
THE INNOVATION OF INALIENABLE NOMINALISERS IN METO*

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ABSTRACT This paper investigates the diachronic origin and synchronic representation of inalienability in the Meto languages of West Timor, focusing on the development of two types of nominal suffixes. Drawing on comparative and language-internal evidence, it proposes that the innovation of an (in)alienable possession system in Meto involved i) the morphosemantic reanalysis of a situational inalienable suffix in **-k > -ʔ*, originally developed due to contact with non-Austronesian languages, and ii) the syntactic Spec-Head reanalysis and grammaticalisation of inherited genitive pronoun enclitics into inalienable possessor agreement morphology (e.g. 3sg **=na > -n*). The analogical extension of these two types of *n* head categorisers resulted in their semi-idiosyncratic use with etymologically **V#* nouns, and also facilitated the aggressive resegmentation of etymologically **C#* nouns, resulting in the illusion of productive subtractive morphology in the language.

1 INTRODUCTION

Like many other Austronesian languages in East Indonesia (Blust 1993, Klamer 2002, Klamer, Reesink & van Staden 2008), the Meto languages of West Timor (iso: aoz, aaz) have innovated grammatically-marked inalienability distinctions. Possessed **alienable** nouns as in (1) do not require morphological marking on either the possessum or possessor (which, when pronominal, takes its nominative form). However, overtly possessed **inalienable** nouns require suffixal possessor agreement (2a); inherently inalienable nouns without overt possessors may only occur in isolation if they bear the suffix *-ʔ* (2b).¹

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¹Unless otherwise cited, all examples come from the author's fieldwork (remote and in-person). Data is presented as per the Leipzig Glossing conventions, with the following addi-

- (1) *ho meo*
 2SG.NOM cat
 ‘your cat’ (**ho meo-m*) [K. Amarasi]
- (2) a. *ho ?naka-m* b. *?naka-ʔ*
 2SG.NOM head-INAL.2SG head-INAL
 ‘your head’ (**ho ?naka*) ‘(a) head’ (**?naka*)

At the same time, these languages attest non-etymological nominal suffixes in *-ʔ/-k* and *-n*, which certain bound roots must take to form **alienable** nouns. As illustrated by the proposed PMP sources and variation in (3), the choice of nominalising suffix cannot be predicted on etymological, dialectal, or lexical grounds; the same variety of Meto may attest all three suffixes on different stems (e.g. Kotos Amarasi *knete-ʔ* ‘hill’, *saha-k* ‘whetstone’, and *kefa-n* ‘ravine’).

- (3) Bound nominal forms across Meto (from expected V# stems)²
- a. PMP **letay* > *k-nete-ʔ* ‘hill’ [K. Amarasi]
 ‘above’ *nete-n* ‘high place’ [R. Amarasi]
nete-n ‘mountain range’ [Molo]
- b. PMP **hasaq* > *saha-k* ‘large whetstone’ [K. Amarasi]
 ‘whet’ *saha-n* ‘large whetstone’ [Molo]
- c. PWMP **rəbaq* > *refe-k* ‘ravine, cliff, gap’ [R. Amarasi]
 ‘collapse’ *k-efa-n* ‘ravine, cliff, gap’ [K. Amarasi, Amfo’an]

Moreover, there are several lexical items which we expect on the basis of their etymological source to have reflexes in *n#* (cf. regular PMP **quzan* ‘rain’ > *uran* ‘rain’), but which also surface as bound forms subject to nominalisation in *-ʔ/-k* as illustrated in (4). These examples additionally demonstrate how a given variety may even display synchronic variation as to which suffix to use on the same stem (e.g. Kotos Amarasi *era-ʔ* and *era-k* ‘stairs’).

- (4) Bound nominal forms across Meto (from expected *n#* stems)
- a. PMP **haRazan* > *era-ʔ*, *era-k* ‘stairs, steps’ [K. Amarasi]
 ‘ladder’ *ela-k* ‘ladder’ [Amanuban, Molo]
- b. PMP **qutan* > *utu-k*, *uta-k* ‘vegetables’ [R. Amarasi]
 ‘small wild herbaceous plants’ (cf. *utan* in K. Amarasi and Molo)
- c. PMP **lilin* > *nini-k* ‘wax, candle’ [R./K. Amarasi, Molo]
 ‘beeswax’

tions: GENR - generic; INAL - inalienable; MET - metathesised; PMP - Proto-Malayo-Polynesian; PRM - Proto-Rote-Meto. K. Amarasi refers to Kotos Amarasi and R. Amarasi refers to Ro’is Amarasi. The pipe | symbol is used to offset the epenthetic vowel *a*, conditioned by consonant clusters.

²Regular sound change expects **q* > $\emptyset$ rather than *ʔ* in this environment.

Previous work in this domain has primarily focused on questions such as where this (in)alienability distinction came from (cf. discussions of contact with Papuan languages; Grimes 1991, Ross 2001, Donohue & Schapper 2008, Arnold 2023), how such systems are distributed both genetically and geographically within Malayo-Polynesian (Klamer 2002, Klamer et al. 2008, Schapper 2015), and what the precise structural differences between the syntax of inalienable and alienable possession are (Alexiadou 2003, Ritter & Rosen 2011, den Dikken 2015, Myler 2016). This paper seeks to extend these discussions in a novel direction by investigating the question of how, mechanically, a noun class system based on (in)alienability may be innovated due to contact, and what the synchronic and diachronic relationship between inalienable possessor morphology and nominal categorisers is—as well as the implications of this relationship for apparently non-concatenative morphological patterns in the languages under investigation.

This article explores these broader issues by proposing not only a historical origin but also a structural function for the interrelated nominal suffixes in (2)–(4), suggesting that i) the initial innovation of the (in)alienable noun class system in Rote-Meto involved a “situational” inalienable suffix **-k* being morphosemantically reanalysed into a genericising *n* head categoriser *-ʔ* as in (2b); ii) the development of Meto inalienable possessor morphology such as 2SG *-m* in (2a) involved Spec-Head reanalysis of pronominal possessor enclitics such as PMP 2SG **=mu* into *n* head categorisers; and iii) the analogical extension of these novel categorisers as in (3) facilitated aggressive resegmentation of etymologically **C#* nouns as in (4), giving rise to the appearance of productive subtractive morphology in Meto.

On that final point, the proposal set out in this paper will be shown to shed new light on putative truncation processes in a number of contexts in the Meto languages, as exemplified below for denominal verbalisation (5a) and compounding (5b)—contributing to the debate on Item-and-Process vs. Item-and-Arrangement approaches to morphology (Hockett 1954).

- (5) a. PMP **quzan* ‘rain’ > *uran* ‘rain’ → *na-ura* ‘(it) rains’
 b. PMP **buaq* ‘fruit’ > *fuaʔ* ‘fruit’ → *fua anggur* ‘grapes’ [K. Amarasi]

The remainder of this section provides a brief overview of the Meto languages and their closest relatives, the languages of nearby Rote island. Section 2 delves into the morphosemantic reanalysis proposed to have initially given rise to the (in)alienable noun class distinction in Meto, drawing on both regional comparanda and the language-internal distribution of *-ʔ* in other morphosyntactic contexts. Section 3 explores the Spec-Head reanalysis involved in grammaticalising the Proto-Rote-Meto possessive enclitics from pronomi-

nal arguments into agreement suffixes (e.g. 3SG $\ast=na > \text{INAL.3SG } -n$), drawing on regular sound changes as well as known tendencies in diachronic syntax (Simpson & Wu 2002, van Gelderen 2004). Section 4 discusses how the proposed analysis of (in)alienable nominalisers allows us to account for the illusion of productive subtractive processes in Meto (5), whilst providing an analogical explanation for the aggressive resegmentation of etymologically C# bases into bound nominal stems as in (4). Section 5 concludes and discusses further directions of research.

1.1 *The Rote-Meto languages and possession*

Comprising a complex language/dialect chain spanning across West Timor (in Kupang Regency, East Nusa Tenggara, Indonesia) and the East Timorese exclave Oecusse, the Meto languages are spoken by approximately 800,000 individuals spread across upwards of 12 self-identified varieties, as illustrated in Figure 1. Recent work by Grimes & Edwards (2026) has proposed that the Meto languages are part of the Timor-Babar branch of Malayo-Polynesian, with their closest relatives being the eponymous languages of nearby Rote island, less than 15km southwest of Timor. Amongst these, the Meto languages show particular genetic affinity to the West Rote languages Dela-Oenale and Dengka (Edwards 2021).

