agreement and possessum agreement

In this section I show how possessives and UV verbs show identical behavior, specifically in the domain of object agreement. UV verbs have a rather complex agreement system, where object agreement surfaces in only a specific subset of configurations of subjects and objects, depending on both arguments' φ-features (22a). In all other cases, the object is realized as a post-verbal pronoun (22b). (In the notation 'X > Y', X and Y represent the φ-features of the subject and the object respectively.)

(22) **Object agreement vs. pronouns on UV verbs:**

a. **3MIN > 3AUG: object agreement**
*i-togulo-**gu-i**=laa*
ASP-hit-**3MIN-3AUG**=FUT
'S/he will hit them'

b. **2MIN > 3AUG: object pronoun**
*i-togulo-**mu**=waa **ijii***
ASP-hit-**2MIN**=FUT **3AUG**
'You will hit them'

An analysis of possessives as containing the UV verb POSS predicts that, in all and only the configurations where UV verbs show object agreement, we should find a suffix indexing the possessum's φ-features. In all other cases, we should find a pronoun doing the same thing. And in fact, this is once again exactly what we see:

(23) **Possessum agreement vs. pronouns in possessive structures:**

a. **3MIN > 3AUG: possessum agreement**
*kuli no-**gu-i***
dog POSS:GEN-**3MIN-3AUG**
'His/her dogs'

b. **2MIN > 3AUG: possessum pronoun**
*kuli no-**mu** **ijii***
dog POSS:GEN-**2MIN** **3AUG**
'Your dogs'

First (§3.1), I will present the exact distribution of object agreement in Äiwoo UV, partly amending earlier published descriptions and analyses. Then, in §3.2 I discuss the manifestations of this system in possessive constructions, and show how they are exacly parallel to the UV system. First I consider the (most frequent) case in which the possessum is 3rd person, that is, a noun phrase (§3.2.2). I also show that the parallel still holds when the possessum is 1st or 2nd person, in predicative contexts of the type "I am yours" (§3.2.3).

This set of facts constitutes a strong argument for the inherently verbal nature of POSS. On one side, it's exactly what my analysis predicts ("if you say POSS is a UV verb, it better do exactly all the things that UV verbs do"). On the other side, it would be extremely hard to explain this complete identity between verbal and possessive patterns in any other way.

3.1 UV VERBS: OBJECT AGREEMENT

Here I present the complex pattern of agreement found on UV verbs, in order to compare it to what we find on possessives. First, let me point out the relevance of UV verbs specifically, as opposed to just (transitive) verbs in general. This is because the two voices have different agreement systems. Agreement in AV is very straight-forward: the verb always agrees with the subject, and there's no object agreement whatsoever. On the other hand, as we have seen UV is decidedly more complex in terms of agreement (Næss 2006 et seq., Roversi 2020). An UV verb always agrees with the subject. In addition, it may agree with the object as well, depending on the φ-features of both arguments, as schematized in (24).

(24) **Object agreement** is found iff:
   a. Subject = 1st person; Object = 2nd person[15]
   b. Subject = 3MIN; Object = non-3MIN

When there is no object agreement, the object is realized as a full pronoun instead[16].

The two different constructions are illustrated below. In (25a,b), both arguments are marked by suffixes on the verb. In (25c,d), only the subject is, and the object is a full (possibly null) pronoun. The difference between object agreement markers and object pronouns is also supported by their placement with respect to the future clitic =C*aa*.

(25) a. **1MIN > 2MIN: object agreement**
*i-togulo-**nee-mu**=waa*
ASP-hit.UV-**1MIN-2MIN**=FUT
'I will hit you'

b. **3MIN > 3AUG: object agreement**
*i-togulo-**gu-i**=laa*
ASP-hit.UV-**3MIN-3AUG**=FUT
'S/he will hit them'

c. **2MIN > 1MIN: object pronoun**
*i-togulo-**mu**=waa* ***iu***
ASP-hit.UV-**2MIN**=FUT **1MIN**
'You will hit me'

d. **3AUG > 3MIN: object pronoun**
*i-togulo-**i**=laa* (**∅**)
ASP-hit.UV-**3AUG**=FUT **3MIN**
'They will hit him/her'

The empirical generalization in (24) is an amended version of the one described in earlier literature (Næss 2006 et seq., Roversi 2020). The specific point of divergence is (24a). In the generalization set up here, all 1 > 2 configurations trigger object agreement. In previous descriptions, this was thought only to apply to 1MIN > 2. The amendment is based on new data, emerged after the publication of those earlier works. I discuss this matter further in appendix B. What is crucial for this paper, however, is only that the set of configurations that trigger object agreement is exactly the same that trigger "possessum agreement", which I proceed to discuss now.

15 More precisely: this only applies to 1MIN/1AUG subjects; unit-augmented subjects of any person block object agreement. I abstract away from this detail in what follows.

16 As mentioned (§1.2), Äiwoo shows frequent drop of any argument, but φ-features seem to play a role. 3MIN object pronouns are essentially always dropped, while 3AUG ones are much more frequently pronounced overtly; we don't know what governs the distribution of overt vs. covert 3AUG pronouns. Non-3rd person object pronouns are seemingly never dropped, though this will need to be confirmed through elicitation.

3.2 Object agreement in possessives: possessum agreement

3.2.1 Setting up the parallel

As a reminder: the hypothesis we are testing is that all Äiwoo possession involves a transitive UV verb POSS whose external argument is the possessor, and whose internal argument is the possessum. Possessed DPs are created by extracting the possessum, to form a relative clause: "my boat" = 'boat$_i$ [that I POSS $\_\_i$]'. The obvious prediction then is that the agreement pattern on Äiwoo possessives should be the same as on UV verbs.

I show that this is indeed true: UV verbs and possessive constructions show the exact same agreement system, with entirely identical distribution of subject and object agreement. Whenever object agreement is triggered on UV verbs, in exactly all and only the same configurations we find "possessum agreement" on possessives. This is abstractly illustrated in (26), where "-S" and "-O" represent suffixes indexing the subject's and object's φ-features. Moreover, whenever an UV clause would have an overt object pronoun, in possessive structures there will be an overt pronoun indexing the possessum (27).

(26) **Object/possessum agreement configurations**:
   a. Verbs: V-S-O (SUBJ)
   b. Possessives: [N$_i$ [POSS-S-O (SUBJ) $\_\_i$]]

(27) **Object/possessum pronoun configurations**:
   a. Verbs: V-S (SUBJ) O$_{\text{PRON}}$
   b. Possessives: [N$_i$ [POSS-S (SUBJ) O$_{\text{PRON}i}$]]

First, in §3.2.2 I will show how this is true for possessed DPs, when the possessum is 3rd person (a noun, or a 3rd person pronoun). Later, in §3.2.3 I will extend this to scenarios where the possessum itself is 1st or 2nd person, in predicative possession contexts (that is, in constructions of the type 'You POSS me' = "I am yours").

3.2.2 3rd person possessums

3AUG possessums Within possessed DPs, the possessum cannot be anything else than 3rd person, since it's a nominal (and not a 1st/2nd person pronoun; though see fn. 19). First, let's examine the case of 3AUG possessums. In an UV clause, whether a 3AUG object is realized as a suffix on the verb or as a pronoun depends on the φ-features of the subject. If this is 3MIN we'll have an object suffix (28a); else, an object pronoun (28b).

(28) a. **3MIN > 3AUG: object agreement**
*i-togulo-**gu**-**i**=laa*
ASP-hit-**3MIN**-**3AUG**=FUT
'S/he will hit them'

b. **2MIN > 3AUG: object pronoun**
*i-togulo-**mu**=waa **ijii***
ASP-hit-**2MIN**=FUT **3AUG**
'You will hit them'

For possessive structures, our prediction is that if the possessum is 3AUG we should see overt marking of it, either as a suffix or as a pronoun depending on the features of the possessor (the subject of our putative POSS verb).

This is perfectly born out. The same configurations in (28) are replicated for possessive structures in (29)-(30), respectively alienable and inalienable. In 3MIN > 3AUG, a configuration that triggers object agreement on UV verbs (28a), we find that possessives carry the exact same type of marking (29a)-(30a). In 2MIN > 3AUG, however, object agreement is blocked on verbs, and the object is realized as a full pronoun (28b). Crucially, this also replicates for possessives (29b)-(30b)[17]. To highlight the parallel between UV verbal structures and possessive structures, next to the idiomatic English translation I include an informal rendition of what I claim to be the underlying Äiwoo syntax.

(29) **Alienable possession**:

a. **3MIN > 3AUG: possessum agreement**
kuli *no-**gu-i***
dog POSS:GEN-**3MIN-3AUG**
'His/her dogs' < [dogs$_i$ [(such that) (s/he) POSS-**3MIN-3AUG** (them$_i$)]

b. **2MIN > 3AUG: possessum pronoun**
kuli *no-**mu*** ***ijii***
dog POSS:GEN-**2MIN** **3AUG**
'Your dogs' < [dogs$_i$ [(such that) (you) POSS-**2MIN them$_i$**]

(30) **Inalienable possession**:

a. **3MIN > 3AUG: possessum agreement**
*gino-**gu-i***
son-**3MIN-3AUG**
'His/her sons' < [(they$_i$) [(whom) (s/he) POSS.as.son-**3MIN-3AUG** (them$_i$)]

b. **2MIN > 3AUG: no possessum agreement**
*gino-**mu*** ***ijii***
son-**2MIN** **3AUG**
'Your sons' < [(they$_i$) [(whom) (you) POSS.as.son-**2MIN them$_i$**]

(For inalienable possessive structures, I argue that what looks like a noun is really a headless relative clause. The kinship root is a modifier to POSS, and not the object itself being extracted. The extracted object is a null pronoun, something we independently know is extremely common in Äiwoo. In other words, I don't assume the underlying structure of (30a) to be '[sons$_i$ [(whom) (s/he) POSS-3MIN-3AUG (them$_i$)]]'. See §3.2.3 for arguments.)

To summarize: I argue that the apparent oddity of possessum marking – whether as a suffix or as a pronoun – is accounted for under an analysis of the possessives as verbal.

17 I choose animates ('dog', 'son') because inanimates have a poorly understood tendency to not trigger number agreement in Äiwoo, neither on verbs nor on possessives. Exceptions exist (i), but are extremely infrequent.

(i) *nuwopa* *tä-gu-i*
house POSS:LOC-3MIN-3AUG
'His/her houses' (Næss 2018: 48)

Possessum marking is not just coincidentially similar to UV object marking: it simply *is* UV object marking. For arguments against a previous analysis of this pattern as an instance of nominal number marking (Næss 2018), see appendix C.

3MIN POSSESSUMS Let's now go back to the possessive data presented initially – with no possessum agreement nor possessum pronouns – and see how it perfectly fits into the picture drawn here. The key observation is that the lack of (overt) marking of possessums parallels the lack of (overt) marking of 3MIN arguments in UV verbs. In UV clauses with 3MIN pronominal objects (that is, not a full DP), the 3MIN object pronoun is nearly always dropped. If the subject is anything else than 3MIN, that's the only overt marking (31a). If both arguments are 3MIN, we see no marking at all (31b)[18].

(31) **UV verbs with 3MIN objects**:

a. *i-togulo-**mu*** (**∅**)
ASP-hit-**2MIN** **3MIN**
'You hit him/her/it'

b. *i-togulo-**∅*** (**∅**)
ASP-hit-**3MIN** **3MIN**
'S/he hit him/her/it'

Keeping in mind the parallel subject-possessor and object-possessum, let's now compare (31) to what happens with 3MIN possessums. Across possessive structures, the distribution of null marking – or the absence of marking – is exactly the same as on UV verbs (32)-(33).

