



Universiteit  
Leiden  
The Netherlands

## Traces of language contact: The Flores-Lembata languages in eastern Indonesia

Fricke, H.L.A.

### Citation

Fricke, H. L. A. (2019, November 13). *Traces of language contact: The Flores-Lembata languages in eastern Indonesia*. LOT dissertation series. LOT, Amsterdam. Retrieved from <https://hdl.handle.net/1887/80399>

Version: Publisher's Version

License: [Licence agreement concerning inclusion of doctoral thesis in the Institutional Repository of the University of Leiden](#)

Downloaded from: <https://hdl.handle.net/1887/80399>

**Note:** To cite this publication please use the final published version (if applicable).

Cover Page



Universiteit Leiden



The handle <http://hdl.handle.net/1887/80399> holds various files of this Leiden University dissertation.

**Author:** Fricke, H.L.A.

**Title:** Traces of language contact: The Flores-Lembata languages in eastern Indonesia

**Issue Date:** 2019-11-13

## CHAPTER 9

---

### Innovations in the noun phrase

---

#### 9.1 Introduction

In this chapter, I discuss three syntactic features of the noun phrase that have been innovated in all Flores-Lembata languages, as well as in some closely related Austronesian languages. In the unrelated Timor-Alor-Pantar (TAP) languages the same features are attested. These areal features are (i) pre-nominal possessor (POSS-N), (ii) post-nominal locative nouns (N-LOC) and (iii) post-nominal numerals (N-NUM). The three features are not inherited from an Austronesian ancestor but are innovated in the Austronesian languages due to contact with non-Austronesian languages.

Table 9.1 provides information on their distribution among the languages of Nusa Tenggara Timur and Timor-Leste (cf. map in §7.1). A minus (-) means that the feature is not attested. A plus (+) means that the feature is attested in all or nearly all languages of this group. In this table, Sumba also includes the island of Sabu, and Timor also includes the island of Rote. All three features are attested throughout the languages of Flores-Lembata, the Austronesian languages of Timor and the non-Austronesian languages of the Timor-Alor-Pantar family. Only post-nominal numerals (N-NUM) also spread further west to Central Flores.

Table 9.1: The spread of innovations in the noun phrase

Feature	AUSTRONESIAN					NON-AN
	Sumba	W Flores	C Flores	Flores-Lemb.	Timor	TAP
POSS-N	-	-	-	+	+	+
N-LOC	-	-	-	+	+	+
N-NUM	-	-	+	+	+	+

W=West; C=Central

In this chapter, I investigate each of these features in detail following the methodology described in §7.2. In §9.2, I discuss the development of POSS-N in the Flores-Lembata languages. In §9.3, I show that post-nominal locatives are a consequence of the previous change in the possessive construction. In §9.4, I discuss the emergence of N-NUM in Flores-Lembata. In §9.4.4, I show traces of non-decimal counting systems in the numerals of Lamaholot and Kedang which may also be attributed to non-AN influence. In §9.5, I summarise the findings of this chapter and conclude that all three syntactic features of the noun phrase in Flores-Lembata, and also in the Austronesian languages of Timor and Central Flores, are not inherited from an Austronesian ancestor but rather innovated through contact-induced change. The syntactic changes most likely occurred in Proto-Flores-Lembata, in the proto-languages of the languages of Timor (cf. §1.3.1), and in Proto-Central Flores, due to separate events of contact with non-Austronesian languages.

Glosses and transcriptions from other sources are adapted to the conventions of this dissertation (cf. §7.3). A list of adapted glosses and re-transcribed sounds with their original representations is found in Appendix C.

## 9.2 Pre-nominal possessor

### 9.2.1 Overview

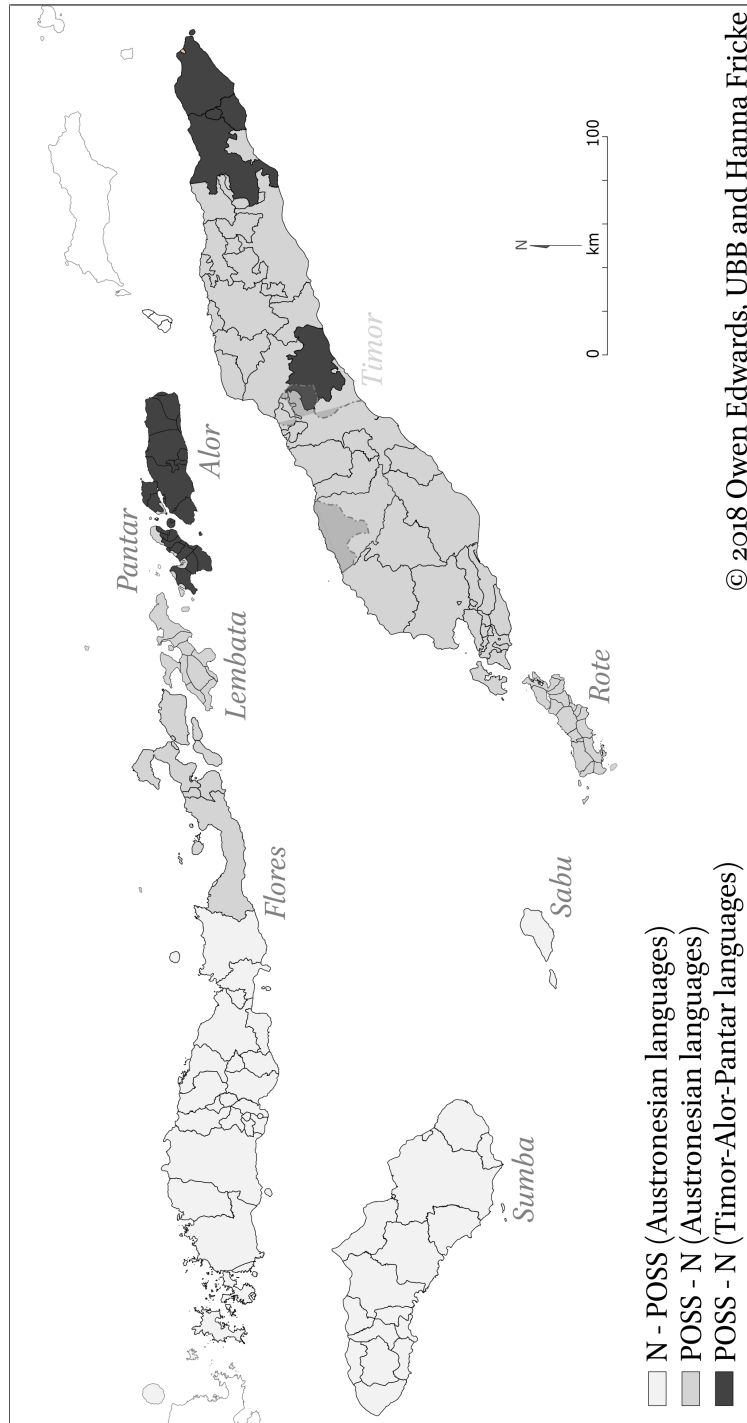
This section discusses the order of a nominal possessor (POSS) and its possessed noun (N) in a possessive construction. The languages of Nusa Tenggara Timur and Timor-Leste include languages with N-POSS order inherited from Proto-Malayo-Polynesian, as well as languages with POSS-N order which