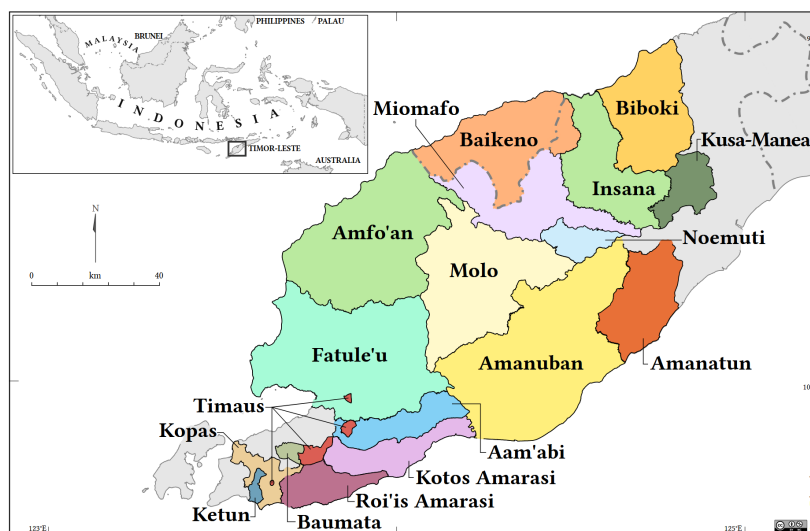


Figure 1 Self-identified Meto varieties (Culhane & Edwards 2025: 168)

We begin with a brief overview of the present-day possession systems of the Rote-Meto languages. To express possession, all nouns in Rote may take a

genitive enclitic indexing the person and number features of the possessor (6). A representative enclitic paradigm is given in (7) for the West Rote language Dela. This construction can express both alienable or inalienable semantic relations, including ownership, part-whole or kinship relationships, and intrinsic properties or attributes (Tamelan 2021: 258).

- (6) a. *au manu =ŋga*
 1SG chicken =1SG.GEN
 ‘My chicken.’
 b. *au langa =ŋga*
 1SG head =1SG.GEN
 ‘My head.’
 [Dela; Tamelan 2021: 256, ex. 13a-b]

(7) Dela Syllabic Genitive Enclitics³ (ibid. Table 7.2)

	SG	PL	
1	=ŋga	=na/ta	(INCL.)
		=ma	(EXCL.)
2	=ma	=ma	
3	=na	=na	

In contrast, only certain nouns in Meto can take the genitive suffixes which are cognate to the Rote enclitics in (7)—i.e., those in a part-whole relationship with the possessor (including body parts or properties).⁴ This results in the (in)alienability distinction in the language illustrated in (1)–(2a) above, where only inalienable possession requires additional morphological marking.⁵ Two representative possessor agreement paradigms are given in (8) for the Meto languages Kotos and Ro’is Amarasi.⁶

³These enclitics also have asyllabic forms in e.g. 1SG =ŋ, 2SG =m etc., showing even greater similarity to the Meto suffixes in (8). Like Ro’is Amarasi, Dela appears to exhibit some sensitivity to the plurality of the possessum, where the 1PL.INCL enclitic is =na when the possessum is singular but =ta when the possessum is plural.

⁴As will be illustrated in section 3, the formal similarity between the Rote genitive enclitics in (7) and Meto possessive suffixes in (8) is a result of their shared ancestry, involving regular sound change from a reconstructable set of PMP genitive enclitic pronouns.

⁵There is substantial variation regarding the possessive marking on kinship terms in Meto; in certain varieties such as Ro’is Amarasi the paradigm for kinship possession is the same as shown in (8b) for other types of inalienable possession, whilst other Meto languages not only employ different paradigms but also vary as to which kinship terms require suffixation (Edwards 2020: §A.3.1, Edwards 2021: 43). This paper hence does not discuss kinship terms.

⁶Although the Amarasi language is often described as consisting of these two dialects, Edwards (2020, 2021) identifies Ro’is Amarasi as having split off first from the rest of (Nuclear) Meto—including Kotos Amarasi—on the basis of the Nuclear Meto sound change PMP *k > ʔ, cf. 1SG agreement prefix PRM *ku- > Ro’is ku- but Kotos, Amfo’an ʔu- and PMP *kambu ‘belly’ > Ro’is na-kapuʔ against Kotos na-ʔapuʔ ‘is pregnant’, Amanuban ma-ʔapuʔ ‘pregnant’. Kotos Amarasi’s possessive suffix paradigm is practically identical to that of the other Meto languages (e.g. Amfo’an, Miomafo, and Kusa-Manea), whilst Ro’is Amarasi’s paradigm is relatively unique in its use of -r.

(8)	a.	Kotos Amarasi Suffixes				b.	Ro'is Amarasi Suffixes ⁷			
			SG	PL				SG	PL	
		1	-k	-k	(INCL.)		1	-k	-k/-r	(INCL.)
				-m	(EXCL.)				-m	(EXCL.)
		2	-m	-m			2	-m	-m	
		3	-n	-k			3	-n	-n	SG. POSSESSUM
		0		-f				-r	-r	PL. POSSESSUM
							0		-f	

As illustrated in (1)–(2) above, these suffixes are ungrammatical when added to alienable nouns such as *meo* ‘cat’, but obligatory on inherently inalienable nouns such as *mata-* ‘eye’ or *tae-* ‘branch.’ From a typological perspective, then, the Meto languages can be said to employ a strategy of head-marking in possessive phrases involving inalienable nouns, but zero marking on those which involve alienable nouns (Nichols 1986, 1992, Nichols & Bickel 2013).⁸

Notably, certain Meto nouns exhibit polysemy and situational flexibility as to whether they are treated as inalienable or not. For instance, the root $\sqrt{\text{sisi}}$ ‘meat’ may be alienable in (9a) or inalienable in (9b). The next section discusses this property in greater detail, arguing that it points to an early stage of (Rote-)Meto wherein all inalienability was flexibly introduced based on context, rather than an inherent and unchangeable property of certain nouns.

(9)	a.	<i>in naah sisi</i>		b.	<i>in sisi-n</i>	
		3SG eat.3SG meat			3SG meat-INAL.3SG	
		‘S/he eats meat.’			‘His/her/its flesh.’	[K. Amarasi]

Whereas the nominal possessor in Rote (Dela) may be dropped in (6), leaving only the genitive enclitic (e.g. *langa=nga* ‘my head’), nouns bearing possessor agreement morphology in Meto must co-occur with an overt possessor (with **sisi-n* alone being incomplete). This requirement has two exceptions. Inalienable nouns may take the suffix *-f* when “the possessor is irrelevant to the discourse, or it is not in a part-whole relationship, or its association is not

⁷While the 3rd person *-r* suffixes are used when the possessum is plural, cf. *hin maat-r =iin* ‘his/her eyes’ vs. *hin kaan-n =ee* ‘his/her name’, the distribution of the two Ro’is INAL.1PL.IN suffixes *-k/-r* is complicated by the fact that the 1PL.IN can also be used in a generic (3SG) sense, i.e. ‘one’s’ (Edwards 2020: 454). However, the general distinction between Kotos *-k* and Ro’is *-r* will be shown in Section 3 to be the diverging (but regular) outcomes of PMP **nt > k* and *r* respectively, cf. PMP **punti* ‘banana’ > Kotos *uki*, Ro’is *uri* ‘banana’.

⁸However, typologically characterising the Rote (6) and Proto-Rote-Meto systems is complicated by the fact that it is not clear whether the genitive enclitic is itself serving as the referential possessor pronoun (van Rijn 2016), in which case there would be double marking on both the head (i.e. hosting the possessor enclitic) and the dependent (i.e. the use of the genitive case form of the pronoun clitic).

in focus” (Edwards 2017: 448). As discussed in the next section, the other suffix that allows inherently inalienable nouns to occur without overt possessors is *-ʔ* as in (10)-(11); the bare form **ʔnaka* is ungrammatical.

- (10) a. *ʔnaka-f* head-INAL.0 'head, leader'
- b. *ʔnaka-ʔ* head-INAL '(something's) head'
- (11) a. *In es reʔ a|n-jari ʔnaka-f neu apirsait =ein ok-oke?*
3SG FOC REL 3-become head-INAL.0 DAT believer =PL RED-all
'He's the one who is head of all believers'
- (Unit Bahasa & Budaya 2015: Colossians 1:18)
- b. *Ma ʔnaka-ʔ hiut =ein reʔ naan ...*
and head-INAL seven.MET =PL REL DEM
'And those seven heads ...' (*ibid.*: Revelations 17:9)

With the empirical preliminaries laid out, we turn first to an account of how this system of (in)alienability in Meto involved the contact-induced innovation of a Proto-Rote-Meto possession marker in **-k* and its subsequent morphosemantic reanalysis into nominalising *-ʔ* as in (10b).

2 INNOVATING INALIENABILITY

This section draws on both comparative evidence and the Meto-internal distribution of *-ʔ* to propose that Proto-Rote-Meto innovated a nominal suffix in **-k* as a marker of (optional) situational inalienability, having come into contact with non-Austronesian languages in the region with class-based inalienable distinctions (Grimes 1991, Ross 2001, Donohue & Schapper 2008).