(32) **Alienable possessives with 3MIN possessums**:

a. *kuli no-**mu*** (**∅**)
dog POSS:GEN-**2MIN** **3MIN**
'Your dog' < [the dog$_i$ [(such that) (you) POSS-**2MIN** ∅$_i$]

b. *kuli no-**∅*** (**∅**)
dog POSS:GEN-**3MIN** **3MIN**
'His/her dog' < [the dog$_i$ [(such that) (s/he) POSS-**3MIN** ∅$_i$]

(33) **Inalienable possessives with 3MIN possessums**:

a. *gino-**mu*** (**∅**)
son-**2MIN** **3MIN**
'Your son' < [him$_i$ [(whom) (you) POSS.AS.SON-**2MIN** ∅$_i$]

b. *gino-**∅*** (**∅**)
son-**3MIN** **3MIN**
'His/her son' < [him$_i$ [(whom) (s/he) POSS.AS.SON-**3MIN** ∅$_i$]

Of course, given the pervasiveness of null morphology, postulating a null possessum pronoun in (32)-(33) might prima facie seem somewhat unmotivated. However, the structure of the argument should be thought of as follows: (i) every time we see overt object marking in UV (as agreement or as a pronoun), we see overt possessum marking in possessive structures; (ii) when an UV object is 3MIN, we don't see any overt marking; (iii) precisely in all and only those same cases, we don't see any overt possessum marking either.

18 See Roversi (2020: §3.4) for arguments that there is indeed a null 3MIN verbal suffix, detectable through allomorphic alternations it triggers on certain other elements.

3.2.3 1st/2nd person possessums

This marking of 3AUG possessums, as mentioned, has already been noted in the descriptive literature, though analyzed differently (Næss 2018, and appendix C for counterarguments). However, what has not been previously noted is that possessives show the same UV verb-like behaviour even when the possessum is *not* 3rd person. Within a possessed DP this state of affairs is extremely unlikely to occur, as the possessum (the head of the DP) almost by definition needs to be 3rd person[19]. However, I'm arguing that POSS is a transitive verb with the meaning "POSSESSUM is POSSESSOR's". Therefore, we should expect to at least be able to find 1st/2nd person possessums in predicative possession constructions, like "**I** am/**we** are {yours, his, …}" or "**you** are {mine, theirs, …}".

For the sake of the exposition, at this point it's useful to repeat the generalization about the distribution of object agreement, repeated from (24):

(34) **Object agreement** is found iff:
   a. Subject = 1st person; Object = 2nd person
   b. Subject = 3MIN; Object = non-3MIN

In all other cases (2 > 1; 3AUG > any object) the object is realized as a full post-verbal pronoun. A few illustrative examples are repeated in (35)-(36).

(35) **Object agreement**:
   a. *i-togulo-**nee-mu**=waa*
      ASP-hit-**1MIN-2MIN**=FUT
      'I will hit you'
   b. *i-togulo-**ngee-mu**=waa*
      ASP-hit-**1AUG-2MIN**=FUT
      'We will hit you'
   c. *i-togulo-**gu-mu**=waa*
      ASP-hit-**3MIN-2MIN**=FUT
      'S/he will hit you'
   d. *i-togulo-**gu-ngo(pu)**=waa*
      ASP-hit-**3MIN-1AUG**=FUT
      'S/he will hit us'

(36) **Object pronoun**:
   a. *i-togulo-**mu**=waa* ***iungo(pu)***
      ASP-hit-**2MIN**=FUT **1AUG**
      'You will hit us'
   b. *i-togulo-**mi**=aa* ***iu***
      ASP-hit-**2AUG**=FUT **1MIN**
      'You.PL will hit me'
   c. *i-togulo-**i**=laa* ***iumu***
      ASP-hit-**3AUG**=FUT **2MIN**
      'They will hit you'
   d. *i-togulo-**i**=laa* ***iungo(pu)***
      ASP-hit-**3AUG**=FUT **1AUG**
      'They will hit us'

My analysis predicts that we should get entirely parallel distribution of object agreement vs. possessum agreement, and object pronouns vs. possessum pronouns. The available data for these configurations is unfortunately not as rich as for 3rd person possessums. However, there is some, and all available evidence is exactly as the POSS-as-verb hypothesis predicts it to be, and thus argues in favor of it.

19 This is not necessarily true if we consider relative clauses headed by 1st/2nd person pronouns, of the type 'we$_i$ [who … $\_\_{}_i$]'. We don't have relative clauses of this type attested in our corpus, so we don't know whether they are possible or not. The prediction is that *if* it's possible to relativize a 1st/2nd person pronoun from a verb like 'hit', then it should also be possible to do so with POSS, creating DPs like, e.g., 'you$_i$ [whom I POSS.as.son $\_\_{}_i$]' = 'you who are my son'. I thank Sandhya Sundaresan for discussion of this point.

Possessum agreement In possession construction where the possessor is 1st person and the possessum is 2nd person ("you are mine/ours"), we should see possessum agreement, as well as in cases where the possessum is 1st/2nd person, and the possessor is 3min ("I am his/hers; you are his/hers"). As for the 1 > 2 cases, we have two combinations attested showing clear possessum agreement on the generic possessive classifier *nou-*:

(37) **1 > 2: possessum agreement**

a. **1min > 2min:**
go *känä* *nou-**nee-mu***
because say.3min poss:gen-**1min-2min**
'Because s/he says that you are mine' (Mark 9:41)
< [because s/he says that] (I) poss-**1min-2min** (you)

b. **1aug > 2min**[20]**:**
go *iumu=we* *nou-**ngee-mu*** *kono*
because 2min=prox poss:gen-**1aug-2min** prt
'Because you are ours, you know'
< [because] (we) poss-**1aug-2min** (you)'

For inalienable possessives, 1 > 2 forms are not attested in the available data. However, it is possible for inalienables to carry possessum agreement, as we have an attested example of a 3min > 2min configuration:

(38) **3min > 2min: possessum agreement**
lâ *iumu=wâ* [*Gino* *une-i*]-***gu-mu*** *God*
dist 2min=dist son true-uv-**3min-2min** God
'You are the true Son of God' (Mark 3:11)
< 'God poss.as.son-truly-**3min-2min** you'

Here, the inalienably possessed "noun" *gino* 'son' is really being used as a transitive predicate, that is, poss.as.son. It is first being modified by *une* 'true' (which takes the UV concord suffix *-i*; this is discussed in §4). The clause has a basic 'you are-truly his' shape ('he poss-truly you'), just with an overt possessor/subject DP (*God*).

This kind of agreement cannot be blamed on possessives being some kind of nominal predicate, as these behave differently. In Äiwoo, almost any syntactic category can function as a predicate. Nominal predicates abound, and they behave morphosyntactically like intransitive verbs, taking φ-prefixes. Consider in this respect (39), with ostensibly the same meaning as (38). Here, this a real nominal predicate and it behaves like an intransitive verb, so there is only subject agreement in the form of a prefix. This contrasts with the subject and object agreement suffixes of (38), which reflect the UV pattern.

20 I thank Åshild Næss for making me aware of this datapoint. This sentence shouldn't be taken as counterevidence to the generalization that pronominal objects are post-verbal in UV. The pronoun *iumu* is in a left-dislocated position, as shown by the fact that it's followed by the deictic element *=we*; the "real" object of the sentence is pro-dropped. See Næss (2015: 94) for arguments. The same applies to (38).

(39) *iumu=wâ* *mu-*[*Kraes* *une*]
2MIN=DIST 2MIN-Christ true
'You are the true Christ' (Mark 8:29)

Data like (38), together with others presented below, makes it clear that an analysis of inalienably possessed DPs where the kinship noun ('son') is the object of POSS is simply untenable. Here, the object of POSS is 2MIN, as clearly evidenced by the object marker *-mu* (compare *i-togulo-**gu-mu*** ASP-hit-**3MIN-2MIN** 's/he hit you'). Therefore, the object clearly can't be the noun 'son' itself, as that would be 3rd person. Hence, we have strong evidence for a headless relative clause analysis: the object is a null pronoun, and the kinship root is a modifier of POSS. This analysis also has the fortunate consequence of making inalienable possessive structures even more parallel to alienable ones. If the semantically specific possessive classifiers represent POSS fused to various roots indicating food, drinks, etc. ('POSS.as.food', 'POSS.as.drink', etc.), then the inalienable structures represent POSS fused to kinship roots.

Table 2 summarizes the predicted outcomes of various configurations of subjects/possessors and objects/possessums. For every configuration, the attested verbal morphology is listed, together with the predicted forms for both alienable and inalienable possessive structures (using *siwo* 'sister', and *gino* 'son' for the attested 3MIN > 2 MIN one). All forms prefixed by an exclamation point are constructed and predicted to be grammatical; the ones prefixed by a checkmark are the ones actually attested.

Table 2: Possessum/object agreement

	Verbal form	**Alienable**:	**Inalienable**:
1MIN > 2MIN	V-nee-mu	✓nou-nee-mu	! siwou-nee-mu
1MIN > 2AUG	V-nee-mi	✓nou-nee-mi*	! siwou-nee-mi
1AUG > 2MIN	V-ngee-mu	✓nou-ngee-mu	! siwou-ngee-mu
1AUG > 2AUG	V-ngee-mi	! nou-ngee-mi	! siwou-ngee-mi
3MIN > 2MIN	V-gu-mu	! no-gu-mu	✓Gino-gu-mu
3MIN > …	V-gu-…	! no-gu-…	! siwo-gu-…

* The form *nouneemi* is attested in the translation of the Gospel of Mark; however, its syntactic context is unclear, so I don't discuss it.

POSSESSUM PRONOUNS In 2 > 1 configurations, object agreement is blocked in UV verbs, and the object is realized as a pronoun instead. In this case as well, the available evidence substantiates that 2 > 1 possessive configurations ("I am/we are yours") behave in the same way, with the possessum being realized as an overt pronoun. Consider the following attested data. In (40), the inalienable noun *tumo* 'father' is first modified by *du* 'all'. It then takes a 2MIN possessor suffix, but we also see a full pronoun realizing the possessum, exactly as predicted. (*lâ ingopu=wâ* 'we here' is left-dislocated; see fn. 20. Same in (41).)

(40) **2MIN > 1AUG: possessum pronoun**[21]
lâ *ingopu=wâ* [*tumo-du*]-***mu*** ***ingo***
DIST 1AUG=DIST father-all-**2MIN** **1AUG**
'We here, we are all your fathers'
< (You) POSS.as.father-all-**2MIN us**

In (41) we have a 2UA possessor/subject and a 1MIN possessum/object, and we find the expected pattern with a possessum pronoun (this person is speaking to his two parents, hence the unit-augmented). The example in (42) is more complex, as it involves coordination. However, we can see the same pattern where the possessum is realized overtly as a pronoun (in this case, in both conjuncts; I do not wish to comment any further about the structure of coordination in Äiwoo, as this is as yet poorly understood.)

(41) **2UA > 1MIN:**
mo *iu* *ile* *gino-**mi-le*** ***iu***
but 1MIN PROX son-**2AUG-UA** **1MIN**
'But me here, I'm your.DU son'
< (You two) POSS.as.son-**2AUG-UA me**'

(42) **2MIN > 1UA:**
go *gino-**mu*** ***iungo-le*** *eä* *gibu-**mu*** ***ingo-le***
because son-**2MIN** **1AUG-UA** and nephew-**2MIN** **1AUG-UA**
'Because we (two) are your son and your nephew'
< [because] (you) POSS.as.son-**2MIN** and POSS.as.nephew-**2MIN us two**'

Table 3 summarizes both the predictions and the findings. (I subsume the 2UA > 1MIN case in (41) under 2AUG > 1MIN in the table, as they function exactly in the same way). Unfortunately, we lack attested examples of structures where the possessor is 3AUG and the possessum is 1st/2nd person (for example, "{I am, you are} their son").