has been argued to have emerged in the Austronesian languages due to contact with non-Austronesian languages. The POSS-N order in adnominal possessive constructions is one of the most discussed typological features of Austronesian languages in eastern Indonesia. This feature was initially mentioned by Brandes (1884:20-27) and became known as the ‘reversed genitive’ contrasting with the N-POSS order found in Austronesian languages further west. Himmelmann (2005:112-113,175) proposes two major types of Austronesian languages of Asia and Madagascar based on typological criteria: symmetrical voice languages and preposed possessor languages. Blust (2013:455) notes that Himmelmann’s pre-posed possessor languages correspond to Brandes’ languages showing the ‘reversed genitive’. Blust also suggests that POSS-N may be the result of substrate influence. Klamer et al. (2008:123) lists the POSS-N order as one of the areal features in East Nusantara shared among Austronesian and non-Austronesian languages.

The map in Figure 9.1 shows that the Austronesian languages of Flores-Lembata and Timor, as well as the Timor-Alor-Pantar (TAP) languages have POSS-N, while the Austronesian languages of Central Flores, Western Flores, Sabu and Sumba have N-POSS word order. Although not every single language is discussed in this section, on the map all languages are classified because this word order pattern appears to be distributed without known exceptions.

In §9.2.2, I describe adnominal possessive constructions with N-POSS order in the western languages of the area of study, i. e. Sumba, Western Flores and Central Flores, to show that these languages follow the typical Austronesian word order. As these languages are the closest relatives of the Flores-Lembata family, their N-POSS order strengthens the argument that POSS-N is an innovation in Flores-Lembata. In §9.2.3, I show that all Flores-Lembata languages have POSS-N and that the same order is also found in the Austronesian languages of Timor as well as in the non-Austronesian TAP languages. In §9.2.4, I discuss the development of the non-Austronesian word order in the possessive construction in the Austronesian languages of Flores-Lembata and Timor. I argue that the Flores-Lembata languages, and also the AN languages of Timor, innovated POSS-N due to separate contact scenarios with non-Austronesian languages.

Figure 9.1: Order of Nominal Possessor and Noun



### 9.2.2 N-Poss

In this section, I show that the Austronesian languages of Central Flores, Western Flores, Sabu and Sumba have N-POSS word order in their possessive constructions. This word order is an inherited Austronesian feature as explained in §9.2.1.

As shown in example (1) from Keo, in Central Flores, the possessed noun *'udu* 'head' is directly followed by the nominal possessor *wawi* 'pig'. There is no morphological marking.

- (1) Keo  
*'udu wawi*  
 head pig  
 'pig's head' (Baird 2002:210)

Keo also has a possessive construction which uses the possessive particle *ko* or *ko'o* placed in between N and POSS (cf. Baird 2002:204, 217). The word order always remains N-POSS.

In Manggarai, spoken in Western Flores, N and POSS are connected by the preposition *dé*, such as in (2). The word order is equally N-POSS.

- (2) Manggarai  
*baju dé amé*  
 shirt POSS father  
 'the father's shirt' (Semiun 1993:41)

Kambera and Hawu, on the islands Sumba and Sawu, both also have N-POSS order, as shown in (3) and (4).

- (3) Kambera  
*ana-na=i Ndilu*  
 child-3SG.POSS=ART NAME  
 'Ndilu's child' (Klamer 1998:51)
- (4) Hawu  
*emu duaé*  
 house king  
 'king's house' (Walker 1982:48)

### 9.2.3 POSS-N

#### 9.2.3.1 The Flores-Lembata languages

In all Flores-Lembata languages, the POSS-N order is attested. Therefore, a preposed nominal possessor can be reconstructed to Proto-Flores-Lembata (PFL) with high confidence. There is evidence from pronominal possessors in the Flores-Lembata languages that the original order was N-POSS at some point in the past and POSS-N is an innovation of PFL. Free possessor pronouns occur pre- or post-nominally, with a tendency from postposition in the west to preposition in the east. Bound possessor pronouns are all suffixing. Possessive prefixes never occur in the Flores-Lembata languages.

In case alienable and inalienable possession are expressed by different constructions, the nominal possessor is pre-posed in both constructions. In most cases, the possessed noun can be marked with a bound possessor pronoun, while the possessor noun is never marked morphologically. In this section, examples of adnominal possessive constructions are given for all Flores-Lembata languages, with the exception of Eastern Lamaholot varieties due to a lack of data on possessive constructions in this language.

The westernmost Flores-Lembata language Sika (SK), juxtaposes nominal possessor and possessed noun, while marking the possessed noun with a suffix, as in (5).

- (5) SK-Krowe  
*Rapa mu'u-n*  
 NAME banana-POSS  
 'Rapa's bananas' (Lewis and Grimes 1995:608)

The suffix *-n* 'POSS' marking the possessed noun is only found on vowel-final nouns, whereas consonant-final nouns have zero marking (Fricke 2014a:39-40). For more details on possessive suffixes in Sika see §8.3.3.1.

In varieties of Western Lamaholot, possessor and possessed noun are also directly juxtaposed and a suffix or enclitic can be added to the possessed noun, as can be seen in the examples (6a), (6b) and (6c).

- (6) a. WL-Lewotobi  
*Hugo lango'=kě*  
 NAME house=NMLZ  
 'Hugo's house' (Nagaya 2011:24)



- b. WL-Lewoingu  
*guru oto-ka*  
 teacher car-3PL  
 ‘teachers’ (pl) car’ (Nishiyama and Kelen 2007:26)
- c. WL-Solor  
*lango wolar=ẽ*  
 house rooftop=3SG.POSS  
 ‘rooftop of a house’ (Kroon 2016:69)

In the WL variety of Lewotobi, only a third person singular marker is left on the possessed nouns and this marker also functions as nominaliser (Nagaya 2011:111). This is parallel to the situation in the neighboring SK variety of Hewa (Fricke 2014a:45). In contrast, the WL varieties of Lewoingu and Solor still retain a full person paradigm of possessor suffixes (Nishiyama and Kelen 2007:23; Kroon 2016:67).

In WL-Lewoingu, there is also a pattern of N-POSS (7). Here, the possessor is expressed twice, by a noun and by a pronoun.

- (7) WL-Lewoingu  
*oto Lado na'én*  
 car NAME 3SG.POSS  
 ‘Lado’s car’ (Nishiyama and Kelen 2007:25)

As this N-POSS order in WL-Lewoingu only appears with an additional pronoun, this construction is different from the constructions discussed so far. The construction in (7) might be literally translated as ‘the car, Lado’s possession’ where the second part *Lado na'én* ‘Lado’s possession’ again shows POSS-N order. The first part is then analysed as a preposed adjunct.