Though (in)alienability has often been conceived of as similar to gender or noun class, i.e. an inherent property of certain nouns, it has also been observed that for many languages it is better characterised as a semantic relation to be employed in particular contexts (Lynch 1973, Heine 1997, den Dikken 2015). Consider for instance the distribution of inalienable possession suffixes in the Buru language of the Maluku islands, which Grimes (1991) observes is flexible rather than obligatory (12).

- (12) a. *Da iko tu nak olo.*
3SG go with 3SG.POSS head
'He went with (comitative) his (social/political) head'
- b. *Da iko tu nak olo-n.*
3SG go with 3SG.POSS head-3SG.GEN
'He went with (accompanied possession) its (pig's) head.'
- [Buru; [Grimes 1991](#): 287, ex. 47-8]

- However, it is not true that Dela has no way to forefront inalienable relationships. As shown in (14), there is a separate strategy of possession marking in the form of *N + N-?* juxtaposition available only with nouns in part-whole and kinship relationships (Tamelan 2021: §7.4.2); this strategy can be applied even to nouns traditionally conceived of as alienable in order to produce part-whole construals (15)–(16), and will be suggested in section 4 to instantiate $\sqrt{\text{root}} + \sqrt{\text{root}}$ compounds beneath a shared inalienable nominaliser *-?*.⁹

- (15) a. *oe na-fali.*
water 3SG-boil
'The water boils.'
- b. *noo oe-ʔ*
coconut water-N?
'coconut water/water of coconut'
[*ibid.*: 302, ex. 6a and 263, ex. 47]

- This ability to optionally mark or emphasise inalienable relations attests to a flexibility which is retained in Meto as well. Despite having a set of obligato-

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rily inalienable nouns which are ungrammatical without possessive suffixation (e.g. $\sqrt{\text{mata}}$ ‘eye’ or $\sqrt{\text{kana}}$ ‘name’), recall that there also exist nouns like $\sqrt{\text{sisi}}$ ‘meat, flesh’ which may be used alienably or inalienably depending on context (9), as exemplified again in (17) with the nominal root $\sqrt{\text{fafo}}$ ‘above’.

- (17) a. *a|n-mui? oe n-bi faof*
 3-exist water 3-LOC above.MET
 ‘there was water up above (i.e. in the sky)’
 (Unit Bahasa & Budaya 2015: Genesis 1:6-7)
- b. *n-bi oe =je fafo-n*
 3-LOC water =DET.DIST above-INAL.3SG
 ‘on top of the water; on the water’s surface’
 (*ibid.*: Matthew 14:25)

Here again, the root $\sqrt{\text{fafo}}$ ‘top, above’ can either be used alienably to refer to that which is generally above us (i.e. the sky) as in (17a), or inalienably to refer to the intrinsic and inseparable top part of something (17b). I propose that this flexibility, found in both Meto and Rote, points to the original state of affairs whereby these languages first innovated inalienability as an optional marking strategy rather than an inherent class system.

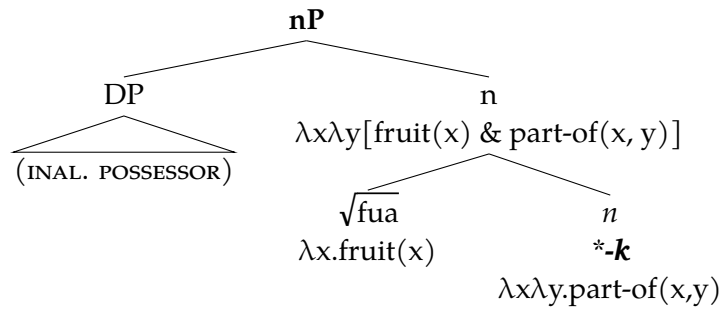
2.1 From situational to inherent inalienability

Recall the consensus view that many of the languages of Wallacea developed (in)alienable distinctions due to contact with Papuan languages (Grimes 1991, Ross 2001, Donohue & Schapper 2008, Schapper 2015, Arnold 2023, *a.o.*). By what specific mechanism, however, did this happen? The core intuition of this paper is that a language is unlikely to immediately and radically restructure its entire nominal system into one with two binary ‘classes’ (i.e. of inherently alienable vs. inherently inalienable nouns). Instead, a language coming into contact with one which distinguishes (in)alienability would more likely borrow the semantic concept by first introducing it as a morpho/syntactically-marked **constructional alternative**, to be optionally employed in certain contexts or situations. This, however, does not mean that such a language cannot subsequently develop into one where nouns are inherently specified as (in)alienable, as found in Meto—rather, innovation of such a class system would be a later development due to the persistent co-occurrence of (originally optional) inalienable marking with certain frequently-inalienable stems.

To that end, I propose that the concept of distinguishing inalienability was first borrowed into Proto-Rote-Meto via use of a suffix **-k* which i) semantically introduced inalienable relations to nouns which were otherwise

neutral for the type of possession they participated in, and ii) syntactically enabled the merger of an INALIENABLE POSSESSOR as a direct argument of the noun without need for an intervening PossP (Alexiadou 2003, Ritter & Rosen 2011). Adopting a category-neutral interpretation of roots as in the framework of Distributed Morphology (Halle & Marantz 1994, Marantz 1997), this suffix can be conceived of as a type of categorising *n* head, with the proposed structure of a PRM inalienably-construed noun in given in (18).

- (18) **Stage 1.** Situational inalienability in Proto-Rote-Meto
**fua-k* ‘(something’s) fruit’



In essence, the nominal root was originally a one-place predicate with a denotation like $\lambda x.\text{fruit}(x)$, while the suffix **-k* was a *n* head categoriser whose semantic denotation as in (19) introduced part-whole semantics to the root via predicate modification (Myler 2016, 2018).

- (19) $\llbracket *-k \rrbracket = \lambda x \lambda y.\text{part-of}(x,y)$

The second variable in this two-part relation (i.e. the ‘whole’) was saturated via syntactic merger of an INALIENABLE POSSESSOR as an argument of the nominalised root, while the root itself was interpreted as the INALIENABLE POSSESSUM (i.e. the ‘part’). In other words, **-k* was a suffix that introduced inalienable construals to nouns which were not inherently classified for alienability.^{10,11}

¹⁰Though outside the scope of this paper, it is possible that the Rote/Dela nominalising suffix *-ʔ* as exemplified in (14)–(16) above continues to have the semantic denotation in (19).

¹¹Taking a step back, this paper assumes that (Pre-)Proto-Rote-Meto was a language in which possession was marked via use of a genitive pronoun enclitic on the possessum, i.e., POSSESSUM=GEN.POSS. This enclitic could optionally co-occur with a pre-posed possessor NP, a common regional feature assumed to have come from contact with Papuan languages (Donohue 2007, Schapper 2015). Whereas Rote broadly maintains this system, Meto retained and grammaticalised the genitive enclitic into possessor agreement on inalienable nouns only, as discussed in detail in section 3, and made pre-posed possessors the obligatory and primary marker of possession on both alienable and inalienable nouns. The key innovation being discussed here is the creation of a suffix **-k* which (head-)marked inalienable possession, without itself instantiating a possessor pronoun or referencing the ϕ -features of the possessor.

From this system of situational inalienability, I propose that nouns which had a high frequency of inalienable use (due to their base semantics, e.g., body parts) were eventually lexicalised as inherently inalienable (as has been proposed by [Jasanoff 2010](#) for the rise of similar distinctions in the Anatolian languages Hittite and Luvian). From a mechanical perspective, this would have involved the **semantic reanalysis** of exactly which morpheme was introducing the ‘part-of’ relation. In other words, the semantic function of **-k* was reanalysed as being in the denotation of the nominal root itself (20), which resulted in a class of inherently inalienable nouns with relational denotations ([Barker 1995](#), [Partee 1999](#), [Beavers, Ponvert & Wechsler 2008](#), [Myler 2016](#)).

- (20) a. **Stage 1:** Proto-Rote Meto
 $\llbracket \text{fua} \rrbracket = \lambda x.\text{fruit}(x) + \llbracket [-k] \rrbracket = \lambda x\lambda y.\text{part-of}(x,y)$
 $\llbracket \text{fua-k} \rrbracket = \lambda x\lambda y[\text{fruit}(x) \ \& \ \text{part-of}(x, y)]$
 b. **Stage 2:** (Pre-)Meto
 $\llbracket \text{fua} \rrbracket = \lambda x\lambda y[\text{fruit}(x) \ \& \ \text{part-of}(x, y)]$

There is in fact substantial supporting evidence for identifying **-k* > *-ʔ* as a nominaliser related to inalienability in Rote-Meto. For one, this suffix remains in complementary distribution with inalienable possessor agreement suffixes in Meto (e.g. *fua-n* ‘its fruit’ vs. *fua-ʔ* ‘a fruit; CLF’, as previously exemplified). This is clearly not a (morpho)phonological restriction since final *ʔn#* clusters are allowed elsewhere in the language as the result of metathesis (e.g. the principdom *Amfoʔan* → *Amfoaʔn*, also *poʔon* → *pooʔn* ‘orchard’). In addition, the glottal suffix is regularly infixated with nouns ending in certain VV# sequences; such infixation also results in the loss/ungrammaticality of inalienable possessor agreement, despite a lack of surface adjacency (21).