Table 3: Possessum/object pronoun

	Verbal form	**Alienable:**	**Inalienable:**
2MIN > 1MIN	V-mu iu	!no-mu iu	! siwou-mu iu
2MIN > 1AUG	V-mu iungo(pu)	!no-mu iungo(pu)	✓tumo-mu ingo
2AUG > 1MIN	V-mi iu	!no-mi iu	✓gino-mi-le iu
2AUG > 1AUG	V-mi iungo(pu)	!no-mi iungo(pu)	! siwou-mi iungo(pu)
3AUG > 1st/2nd	V-i PRON	!no-i PRON	! siwe-i PRON

3.3 Section summary

In this section I have shown how the complex agreement pattern found in UV verbs is entirely replicated in the possessive system. UV verbs always have subject agreement,

21 I thank Åshild Næss for making me aware of this important datapoint as well. Note that in Äiwoo culture, *tumwä* subsumes both the biological father of a child and the father's brothers.

and possessive structures always have possessor agreement. Whenever UV verbs have object agreement in addition, possessive structures have possessum agreement in addition. Whenever UV verbs have their object realized as an (overt) independent pronoun, possessive structures have an (overt) independent possessum pronoun. Coherently with the view that POSS is nothing more than a regular transitive UV verb, it can be used in clauses with 1st/2nd person subjects and objects, again with the same agreement pattern as UV verbs. All these facts are impossible to explain without a view of possessives as inherently verbal, and would just be a series of coincidences and stipulations.

4 The morphology of modifiers

In this section I describe what I analyze as voice concord morphology, and show that it behaves in the exact same way in UV verbs and in possessives. Äiwoo verbs routinely includes several stems ("nuclear-level verb serialization"; Ross & Næss 2007, Næss & Boerger 2008, Næss 2012 et seq.). The so-formed complex stem behaves as one single verb for purposes of negation, TAM and φ-marking. The main stem is the linearly leftmost one, and all subsequent stems act as modifiers of the main one. Moreover, the main stem is the one that determines the voice properties of the whole form.

The following is the core pattern. When a modifier is attached to an UV verb stem, it has to take the suffix *-i*/*-nyii*. This never happens with AV verbs and intransitives (Roversi 2019, Næss 2021). This is illustrated in (43), where I bracket the whole complex stem. When the modifier *mana* 'very' is added to the UV form *ââ* 'pull', it carries the *-i* suffix (43a). When it is added to the AV form of the same verb *âwââ*, it does not (43b) (the fact that these verbs have different subjects is irrelevant).

(43) **Voice concord morphology**:

a. **UV**:
ki-[*ââ-mana-**i***]*-mu=wâ*
IPFV-pull.UV-very-**UV**-2MIN=DIST
'You catch a lot (of fish)'

b. **AV**:
ki-[*âwââ-mana*]*=kâ*
IPFV-pull.AV-very=DIST
'He catches a lot (of fish)'

To restate my claim clearly: all possessive structures in Äiwoo contain the UV verb POSS. This predicts that (i) like all other predicates, they should be able to be modified by an array of additional stems; (ii) since POSS is UV, all additional modifiers should carry voice concord morphology. In fact, both predictions are born out. The same *-i*/*-nyii* suffix found on modifiers of UV verbs also appears on modifiers when these are attached to possessives, both inalienably possessed roots (44) and possessive classifiers (45).

(44) *go ile ine* [*ibete päko-**i***]*-∅ Pita*
because this he friend good-**UV**-3MIN Peter
'Because he (here) is a good friend of Peter'

(45) *mo molâ* [*nugu-mole-**nyii***]*-ji ile=to*
but tradition POSS:TOOL-exactly-**UV**-12MIN this=TAM
'But this is exactly our tradition'

4.1 Voice concord morphology in UV verbs

Here I present the complete set of facts regarding voice concord in UV verbs (Næss 2021: §4.5, Roversi 2019: §3.3.1, Wu et al. 2023). When several modifiers appear on an UV verb, every single one must take the voice concord *-i*/*-nyii* suffix. Consider the examples in (46), showing cases of one (46a), two (46b) and even three (46c) modifiers carrying this suffix.

(46) **Voice concord morphology appears on every modifier**:

a. *bäli enge=ke i-[[kää]-päko-**i**]-no*
side DEM.PROX=PROX ASP-know.UV-good-**UV**-1MIN
'I know this topic well'

b. *i-[[[kää]-päko-**i**]-mana-**i**]-no*
ASP-know.UV-good-**UV**-very-**UV**-1MIN
'I know this very well'

c. *ki-[[[[eâmole]-wâtu-**i**]-päko-**i**]-mana-**i**]-i ijii=le*
IPFV-look.UV-COMP-**UV**-good-**UV**-very-**UV**-3AUG 3AUG=PROX
'They have to look after them more properly'

Although the form of this suffix is mostly *-i*, some modifiers consistently take the allomorph *-nyii* instead in exactly the same contexts; the alternation seems to be arbitrary, or simply a matter of lexical allomorphy. One of these is *mole* 'exactly', as showed in (47). Moreover, some modifiers consistently never take any suffix, for reasons currently not understood. A few of these are *eopu* 'also' (48) and *du* 'all' (49).

(47) *lâ sime-eângâ ba i-[kää-mole-**nyii**]-no=gu*
DIST person-DIST NEG ASP-know.UV-exactly-**UV**-1MIN=NEG
'I don't know this person exactly' (Mark 14:70)

(48) *kele nunugo-ee i-[viteia-**eopu**]-mu=dä*
here tobacco-PROX ASP-sell.UV-also-2MIN=some
'This tobacco, do you sell some of that too?'

(49) *ile=ke nye-eângâ i-[meli-**du**]-kä-de=to*
this=PROX BN:manner-DIST ASP-let.go.UV-all-DIR3-12AUG=TAM
'At this time/now, we have abandoned all that'

Finally, a highly similar pattern obtains with the modifier 'again': the form used with AV and intransitive verbs is *ute* (50a), whereas with UV verbs it's *usi* (50b) (synchronically, this can't be segmented as *ute-i*, though that's its likely diachronic origin; Roversi 2019: 37).

(50) **'Again': AV *ute* vs. UV *usi***

a. *li-[lotâlâ-**ute**] numomoji nogo-i*
3AUG-prepare.AV-**again.AV** canoe POSS:TOOL-3AUG
'They prepared their canoe again'

b. *ku-[lotoläi-**usi**]-∅=jo*
IPFV-prepare.UV-**again.UV**-3MIN=TAM
'She prepared (it) again'

4.2 Modifying possessives: also voice concord morphology

As foreshadowed above, the distribution of voice concord morphology in possessive constructions is identical to the one found in UV verbs. Possessives – both alienables and inalienables alike – can be modified, and when this happens, the modifiers show the suffix *-i* (51) or *-nyii* (52), depending on the specific lexical item. As with UV verbs, those modifiers like *eopu* 'also' that don't carry voice concord morphology with verbs also fail to carry it with possessives (53). Finally, 'again' takes the form *usi* and not *ute* (54).

(51) **Poss-modifier-*i*:**

a. *ile sime-enge [Gino une-**i**]-∅ God*
this person-PROX son true-**UV**-3MIN God
'This man is the true Son of God' (Mark 15:39)

b. *go ile ine [ibete päko-**i**]-∅ Pita*
because this he friend good-**UV**-3MIN Peter
'Because he (here) is a good friend of Peter'

(52) **Poss-modifier-*nyii*:**

a. *mo molâ [nugu-mole-**nyii**]-ji ile=to*
but tradition POSS:TOOL-exactly-**UV**-12MIN this=TAM
'But this is exactly our tradition'

b. *go le nubo enge nâ-[to-lâoo-**nyii**]-mi=to=waa*
so.that PROX land this=DIST IRR-POSS:LOC-always-UV-2AUG=TAM=FUT
'So that this land will always be yours'

(53) **Poss-also:**
*nuwa nyigaa [na-**eopu**]-de ile Nyiwoo*
fruit/seed see.almond POSS:FOOD-**also**-12AUG this Reef.Islands
'*Nuwa nyigaa* is also our fruit here in the Reefs'

(54) **Poss-*usi*:**
*lâ minugolunänâ lâ [na-**usi**] nää nogo=nâ*
DIST the tenth one DIST POSS:FOOD.3MIN-**again.UV** spirit POSS:TOOL.3MIN=DIST
'The tenth one is for his spirit again' (lit. 'is [his spirit]'s again')[22]

All examples in (51)-(54) show possessives used predicatively, and not within a DP. One could therefore think that the voice concord morphology showed by modified possessives is a consequence of this[23]. However, this isn't a likely explanation. As mentioned earlier, nominal predicates behave morphosyntactically like intransitive verbs, taking φ-prefixes:

22 This line is part of a text explaining the traditional shark fishing customs of the Reef Islands. Fishermen will offer, or sacrifice, every fifth shark they catch to a spirit so that they will continue to have good luck in their fishing. Therefore, the speaker is explaining how the fifth shark is for the spirit, then the tenth one is again for the spirit, then the fifteenth, etc.

23 I thank Mitya Privoznov (p.c.) for this idea, and Åshild Næss (p.c.) for reminding me of it in a later occasion.

(55) *ba* ***ji****-ki-*[*penyibe*]*=gu*
NEG **12MIN**-IPFV-old.man=NEG
'We're not fully grown' (lit. 'we're not elders')

Nominal predicates, like all other predicates, can also be modified. When this happens, they confirm their intransitive-like behavior: their modifiers do not take the voice concord morphology shown by UV verbs and possessives. Consider again the minimal pair (56)-(57), repeated from (38)-(39). In the former, containing a possessive, the modifier *une* 'true' takes the voice concord suffix *-i*. In the latter, the bona fide noun *Kraes* 'Christ' is used as a predicate; the same modifier *une* here takes no voice concord suffix.

(56) *lâ* *iumu=wâ* [*Gino* *une-i*]***-gu-mu*** *God*
DIST 2MIN=DIST son true-UV-**3MIN-2MIN** God
'You are the true Son of God' (Mark 3:11)
< 'God POSS.as.son-truly-**3MIN-2MIN** you'

(57) *iumu=wâ* *mu-*[*Kraes* *une*]
2MIN=DIST 2MIN-Christ true
'You are the true Christ' (Mark 8:29)

Unfortunately, there are no available examples in the corpus of a modified possessive used within a DP, but the prediction is that these should show voice concord morphology in the same manner. A constructed illustration of this showed in (58) (the constructedness is marked with an exclamation point); this kind of data will have to be elicited from native speakers when the practical circumstances allow it.

(58) **Constructed, predicted to be grammatical**:
! [*gino-une-****i***]*-no* *ku-basiki*
son-true-**UV**-1MIN IPFV-run
Intended: 'My true son is running'

To summarize: all possessive structures, both inalienable and alienable alike, show the same type of voice concord pattern that only UV verbs have. This follows naturally from an analysis of possessives as (containing) the UV verb POSS. Once again, without such an analysis we would have no explanation for this phenomenon: non-verbal predicates are very frequent in Äiwoo, but they never show this type of morphology. Possessives would constitute an exception, whereas my analysis gives a unified account.