Alorese, belonging to the WL subgroup, has developed an analytic possessive construction but maintains the order of POSS-N (8), where the third person singular pronoun *no* and the possessive particle *ning* are in between the nominal possessor *ruha* ‘deer’ and the possessed noun *kotong* ‘head’. Historically, there is a fossilised possessive nasal suffix on the possessed noun *kotong* ‘head’ (Klamer 2011:26).

- (8) WL-Alorese  
*ruha no ning kotong*  
 deer 3SG POSS head  
 ‘the deer’s head’ (Klamer 2011:55)

Central Lamaholot (CL) varieties have possessive constructions where a pronoun occurs between POSS and N and constructions where POSS and N are juxtaposed.<sup>1</sup> In the example from CL-Atadei Painara in (9a), POSS and N are separated by the third person singular proclitic *ne*. The possessed noun is marked by a possessor suffix of which a full paradigm exists in this variety (Krauß 2016:121). In the example (9b) from CL-Central Lembata, no free pronoun is found between POSS and N. Similar to CL-Atadei Painara, a possessor suffix *-n* '3SG.POSS' is attached to the possessed noun *bapa* 'father'. CL-Central Lembata also has a full paradigm of possessor suffixes (cf. §3.4.3).

- (9) a. CL-Atadei Painara  
*Daniel ne una-n*  
 NAME 3SG house-3SG.POSS  
 'Daniel's house' (Krauß 2016:121)
- b. CL-Central Lembata  
*kopong bapa-n*  
 child father-3SG.POSS  
 'the child's father' (P:14)

The language Kedang also uses a possessive construction with a pronoun (10), where the possessor *sétang* 'devil' is followed by a third person singular possessor pronoun *né'* which is followed by the possessed noun *ning* 'nose'.

- (10) KD-Leuwayang  
*sétang né' ning*  
 satan 3SG.POSS nose  
 'the devil's nose' (Samely 1991a:157)

### 9.2.3.2 The AN languages of Timor

The Austronesian languages of Timor pattern typologically with the Flores-Lembata languages in having pre-nominal possessors, as seen in the following example (11) from Amarasi with POSS-N order. A third person singular

<sup>1</sup> In CL-Central Lembata the distinction between connecting POSS and N with a pronoun or by juxtaposition is used to marked alienability (cf. §3.3). In CL-Central Lembata, possessor suffixes are used to marked inalienable possession only. In CL-Atadei Painara, the choice of juxtaposition or free pronoun construction rather appears to differentiate possessive relations from part-whole or attributive relations (Krauß 2016:121).

pronoun *in* is inserted between the possessor *faafj=é* ‘pig=DIST’ and the possessed noun *éku-n* ‘neck-3SG.POSS’ which is marked with a possessor suffix.

- (11) Amarasi  
*faafj=é in éku-n*  
 pig=3DET 3SG neck-3SG.POSS  
 ‘the pig’s neck’ (Edwards 2016a:258)

This analytical construction with a pronoun *in* between the two nouns is similar to what has been described for Alorese, Central Lamaholot and Kedang in §9.2.3.1. However, in Amarasi, the insertion of the third person possessive pronoun is optional (Edwards 2016a:256). This is different to the Central Lamaholot varieties, where the insertion of the 3SG pronoun is functional. In CL-Central Lembata, the construction with a pronoun *in* between POSS and N is reserved for alienable possessive relations, and in CL-Atadei Painara, the construction with a pronoun is only found in attributive constructions, but not in part-whole relations.

Tetun allows preposed as well as postposed possessors. However, the preposed possessors are with 80% by far the most frequent word order found (van Klinken 1999:142). Juxtaposition of POSS and N (12a), as well as a possessive construction with an inserted third person pronoun (12b) are found.

- (12) Tetun  
 a. *fahi na’in*  
 pig noble  
 ‘the pig’s owner’ (van Klinken 1999:143)  
 b. *Bui Hirik ni naran*  
 NAME NAME 3SG name  
 ‘Bui Hirik’s name’ (van Klinken 1999:143)

In addition to stylistic, dialectal and structural factors, alienability plays a role in the choice of the possessive construction in Tetun (cf. §8.2).

### 9.2.3.3 The Timor-Alor-Pantar languages

The non-Austronesian Timor-Alor-Pantar languages all have a basic word order of POSS-N (Schapper 2014b:14). Juxtaposition of POSS and N and constructions with a third person pronoun *in* between POSS and N are both attested in TAP.

Western Pantar, for example, has a construction with a linking pronoun (13a), where the possessor *wénang* ‘man’ is followed by a third person pronoun *gai* and the possessed noun *bla* ‘house’, but also a construction, such as in (13b) where the possessor *yattu* ‘tree’ is directly followed by the possessed noun *ga-’ung* ‘3SG-head’ that is marked with a possessor prefix.

- (13) Western Pantar
- a. *wénang gai bla*  
 man 3SG.POSS house  
 ‘the man’s house’ (Holton 2014:61)
- b. *yattu ga-’ung*  
 tree 3SG-head  
 ‘the head (top) of the tree’ (Holton 2014:63)

The use of these two different constructions is determined by the alienability of the possessive relationship expressed. In an alienable possessive construction, the linking pronoun is obligatory, while in inalienable possessive constructions, it is optional but the possessor prefix is obligatory (Holton 2014:60,62).

#### 9.2.4 The emergence of POSS-N

I propose that the POSS-N word order in the Austronesian languages of Nusa Tenggara Timur and Timor-Leste is an innovation which emerged due to contact with non-Austronesian languages. In §9.2.1, I have proposed already that POSS-N in the adnominal possessive constructions is not inherited from Proto-Malayo-Polynesian. In addition, the retention of possessor suffixes in many of the Austronesian languages that have preposed nominal possessors, support the presence an earlier postposed possessor order (Klamer et al. 2008:128). According to Himmelmann (2005:113), not taking into account Oceanic languages, Austronesian languages with a preposed possessor are found on Timor, in the Moluccas and in West Papua. These are all areas where non-Austronesian languages are spoken alongside Austronesian languages until today and contact across language families is likely.<sup>2</sup>

<sup>2</sup> However, at least one exception is known. Himmelmann (2005:114) states that the Formosan language Pazeh spoken on Taiwan has pre-nominal possessors. It is unknown whether this construction is a retention or innovation in this language.

Nusa Tenggara Timur and Timor-Leste is such an area as well. The Timor-Alor-Pantar (TAP) languages in this region all have POSS-N order which thus can be considered an old feature that is reconstructible to Proto-TAP. I have shown in the §9.2.3.1 and §9.2.3.2 that in this area, the languages geographically closer to TAP languages, i. e. the Flores-Lembata languages and the AN languages of Timor, have innovated POSS-N, while those AN languages further west, i. e. the languages of Central Flores, Western Flores and Sumba, have retained N-POSS. Therefore, I conclude that contact with non-Austronesian languages has either introduced or reinforced the pattern of preposed possessors in the Austronesian languages with which they had contact. This is in line with Reesink and Dunn (2018:947) who suggest that the preposed possessor “gained popularity in communalects that came into contact with speakers of Papuan languages.”