- (21) a. *taʔe* ‘a branch’ ~ *tae-n* ‘(its) branch’ **taʔe-n*
 b. *uʔu* ‘source’ ~ *uu-n* ‘(its) source’ **uʔu-n*
 c. *noʔo* ‘a leaf’ ~ *noo-n* ‘(its) leaf’ **noʔo-n*

In addition, *-ʔ* appears in other inalienable contexts in Meto, such as in the intrinsic property nominalisation circumfix *ma-...-ʔ* (22). As discussed at length in [Tan \(2023: §4\)](#), this circumfix produces a resultant state passive/adjectival participle when built to a verb (22a-b), following [Kratzer \(2000\)](#), [Bruening \(2012, 2014\)](#). More relevantly, when this circumfix is built to a noun (22c-d), it acquires a possessive interpretation similar to English ‘brown-eyed’ formations (e.g. *red-headed*, *one-legged*; [Nevins & Myler 2014](#)). In other words, the circumfix forms modifiers whose subject of modification is interpreted as possessing the noun in question (or the result of the predicate, in the case of a verbal base). In many languages, such intrinsic properties pattern like in-

alienable nouns (Bernd 1997, Nichols & Bickel 2005), further supporting the characterisation of *-ʔ* as being tied to inalienability in some way.

(22) Kotos Amarasi property nominalisations

- a. *n-putu* ‘burns’ → *ma-putu-ʔ* ‘warm(ed)’
- b. *n-tui* ‘writes’ → *ma-tuʔi* ‘written’
- c. *nini-* ‘wing’ → *ma-nini-ʔ* ‘winged’
- d. *hae-* ‘leg’ → *ma-haʔe* ‘legged’

As a nominalising element, *-ʔ* is also found in deverbal formations in both Meto and Rote. For instance, *-ʔ* is the suffixal part of an instrument-forming circumfix in Meto (23), and a productive nominalising suffix in Rote (24). Altogether, there is robust language-internal and comparative evidence for positing that *-ʔ* is a nominalising suffix at least partly related to inalienability.

(23) Kotos Amarasi instrument nominalisation

- a. *n-tui* ‘writes’ → *ʔ-tuʔi* ‘pen’
- b. *n-toko* ‘sits’ → *ʔ-toko-ʔ* ‘chair’

(24) Dela deverbal nominalisation

- a. *ŋgoe* ‘to lock’ → *ŋgoe-ʔ* ‘key’
- b. *meto* ‘to dry’ → *meto-ʔ* ‘dried’

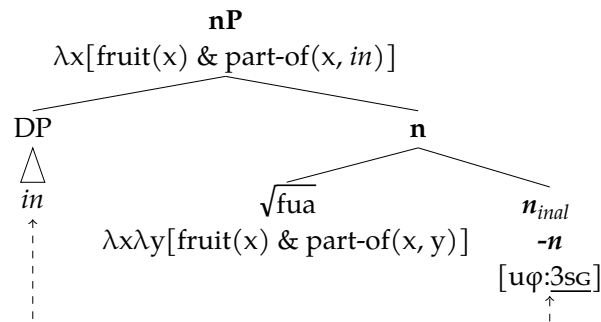
Assuming that the original function of **-k > -ʔ* as introducing inalienable relations was reanalysed as being an inherent part of certain nominal roots’ semantic denotation (20), what exactly is the new function of *-ʔ* in modern formations such as (11b) and (21)? As discussed at length in Tan (2023, 2026), it is possible to analyse the function of *-ʔ* in both inalienable noun formations (e.g. *fua-ʔ* ‘a fruit’) and intrinsic property nominalisations (22) as instantiating a genericising *n_{gen}* nominaliser which satisfies inherently inalienable nouns’ syntactic and semantic need for a possessor when one is not overtly merged. This suffix does so by triggering existential closure over the unbound INALIENABLE POSSESSOR entity, without which the derivation crashes (**fua*, **ma-tui*) due to a lack of rescue closure in Meto.¹² Building off of the denotation proposed for resultant-state participle-forming morphology cross-linguistically (Kratzer 2000, Zimmermann 2007, Bruening 2014), *-ʔ* has a de-

¹²Tan (2023, 2026) argues that this lack of rescue closure is what underlies the unavailability of productive passive voice constructions in Amarasi (e.g. *in n-tui buku* ‘s/he writes the book’ but **buku n-ma-tui* ‘the book was written’), wherein it is impossible to existentially bind the implicit AGENT argument in the absence of nominalisation in *-ʔ* (e.g. *buku ma-tuʔi* ‘the written book/the book is written.’) This work fits into the growing literature on languages which have morphology dedicated to overt existential closure, cf. Zimmermann (2007) on Bura, Baclawski (2018) on Cham, and Hopperdietzel (2020, 2021) on Daakaka.

- $$\begin{array}{c}
 \mathbf{nP} \\
 \lambda x \exists y [\text{fruit}(x) \ \& \ \text{part-of}(x, y)] \\
 \swarrow \quad \searrow \\
 \sqrt{\text{fua}} \qquad \qquad n_{gen} \\
 \lambda x \lambda y [\text{fruit}(x) \ \& \ \text{part-of}(x, y)] \qquad \mathbf{-2}
 \end{array}$$

(27) *Sin ar= sin na-huum on re? fua-? unu? na-?ko etu ma rene*
 3PL all= 3PL 3-like IRR REL fruit-INAL first 3-from field and garden
 ‘They were like the first fruit/harvest from the fields and gardens ...’
 (Unit Bahasa & Budaya 2015: Revelations 14:4)

(28) **Stage 2b.** Overtly-possessed inherently inalienable nouns in Meto
in fua-n 'its fruit'



13

relationships in $*-k$, whose semantics were reanalysed over time as being an inherent part of the denotation of certain (typically inalienable) nouns, the paper will now turn to a discussion of how the agreement morphology in (28) was likewise innovated on the basis of the syntactic reanalysis and grammaticalisation of inherited possessive enclitic pronouns.

3 FROM POSSESSOR TO CATEGORISER

Building on existing analyses of the syntax of inalienable possession (Alexiadou 2003, Ritter & Rosen 2011), the structure for (overtly-possessed) inherently inalienable nouns in Meto is given in (28). In this structure, Spec-Head AGREE between the inalienable possessor DP (merged as a direct argument of the possessum) and the inalienable categorising head n is exponed as possessor agreement morphology, outlined in the paradigms in (8) and restated in (29) below. In other words, suffixes such as $-m$, $-n$, $-k$ etc. are the Spell-Out of ϕ -features on n_{inal} .¹³ This means that there are at least three distinct nominalisers in Meto: i) the n_{inal} head, which is licensed by inherently inalienable nouns and allows for the direct merger of an overt possessor argument which it then agrees with, ii) the invariant n_{gen} head $\leftrightarrow -?$, which is licensed by inalienable nouns and satisfies their semantic and syntactic need for an overt possessor as in (26), and iii) the default $n \leftrightarrow \emptyset$ head, which is licensed by alienable nouns and requires a PossP to introduce overt possessors.¹⁴

(29) a. Kotos Amarasi Suffixes				b. Ro'is Amarasi Suffixes			
	SG	PL			SG	PL	
1	$-k$	$-k$	(INCL.)	1	$-k$	$-k/-r$	(INCL.)
		$-m$	(EXCL.)			$-m$	(EXCL.)
2	$-m$	$-m$		2	$-m$	$-m$	
3	$-n$	$-k$		3	$-n$	$-n$	SG. POSSESSUM
0		$-f$			$-r$	$-r$	PL. POSSESSUM
				0		$-f$	

¹³I assume that “generic” $-f$ involves agreement with a null/impersonal but syntactically-projected pronoun (Legate, Akkuş, Šereikaitė & Ringe 2020, Tan & Köhlert 2021) distinct from the (syntactically-absent) existentially-bound POSSESSOR found in NOUN-? formations.

¹⁴Here I make the relatively uncontroversial assumption that roots have some selectional control over and inherent specification as to the categorising heads they can combine with (e.g. *curious* lacks a primary noun in $**cury$ in contrast to *glorious* with *glory*; $\sqrt{typ(e)}$ forms *typical* but not $*typic$, unlike $\sqrt{graph}$ which forms both *graphic* and *graphical*; see also *-ify* vs. *-ise* as competing verbalisers). In Meto, inherently inalienable roots may combine with n_{inal} or n_{gen} but not default n , strictly alienable roots can only take the latter, and semantically-flexible roots such as $\sqrt{sisi}$ ‘meat/flesh’ (9) and $\sqrt{fafo}$ ‘above’ (17) may combine with all three.