5 Φ-morphology on UV verbs and possessives

Finally, additional evidence for a close relation between the possessive system and the UV verbal system comes from the φ-marking morphology itself. The core observation is that the suffix paradigm found on inalienable nouns and possessive classifiers alike (59a,b) is very similar to the one found on UV verbs (60a), and crucially different from the one found on AV (60b):

(59) **Possessives**:

a. *tumä-**i***
father-**3AUG**
'Their father'

b. *nenu* *na-**i***
coconut POSS:FOOD-**3AUG**
'Their coconut'

(60) **Verbs**:

a. **UV verbs**:
*ki-lââ-**i***
IPFV-build.UV-**3AUG**
'They build (it)'

b. **AV verbs and intransitives**:
*ki-**li**-lâwââ*
IPFV-**3AUG**-build.AV
'They build (it)'

Let us now take a closer look at the verbal paradigms in both AV and UV (slightly amended from Næss 2015b: 74). UV verbs have their subject marked by suffixes (table 4), whereas AV verbs take prefixes (table 5; intransitive verbs pattern like AV verbs in this respect). The morphological form itself of the affixes is also different between the two paradigms for almost all 1st and 3rd person forms, apart from 3MIN ∅.

Table 4: UV agreemenent markers (suffixes)

	MIN	UNIT-AUG	AUG
1	-no, -nee*, -∅†	-ngo-le	-ngo(pu), -ngee*
12	-ji	-de-le	-de
2	-mu	-mi-le	-mi
3	-∅, -gu‡	-i-le	-i

* The allomorphs *-nee, -ngee* are only used when preceding a 2nd person object marker. For details on object agreement and *-ngee* specifically, see §3.1 and appendix B.
† 1MIN is only -∅ when following the 3MIN subject marker *-gu*.
‡ 3MIN is only *-gu* when preceding an object marker.

Table 5: AV agreement markers (prefixes)

	MIN	UNIT-AUG	AUG
1	i-	me- … -le	me-
12	ji-	de- … -le	de-
2	mu-	mi- … -le	mi-
3	(∅-)	li*- … -le	li*-

* 3AUG *li-* has an allomorph *lu-*, phonologically conditioned.

As can be seen from (59)-(60) above, all possessives – both alienable and inalienable alike – take a suffix paradigm that is far more similar to the UV one than to the AV one. However, the parallel is not perfect, as some forms deviate from the UV paradigms (only 1MIN and

3MIN forms). In the possessive paradigms, these are often represented by morphological mutations of the stem itself rather than by segmentable suffixes. The full paradigm of the inalienably possessed root *isä* 'mother' is shown in table 6. Apart from 1MIN and 3MIN,

Table 6: Full paradigm of *isä* 'mother' (Næss in prep.)

	MIN	UNIT-AUG	AUG
1	iso	iso-ngo-le	iso-ngo(pu)
12	iso-ji	iso-de-le	iso-de
2	iso-mu	iso-mi-le	iso-mi
3	isä	isä-i-le	isä-i

the suffix paradigm is identical to the UV verbal paradigm (table 4). (Other nouns have slightly different alternation patterns, but what is consistent is that only 1MIN and 3MIN don't show overt suffixes; see appendix A for full paradigms.)

As for the possessive classifiers used with alienably possessed nouns, the whole φ-paradigm for all six is shown in table 7. Once again, 1MIN and 3MIN are the less predictable forms, whereas the rest of the paradigm is the same as the UV verbal paradigm. We can see that most classifiers have at least two different stems, but how these are distributed is seemingly semi-arbitrary. The only paradigm with only one stem seems to be the BETELNUT one, although one can observe vowel harmony-like effects in the alternation between *da-* and *dä-*. However, this is not obviously phonological, since the 3AUG suffix *-i* doesn't trigger the fronted stem *dä-*. This is also the case for *na-* vs. *nä-* in the FOOD paradigm. A schematic summary of the various stem alternation patterns is showed in (61).

Table 7: Possessive classifiers, full paradigm (Næss 2006: 273)

	GENERAL	FOOD	DRINK	BETELNUT	UTENSILS	LOCATION
1MIN	nou	nugo	numo	da-no	nugu	to
12MIN	nou-ji	nä-ji	numo-ji	dä-ji	nugu-ji	to-ji
2MIN	no-mu	na-mu	numo-mu	da-mu	nugu-mu	to-mu
3MIN	no	na	numä	da	nogo	tä
1UA	nou-ngo-le	nugo-ngo-le	numo-ngo-le	da-ngo-le	nugu-ngo-le	to-ngo-le
12UA	nou-de-le	nä-de-le	numo-de-le	dä-de-le	nugu-de-le	to-de-le
2UA	no-mi-le	nä-mi-le	numo-mi-le	dä-mi-le	nugu-mi-le	to-mi-le
3UA	no-i-le	na-i-le	numä-i-le	da-i-le	nogo-i-le	tä-i-le
1AUG	nou-ngo(pu)	nugo-ngo(pu)	numo-ngo(pu)	da-ngo(pu)	nugu-ngo(pu)	to-ngo(pu)
12AUG	nou-de	nä-de	numo-de	dä-de	nugu-de	to-de
2AUG	no-mi	nä-mi	numo-mi	dä-mi	nugu-mi	to-mi
3AUG	no-i	na-i	numä-i	da-i	nogo-i	tä-i

(61) **Stem alternation patterns**:[24]

a. {1} ≠ {12, 2, 3}: FOOD (+ "vowel harmony")

b. {1, 12} ≠ {2, 3}: GENERAL

c. {1, 12, 2} ≠ {3}: DRINK, UTENSILS, LOCATION

d. 1 = 12 = 2 = 3: BETELNUT (+ "vowel harmony")

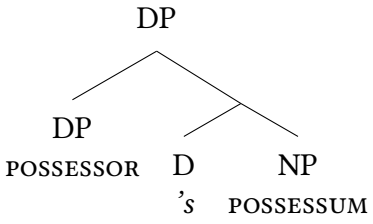
These alternation patterns – that is, how two different stems are distributed between the different person forms – are the same that are found in the inalienable paradigms (see appendix A). Since a full analysis of the morphology is beyond the scope of this paper, I leave this issue aside here. What matters for the purpose of this paper is that, apart from 1MIN and 3MIN, the paradigm of φ-suffixes found on possessive forms is the same as the one found on UV verbs, and clearly different from the one found on AV verbs (in terms of position of the affixes, and exponents). Rather then being a simple coincidence, this is predicted by an analysis where possessives are built on the UV verb POSS.

6 Interim summary

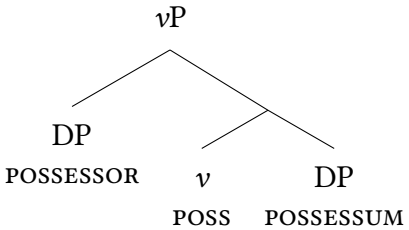
6.1 The picture so far, and some cross-linguistic parallels

Throughout the previous sections, I've argued that Äiwoo has a null transitive possession verb POSS, which only occurs in UV. This verb takes the possessor as its external argument, and the possessum as its internal argument. The idea is that POSS is nothing more than a verbal/clausal counterpart of the nominal Saxon genitive (62). Example (62a) represents a fairly standard analysis of the Saxon genitive (Abney 1987, Chomsky 1995). I propose that Äiwoo POSS really just has the same structure (62b), but belongs to the extended verbal projection instead of to the nominal one. This proposed structure then fills a gap predicted by the theory, as there's no reason why such a structure shouldn't exist.

(62) a. **English Saxon genitive**:



b. **Äiwoo POSS**:



Äiwoo POSS is always found morphologically fused to some other root. It can either be spelled out as the possessive classifiers (POSS.as.food, POSS.as.drink, etc.), or it can be fused to inalienable roots (POSS.as.son, POSS.as.mother, etc.). This idea is reminiscent to what

24 Interestingly, this distribution of stems is in line with the *ABA generalization (Caha 2009, Bobaljik 2012, Moskal 2018 a.o.), at least true if one analyzes the FOOD and BETEL paradigms as involving vowel harmony.

Chung & Ladusaw (2003) propose for Chamorro, where the verb *gäi* 'have' can incorporate, or be modified by, various nominal roots, so to create verbs meaning 'have as pet' (63a), 'have as a child' (63b), etc.[25]. In the examples below, the modifier to *have* is bracketed, whereas the object of the complex verb is boldtyped.

(63) **Chamorro** (Chung & Ladusaw 2003: 89):

a. *gäi-*[*ga'*] ***un*** ***ga'lagu*** *ennao* *na* *patgun*
AGR.have-pet a dog that L child
'That child has a pet dog'

b. *hayi* *gäi-*[*patgun*] ***si*** ***Carmen****?*
who WH$_{[NOM]}$.AGR.have-child UNM Carmen
'Whose child is Carmen?' (lit. 'who has Carmen as a child?')

Patterns very reminiscent of the Äiwoo one have been described in a variety of languages, especially for kinship terms. Several Algonquian languages have kinship roots that can be derived into verbs like 'have OBJ as a father', etc.[26]. A few examples from Passamaquoddy are given in (64). In this language as well, headless relative clauses can be formed this way (64c); verbs in relative clauses consistently use so-called "conjunct order" morphology, different from what we find in matrix verbs (see §8.2 for details).

(64) **Passamaquoddy**:

a. *∅-mihtaqsuw-akum-a-l* *Piyel-ol*
3-father-be.related.TA-3OBJ-3OBV.SG Piyel-OBV.SG
'S/he has Piyel as a father; Piyel is his/her father'

b. *k-hesisuw-akum-ku-nnu-k*
2-older.brother-be.related.TA-INV-1PL-3PROX.PL
'They have us.INCL as brothers; we.INCL are their brothers'

c. *mihtaqsuw-akum-uk* *peciye*
father-be.related.TA-1SG>3.CNJ leave.3SG
'My father (lit. 'the one I have as a father') left'

Phenomena like this have also been described for Iroquoian, Uto-Aztecan, and Australian languages (Sapir 1917, Amith & Smith-Stark 1994, Evans 2000, Koenig & Michelson 2010, 2022). Beyond kinship terms, perhaps the closest parallel to Äiwoo I have been able to find is American Sign Language (ASL) as analyzed by Abner (2012, 2013). She shows that the element used in nominal possessive structure is not a determiner, but a transitive verb. Also in ASL, possessed DPs are built by relativizing the possessum out of this verb.

25 I'm making no strong claim that Äiwoo POSS is exactly what described for Chamorro in Chung & Ladusaw (2003), but merely highlighting the intuitive similarity. I also don't have any detailed analysis of how the semantics of POSS arise compositionally from the various items it can combine with. The sophisticated type of data that are typically examined in discussion of the semantics of possession (Partee [1983] 1997, Barker 1995, Vikner & Jensen 2002, Partee & Borschev 2003, Alexiadou 2003, Adger 2013, a.o.) are simply not available for Äiwoo. I leave this as an open issue.

26 I thank Norvin Richards, Peter Grishin and Will Oxford for making me aware of the Algonquian pattern. The Passamaquoddy data was elicited by the author from native speaker consultants.

(e.g. 'Mark Twain's book' is literally 'the book$_i$ [that $\_\_i$ is Mark Twain's]'). The only difference between ASL POSS and Äiwoo POSS is that their argument structures are the mirror image of each other. In Äiwoo, the possessor is the external argument and the possessum is the internal argument, whereas the opposite is true in ASL.

Finally, a typological overview (Bugaeva et al. 2022) finds a number of languages where at least some kinds of possessives have a comparable structure to Äiwoo (in their terminology, "verbal appositive classifier systems"). I illustrate this here with Ainu (65).

(65) **Ainu** (Bugaeva et al. 2022: 45):
[__ *ku-kor*] *seta*
1SG.A-have dog
'My dog', lit. 'dog (that) I have'

6.2 A few predictions of the relativization account

Analyzing possessed DPs as containing a UV relative clause makes a number of other predictions, many of which cannot be confirmed with the available data. In the interest of space, I'll limit myself to spelling them out concisely, and leaving them as open issues.