Although the Flores-Lembata languages and the AN languages of Timor have both innovated POSS-N, no shared development can be proposed. First, this word order feature is certainly typological and not subgroup defining (Himmelman 2005:114). This feature cannot be used to propose that the Austronesian languages of Timor and the Flores-Lembata languages form a subgroup. In addition, phonological evidence has been presented in §5.5 that the Flores-Lembata languages subgroup with their western neighbours on Flores and Sumba, and not directly with the AN languages of Timor. Thus, the innovation of POSS-N most likely occurred in Proto-Flores-Lembata and not earlier because the closest relatives of Flores-Lembata retain N-POSS, as I have shown in §9.2.2.

## 9.3 Post-nominal locatives

### 9.3.1 Overview

This section is about the noun phrase word order of the noun (N) and locative expressions that encode topological information (LOC). Topological information is encoded in words that express a spatial relation between an object or a person and a point of reference. In English, these are prepositions, such as ‘in’, ‘near’, ‘on’, ‘behind’ and the like (Levinson 2003:71-72). The point of reference in the expressed spatial relation, such as a house or a tree, is usually expressed by a noun, also referred to as ‘relatum’ or ‘ground’

in spatial relation theory (Levinson 2003:7,35).

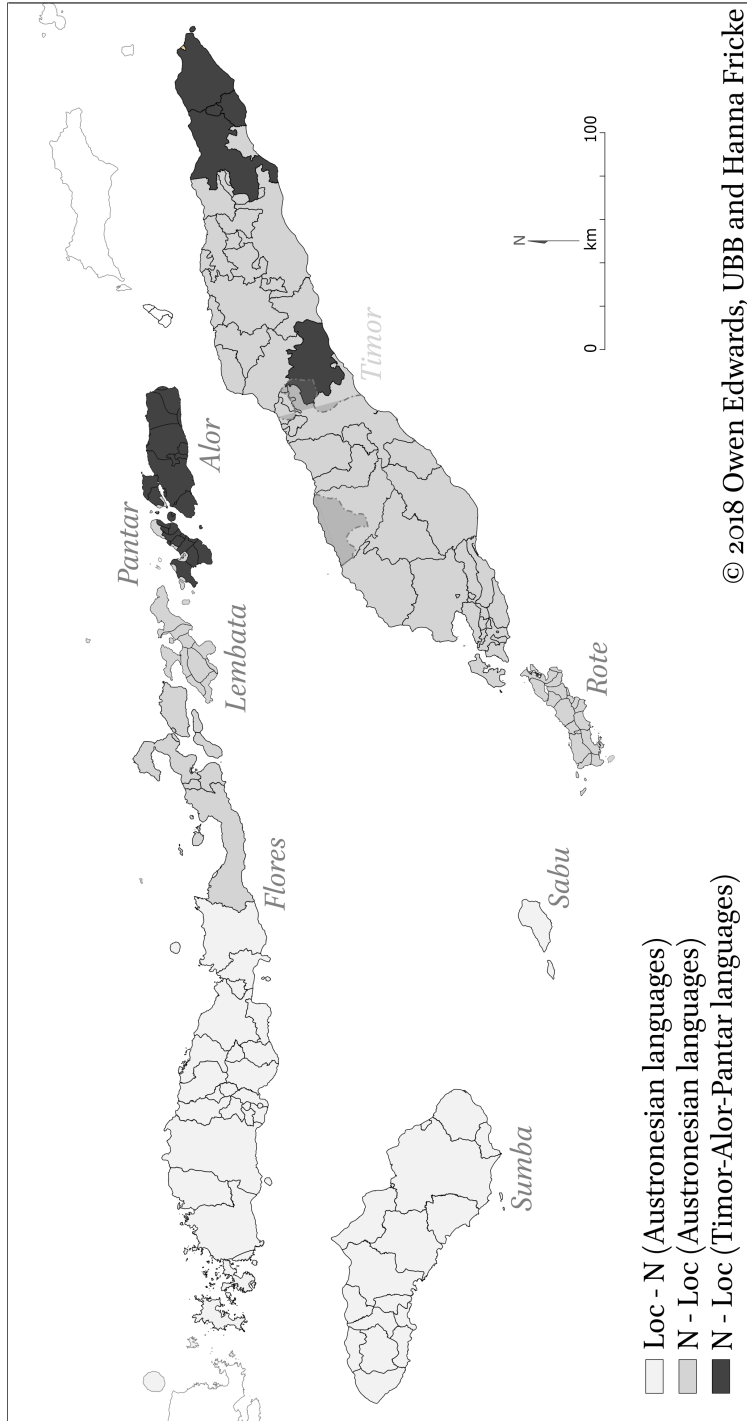
According to Blust (2013:309), locative expressions in Austronesian languages are generally composed of a generic locative preposition followed by a locative noun that expresses a topological relation. These two elements, preposition and locative noun, form a complex preposition together and precede the ground noun. This inherited Austronesian order of LOC-N is reversed in the Flores-Lembata languages as well as in the AN languages of Timor. In this section, I argue that the innovation of N-LOC in these languages is a consequence of the innovation of preposed possessors as discussed in §9.2, and thus also a result of contact with non-Austronesian languages.

On the map in Figure 9.2, languages with LOC-N and those with N-LOC are displayed. The word order of LOC-N is attested in the Austronesian languages of Central and Western Flores, as well as on Sumba and Sabu. However further to the east, in the AN languages of Timor, the Austronesian Flores-Lembata languages and in the non-Austronesian Timor-Alor-Pantar languages, the word order N-LOC is found. As for the order of nominal possessor and possessed noun in §9.2, not every single language in the area of study is discussed in this section but as no exceptions are known, on the map all languages are either indicated as N-LOC or LOC-N.

Typical locational constructions in the languages of this area often contain two elements that express different semantic aspects of the location. The first element can be a default locational preposition or a locational that carries information about distance or direction to the deictic centre. These can be words meaning ‘seawards’ or ‘upwards’. The second element, often a nominal such as ‘inside’, ‘top’ or ‘lower part’, encodes topological information.<sup>3</sup> In this section, I am concerned with the second element, henceforward “topological nouns” or “locative nouns” (LOC), and its position relative to the ground noun (N).

<sup>3</sup> There are also languages which only have one locational element per locational phrase. This could be a single adposition, such as in Keo in Central Flores which has prepositions or in some Timor-Alor-Pantar languages which have postpositions. These adpositions either express spatial information on distance and direction or topological information.