3.1 Sound change in PRM

I propose that the possessor agreement suffixes in (29) arose from reanalysis of apocopated genitive enclitic pronouns, reinforced with the genitive prefix **n(i)-*. Consider first the set of PMP genitive enclitics in (30a), following Blust (1974), Reid (1978), and most directly Ross (2006).¹⁵ It is no coincidence that these enclitics look similar to the Rote genitive enclitics in (30b), with the primary difference being that Dela has regularised a default *a* vowel throughout and appended a nasal element to the 1st and 3rd person markers.

(30)	a.	PMP Genitive Pronouns			b.	Dela Genitive Enclitics		
		SG	PL			SG	PL	
	1	<i>*=ku</i>	<i>*=ta</i>	(INCL.)	1	<i>=ŋga</i>	<i>=na/ta</i>	(INCL.)
			<i>*=mi</i>	(EXCL.)			<i>=ma</i>	(EXCL.)
	2	<i>*=mu</i>	<i>*=mi</i>		2	<i>=ma</i>	<i>=ma</i>	
	3	<i>*=ia</i>	<i>*=da</i>		3	<i>=na</i>	<i>=na</i>	

Given these similarities, I posit that PRM inherited the genitive enclitics in (30a) but reinforced them in their possessive usage with a prefix in **n-*. As discussed at length in Tan (2023: §5.3.3), the PRM oblique case marker **n-* can be traced back to the PAN genitive case marker **n-* reconstructed by Reid (1978), Ross (2006) and Blust (2015).¹⁶ This prefix is suggested by both Edwards (2016) and Tan (2023) to underlie the difference between nominative *#h* pronouns and oblique *#k* pronouns in Meto (31).¹⁷ In particular, where regular PMP/PRM **k > h* in the nominative forms of these pronouns, sequences of oblique **n-k > *ŋ-k > k* result in velar-initial accusative and dative pronouns. Drawing on the reconstructed PRM forms in Edwards (2021), the development of the 2SG/PL and 1PL.EX/IN pronouns is illustrated in (32) below.¹⁸

¹⁵In Ross's (2006) original reconstruction of 'Genitive 1' enclitics, the 2PL pronoun **=mi* is a later contraction of the original polite 2nd person form **=(mu)-ihu*.

¹⁶While it seems unexpected for genitive case to mark pronouns with accusative/dative distributions, an original function of the Proto-Austronesian genitive was to mark non-subject agents. In the process of losing the conservative Austronesian Voice system, several languages of the Timor-Babar and Sumba-Hawu families appear to have reanalysed genitive-reinforced enclitics as indexing non-subject and/or oblique arguments more broadly (cf. Malay 3SG.OBJ *-nya* from PMP GEN-3SG **ni-a*). Paralleling the Rote-Meto examples in (31) and (32), all dative clitics in Kambera have clearly-segmentable initial nasals (e.g., 1PL.IN.NOM *ta=* against 1PL.IN.DAT *=nda* Klammer 2008). The development of such reinforced pronouns is set aside for future study.

¹⁷Meto non-3rd person pronouns are syncretic for accusative (DO) and dative (IO, beneficiary, etc.) case. However, the 3SG shows a three way case distinction between *in ~ =ee ~ ne*, where PMP 3SG **ia* developed into accusative *=ee* while oblique case marking in **n-ia* produced dative *ne* (compare Kambera 3SG.ACC *=ya* versus 3SG.DAT *=nya*; Klammer 2008). The 3PL pronoun variably occurs as *n-sin* in dative contexts, providing overt evidence for possible retention of the proposed oblique case prefix **n-* (Tan 2023: §5.3.3).

¹⁸The addition of *#k* in the 1SG.OBL *kau* was likely due to paradigm-internal analogy.

- (31) a. Meto Nominative Pronouns b. Meto Oblique Pronouns
- | | SG | PL | | SG | PL | |
|---|--------------|--------------------|--|----|-------------------|--------------------|
| 1 | <i>au</i> | <i>hit</i> (INCL.) | | 1 | <i>kau</i> | <i>kit</i> (INCL.) |
| | | <i>hai</i> (EXCL.) | | | | <i>kai</i> (EXCL.) |
| 2 | <i>ho</i> | <i>hi</i> | | 2 | <i>ko</i> | <i>ki</i> |
| 3 | <i>(h)in</i> | <i>sin</i> | | 3 | <i>=ee</i> (ACC.) | <i>sin</i> |
| | | | | | <i>ne</i> (DAT.) | |
- (32) 2SG.NOM *ho* ~ 2SG.OBL *ko* 2PL.NOM *hi* ~ 2SG.OBL *ki*
- a. PMP **kahu* > PRM **koo* > *ho* a. PMP **kamuyu* > PRM **kemi* > *hi*
- b. PRM **n-koo* > **η-koo* > *ko* b. PRM **n-kemi* > **η-kemi* > *ki*
- 1PL.EX.NOM *hai* ~ 1PL.EX.OBL *kai* 1PL.IN.NOM *hit* ~ 1PL.IN.OBL *kit*
- a. PMP **kami* > PRM **kami* > *hai* a. PMP **kita* > PRM **kita* > *hit*
- b. PRM **n-kami* > **η-kami* > *kai* b. PRM **n-kita* > **η-kita* > *kit*

Strong evidence for intermediate stages involving nasal-velar clusters comes from the Rote languages, many of which still retain these sequences as in Dela-Oenale 2SG.NOM *hoo* ~ 2SG.ACC *ηgo*, 2PL.NOM *hei* ~ 2PL.ACC *ηgi*, and 1PL.IN.NOM *hita* ~ 1PL.IN.ACC *ηgita* (Tamelan 2021: 97, Table 3.15); see also Lole 2SG.NOM *o* ~ 2SG.ACC *ηgo*, 2PL.NOM *ei* ~ 2PL.ACC *ηgei*, 1PL.IN.NOM *ita* ~ 1PL.IN.ACC *ηgata*, and 1PL.EX.NOM *ai* ~ 1PL.EX.ACC *ηgai* (Balukh, Shiohara & Thine 2023).¹⁹

Returning now to our possessive enclitics and suffixes, we can see that Dela *=ηga* in (30b) can likewise be explained as the PMP genitive pronoun in **=ku* undergoing homorganic reinforcement in **n-* > **η-*, with additional generalisation of the pronoun's vowel. In the same way, the Nuclear Meto possessor agreement suffixes in (29a) can be shown to be the result of entirely regular sound changes as schematised in (33).

- From PRM genitive enclitics > Kotos Amarasi possessive suffixes
- | | PRM reinf./assim. | | cluster red. | | apocope | Meto |
|------------|-------------------|---|--------------|---|-------------|-------------|
| 1SG | <i>*=n=ku</i> | > | <i>*-ηku</i> | > | <i>*-ku</i> | > <i>-k</i> |
| 1PL.IN | <i>*=n=ta</i> | > | <i>*-nta</i> | > | <i>*-ka</i> | > <i>-k</i> |
| 1PL.EX/2PL | <i>*=n=mi</i> | > | <i>*-mmi</i> | > | <i>*-mi</i> | > <i>-m</i> |
| 2SG | <i>*=n=mu</i> | > | <i>*-mmu</i> | > | <i>*-mu</i> | > <i>-m</i> |
| 3SG | <i>*=n=ia</i> | > | <i>*-nia</i> | > | <i>*-ne</i> | > <i>-n</i> |
| 3PL | <i>*=n=da</i> | > | <i>*-nda</i> | > | <i>*-ka</i> | > <i>-k</i> |
- (33)

The development of 1SG **=ku* into inalienable *-k* is identical to that of the free-standing pronouns in (32), wherein addition of a reinforcing **n-* allowed PMP

¹⁹In Lole, a Nuclear Rote language, PMP **k* is regularly lost, resulting in #V nominative ~ #ηg accusative alternations.

**k* > *k*.²⁰ The development of the 1PL.EX/2PL and 2SG suffixes in *-m* can likewise be captured by addition of genitive **n-* onto *=*mi/mu*, whereby cluster simplification and apocope resulted in surface homophony as *-m*.²¹ The 3SG involved contraction of *=*n=ia* into **-ne* (cf. 3SG.ACC **ia* > =*ee*, 3SG.DAT **n-ia* > *ne* in (31b) above, as well as Malay *-nya*), with vowel deletion producing *-n*. Most surprising at first glance is the development of the 1PL.IN and 3PL suffixes in *-k*. However, there is independent evidence that Nuclear Meto languages such as Kotos Amarasi turned **nt/nd* sequences into *k* (34).