The first prediction is connected to inalienable possession. In §3.2.3, I argued that inalienably possessed "nouns" (66) are really headless relative clauses; that is, not (67a), but (67b). Breaking it down: the kinship root meaning 'son' is not the object of POSS undergoing extraction (67a). On the contrary, 'son' is a modifier of POSS, and what is being extracted is a null pronominal (67b). The reason for arguing for (67b) is that we see cases where the possessum is not 3rd person (§3.2.3), ergo, it cannot be a noun.

(66) *gino-i*
son-3AUG
'Their son'

(67) **Two possible underlying structures**:
a. **Argued to be untenable: relative clause headed by a noun**
[son [(whom) (they) POSS-3AUG __]]
b. **Argued to be right: headless relative clause**
[(he) [(whom) (they) POSS.as.son-3AUG __]]

Even accepting my analysis of inalienables as headless relatives, nothing we know of should forbid in principle that an overt noun be extracted from POSS.as.son. For example, this could result in structures like 'my son the fisherman' = 'the fisherman$_i$ [whom I POSS.as.son $\_\_i$]'. We don't have data in our corpus to directly bear on this issue. There are, however, several pieces of data that might be analyzed this way (68) (*pesaliki* is an honorific term, and *gisi*, literally 'man's brother', can also be used for friends). This way, *pesaliki* would be the extracted object of *gisi*: '[the bigman$_i$ [I POSS.as.brother $\_\_i$]] is nearly here'.

(68) [*pesaliki gisi*] *i-pu-mä*
bigman brother.1MIN ASP-go-DIR1
'My friend is nearly here'

Of course, without knowing more about the syntax of appositions in Äiwoo, it's impossible to rule out other analyses. At best, it might be preliminary evidence; certainly, structures like these are compatible with the POSS-based analysis.

Another prediction relates to how extraction interacts with the voice system. Although Äiwoo generally follows the Austronesian extraction restriction, there's an apparent exception, presented in §2.1. If the object of an UV clause is pronominal, then the *subject* of that clause may exceptionally be extracted. Here is what this predicts for possessive structures. If the possessum is pronominal ('SUBJ POSS *it*'), then in principle one should be able to extract the *possessor*. Although this hasn't been tested, here is an example that might be thought of showing exactly this. Here, the bound noun *me-* 'person' is being used as a relativizer; essentially, it's no different from any other noun, apart from it being obligatorily phonologically bound to its host (see Næss 2017b for details abound bound nouns). This is naturally interpretable as a case of possessor extraction: "the owner" is, literally, 'the person who POSS (it)' (69b).

(69) **Possible example of possession extraction**:

a. ***me-nogo*** *ku-pu-mä=kaa* *lâto* *ku-luwa-kä=nâ*
BN:person-POSS:TOOL.3MIN IPFV-go-DIR1=FUT then IPFV-take-DIR3=DIST
'The owner will come and take it'

b. **Suggested underlying structure**:
[person [(who) __ POSS.as.tool.3MIN (it)]]

As stated, this would predict that a version of (69a) with a full DP object (e.g. "the owner of the dog") should be impossible. If that is not true, then it might mean one of several things. Perhaps POSS is not actually exclusively UV, but has an AV version as well, and this is simply exceedingly rare in natural speech. Alternatively, we might simply be wrong about how extraction and symmetrical voice interact in Äiwoo.

Finally, analyzing possessed DPs as containing a relative clause makes another prediction, centered around the difference in timing of Merge between nominal complements and adjuncts (Lebeaux 1991, Fox 1999)[27]. These analyses have been developed to account for contrasts in Condition C effects, like in (70) (taken from Stockwell et al. 2022: 1; though see Adger et al. 2017, Bruening & Al Khalaf 2019, Stockwell et al. 2022 a.o. for diverging claims on whether these contrasts actually hold empirically).

(70) a. * [Which picture of Harry$_i$]$_j$ did he$_i$ frame $\_\__j$?
b. [Which picture arranged by Harry$_i$]$_j$ did he$_i$ frame $\_\__j$?

My analysis of Äiwoo predicts that a possessor in a DP should behave more similarly to (70b) than (70a) in terms of Condition C. Unfortunately, close to nothing is known

27 I thank Amir Anvari for this observation.

about very basic facts of binding in Äiwoo, and even less is known about how binding conditions interact with symmetrical voice. Although fascinating, more work needs to be done to determine whether this is a prediction that may at all be tested in Äiwoo.

7 Preliminary notes on the semantics of POSS

In this section, I want to offer a speculation about the semantics of POSS and that of HAVE. Purely intuitively, POSS is different from HAVE in the sense that a sentence where POSS is used by itself as a transitive predicate is not translated into English with HAVE. Rather, HAVE is consistently conveyed by Äiwoo speakers by using a possessed DP as the subject of an existential predicate (72). This is cross-linguistically attested (Stassen 2009: §4.1).

(71) *boat* *nugu*
boat POSS:TOOL.1MIN
'The boat is mine'

(72) [*boat* *nugu*]$_{DP}$ *i-to*
boat POSS:TOOL.1MIN ASP-exist
'I have a boat' (lit. 'a boat of mine exists')

The idea in this section is to consider whether one could capitalize on the semantics and syntax of POSS to explain why Äiwoo uses the particular construction in (72) to express the equivalent of HAVE, instead of leaving it as a coincidence. However, the reader should note that these ideas are quite speculative and tentative.

First, let's examine a few naturally occurring examples of POSS used by itself as a transitive matrix clause predicate, one of which is repeated as (73). The translation offered by the native speakers is not 'the elders have a/the *sapulâu*'. Consider also (74): here, the possessum is dropped (as it's contextually very salient), and the possessive is used predicatively to convey 'it is/will be ours'.

(73) *sapulâu* *tä* *penyibe*
men's.house POSS:LOC old.men
'The *sapulâu* house belongs to the elders', or '… is the elders''

(74) ***nou-de-le*** *mo* *na-malei-wâ-ngo-le*
POSS:GEN-12AUG-UA but IRR-look.after-DIR2-1AUG-UA
[Context: a man and his wife can't have children, so he asks a couple to adopt their newborn] 'It will be ours (us three.INCL), but we (two.EXCL) will raise it for you'

What sentences like these teach us is that at the very least, POSS differs from HAVE in not sharing the latter's definiteness effect. An old insight in the literature is that HAVE poses some restrictions on the kind of objects it can take (Partee 1999, 2004, Keenan 1987, Szabolcsi 1994, Iatridou 1995, Sæbø 2009)[28]. More specifically, there's a definiteness effect,

28 Tracing the exact origin of this observation has proven a difficult task. Partee (1999, 2004) are the written-out, published version of a never-developed abstract occasionaly cited as Landman & Partee (1987); in the acknowledgments section of Partee (2004), she states that the original statement of the problem dates back to a presentation of hers in 1983. This has been informally confirmed to me by Anna Szabolcsi and Barbara Partee themselves (p.c.). Furthermore, Sabine Iatridou credits "work of Jacqueline Guéron, Anna Szabolcsi and others" (Iatridou 1995: 197), but I haven't managed to reconstruct specific references.

similar to that found with existential predicates (Milsark 1974, 1977, Barwise & Cooper 1981; though see Myler 2016: 328-336 for a critique of the idea that the two effects are the same). Simplifying: under its ordinary ownership reading, HAVE cannot take an object containing a strong quantifier (in the sense of Milsark 1974, 1977), such as definite descriptions, demonstratives, or universal quantifiers (75).

(75) **HAVE's definiteness effect**:
   a. Do you see all the antiques in this room? I own/*have them. (Iatridou 1995: 197)
   b. John has *the/*that/*every sister (Partee 2004: 282)

According to a number of analyses of this phenomenon (see references above), the fact that HAVE shares this effect with this existential predicates is no coincidence, but is simply a consequence of the fact that HAVE underlyingly contains an existential predicate.

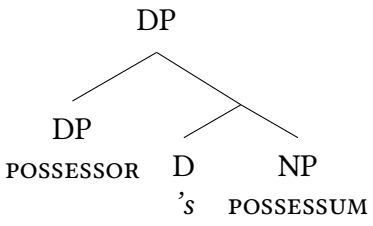
Differently from HAVE, Äiwoo POSS clearly has no problems with definite objects. In (74), for example, the object of POSS is clearly definite, since it is a (dropped) pronoun. As additional evidence, consider (76), where the possessum is marked by a demonstrative, and therefore definite:

(76) [*ile* *dekilingä* *enge*] *nä-ji*
PROX food this POSS:FOOD-12MIN
'This food is ours [mine and yours]'; (lit. 'We [you and I] POSS this food')

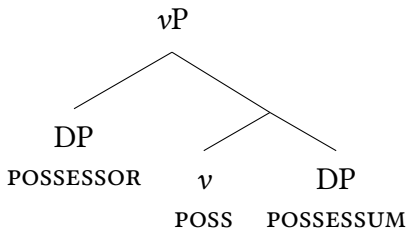
A possible idea is that POSS, differently from HAVE, simply lacks any existential import at all. The semantic content of POSS would just that be that two DPs are in a context-dependent kind of relation with each other (i.e. 'possession', in all its semantic variety). Given the classical explanation of the definiteness effect, the fact that POSS doesn't have an existential predicate inside it would make it compatible with definite objects. Furthermore, since POSS doesn't contain an existential predicate, to convey something like HAVE an existential predicate simply must be added, as in (72).

The definiteness properties of Äiwoo POSS might be a consequence of the size of the nominal constituents it takes as arguments. Consider the traditional analysis for the English Saxon genitive compared to the structure I propose for POSS (repeated from (62)). In English, while the possessor is a DP, the possessum is an NP (or at least something smaller than a DP), since it's embedded in a larger nominal structure. In Äiwoo, there's no reason to doubt that both the possessor and the possessum can be full DPs (or at least, nominal constituents of the same size, whatever that size be).

(77) a. **English Saxon genitive**:



b. **Äiwoo POSS**:



Given the smaller size of the possessum in English, we might expect restrictions on its definiteness value. This, of course, shouldn't be the case in Äiwoo, where both DPs' definiteness should in principle be able to vary freely[29]. Ultimately, these kinds of questions will require careful elicitation with native speaker consultants.

8 Theoretical and cross-linguistic implications

8.1 Against a classic universalist analysis

This paper's main issue is the mapping between possession and syntactic categories. I have shown that in Äiwoo, DP-internal possession is structurally derived from clausal possession. Such an analysis is potentially significant when seen from the perspective of proposed syntactic universal connected to possessive structures. An influential proposal holds that languages in general do the opposite of Äiwoo: clausal possession, like HAVE, is to be derived from an underlying non-verbal constituent. Important pieces of work arguing in this direction are Freeze (1992), Kayne (1993), and Szabolcsi (1981, 1983, 1994).

In a series of papers, Szabolcsi (1981, 1983, 1994) proposes that Hungarian possessive clauses are derived from an underlying DP constituent. Simplifying: the possessed DP in (78a) has the dative possessor in a high specifier position (c-commanding the possessum), argued to be parallel to that of a clausal subject. From here, the possessor can be extracted, to create a clausal possession structure (78b).