Figure 9.2: Order of Locative and Noun



This section is structured as follows. §9.3.2 and §9.3.3 concern the position of locative nouns in the noun phrase by showing a pattern of LOC-N word order towards the west and N-LOC word order further east. The languages of Sumba, Western Flores and Central Flores, discussed in §9.3.2, have retained the typical Austronesian LOC-N word order and thus provide evidence for the hypothesis that the N-LOC order in the Flores-Lembata languages (§9.3.3.1), as well as in the AN languages of Timor (§9.3.3.2), is an innovation. In §9.3.3.3 I show that the non-Austronesian TAP languages also have LOC-N, which is not an innovation in these languages but most likely a retention from their ancestor Proto-TAP. This fact supports structural diffusion from TAP languages into Flores-Lembata and the AN languages of Timor. In §9.3.4, I discuss the etymological origins of locative nouns in Flores-Lembata. In §9.3.5, I compare and analyse the fossilised possessive suffixes found on locative nouns in a subset of the Flores-Lembata languages. In §9.3.6, I argue that the word order change from inherited Austronesian LOC-N to N-LOC arose due to contact with non-Austronesian languages of the area. In addition, the change was facilitated by the previous change of N-POSS to POSS-N because the locative noun and the ground noun structurally represent a possessive construction, where a locative noun, such as ‘inside’ is the possessed noun and the ground noun, such as ‘house’, is the possessor.

### 9.3.2 LOC-N

In the Austronesian languages of Central Flores, Western Flores, Sabu and Sumba, all locational information precedes the ground noun. This information can contain up to two elements, a general locational and an element that specifies the topological relation with the ground noun.

In the language Keo in Central Flores, a prepositional structure is attested (14), where the preposition *'oné* precedes the ground NP *kéka go'o* ‘small house’.

- (14) Keo  
*'oné kéka go'o*  
 inside hut small  
 ‘inside a small hut’

(Baird 2002:344)



There is also a general locational preposition *éna* 'LOC' (Baird 2002:340) but it is not combined with other locational preposition such as *'oné* 'inside'. Thus, in Keo only one element can precede the ground noun.

Also in Manggarai, a set of locative prepositions is attested. Besides directional, elevational or distance information, such as *éta* 'a higher place' or *wa* 'lower place', some of these prepositions also convey topological information, such as *oné* 'inside' or *musi* 'behind' (Semiun 1993:34-35).

In the languages Kambera on Sumba (15), as well as in Hawu on Sabu (16), a general locative preposition is combined with a topological expression preceding the ground noun.

- (15) Kambera  
*la lumbu topu*  
 LOC under mat  
 'under a mat' (Klamer 1998:124)

- (16) Hawu  
*pa dida kéraja behi nadé*  
 LOC top cage iron DEM.2SG  
 'on top of this iron cage' (Walker 1982:26)

In sum, the topological information precedes the noun in these languages. The words conveying the topological information have been analysed as prepositions or as nouns by different researchers. In Kambera, for example, they are named "prepositional nouns" (Klamer 1998:123) and some of them can still function as full nouns but most of them are grammaticalised and have to be combined with the general locational *la* 'LOC' as in (15).

The topological constructions can also be analysed as possessive constructions, with the topological noun (LOC) being the possessed noun ( $N_P$ ) and the ground noun ( $N_G$ ) being the possessor (POSS). When adopting this analysis, the LOC- $N_G$  order is explained by the order of the possessive construction which is  $N_P$ -POSS (cf. §9.2). The analysis of the topological nouns as prepositions, especially in the languages of Flores, can be regarded as a further stage in grammaticalisation. In Kambera and Hawu a default locational preposition is still needed, which suggests that the topological nouns have not yet fully grammaticalised into prepositions.

### 9.3.3 N-LOC

#### 9.3.3.1 The Flores-Lembata languages

In this section, I show that the word order N-LOC is consistent throughout all Flores-Lembata languages, using examples with three different topological relations, namely ‘in’, ‘on’ and ‘under’. As for the POSS-N order, also the innovation of N-LOC can be reconstructed to Proto-Flores-Lembata. The etymology of the locative nouns to express these relations is discussed in §9.3.4.

In Sika, topological information is expressed by a postposed locative noun. However, in some cases, the information is encoded in the combination of the semantics of the preposition and the postposed locative noun. In SK-Hewa, locative nouns are clearly marked as possessed by a possessive suffix *-n*. Thus locative constructions in Sika can be analysed as possessive constructions.

For SK-Krowe, there is little descriptive information available. However, from example sentences in the dictionary by Pereira and Lewis (1998) it appears that final nasals are fossilised on some locative nouns, such as *uneng* ‘inside’. In example (17), the ‘in’ relation is expressed by the posposed locative noun *uneng* ‘inside’ and the prepositional element *wawa* ‘downwards’ adds directional information.

- (17) SK-Krowe  
*wawa tana uneng*  
 downwards earth inside  
 ‘in the earth’ (Pereira and Lewis 1998:204)

The topological relations expressing ‘under’ and ‘on’ are expressed by the combination of two elements, a preposition and a locative noun. The SK-Hewa example in (18) shows the use of the possessed locative noun *lewu* ‘space underneath’ to express ‘below’ or ‘under’. The reading of ‘under’ is enforced by the preposition *wawa* ‘downwards’ which points to a lower direction than the location of the deictic centre.

- (18) SK-Hewa  
*Ia méong wawa méja lewu-n.*  
 exist cat downwards table space.underneath-POSS  
 ‘There is a cat under the table.’ (HC\_SR:31)

To express the 'on' relation, a locational *réta* 'hillwards' or *lala* 'upwards' pointing to a higher location and the noun *wutu* meaning 'end' are combined. In example (19) from the Krowe variety both, the locational *réta* 'hillwards' indicating the upward direction and the locational noun *wutu* 'end' follow the ground noun *méja* 'table', while the prepositional slot is filled with the default locational *é'i* LOC.

- (19) SK-Krowe  
*Lopa deri é'i méja réta wutu.*  
 PROH 2SG.sit LOC table hillwards end  
 'Don't sit on the table.' (Pareira and Lewis 1998:218)

In the sources on Sika, there is no descriptive analysis of a topological ground phrase in SK-Krowe. However, the example in (19) from the Sika dictionary by Pareira and Lewis (1998) suggests that the topological information is combined in the two elements *réta* 'hillwards' and *wutu* 'end' which are both placed after the ground noun *méja* 'table'. Possibly, these are two locational phrases, *é'i méja* 'at the table' and *réta wutu* 'at the end in hillward direction'.

In the Hewa construction in (20), similar elements are found but they appear in a different order and the locative noun has a possessive suffix. The locational *lala* 'upwards', which does not exist in SK-Krowe according to the dictionary of Pareira and Lewis (1998), precedes the ground noun '*ai* 'tree' and the locative noun *wutu-n* 'end-POSS' follows the ground noun.