(34) Examples of **nt/nd* > *k* in Nuclear Meto

- a. PMP **punti* ‘banana’ > PRM **hundi* > *uki* ‘banana’ [K. Amarasi, Molo]
- b. PMP **muntay* ‘citrus’ > PRM **munde* > ?-*muki*-? ‘lime’ [K. Amarasi]
muke ‘lime’ [Molo]
- c. PMP **paŋdan* > PRM **hendam* > *ekam* ‘pandan’ [K. Amarasi, Molo]
- d. PMP **bituqən* > PRM **fanduun* > *fkuun* ‘star’²² [Molo]
- e. PCMP/PRM **əndi* ‘take’ > *n-eki* ‘takes’ [K. Amarasi, Molo]

As such, all of the possessor agreement suffixes in Kotos Amarasi (which, we can recall, is largely representative of the paradigms of Nuclear Meto) can be straightforwardly accounted for by the application of regular sound changes to the set of inherited genitive enclitic pronouns in (30a). What then of the Ro’is paradigm in (29b)? These too fall out directly from the changes outlined in (33), with the only difference being that the regular outcome of PMP **nt/nd* was *r* in Ro’is Amarasi instead of *k* (35).

(35) Examples of **nt/nd* > *r* in Ro’is Amarasi

- a. PMP **punti* ‘banana’ > PRM **hundi* > *uri* ‘banana’
- b. PMP **muntay* ‘citrus’ > PRM **munde* > *muri* ‘lime’
- c. PMP **paŋdan* > PRM **hendam* > *eram/erem* ‘pandan’
- d. PMP **bituqən* > PRM **fanduun* > *fruun* ‘star’
- e. PCMP/PRM **əndi* ‘take’ > *n-eri* ‘takes’

Thus, the fact that Ro’is Amarasi (29b) has *-r* in the 1PL.IN and 3PL, exactly where Kotos Amarasi (29a) has *-k*, is also the result of regular sound change.²³

²⁰In contrast, regular **#k* > *h* in PMP **kahi* > Meto *hau* ‘wood’ and **kutu* > Meto *hutu* ‘louse’.

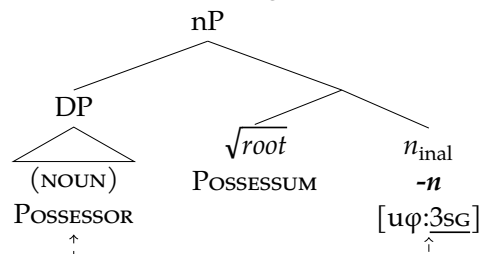
²¹For the sake of regularity, (33) schematises 2SG **-mmu* and 2PL **-mmi* as having also had homorganic nasal clusters, although there is no comparative evidence to support this (contra the attestation of the cluster in 1SG =*ŋga* in Dela).

²²Several Austronesian languages show medial **nt* in reflexes of this root, cf. Malay *bintan*, Makassarese *bintun*, Pazeh *bintun*, and Simalur *bintun*, among others (Blust, Trussel & Smith 2023). The Kotos form *kfuun* ‘star’ shows metathesis of the initial **fk* cluster.

²³I assume that the novel development of SG vs. PL possessum distinctions in the 1PL.IN and

ways been overtly possessed by virtue of their semantics; I propose that such a high frequency of co-occurrence with inalienable nouns specifically enabled the enclitic pronominal arguments to be grammaticalised into n_{inal} head categorisers via Spec-Head reanalysis (38), drawing on known mechanisms of diachronic syntactic change.

(38) **Stage 2. Possessor agreement in Meto**



Following Simpson & Wu (2002), I propose that the enclitic pronoun in Spec, nP was reanalysed as the head of the nP itself (38). Such Spec → Head reanalysis is a typical example of the diachronic pressure for structural economy described by van Gelderen's (2004) Head Preference Principle, which models the tendency for phrasal elements occupying the specifier of a projection with a null head to be reanalysed as the overt instantiation of that head; i.e. 'Be a Head, not a Spec'.

Crucially, both structures in (37)–(38) would have been string-identical,²⁵ given lowering of the enclitic pronoun onto its POSSESSUM host. Furthermore, the pronominal enclitic and any free-standing possessor in (37) would have necessarily had identical ϕ -features, given their relationship of co-indexation: it is easy to see why this could have been reanalysed in (38) as a relationship based on syntactic agreement rather than co-indexation or resumption.

Complementing discussion in section 2 of the genericising n_{gen} head in -ʔ as the outcome of **semantic reanalysis** of an earlier marker of situational inalienability, this section has described how the development of possessor agreement and ϕ -sensitive nominalisers in n_{inal} were the result of **syntactic reanalysis** and the grammaticalisation of formerly argumental enclitic pronouns, as supported by comparative data from Rote and regular sound change in PRM. The penultimate section of this paper turns to how these analyses, in tandem, allow us to account for apparently productive subtractive processes in Meto without having to resort to non-concatenative morphology.

²⁵We cannot yet date whether vowel apocope occurred before or after the syntactic reanalysis in question, i.e. $*=na > *=n > -n$ or $*=na > *-na > -n$. However, phonological erosion frequently co-occurs with grammaticalisation, such that teasing the two changes apart does not seem immediately crucial for assessing the present proposal.

4 EXTENSION, RESEGMENTATION AND “SUBTRACTION”

The paper thus far has presented an account of how the innovation of inalienability distinctions in Meto was closely tied to the development of two nominalisers: i) the suffix $\text{PRM } *k > -ʔ$ used with ‘existentially’-interpreted inalienable nouns and ii) the possessor agreement suffixes in $-k/-r/-n/-m$, arising from the grammaticalisation of formerly pronominal genitive enclitics. This penultimate section demonstrates that this proposal has the additional benefit of accounting for not only the appearance of non-etymological C# on certain nominal stems, but also the disappearance of etymological C# in both productive and non-productive contexts across Meto.

4.1 The role of analogy

Let us return to the final empirical issue introduced in section 1, whereby Meto synchronically appears to attest semi-idiosyncratically distributed nominalising suffixes on both etymologically $*V\#$ and $*n\#$ stems; a subset of these forms are given in (39), extracted from (3)–(4) above.

- (39) Bound nominal forms across Meto (from expected $V\#$ and $n\#$ stems)
- | | | | |
|-------------------|---|--|------------------|
| a. PMP $*letay$ | > | $k\text{-}nete\text{-}ʔ$ ‘hill’ | [K. Amarasi] |
| ‘above’ | | $nete\text{-}n$ ‘high place’ | [R. Amarasi] |
| | | $nete\text{-}n$ ‘mountain range’ | [Molo] |
| b. PMP $*haRəzan$ | > | $era\text{-}ʔ, era\text{-}k$ ‘stairs, steps’ | [K. Amarasi] |
| ‘ladder’ | | $ela\text{-}k$ ‘ladder’ | [Amanuban, Molo] |

We can now identify two factors that may have contributed to the development of the forms in (39). The first, recalling $\sqrt{\text{fafo}}$ ‘above, top’ in (17), is that there may have been both inter- and intra-root variation as to whether and which inalienable suffixes they took, as exemplified again with $\sqrt{\text{nini}}$ ‘wing, edge’ below (40). In other words, certain roots may have occurred in inalienable contexts at higher frequencies than others, and even then there may have been differences in how often they occurred with or without overt inalienable possessors (and hence with agreeing $-n/-k$ or generic $-ʔ$). The second is that there would likely have been an extremely high frequency of 3SG possession in $-n$, especially since certain (inanimate) nouns would have only admitted 3rd person inalienable possessors (e.g. edges, tops, leaves, fruits).

- (40) a. $On\ reʔ\ snaen =ee\ et\ tais =je\ nini\text{-}n$
 IRR REL sand =DET LOC sea.MET =DET edge-INAL.3SG
 ‘Like sand at the edge of the sea’ (i.e., at the sea shore)
 (Unit Bahasa & Budaya 2015: Genesis 41:49)

- b. ... *ma n-eik* =*je neu nini-ʔ*
 and 3-take.MET =3SG.ACC DAT edge-INAL
 ‘... and took it to the edge.’ (ibid.: Matthew 13:48)

Given these two properties, I posit that affixal *-n* was analogically extended as the default nominaliser for words such as (39a) PMP **letay* > *nete-n* ‘high place’ in varieties such as Ro’is Amarasi and Molo, in competition with the default genericising nominaliser in *-ʔ* found in Kotos Amarasi *k-nete-ʔ* ‘hill’ (cf. Rote cognates in Dela *lete-ʔ*, Termanu *lete-k* ‘mountain’). That analogy had a role to play in the extension of these nominal suffixes would account for the high level of variability and irregularity shown not only across the Meto languages, but even within a single dialect—it is, after all, notoriously difficult to predict the outcome of analogy, such that competition between frequent suffixes like 3SG *-n*, 1SG/1PL.EX/3PL *-k*, and generic *-ʔ* could indeed have produced the semi-idiosyncratic distribution found in (39) and (3).