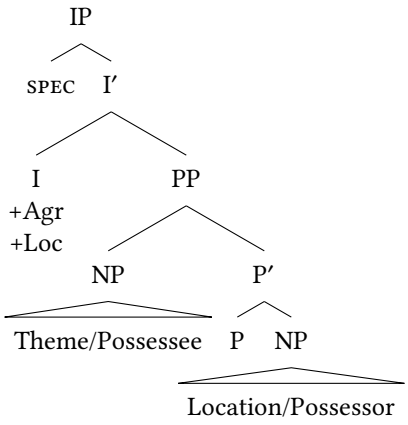
(78) a. **Nominal possession**: (Szabolcsi 1994: 180; glosses from Myler 2016: §2.2.1)
Mari-nak a kalap-ja-i-∅
Mari-DAT the hat-POSS-PL-3SG
'Mari's hats'

b. **Predicative possession**: (Szabolcsi 1994: 223; my annotations)
Mari-nak van-nak [__ kalap-ja-i-∅]
Mari-DAT be-3PL hat-POSS-PL-3SG
'Mari has hats'

Freeze (1992) extends this idea, arguing that this is actually a language universal: in all languages, clausal predicative possession (HAVE and its cross-linguistic equivalents, including locative constructions like 'be at') is based on an underlying non-verbal constituent. Freeze (1992) proposes that the universal underlying structure is that of a locative PP, where the possessum c-commands the possessee (79). Different surface structures that semantically correspond to HAVE are derived by moving different constituents to the subject position (spec,IP). To derive HAVE, the possessor moves to the subject position, and P head-moves into I; the so-formed complex head is spelled out as HAVE.

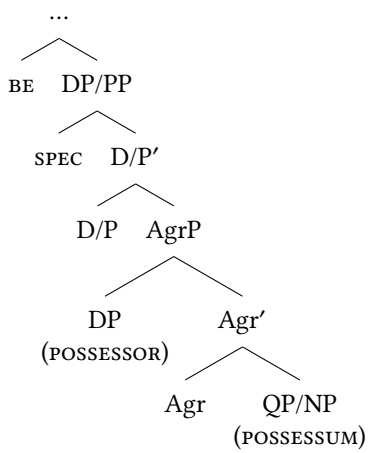
29 This is related to the issue of "Possessor Dominance" (Chung 2008), the effect by which the global definiteness of a possessed DP (in English) is determined by the definiteness of the possessor (see Woisetschlaeger 1983 and Adger 2013: §5.3–5.4). This effect, however, is not universal, as Chung shows based on data from Māori and Chamorro.

(79) **Proposed universal underlying structure** (Freeze 1992: 558)[30]:



Kayne's (1993) main focus is to account for HAVE and BE as auxiliary verbs; however, it contains an analysis of possessive HAVE, which is similar in spirit to Freeze's. The proposed underlying structure is (80). The element notated as D/P is a 'prepositional determiner'. HAVE is derived by raising the possessor DP to the subject position (passing through spec,DP), and incorporating D/P into the copula BE, which is then spelled out as HAVE. Note that the asymmetric c-command relation between possessor and possessum is the same as Szabolcsi's, and the opposite of Freeze's.

(80) **Proposed underlying structure** (elaborated from Kayne 1993: 7):



The three approaches just very briefly reviewed can be summarized as in (81), at least for what is relevant to the issues in this paper (X » Y = X c-commands Y):

(81) **Proposed underlying structures for predicative possession**:

a. Szabolcsi (1981, 1983, 1994): DP; possessor » possessum (Hungarian-specific)
b. Freeze (1992): PP, possessum » possessor (universal)
c. Kayne (1993): DP/PP, possessor » possessum

30 The tree is as shown in Myler (2016: 113), in a slightly modernized version compared to the original. Note that Freeze sets aside the Hungarian structure in (78b), as it can't be derived from (79).

Freeze's proposal makes the particular point that there is only one universal underlying structure for clausal possession (although he is forced to set aside other constructions, which are incompatible with his proposal). Contrary to this, more recently it has been argued that the view under which all predicative possession is to be derived from one single underlying structure is untenable. Levinson (2011) analyzes the Icelandic *vera með* 'be with' construction, and concludes that it's impossible to derive from Freeze's underlying argument structure (79). Therefore, that structure cannot be universal. A similar claim is made in Boneh & Sichel (2010), who argue that various possessive constructions in Palestinian Arabic are derived from several different underlying argument structures. They make a theoretical point that's rather similar to mine: these structures *should* be able to exist given what UG allows, so we shouldn't be surprised to find them. Finally, Myler (2016) reviews in detail a series of proposals and data, part of which novel and based on a study of closely-related varieties of Quechua. His conclusion is, again, that not all possessive constructions across languages can be derived from one and the same universal underlying structure, *contra* Freeze (1992) and Kayne (1993).

There is an obvious tension between what I claim and a Freezian/Kaynian universalist approach. Their claim is that clausal possession is derived from a non-clausal constituent (PP or DP). In Äiwoo, the exact opposite happens: DP-internal possession is derived from a transitive clausal structure. Äiwoo is then incompatible with the analyses sketched so far. Freeze's approach is ruled out immediately, because the asymmetric c-command relation between the two arguments is reversed: in Äiwoo, the possessor c-commands the possessum, whereas Freeze assumes the opposite configuration. Moreover, Szabolcsi's and Kayne's analyses are also very hard to square with the Äiwoo evidence. This can be shown schematically as in (82). Szabolcsi and Kayne argue that possessive clauses are derived from an underlying DP; in Äiwoo, the opposite is true. Therefore, a Szabolcsi/Kayne-style analysis of Äiwoo would entail a sort of Duke-of-York syntactic derivation (82c). The transitive clausal structure I assume to be at the base of possessed DPs would itself derive from a DP. It's unclear to me how such a derivation could be mechanically implemented and motivated.

(82) **Derivational history of possessive structures**:
   a. Szabolcsi/Kayne: DP ⟶ clause
   b. Äiwoo: clause ⟶ DP
   c. Äiwoo under Szabolcsi/Kayne: DP ⟶ clause ⟶ DP

(This same issue would also arise with ASL and all other languages discussed in §6.1.)

Given this tension, the logical possibilities at this point are two. On one hand, we could follow Levinson (2011) and Myler (2016) and conclude that a Szabolcsi/Freeze/Kayne-style analysis can't hold universally. Äiwoo is yet another language that cannot be reduced to the same underlying structure proposed for English, Hungarian, etc. Therefore, that structure cannot be universal. Possession is not universally tied to a specific syntactic category, but may simply vary. I proceed to discuss, and rule out, the only logically possible alternative to this if we want to maintain a universalist analysis.

8.2 Against an Äiwoo-style universalist analysis

Here are the facts that I have argued to hold so far. (i) All possession in Äiwoo is inherently verbal. (ii) Corollary: Äiwoo has no *nominal* possession, that is, there is no functional head encoding possession that's part of the nominal extended projection. If one still holds that possession is universally mapped onto one unique syntactic category, given (i)-(ii), here is the only logical possibility. It could be the case that Szabolcsi, Freeze and Kayne are wrong about their analysis of English, Hungarian, etc. Maybe, all languages in fact work like Äiwoo. Possession is universally verbal, and this just happens to be very hard to spot in many languages. Under this view, English *my boat* (and Hungarian, etc.) would also be derived from an underlying clause like *the boat that I* POSS. This approach would preserve a claim of universality, at the cost of having to develop a new analysis of possessives in many different languages. In what follows, I argue that this is untenable: for several languages it can be proven beyond doubt that an Äiwoo-style analysis won't work.

To show this, one can use the same arguments I used for Äiwoo, just the other way around: if it neither walks like a duck nor it quacks like a duck, it's probably not a duck. For example, if agreement and/or relativization work in different ways in possessives and verbs, then possessed DPs simply cannot contain a relative clause. This kind of argument is hard to make for English, because: (i) there is no object agreement on verbs, so we wouldn't expect possessum agreement on possessives either; (ii) analyses based on reduced relative clauses have been proposed for a variety of DP-internal elements (adjectives, etc.; Cinque 2010). Instead, I will base my arguments on Passamaquoddy, an Algonquian language whose verbs are highly inflected and look very different in main vs. relative clauses; the data below is based on Francis & Leavitt (2008)[31]. I will show that at least in this language, possessed DPs demonstrably do not contain relativized clausal material[32]. Therefore, the syntax Äiwoo uses for possessives cannot be universal.

First, let's take a look at what possessed DPs look like in Passamaquoddy. In what follows, to aid reading I notate morphology indexing the possessor's/subject's features in **bold type**, whereas affixes indexing the possessum's/object's features are underlined. In a possessed DP (83), there will be a prefix indexing the possessor (*k(t)*- 2nd person), and – for certain φ-values – a suffix as well (*-onnu* 1PL; note that first person inclusive across Algonquian is often formed by using both 1PL and 2nd person morphology). Finally, if the noun itself (the possessum) is plural, a plural suffix will be added (here *-k*). For some nouns, an additional 'possessed' suffix is optionally used (83b).

(83) **Possessed DPs**:

a. ***k****-posum-****onnu****-k***
2-cat-**1PL**-3PROX.PL
'**Our.INCL** cats'

b. ***kt****-emqan-*om*-****onnu****-k***
2-spoon-POSS-**1PL**-PROX.PL
'**Our.INCL** spoons'

Having seen this, we must now ask us two (related) questions: (A) Is the morphology in (83) the same kind of morphology that we find on inflected verbs? (B) More specifically,

31 Also referred to as Malecite, Maliseet or Wolastoqey, all three often hyphenated with Passamaquoddy.

32 These arguments work exactly the same for any Algonquian language that has preserved the distinction between independent and conjunct order, that is, the vast majority of them.

is this the same kind of morphology we find on verbs *in relative clauses*? The answer to A is 'almost, but still not entirely'; the answer to B is 'very much not'. I'll first illustrate the stronger point, namely the answer to question B.

Passamaquoddy, like almost all Algonquian languages, differentiates between (at least) two sets of morphological inflection on verbs, traditionally called 'orders' (in the sense of 'kind/type', not linear order; Bloomfield 1946, Oxford 2014). Simplifying the picture somewhat, the so-called 'independent order' is mostly used for matrix clause verbs. The 'conjunct order' is used for a variety of embedded contexts. Most importantly for us, verbs in relative clauses are *always* inflected with conjunct morphology (Bruening 2001, 2004; see also Brittain 2001, Richards 2004, Cook 2008). The conjunct verb form in (84) has the same combination of subject and object as the nouns in (83) has possessor and possessum: respectively, 12PL and 3PROX.PL. (Note that this verb form alone can be used as a headless relative, as indicated in the free translation.) The difference in morphology between this verb and the possessed noun is glaring: here we have no prefix, and the two arguments are jointly indexed by one portmanteau suffix. The final suffix *-ik*, indexing the object, is the same as the one on the noun, modulo morphophonology, but it's optional (something it never is on nouns).

(84) **Relative clause verbs**:
*nemiy-**oq**(-ik)*
IC.see.TA-**12>3.CNJ**-3PROX.PL
'**We.INCL** see them'; '[The ones] that **we.INCL** see'

A verb form in a relative clause in Passamaquoddy will always carry the kind of morphology we see in (84). If we say that possessed DPs contain relativized clausal material (as in Äiwoo), this would already by itself clearly make very wrong predictions. Now, going back to question A ('does the morphology on possessed nouns look like that on verbs?'), we can appreciate that there are indeed Passamaquoddy verbs that carry morphology similar to that on possessed nouns. Unfortunately for our Äiwoo-as-universal hypothesis, these are matrix verbs, that inflect in the so-called 'independent order'. In other words, possessives carry the "wrong" kind of verbal morphology for an Äiwoo-style analysis to work.

Here's an example with the same 12PL > 3PL configuration (85); the possessed nouns are repeated for comparison. In this case, we do see a lot of material in common between the nouns and the verb. The prefix *k(t)-*, the suffix *-(o)nnu*, and the suffix *-k* are all the same (modulo morphophonology)[33]. However, we also see clear differences. The verb has an extra object agreement slot that the noun doesn't have (here *-a-*, for 3rd person objects). Moreover, the possession suffix (86b) has no equivalent whatsoever on verbs.