- (20) SK-Hewa  
*lala 'ai wutu-n*  
 upwards tree end-POSS  
 'on the tree' (HC\_SR:43)

The locationals *lala* 'upwards' in SK-Hewa and *réta* 'hillwards' in SK-Krowe both point to an upward direction from the deictic center. The postposed locative noun *wutu* 'end' indicates that the location is on the (upper) end or surface.

Western Lamaholot (WL) varieties use postposed locative nouns for 'inside' that are cognate with the Sika noun *uneng* 'inside'. The locative nouns show remnants of possessive suffixes that vary across varieties, as can be seen in the examples in (21a) and (21b).

- (21) a. WL-Lewotobi  
*ia boti one'*  
 LOC bottle inside  
 'in the bottle' (Nagaya 2011:259)
- b. WL-Alorese  
*oro sepatu unung*  
 LOC shoe inside  
 'in the shoe' (Klamer 2011:77)

To express 'on', WL varieties use either *wutu* 'end; surface' (22a), as also found in Sika, or *lolo* 'top; surface' (22b) which is also found in Central and Eastern Lamaholot varieties, as well as in Kedang. The distribution of these two options seems to occur in free variation, as in most varieties, both options are attested. Also these locative nouns show fossilised possessive suffixes. In WL-Lewotobi, the possessive suffix is realised by nasalisation of the final vowel.

- (22) WL-Lewotobi
- a. *ia uri' wutũ*  
 LOC bed top  
 'on the bed' (Nagaya 2011:612)
- b. *pé méja lolõ*  
 DIST table top  
 'on the table' (Nagaya 2011:286)

To express the 'under' relation a postposed locative noun is also used, such as in (23), where *wewelen* 'under' follows the ground noun *méja* 'table'. The final syllable *-en* is a fossilised possessive suffix.

- (23) WL-Lewoingu  
*Busan to'u pé méja wewelen.*  
 cat one at table under  
 'There is a cat under the table' (Nishiyama and Kelen 2007:90)

Central Lamaholot (CL) as well as Eastern Lamaholot (EL) varieties also use postposed locative nouns, however these nouns do not show any trace of

a possessive suffix.<sup>4</sup> One could analyse them as grammaticalised postpositions.

For Central Lamaholot, the forms meaning ‘inside’ are *or* or *ora* depending on dialectal variation, as can be seen in the Central Lembata example (24a) and the Atadei Painara example (24b) respectively.

- (24) a. CL-Central Lembata  
*jéné una or*  
 upwards house inside  
 ‘inside the house’ (FH2:10)
- b. CL-Atadei Painara  
*wel una ora*  
 sideways house inside  
 ‘inside the house’ (Krauß 2016:126)

In Central Lamaholot, the locative noun *lolo* is used for ‘top’, as in (25), while *leng* is attested for ‘below’, such as in (26).

- (25) CL-Central Lembata  
*jéné ulik lolo*  
 upwards bed top  
 ‘on the bed’ (F1:10)
- (26) CL-Central Lembata  
*wo méja leng*  
 DIST table space.underneath  
 ‘under the table’ (FH1:4)

For Eastern Lamaholot, the locative noun *bolo* ‘inside’ (27a), *lol'o* ‘top’ (27b) and *langu* ‘below’ (27c) are attested.

<sup>4</sup> For Eastern Lamaholot almost no data is available. However, I elicited the expressions in (27a) to (27c) from a speaker of the Eastern Lamaholot variety of Lewoeleng. As these sentences were not recorded but written down by the speaker himself, the representation of phonemes might not correspond to the exact realisation of the words but the structure could be captured well. The EL-Lewoeleng speaker uses an apostrophe in several words. Probably, the apostrophe symbolises a glottal stop as this is the way people in the region usually represent the glottal stop in writing. However, the apostrophe appears in between consonants and vowels which is an unusual place for a glottal stop in the languages of the region. It is unknown whether this is the actual place where a glottal stop occurs in this language or whether the glottal stop rather occurs after the vowel, thus at the end of the word.

- (27) EL-Lewoeleng
- a. *do ul'i bolo*  
 LOC house inside  
 'inside the house' (NB:82)
- b. *do lub'a lol'o*  
 LOC cooking.pot top  
 'on the cooking pot' (NB:82)
- c. *do méjaa langu*  
 LOC table under  
 'under the table' (NB:82)

Kedang (KD) also exhibits post-nominal locative nouns, such as in example (28), where *laléng* 'inside' is placed after the ground noun *huna* 'house'.

- (28) KD-Leuwayang  
*bè huna laléng*  
 LOC house inside  
 'in the house' (Samely and Barnes 2013:330)

It is not entirely clear whether there are fossilised possessive suffixes on the locative noun in Kedang or not. Synchronically, Kedang does not have a suffix *-ng* (Samely 1991a:62). On the one hand, the final nasal of the noun *laléng* could be a fossilised suffix cognate with those found in Western Lamaholot and Sika. But as *laléng* goes back to PMP \**daləm* 'in', the final nasal might also come from \**m*. Given that \**m* > *ng* is attested word finally for Kedang, it is more likely that the final nasal is part of the stem and that there is no suffix on the noun.

For the locative noun *lolo'* expression 'top', such as in example (29), no clear suffix is found. There is no data of a full topological construction expressing 'under' in Kedang.

- (29) KD-Leuwayang  
*bè éné lolo'*  
 LOC sand top  
 'on the sand' (Samely 1991a:158)

### 9.3.3.2 The AN languages of Timor

The languages Amarasi (30) and Helong (31), both spoken in the Western part of Timor island, have a postposed noun meaning ‘inside’. In Amarasi, the locative noun *nana-* ‘inside’ has a third person singular genitive suffix *-n* that goes back to the same PAN source \**ni* as the fossilised suffixes found in most Flores-Lembata languages (cf. §9.3.5). However, in Helong, no suffix is found on the locative noun; the ground noun *uma* ‘house’ and the locative noun *dalé* ‘inside’ are simply juxtaposed.

- (30) Amarasi  
*ét ooj=é nana-n*  
 IPFV.LOC water=3DET inside-3SG.POSS  
 ‘in the water’ (Edwards 2016a:400)

- (31) Helong  
*né uma dalé*  
 at house inside  
 ‘inside the house’ (Balle 2017:96)

This kind of juxtaposition is also found in South Mambae (32a), an Austro-nesian language spoken in the eastern part of Timor Island. In South Mambae the locative noun *lala* ‘inside’ is placed after the ground noun, here *ai* ‘tree’, and the two nouns form a compound. The same structure is also found with other South Mambae locative nouns as in (32b).

- (32) South Mambae  
 a. *ni ai lala*  
 LOC tree inside  
 ‘in the jungle’ (Edwards 2016a:60)  
 b. *ээр lau*  
 water top  
 ‘on the water’ (Grimes et al. 2014:28)

In the constructions from South Mambae above, there is no evidence for genitive suffixes. However, there is evidence that locative constructions can be analysed as possessive constructions with a lost genitive suffix *-n* on the

possessum. In other varieties of Mambae many body parts occur in the citation form with a final *-n*. Secondly, in South Mambae nouns ending in CV generally metathesise their final syllable. However, locative nouns are unmetathesised. The historic presence of a final consonant *n* in these words could have blocked metathesis at the time when final syllable metathesis was a productive process (Edwards 2016a:64).