Put more explicitly, the addition of nominalising suffixes on etymologically V# stems such as **letay* > *nete-* ‘above’ may have been due to these stems occurring in (inalienable) possession contexts with relatively high frequency, but without the inherently inalienable semantics that would have allowed interlocutors to transparently decompose these suffixes as possessor agreement (contra canonically inalienable nouns like body parts).²⁶ Over time, such roots became bound, requiring *-ʔ* to serve as nominal arguments.

At the same time, the relative productivity and frequency of 3sg possessive *-n* may have led speakers to aggressively resegment etymological stem-final *n#* as such an inalienable suffix, backforming a root to which they subsequently added another nominaliser to instead (cf. English *pea* from *pease*, *cherry* from *cerise*). This is what I propose occurred in forms such as (4), repeated in (41) below, where the expected *n#* of PMP **haRəzan* has been substituted by *-ʔ* and/or *-k* in Meto.²⁷ That this change was irregular and based on analogy again accounts for why not all words or dialects underwent this backformation, cf. PMP **qutan* > expected Kotos Amarasi *utan* but unexpected Ro’is Amarasi *uta-k*.

²⁶One could potentially formally model this as changes in the licensing conditions between individual stems and the type of nominaliser they can combine with (e.g. some roots can only combine with *n_{inal}*, and not *n*), or changes in the surface exponents of certain nominalisers (e.g. default *n* shows lexically-conditioned variation between $\emptyset$, *-ʔ*, *-n*, and *-k*). As this paper is primarily focused on the initial development of nominalisers related to inalienability in Meto, I leave the detailed investigation of their subsequent extension to future research.

²⁷The non-etymological *-k* in words like *era-k* ‘stairs’ or *nini-k* ‘wax, candle’ could have been due to the sufficiently high frequency of 3PL possessors (which would trigger *-k* agreement in Nuclear Meto, cf. also INAL.1SG *-k*), the fact that 1PL.IN *-k* may also be used for generic/impersonal possession (i.e. ‘one’s x’), and/or the result of dialect mixture.

- (41) Bound nominal forms across Meto (from expected *n#* stems)
- a. PMP **haRazan* > *era-ʔ*, *era-k* ‘stairs, steps’ [K. Amarasi]
 ‘ladder’ *ela-k* ‘ladder’ [Amanuban, Molo]
 - b. PMP **qutan* > *utu-k*, *uta-k* ‘vegetables’ [R. Amarasi]
 ‘small wild herbaceous plants’ (cf. *utan* in K. Amarasi and Molo)
 - c. PMP **lilin* > *nini-k* ‘wax, candle’ [R./K. Amarasi, Molo]
 ‘beeswax’

It hence seems plausible to account for the semi-sporadic distribution of non-etymological final consonants on a number of bound Meto roots as being the outcome of analogical developments related to the innovation of inalienable nominalisers, as discussed in section 2 and 3 of this paper.²⁸

4.2 “Subtractive” morphology in Meto

An interesting implication of the analysis set forth in this paper is that it may allow us to account for the appearance of synchronically productive subtractive morphology in Meto, without needing to resort to the use of non-concatenative processes. Edwards (2017, 2020) claims that the Meto languages exhibit productive C# subtraction as a process which i) derives verbs from nouns (42) and ii) is obligatory on the first element of a noun + noun compound (43). As there is no categorial distinction between nouns and adjectives in Meto, the latter construction is frequently used for modification.

- (42) Putative subtractive denominal verb formation in Kotos Amarasi
- a. PMP **quzan* ‘rain’ > *uran* ‘rain’ → *na-ʔura* ‘(it) rains’²⁹
 - b. PMP **hanjin* ‘wind’ > *anin* ‘wind’ → *n-ʔani* ‘is windy’
 - c. PMP **tapis* ‘loincloth’ > *tais* ‘sarong’ → *na-tai* ‘clothes s.o.’
- (43) Putative subtractive noun-noun compounding in Kotos Amarasi
- a. PMP **quzan* ‘rain’ > *uran* ‘rain’ → *uur koʔu* ‘big rain’³⁰
 - b. PMP **tapis* ‘loincloth’ > *tais* ‘sarong’ → *tai mutiʔ* ‘white sarong’
 - c. PMP **buaq* ‘fruit’ > *fuaʔ* ‘fruit’ → *fua anggur* ‘grapes’

²⁸Further research may seek to compile a comprehensive list of all ‘bound’ noun stems which take a non-etymological final consonant/suffix to determine if they fall into any clear semantic classes, or if there are any tendencies in the choice of extending *-n*, *-k*, or *-ʔ*.

²⁹Amarasi employs automatic glottal stop prothesis at the beginning of denominalised #V roots, prior to addition of agreement prefixes.

³⁰Compounding in Amarasi generally requires CV → VC metathesis (e.g. *fafi* ‘pig’ → *faif fui* ‘wild pig’), where metathesised *a* assimilates to the quality of the preceding vowel (e.g. *rusa* ‘deer’ → *ruus*). The intermediate steps involved in (43a) are hence *uran* → **uarn* → **uurn* → *uur* (with omission or deletion of final *n*). Interested readers can refer to Mooney (2022) and Edwards (2020) for differing analyses of this process.

However, the existence of “truncation” or “subtraction” as a productive morphological process has long been controversial, having played a key role in the debate about Item-and-Process vs. Item-and-Arrangement frameworks of morphology (Hockett 1954, Anderson 1992, Kosa 2008). Indeed, many proponents of the latter (such as those working in the framework of Distributed Morphology) have sought to reduce these alternations to concatenative morphology in interaction with phonology, as with anti-faithfulness constraints (Alderete 2001), prosodic circumscription (Mester 1990, Lombardi & McCarthy 1991), or deficient (sub)segments (Trommer & Zimmermann 2014, Köhnlein 2018). For our purposes, a major benefit of the present analysis of “inalienable” nominalisers in Meto is that it allows us to develop an entirely concatenative account of the alternations in (42)-(43).

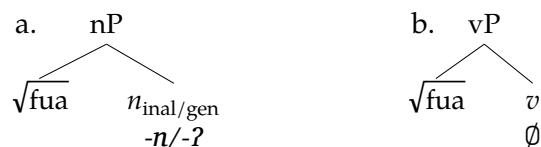
4.2.1 “Subtractive” verbalisation

Let us first consider denominal verb formation in (42), with further examples provided in (44).

- (44) Denominal verb formation in Kotos Amarasi
- a. PMP **buaq* ‘fruit’ > *fua-ʔ/fua-n* ‘(its) fruit’ → *na-fua* ‘bears fruit’
 - b. PMP **qanuR* ‘path’ > *eno-ʔ* ‘door’ → *na-ʔeno* ‘opens the door to’
 - c. PMP **ikuR* ‘tail’ > *iku-n* ‘(its) tail’ → *na-ʔiku* ‘tails along, follows’

The examples in (44) transparently demonstrate how putative final C# subtraction is more likely to involve simple omission of the *n* head categoriser (exponed as *-n/-ʔ*) in the verbal formation, rather than a process of productive morphophonological subtraction. Adopting a category-neutral approach to roots as assumed in frameworks like Distributed Morphology (Halle & Marantz 1994, Marantz 1997), the alternation in (44a) can best be captured through the structural difference in (45).

- (45) Category-neutral $\sqrt{\text{fua}}$ in nominal (*fua-n/ʔ*) and verbal (*na-fua*) usage



It is no coincidence then that all “subtracted” C# in Meto happen to be homophonous with independently attested nominal suffixes, i.e. *-ʔ* and *-n*. This analysis even accounts for “subtraction” of etymologically expected C# in (42); we simply need to posit that, like with the bound stems in (41), these

roots have undergone aggressive resegmentation and backformation, where speakers have reanalysed etymological final *n*# as a nominalising suffix. Thus, the categorial alternation in (42a) can also be represented as in (46).

(46) Category-neutral $\sqrt{\text{ura}}$ in nominal (*ura-n*) and verbal (*na-ura*) usage



Even the deletion of final *s*# in (42c) can be accounted for in this way. Both *s*# and *t*# are attested as undergoing “subtraction” in denominal and compounding contexts (47). Whereas these consonants are etymologically expected in *tais* ‘sarong’ and *uat* ‘blue vein’, the latter’s doublet in *ua-n* ‘palm lines’ shows that **urat* underwent aggressive resegmentation and backformation like the roots in (41), where the final *t*# was replaced with the inalienable agreement suffix (with productively-inflecting forms in *ua-f*, *ua-k*, *ua-m*, and so on).