(85) **Independent verbs: extra object agreement marker, no possessed suffix**
***k**-nomiy-a-**nnu**-k*
2-see.TA-3OBJ-**1PL**-3PROX.PL
'**We.INCL** see them'

33 The reason why independent verbs have very similar morphology to possessed nouns is that they diachronically originate from nominalizations in Pre-Proto-Algonquian (Goddard 1974, 2007, Proulx 1982), but at the synchronic level they're simply just matrix clause verbs.

(86) **Possessed DPs**:

a. ***k****-posum-****onnu****-k*
2-cat-**1PL**-3PROX.PL
'**Our.INCL** cats'

b. ***kt****-emqan-*om*-****onnu****-k*
2-spoon-POSS-**1PL**-PROX.PL
'**Our.INCL** spoons'

The bottom line is that possessed nouns cannot be reduced in any way to, or cannot contain, clausal structure. The morphology that shows up on possessed nouns is very different to the one found on relative clause verbs, and even those verbs that do have similar morphology to possessed nouns still show systematic irreconcilable differences from them. An Äiwoo-style analysis of Passamaquoddy possession is untenable, and hence, the Äiwoo possessive construction can't be universal either.

9 Conclusion

Possession in Oceanic languages, though fairly well-described in the typological literature (Lichtenberk 2009a,b), is largely uncharted territory for generative syntax, especially outside of better-studied Polynesian languages (though see den Dikken 2003, Pearce 2010, von Prince 2012, 2016 a.o.). This paper presents a study of Äiwoo, where and the empirical contribution is to show that all possessive structures in Äiwoo involve a transitive UV verb POSS. This includes not only predicative possession (i.e. clausal possession), but also DP-internal possession, which involves a relative clause. The evidence from this comes from three aspects that are identical between possessives and UV verbs: (i) word order and syntax; (ii) a particular agreement pattern; (iii) voice concord morphology on modifiers. A series of open questions remain unanswered, largely due to current logistical challenges for carrying out fieldwork.

The theoretical contribution bears on the mapping between possession and syntactic categories. In English, Hungarian, and other better-studied languages, possession is part of the extended nominal projection (e.g. the Saxon genitive), and even what prima facie seems to be instances of clausal/verbal possession (HAVE and similar constructions) has been analyzed as deriving from an underlying non-verbal constituent. I argue that in Äiwoo, in contrast, possession is part of the *verbal* extended projection, to the point that even possessed DPs are derived from (or built on top of) clausal structure. The existence of the Äiwoo structure thus fills a gap predicted by the theory, as there's no principled reason, grounded in UG, why an inherently verbal possessive head shouldn't exist. Moreover, although languages like Äiwoo do exist, it can be shown that not all languages are amenable to an Äiwoo-style analysis. In some other languages, like Passamaquoddy, possessed DPs demonstrably *cannot* contain clausal structure. This further supports the idea that possession cannot be exclusively mapped onto a unique syntactic category, but this mapping varies cross-linguistically.

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A Inflectional paradigms of inalienable roots

In this appendix, I report the full φ-paradigms of various classes of inalienable roots; the data is from Næss (in prep.). Similarly to the possessive classifiers, many inalienable roots show an alternation between two different stems. The distribution of these two stems can be characterized in terms of person features; number does not seem to play a role. The alternation patterns attested for inalienable roots almost entirely replicate the ones found on the possessive classifiers, repeated in (87). The only exception is pattern (87a), which isn't found in inalienable roots.

(87) **Stem alternation patterns in possessive classifiers**:
   a. {1} ≠ {12, 2, 3}: FOOD (+ "vowel harmony")
   b. {1, 12} ≠ {2, 3}: GENERAL
   c. {1, 12, 2} ≠ {3}: DRINK, UTENSILS, LOCATION
   d. 1 = 12 = 2 = 3: BETELNUT (+ "vowel harmony")

First, table 8 shows a paradigm where all forms are built on the same stem (87d). In table 9, on the other hand, we see the same pattern as in (87b), with forms including the speaker (first person, exclusive and inclusive) built on one stem and 2nd/3rd person forms built

on a different stem. As in all other paradigms in the language, unit-augmented forms are consistently built by adding *-le* to the corresponding augmented forms.

Table 8: 1 = 12 = 2 = 3

	'Body'
1MIN	nyisi
12MIN	nyisi-ji
2MIN	nyisi-mu
3MIN	nyisi
1UA	nyisi-ngo-le
12UA	nyisi-de-le
2UA	nyisi-mi-le
3UA	nyisi-i-le
1AUG	nyisi-ngo(pu)
12AUG	nyisi-de
2AUG	nyisi-mi
3AUG	nyisi-i

Table 9: {1, 12} ≠ {2, 3}

	'Daughter'
1MIN	sipeu
12MIN	sipeu-ji
2MIN	sipe-mu
3MIN	sipe
1UA	sipeu-ngo-le
12UA	sipeu-de-le
2UA	sipe-mi-le
3UA	sipe-i-le
1AUG	sipeu-ngo(pu)
12AUG	sipeu-de
2AUG	sipe-mi
3AUG	sipe-i

Finally, other nouns show the alternation pattern in (87c), where all participant forms share one stem, and third person forms have a different stem. Exactly how the two stems are different, however, varies. The consistent generalization is that the final vowel in the third person stem is lower than the final vowel in the participant stem. All the attested alternations are shown in table 10 ('mat.' stands for 'maternal'). Note that in *gisi~gite*, the consonantal alternation is predictable, as /t/ and /s/ consistently neutralize to /s/ before /i/. Similarly, the vowel alternation in the first syllable of *giângu~giängä* is predictable in terms of vowel harmony.

B UV AGREEMENT IN 1AUG > 2 CONFIGURATIONS

In this paper I have proposed the following generalization regarding the distribution of object agreement on UV verbs (repeated from (24)):

(88) **Object agreement** is found iff:
   a. Subject = 1st person; Object = 2nd person
   b. Subject = 3MIN; Object = non-3MIN

As mentioned in §3.1, this generalization is slightly different from the one proposed in Næss (2006, 2015b) et seq., and analyzed in a Minimalist framework in Roversi (2020). Specifically, the first clause (88a) is different. In these earlier works, the generalization has it that only 1MIN > 2 configurations trigger object agreement, whereas 1AUG > 2 block it. However, since then new data has emerged showing that 1AUG > 2 is also one of the

Table 10: {1, 12, 2} ≠ {3}

	'Mouth' u~e	**'Man's sister'** ou~e	**'Man's brother'** i~e	**'Mat.uncle'** u~ä	**'Mother'** o~ä	**'Mat.grandma'** u~o
1MIN	nedu	siwou	gisi	giângu	iso	ipebu
12MIN	nedu-ji	siwou-ji	gisi-ji	giângu-ji	iso-ji	ipebu-ji
2MIN	nedu-mu	siwou-mu	gisi-mu	giângu-mu	iso-mu	ipebu-mu
3MIN	nede	siwe	gite	giängä	isä	ipebo
1UA	nedu-ngo-le	siwou-ngo-le	gisi-ngo-le	giângu-ngo-le	iso-ngo-le	ipebu-ngo-le
12UA	nedu-de-le	siwou-de-le	gisi-de-le	giângu-de-le	iso-de-le	ipebu-de-le
2UA	nedu-mi-le	siwou-mi-le	gisi-mi-le	giângu-mi-le	iso-mi-le	ipebu-mi-le
3UA	nede-i-le	siwe-i-le	gite-i-le	giängä-i-le	isä-i-le	ipebo-i-le
1AUG	nedu-ngo(pu)	siwou-ngo(pu)	gisi-ngo(pu)	giângu-ngo(pu)	iso-ngo(pu)	ipebu-ngo(pu)
12AUG	nedu-de	siwou-de	gisi-de	giângu-de	iso-de	ipebu-de
2AUG	nedu-mi	siwou-mi	gisi-mi	giângu-mi	iso-mi	ipebu-mi
3AUG	nede-i	siwe-i	gite-i	giängä-i	isä-i	ipebo-i

configurations that trigger object agreement. In fact, in the whole corpus there is only one example showing 1AUG > 2 without object agreement, and with the object realized as a full pronoun instead:

(89) *go ku-wobii-**ngopu**=to=we **iumu**, ä jelâ nugu-ngo*
for IPFV-follow.UV-**1AUG**=TAM=PROX **2MIN**, and thing POSS:TOOL-1AUG
i-meli-du-kâ-ngo
ASP-let.go.UV-all-DIR3-1AUG
'We have left everything to follow you' (Mark 10:28; lit. 'in order for us to follow you, we have left all our things')

On the contrary, there are a small but non-negligible number of examples of similar configurations showing object agreement and no object pronouns:

(90) *i-kää-**ngee-mu***
ASP-know.UV-**1AUG-2MIN**
'We know you' (Mark 1:24)

(91) *ki-viteiâ-**ngee-mu**=to*
IPFV-sell.UV-**1AUG-2MIN**=TAM
'We will sell you' (said by parents to their child as a threat)

As for the form *-ngee* itself, there are good reasons to believe it to be a 1AUG marker. 1MIN has the allomorphs *-no* and *-nee*, where the former is the default and the latter is only used when preceding a 2nd person object marker. 1AUG has *-ngo(pu)* as its default allomorph. Therefore, it seems plausible to assume that *-ngee* would be the 1AUG equivalent of 1MIN *-nee*. Schematically, *-no : -nee = -ngo(pu) : -ngee*.

As for the difference between (89) and (90), it's hard to claim anything conclusive based on rather scarce data, but a couple ideas could be formulated. It might be that there is inter-

speaker variation, so that some variety 'Äiwoo A' forbids object agreement in a 1AUG > 2 configuration like in (89), whereas some other variety 'Äiwoo B' allows it[34]. Alternatively, it could be the case that object agreement is the default (in the configurations that allow it), but it can be suspended in marked pragmatic or information-structural circumstances. This is not unlikely what happens for example in Romance languages: pronominal objects are most often realized as clitics (92a), but must be realized as full pronouns when emphasized (e.g., under contrastive focus, here represented with capitalization) (92b).

(92) **Object clitics vs full pronouns (Italian)**:

a. ***li*** *ho* *visti*
them have.1SG seen
'I saw them'

b. *ho* *visto* ***LORO***
have.1SG seen **them**
'I saw THEM'

One could thus hypothesize that the object in (89) is carrying some type of emphasis or other marked pragmatic value. Although this can't be proven beyond doubt for now, there might be preliminary evidence from the corpus in favor of this idea. The attested datapoints that might bear on this question involve complex allomorphy patterns, so it'll be useful to take a brief detour and review these first. Here, I assume the analysis in Roversi (2020: §3.4); see there for arguments.

A 3MIN subject (on an UV verb) may be marked by one of two allomorphs. When the 3MIN subject suffix is followed by an object suffix, 3MIN will be spelled out as *-gu* (93a). In all other cases, it will be realized as a null suffix (93b). We can detect that there is indeed a null suffix by the allomorphic effect it has on its surroundings: specifically, it will select the n-initial form of a following clitic (here the future clitic =C*aa*, but other clitics follow the same allomorphy pattern of initial consonant alternation; see Næss 2015b: 283-284, Roversi 2019: 24-25). For clarity, here I notate this suffix as *-*$\emptyset^{n}$.

(93) a. *i-togulo-**gu**-mu=waa*
ASP-hit-**3MIN**-2MIN=FUT
'S/he hit you'

b. *i-togulo-**Ø**^{n}=naa*
ASP-hit-**3MIN**=FUT
'S/he hit him/her/it'

Another UV φ-suffix that shows allomorphic variation is 1MIN. A 1MIN subject will be spelled out as *-no* (94a) in the default case, or as *-nee* when preceding a 2nd person object suffix (94b). Most importantly for us, a 1MIN *object* (which can only occur in 3MIN > 1MIN configurations, given the distribution of object agreement) is always spelled out as a null suffix (94c). Again, we can detect the presence of this null suffix because it selects a specific form of a following clitic, in this case the ng-initial form (notice that it's the same form triggered by overt 1MIN suffixes like *-no* (94a)). I'll notate the 1MIN object suffix as *-*$\emptyset^{\eta}$.