Tetun again has the same structure and possibly a fossilised nasal suffix at the locative noun *laran* ‘inside’ (33). van Klinken (1999:161) gives a list of locative nouns and all of them except for one *kotuk* ‘behind; back’ end in *n*. van Klinken (1999:150) analyses the final *n* on locative nouns as “fossilised genitive marking”.

- (33) Tetun  
*iha ké'an laran*  
 LOC house inside  
 ‘inside the house’ (van Klinken 1999:161)

The word order of ground noun followed by a locative noun appears consistent across the Timor area and is parallel to the word order found in Flores-Lembata languages. Among Timorese languages surveyed here, possessive marking on the locative noun is only found in Amarasi and Tetun. Taking into account that the possessive marker goes back to a PAN form, it could be assumed that it was lost in South Mambae and Helong whereas Amarasi and Tetun can be considered as more conservative in this respect. The highly isolating nature of South Mambae with only one prefix (Grimes et al. 2014:8) supports the loss of other affixes.

### 9.3.3.3 The Timor-Alor-Pantar languages

The non-Austronesian languages of the Timor-Alor-Pantar family have topological verbs or postpositions, such as *ta* ‘on’ in Kaera (34).

- (34) Kaera  
*gang a-bat ta ga-dag*  
 3SG 3SG.POSS-leg on 3SG-leave  
 ‘She puts him on her lap’ (Klamer 2014b:119)



But it is also possible to encode topological information with nominals such as shown in the following examples from Kaera (35a) and Western Pantar (35b). The noun denoting ‘inside’ is marked with a possessive person prefix, *g-* ‘3SG.POSS’ in Kaera (35a) and *ga-* ‘3SG’ in Western Pantar (35b). In Western Pantar, the same person prefixes, such as *ga-* ‘3SG’, are used to mark inalienable possessors on nouns as well as core arguments on verbs (Holton 2014:70).

- (35) a. Kaera  
*abang g-om*  
 village 3SG.POSS-inside  
 ‘in the village’ (Klamer 2014b:110)
- b. Western Pantar  
*bla ga-umé*  
 house 3SG-inside  
 ‘in the house’ (Holton 2014:48)

Not all topological nouns in Timor-Alor-Pantar languages are marked with a possessive prefix. They can also be simply postposed to the ground noun without any morphological marking as in the examples from Western Pantar (36a) and Makasae (36b).

- (36) a. Western Pantar  
*méa gégung*  
 table under  
 ‘under the table’ (Holton 2014:48)
- b. Makasae  
*kaisa lé'ééré mutu é'é*  
 box PROX inside PROX  
 ‘inside this box’ (Huber 2008:36)

In the examples above, it can be seen that the Timor-Alor-Pantar languages consistently express topological relations with an element that appears after the ground noun, the word order is thus N-LOC. There are cases where the topological element has been analysed as a postposition, such as in (34).

However, as stated for Western Pantar, the postposition is “similar to obligatorily possessed nouns” (Holton 2014:47) as it carries an obligatory person prefix. Holton (2014:48) also gives an alternative analysis of the locative postpositions as they “share many properties with verbs”. Thus, the topological element can be either analysed as a noun or a verb that in some cases grammaticalised into a postposition. This situation is also described for Teiwa, another Alor-Pantar language. Klamer (2010:208-210) discusses possessed locative nouns in Teiwa and concludes that some of them are possibly “multifunctional items that can be used as either nouns or verbs”. As possessor prefixes for nouns and verbal prefixes are often homophonous or very similar in the languages of Alor-Pantar, it might be difficult to differentiate nouns and verbs in this case.

In sum, TAP languages express topological information either by verbs or nouns but these topological words are always postposed to the ground noun, thus following the order of N-LOC which is also attested in Flores-Lembata and on Timor.

### 9.3.4 Etymology of the Flores-Lembata locative nouns

In this section, I compare the lexemes that are used to express topological information among Flores-Lembata languages and provide suggestions on their origin and development. Table 9.2 shows four cognate sets that can be established when comparing the Flores-Lembata locative nouns for ‘inside’ from the example sentences in §9.3.3.1. In the lower part of the table, a selection of cognates found among other languages of Flores and Timor are listed. The data in this section is taken from the sources of the example sentences in the previous sections. Additional lexical data in this section is taken from the same sources as used in Part II of this dissertation (cf. §4.2). For cognates which underwent semantic shift and have a different meaning than ‘inside’, this meaning is indicated next to the form.

Two of the cognate sets are of PMP origin and spread over wider areas. Cognates going back to PMP \*qunəj ‘soft core; pith’ are found in Western Lamaholot (WL), Sika (SK) and in Central and Western Flores. Cognates going back to PMP \*daləm ‘in, area within, inner part of something; between; below, under; deep; mind, feelings’ are found in Kedang (KD) as well as in the Austronesian languages of Timor and in the Western Flores language Komodo.

Table 9.2: Locative nouns for ‘inside’ and their origins

PMP	*qunəj	*daləm	-	-
PCL	-	-	*ora	-
Reflexes in Flores-Lembata languages				
SK-Hewa	<i>uné n</i>	-	-	-
SK-Krowe	<i>une ng</i>	-	-	-
WL-Lewotobi	<i>one '</i>	-	-	-
WL-Lewoingu	<i>ono 'on</i>	-	-	-
WL-Solor	<i>one ě</i>	-	-	-
WL-Alorese (Baranusa)	<i>unu ng</i>	-	-	-
CL-Central Lembata	<i>una</i> ‘house’	-	<i>or</i>	-
CL-Atadei Painara	<i>una</i> ‘house’	-	<i>ora</i>	-
EL-Lewoeleng	-	-	-	<i>bolo</i>
KD-Leuwayang	<i>huna</i> ‘house’	<i>laléng</i>	-	-
KD-Leubatang	-	<i>laléng</i>	-	-
Reflexes in languages of Central Flores and Western Flores				
Keo	<i>'oné</i>	-	-	-
Ende	<i>oně</i>	-	-	-
Manggarai	<i>oné</i>	-	-	-
Komodo	-	<i>lalé</i>	-	-
Reflexes in Austronesian languages of Timor				
Amarasi	-	<i>nana-n</i>	-	-
Lole (Rote)	-	<i>dalé-k</i>	-	-
Helong-Funai	-	<i>dalé n</i>	-	-
Tetun	-	<i>lara n</i>	-	-
Mambae	-	<i>lala</i>	-	-