(47) Putative subtraction of *s*# and *t*# in Kotos Amarasi

- a. PMP **tapis* ‘loincloth’ > *tais* ‘sarong’ → *tai muti?* ‘white sarong’
na-tai ‘clothes s.o.’
- b. PMP **urat* ‘blood vessel’ > *uat* ‘blue vein’, *ua-n* ‘palm lines’ →
ua mnaun ‘long-lived, lit. long veins/lines’
n-ua reko ‘is lucky, lit. good veins/lines’

Notably, both *-s* and *-t* are independently attested as productive nominalising suffixes in Meto. Where *-t* is a deverbal nominaliser (48a-b), it also has a phonologically-conditioned dissimilated allomorph in *-s* when attached to a stem which already contains *t* (48c-d).

(48) Nominalisation in *-t*/*-s* in Kotos Amarasi

- a. *na-baka* ‘steals’ → *baka-t* ‘theft’
- b. *n-sii* ‘sings’ → *sii-t* ‘song’
- c. *n-mate* ‘dies’ → *mate-s* ‘death’
- d. *n-tui* ‘writes’ → *tui-s* ‘writing’

Furthermore, there is a separate nominal suffix in *-s* which produces demonyms (49). Notably, when the base form is used as a verb, this suffix is also omitted.

(49) Demonyms and denominal formations in Kotos Amarasi

- a. *Beru* ‘(Tetun) Belu’ → *beru-s* ‘s.o. from Belu’ ~ *n-beru* ‘speaks Belu’
- b. *Sapu* ‘Sabu’ → *sapu-s* ‘s.o. from Sabu’ ~ *n-sapu* ‘speaks Hawu’

This paper is not suggesting that the final *s#* and *t#* in (47) is either the de-verbal suffix in (48) or the demonym-forming suffix in (49). However, the existence of the productive suffixes in (48)-(49) and doublet in $\text{PMP } *u\text{Rat} > uat \sim ua-n$ all support analysing putative *t#* and *s#* “subtraction” as involving analogical resegmentation and the omission of some form of nominalising suffix (albeit one that is etymologically expected), as shown in (50).

(50) Category-neutral $\sqrt{\text{tai}}$ in nominal (*tai-s*) and verbal (*na-tai*) usage



That such denominal “subtraction” involved the aggressive resegmentation of etymologically-inherited final consonants is indirectly supported by how not all nouns undergo this consonant loss when verbalised, pointing again to the irregular role of analogy in conditioning this change.³¹

(51) Non-subtractive denominal verb formation in Kotos Amarasi

- a. *barab* ‘preparation’ → *na-barab* ‘prepares’
- b. *baun* ‘small, poor’ → *na-baun* ‘makes small’
- c. *boʔis* ‘praise’ → *n-boʔis* ‘praises’
- d. *tanar* ‘sign’ → *n-tanar* ‘takes note of’ cf. Malay *tanda* ‘sign, omen’
- e. *teken* ‘mark’ → *n-teken* ‘marks’ cf. Dutch *teken* ‘sign, mark’

In contrast, clear evidence in favour of subtraction being a productive morphological process in Meto would require the deleted segment to *not* have an independent existence as a nominal suffix in the language; to my knowledge, no such examples have yet been found.

4.2.2 “Subtractive” compounding

The illustration of “subtraction” in nominal compounding (43) can then be accounted for by positing that such modification involves structures as in (52), instantiating $\sqrt{\text{root}} + \sqrt{\text{root}}$ compounds sharing a single categorising head (Harðarson 2017, Fenger & Harðarson 2019, Tan 2021); the surface form of this head is determined by the final root in the compound.

³¹The fact that loaned nouns in (51d-e) fail to undergo “subtraction” is further evidence against analysing C# deletion as a productive morphological process. Although one could argue that the alternations in (51) actually involve backformation from the verb to the noun, this is relatively unlikely given that the loans were probably originally borrowed as nouns.

5 CONCLUSION

This paper has explored the development of inalienability in Meto from several different perspectives. Most broadly, taking for granted that inalienability arose due to contact with other (non-Austronesian) languages in the region, one key question was by what precise mechanisms such distinctions were borrowed and integrated into the Meto languages. Section 2 proposed that this contact was unlikely to have led to the immediate wholesale restructuring or bifurcation of the Rote-Meto nominal system into one with two lexical classes, i.e. inherently inalienable nouns vs. inherently alienable ones. Instead, drawing on comparative evidence from closely related languages and the retention of nouns with semantically-flexible interpretations in Meto, it was argued that Proto-Rote-Meto first borrowed inalienability as an optional marking strategy, where $\text{PRM } *-k > -ʔ$ allowed speakers to introduce inalienable construals to nouns which were otherwise neutral for inalienability.

Given that certain nouns (e.g. body parts) would have almost always been used in inalienable contexts, it was proposed that Meto speakers **semantically reanalysed** the $\lambda x \lambda y. \text{part-of}(x,y)$ relation as being inherent to the semantic denotation of these nouns, rather than something introduced by the $*-k > -ʔ$ suffix. This reanalysis led to the development of a true class-based system of inalienability in Meto (but not Rote), where certain nouns are now ungrammatical without inalienable possessor agreement or existential closure in $-ʔ$.

In parallel, section 3 explored the concomitant development of the Meto possessor agreement suffixes in $-n/-m/-k/-r$ as the result of **syntactic reanalysis** of the inherited set of PMP/PRM genitive enclitics, which were originally used as possessive pronouns (often to co-index free-standing possessors). Drawing on entirely regular sound changes, again supported by cognate forms in Rote, it was proposed that these enclitics underwent Spec-Head reanalysis, with the former relation of co-indexation/resumption between the free-standing possessor and post-nominal element coming to be reinterpreted as syntactic agreement for ϕ -features.

Finally, section 4 showed how this system was subject to complex analogical changes including both extension and backformation, leading to the development of bound roots in Meto with semi-idiosyncratic requirements for nominal suffixation. Due to syntactic variability in not only whether inalienability was expressed and with which suffix, as well as the high frequency of 3sg possessors (especially with inanimate nouns), it was suggested that certain stems came to take $-n$, $-k$, and/or $-ʔ$ as their default nominaliser. This included nouns which we would expect to be $V\#$ on etymological grounds, as well as nouns which we expect to show reflexes in $n\#$. In the latter case, it was proposed that certain stems underwent aggressive resegmentation and

backformation, wherein the inherited final C# was incorrectly identified as a nominalising suffix. This analysis, based on analogy, not only accounts for the high level of variation found both across Meto and even within a single dialect, but also allows us to develop a concatenative account of putative “subtractive” morphological processes. Instead of requiring productive C# deletion in denominal verb formations and compounding, adopting a structure involving category-neutral roots allows us to directly model the attested alternations as the omission of categorising *n* heads.

There is much left to clarify regarding the development of the nominal system in Rote-Meto; for one, a full-scale analysis of all non-etymological final C# would allow us to strengthen our understanding of the analogical changes involved and identify any trends in the distribution of the competing nominalisers in *-n*, *-k*, and *-ʔ*. In addition, this paper has set aside the potential role of the plural enclitic *=eni/=ei)n* in the development of the Meto nominal system. This element commonly surfaces as *=n* on V# hosts (e.g. *koro* ‘bird’ ~ *koro=n* ‘birds’),³³ and may have also facilitated backformation and aggressive resegmentation or fossilisation/extension in cases where the stem was frequently pluralised (cf. PMP **Ratus* ‘hundred’ > *natun* ‘100’ in Meto). It is hence possible that certain cases of non-etymological *n*# are not from the inalienable possessor suffix, but rather from this pluralisation. Moreover, the complex cross-Meto variation found with systems of possession-marking on kinship terms has been left entirely to future work, as has the etymological source of the unique INAL.0 suffix *-f* (which appears to occur in several cells of the kinship paradigm, in contrast to its limited distribution in the paradigms of the inalienable nouns discussed in this paper).

Zooming out, many other languages in the Timor-Babar family also attest non-etymological *ʔ*# and *k*#, as well as nominal *-k*, such as Helong and Tetun Terik (van Klinken 1999). It remains to be seen to what extent the original function of Proto-Timor-Babar **-k* can be identified, if such an affix is even reconstructable beyond Proto-Rote-Meto. Regardless, the paper has sought to add a novel empirical perspective to the growing discussion on the diachrony of categorising heads and their interaction with apparently idiosyncratic morphophonological alternations and putative class phenomena.

³³However, the actual allomorphy of this enclitic is rather complex. C# stems take *=eni* or metathesised *=ein* depending on discourse context (e.g. *eno-ʔ* → *eno-ʔ=ein* ‘doors’). Edwards (2020: §5.6) illustrates that in Kotos Amarasi, CV# and VV# verbs take *=n* when either the subject of object is plural, while CV# nouns take *=n* when referring to plural referents (or forming an associative plural). However, VV# nouns instead have plurals in *=ngwein* or *=nu*, cf. *hau* → *hau=ngwein* ~ *hau=nu* ‘trees’. Edwards (2020: 236) suggests that *=ngwein* may come from a combination of underlying */=nu=ein/* with intervocalic *g^w* insertion.

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