(94) a. *i-togulo-**no**=ngaa* *ijii*
ASP-hit-**1MIN**=FUT 3AUG
'I hit them'

b. *i-togulo-**nee**-mu=waa*
ASP-hit-**1MIN**-2MIN=FUT
'I hit you'

c. *i-togulo-gu-**Ø**$^{\eta}$=ngaa*
ASP-hit-3MIN-**1MIN**=FUT
'S/he hit me'

34 However, both these examples are from the same translation of the Gospel of Mark, so a variation-based hypothesis doesn't seem too likely to hold water.

Now we can go back to the question of whether information-structural factors may or may not force a pronominal object to be realized as a full pronoun instead of as a verbal suffix. Note that 3MIN > 1MIN is a combination that by default triggers object agreement (94c). Consider now (95)-(96), two consecutive sentences that also constitute a near-minimal pair. The 3MIN > 1MIN configuration obtains twice in (96), both with the standard object agreement pattern as in (94c); note the ng-initial clitic on the first occurrence. On the other hand, sentence (95) shows the same 3MIN > 1MIN configuration, but here the 1MIN is realized as a full pronoun instead of as a suffix. Note the following clitic shows up in its n-initial form, signalling that there's a 3MIN subject marker but no object marker.

(95) *iie* *ki-liko* *devalili* *kele* *mi-doo=we* *ngä* *nääng**u***,
who IPFV-greet.UV child here BN:one-like.that=PROX PREP name.1MIN,
*i-liko-lâ-epu-mä-**∅**^{n}=nâ* ***iu***
ASP-greet.UV-out-also-DIR1-**3MIN**=DIST **1MIN**
'Whoever welcomes these children in my name, also welcomes me' (Mark 9:37)

(96) *iie* *ki-liko-lâ-mâ-**gu**-**∅**^{ŋ}=ngâ* *i-liko-lâ-epu-kä-**∅**^{n}=nâ*
who IPFV-greet.UV-out-DIR1-**3MIN-1MIN**=DIST ASP-greet.UV-out-also-DIR3-3MIN=DIST
God, *me-wowâi-mä-**gu**-**∅**^{ŋ}*
God BN:person-send.UV-DIR1-**3MIN-1MIN**
'Whoever welcomes me also welcomes God, the one who sent me' (Mark 9:37)

Presumably, this might be tied to the fact that 'me' in (95) is the focus-associate of 'also'. In several languages, focus operators like 'also', 'even', 'only', etc., force pronominal arguments to be spelled out as full pronouns, instead of reduced forms like clitics, verbal affixes, or *pro*. Consider Italian again. To express 'also' taking the object as its focus associate, the only option is to use a full pronoun (97a). If one uses a clitic object (97b), the only available reading is VP-focus; the object focus reading is completely impossible. (A version like **anche li ho visti* is just ungrammatical under any reading.)

(97) a. *ho* *visto* *anche* *loro*
have.1SG seen also them
'I also$_{F}$ saw them$_{F}$' (object focus, e.g. in addition to another group of people)

b. *li* *ho* *anche* *visti*
them have.1SG also seen
✗ 'I also$_{F}$ saw them$_{F}$' (object focus)
✓ 'I also$_{F}$ saw$_{F}$ them' (VP focus; e.g. in addition to hearing them)

A final interesting point concerns the formal analysis of Äiwoo agreement in Roversi (2020), designed to capture the old generalization, that is, a system where object agreement is triggered iff (i) 1MIN > 2; (ii) 3MIN > non-3MIN. This was done by proposing a probe with a disjunctive satisfaction condition (in the interaction-and-satisfaction theory of agreement; Deal 2015, 2022a): it can be satisfied by either an [ADDR(ESSEE)] feature, or an [AUG] feature. The probe will always agree with the subject. if the subject has either

of these features, it will stop there. This leaves out 1MIN and 3MIN subjects, the only ones that don't have either of the satisfaction features, and that in fact are the only ones that trigger object agreement. See Roversi (2020) for details.

Now, this analysis clearly doesn't work for the new generalization that was discovered since and presented here, where 1AUG > 2 also triggers object agreement. In fact, it's not immediately clear to me how to capture this distribution of object agreement within current Minimalist theories of agreement. To do so, one would need to accept the existence of distinct feature for 3rd person (Nevins 2007, Trommer 2008, Grishin 2022), *contra* Benveniste (1971), Harley & Ritter (2002), and Preminger (2019), a.m.o. I leave this interesting puzzle open for future inquiry. However, Roversi's (2020) broader theoretical claim in that probes can have a disjunctive satisfaction condition has since been confirmed by work on other languages. Even just limiting the empirical domain to φ-agreement, Bondarenko & Zompì (2021) analyze agreement in Svan (Kartvelian) as showing disjunctive satisfaction. Moreover, Oxford (2022) proposes various types of probes with a disjunctive satisfaction condition to model agreement phenomena in a series of Algonquian languages (including varietes of Delaware showing an "addressee or plural" pattern similar to the one argued for Äiwoo in Roversi 2020; see Oxford 2022: 30-31).

C 3AUG POSSESSUM MARKING VS. NUMBER MARKING

As shown in §3.2.2, when a possessed nominal (a possessum) is 3AUG, its number is marked either as a suffix or as a pronoun (*kuli no-gu-**i*** 'his/her dogs'; *kuli no-mu **iji*** 'your dogs'). This pattern was analyzed in Næss (2018: §4.5–4.6) as a way of expressing plural marking on nouns. However, such an analysis must come with a number of caveats, some of which are already noticed by Næss herself. My main objections are of two kinds: (i) typological and language-internal implausibility, and (ii) empirical coverage of the analysis.

First of all, Äiwoo essentially never marks number of nouns themselves[35]. Having number marked exclusively on possessed nouns – both inalienables and alienables, as long as they're marked for possession – would be a typological *rarissimum*; Næss herself is unaware of any other attested case (Næss 2018: 56). Moreover, it's unclear why to mark plurality a 3AUG suffix should be added on top of a 3MIN one, when the inalienable noun/possessive classifier is already in its minimal number form. Næss here adduces an ambiguity-avoidance explanation: since *gino-i* 'son-3AUG' already means 'their son', the 3MIN suffix would be added then to make sure that *gino-gu-i* 'son-3MIN-3AUG = his/her sons' is different. However, such an explanation only carries so much bite in a language where number-related ambiguity and vagueness are otherwise perfectly tolerated.

Furthermore, the additional 3AUG possessum pronoun as a mean of number marking is perhaps even stranger from a typological perspective. A possible parallel might be found

35 The only exception to this is the collective prefix *pe-*, used with human-referring nouns and kinship terms, e.g. 'person', 'child', 'man', 'woman', etc. However, as argued in Næss (2018: §4.4), this is not straight-forward purely inflectional plural marking in the same way as e.g. *-s* in English, as it carries richer quasi-lexical collective semantics, referring to "a specific, delimited group of people" (Næss 2018: 45).

in Haitian Creole[36]. In this language, the 3PL pronoun is *yo*. In definite plural DPs, a marker *yo* also appears (98b), whereas indefinite plurals are left unmarked (98a) (Joseph 1988, DeGraff 2007, Glaude 2013). If these two *yo* are one and the same, this would be an instance of a pronoun being used to mark number, parallely to what Næss argues for Äiwoo.

(98) **Plurals in Haitian Creole**:

a. **Indefinite: unmarked**
liv
book
'book, books'

b. **Definite: marked by *yo***
liv ***yo***
book DEF.PL/3PL?
'the books'

(However, there is no published claim arguing that the definite plural *yo* really is the 3PL pronoun, rather than just being a homophonous item; Michel DeGraff, p.c.)

As for empirical coverage, Næss' analysis of possessum marking as augmented number marking simply cannot extend to those cases where the possessum is 1st/2nd person (§3.2.3). These perfectly reproduce the distribution of object marking in UV verbs, so my analysis based on the UV verb POSS does predict them fully, whereas Næss' leaves them unaccounted for.

D A possible extension: "relational markers"

In addition to possessive classifiers and inalienably possessed roots, Äiwoo's possessive system comprises, so to speak, a third member, which Næss labels "relational markers" or "relational prepositions" (Næss 2006 et seq.). Here I gloss them as RELM (for "relational marker"). These are *eä/wä, nä, lä, ngä*; it's unclear if anything behind lexical idiosyncrasies determines exactly which one will be chosen for which noun. They are used to encode various kinds of relations between two noun phrases, often other than prototypical possession proper (examples from Næss in prep. 2023: §3.2.5):

(99) a. *nupo* ***eä*** *nubââ*
net RELM.3MIN shark
'Net for (to catch) sharks'

b. *numonu* ***nä*** *talâu*
money RELM.3MIN meal
'Money for feasts/ceremonies'

c. *dekuluwo* ***lä*** *Temotu*
bird RELM.3MIN Temotu
'Bird from Temotu Province'

The second noun phrase, as commonly in Äiwoo, can be dropped: *nubu eä* 'the core of it (breadfruit); its core'. Like inalienable roots and possessive classifiers, the relational markers can also be inflected for φ-features, with the same paradigm of suffixes found on other possessives (and UV verbs):

36 I thank Christopher Legerme for pointing this out to me, and for providing the example in (98).

(100) a. *totokale* ***eou***
picture **RELM.1MIN**
'(A) picture of me'; cf. the different reading of *totokale nou* '(A) picture that I own', with the general possessive classifier (Næss 2006: 273)

b. *ibe* ***eou-de***
old.man **RELM-12AUG**
'Our.INCL God'

c. *talâu* ***wä-i***
meal **RELM-3AUG**
'Ceremonies for them'

Unfortunately, the status of these markers is rather unclear, and the data is not abundant. For example, we don't know whether all forms have a full φ-paradigm, and their exact semantic properties are unknown. However, there is some preliminary evidence that they might have similar morphosyntactic properties to the rest of the possessive system. They seem to show the same possessum agreement pattern as other possessives (and UV verbs), with a parallel distribution of possessum suffixes vs. possessum pronouns (101). They also seem to consistently show UV voice concord on their modifiers (102).

(101) **Possessum agreement**:

a. **As a suffix**:
sime ***lä-gu-i*** *nuumä* *eângâ*
person **RELM-3MIN-3AUG** village that
'People from that village'

b. **As a pronoun**:
eabe ***eou-de*** ***ijii***
family.line **RELM-12AUG** **3AUG**
'Our family members, our elders' (Mark 7:5)

(102) **Voice concord on modifiers**:

a. *ngâ* *numalu* ***wä-mole-nyii*** *nubonu* *elo* *eângâ=to=wâ*
LOC.PREP middle **RELM.3MIN-exactly-UV** lake big that=TAM=DIST
'Right in the middle of the big lake'

b. *doo* *naaeo* ***wä-mole-nyii***=*nâ*
what story **RELM.3MIN-exactly-UV**=DIST
[About a specific ceremony] 'What exactly is the story of that?'

c. *ki-li-boli-ee-kä=naa* *go* *taapi* ***eä-usi***=*nâ*
IPFV-3AUG-wrap-go.up-DIR3=FUT with leaf **RELM.3MIN-again.UV**=DIST
'It will be covered with its leaves again'

Although the preliminary evidence might be promising, unfortunately, very little can be concluded on the basis of this sparse data alone. I simply note that they might conform to the generalizations proposed in this paper, but more research is needed.