PMP=proto-Malayo-Polynesian; PCL=Proto-Central Lamaholot

In the languages of Flores-Lembata initial PMP \*d regularly changes into *l* if there is another liquid in the word, which explains the initial *l* in the Kedang form *laléng* ‘inside’ going back to PMP \*daləm (cf. §5.2.2). This means that, although the Flores-Lembata languages and the AN languages of Timor have changed their word order from LOC-N to N-LOC, these languages kept

Austronesian lexemes as locative nouns. In contrast to most languages discussed here, Central Lamaholot and Eastern Lamaholot did not retain Austronesian forms for ‘inside’. Central Lamaholot has innovated the form PCL \*ora ‘inside’ which probably also meant ‘liver’ as this is an alternate meaning in CL-Central Lembata, while Eastern Lamaholot has innovated PEL \*bolo ‘inside’. No clear cognates of these items could be found in other languages.<sup>5</sup>

Locative nouns in Flores-Lembata languages that denote ‘top’ can be grouped into two cognate sets given in Table 9.3. None of those two sets goes back to a PMP form, such as for example PMP \*babaw ‘upper surface’. Both cognate sets appear to be innovations at the level of Proto-Flores-Lembata (PFL). No clear cognates have been found in other languages. Reflexes in square brackets are attested in the language for which they are listed but cannot be used to express the topological relation ‘on top of’. Reflexes marked with a question mark are not clearly cognate.

Table 9.3: Locative nouns for ‘top’ and their origins

PFL	*lolo ‘top’	*wutu ‘end; tip’
SK-Hewa	? [ <i>lala</i> ‘upwards’]	<i>wutu n</i> ‘top; end’
SK-Krowe	-	<i>wutu</i> ‘top; end’
WL-Lewotobi	<i>lolõ</i>	<i>wutũ</i> ‘top’
WL-Lewoingu	<i>lolo n</i>	<i>wutu n</i> ‘top; last’
WL-Solor	<i>lolõ</i>	<i>wutũ</i> ‘top; end, tip, edge’
WL-Adonara	<i>lolõ</i>	-
WL-Alorese (Baranusa)	<i>lulu ng</i>	-
WL-Alorese (Alor Kecil)	<i>lolo ng</i>	-
WL-Alorese (Alor Besar)	<i>lolo ng</i>	[ <i>futu ng</i> ‘end’]
CL-Central Lembata	<i>lolo</i>	[ <i>wutu</i> ‘end’]
CL-Lewokukung	<i>lolo</i>	-
EL-Lewoeleng	<i>lol’o</i>	-
KD-Leuwayang	<i>lolo’</i>	[ <i>wutu</i> ‘tip’]
KD-Leubatang	-	? ‘ <i>oté</i> ‘top’

<sup>5</sup> Several languages of western Timor have similar forms meaning ‘hole’ which could be cognate with Lewoeleng *bolo* ‘inside’. Examples include Termanu (Rote) *bolo-k* ‘hole, cavity, hollow, pit’ and Helong *bolo* ‘hole’. However the semantic relation of ‘hole’ and ‘inside’ is not straightforward.

PFL \*lolo ‘top’ could be related to #blolo/golo ‘tall’ which has reflexes in Lamaholot and Kedang and also cognates in the Alor-Pantar languages, such as Blagar *blolu* ‘tall’ and Reta *balolu* ‘tall’. The putative cognate *lala* ‘upwards’ in SK-Hewa is not clearly related. The vowel change appears to be irregular and also the function and semantics are slightly different. The Hewa word *lala* ‘upwards’ is a preposition that points to a place that is located at a higher place and it does not function as a locative noun following the ground noun.

PFL \*wutu ‘end; tip’ has reflexes throughout all Flores-Lembata languages but it can only be used as a locative noun in Sika and some Western Lamaholot varieties. In CL-Central Lembata for instance, the semantics of *wutu* are restricted to an actual end of something as in (37) and cannot be extended to the meaning ‘surface’ or ‘top’. The same restriction holds for WL-Alorese and KD-Leuwayang. The use of *wutu* ‘end’ as a locative noun appears to be innovated in Sika and some WL varieties.

- (37) CL-Central Lembata  
*wo* [ *kaju wutu* ]  
 DIST wood end  
 ‘at the end of the piece of wood’ (S2:24)

For the expression of the topological relation ‘under; below’ in form of a locative noun, three cognate sets can be established for the Sika and Lamaholot varieties. These sets are given in Table 9.4. For Kedang, there is no information available on how this relation is expressed.

Table 9.4: Locative nouns for ‘under’ and their origins

PMP	-	*burit ‘back’	-	-
LH	-	-	-	#langu
PWL	-	-	*kəwəl	-
SK-Hewa	<i>lewu n</i>	-	-	-
WL-Lewotobi	-	<i>wuĩ</i>	-	-
WL-Lewoingu	-	-	<i>wewel en</i>	-
WL-Solor	-	-	<i>kenewel ẽ</i>	<i>langũ</i>
WL-Alorese	-	-	-	<i>lang</i>
CL-Central Lembata	-	-	-	<i>léng</i>
EL-Lewoeleng	-	-	-	<i>langu</i>

Only one of the cognates sets goes possibly back to a PMP form, namely PMP \*burit ‘hind part, rear, back’. The initial *w* is a regular reflex of PMP \*b, and PMP \*r appears to have merged with PMP \*R which becomes glottal stop or is deleted in WL. Final consonants are frequently dropped in Western Lamaholot (cf. §5.2). The other sets must be regarded as innovations at lower levels, as at the current stage no clear cognates in other languages could be found. The forms most formally similar to #langu are Timor-Alor-Pantar forms, such as *alolang* ‘below’ in Blagar-Pura and *galolang* ‘below’ in Reta. The WL-Solor form *kenewel* could be a derivation of *kewel* using the nominalising infix *-n-*. WL-Lewoingu *wewel* could be a partial reduplication of *wel*, a short form of *kewel*. However, *kewel* or *wel* are known to be found as independent forms in Lewoingu. Therefore this analysis has to be kept tentative.

### 9.3.5 Suffixes on Flores-Lembata locative nouns

In the previous sections, I showed that in Sika, Western Lamaholot, but not in Central Lamaholot, Eastern Lamaholot and possibly Kedang, a fossilised nasal suffix is found on the topological nouns. In the case of Kedang, it remains unclear whether there are fossilised suffixes on locative nouns or not because there is only little data on locative nouns in this language. Table 9.5 provides an overview of the nasal suffixes and the varieties that have them.

Table 9.5: Suffixes on locative nouns

PAN	*ni
PFL	*-n
SK-Krowe	-ng
SK-Hewa	-n
WL-Lewotobi	-ʻ / - $\tilde{V}$
WL-Lewoingu	-ʻon / -n / -en
WL-Solor	-ʻ $\tilde{e}$ / - $\tilde{e}$ / - $\tilde{V}$
WL-Alorese	-ng

Sika and WL-Alorese display much more regularity in the shape of the suffix than Western Lamaholot. The variation between SK-Krowe and SK-Hewa is

a dialectal difference between the southwestern tana 'Ai varieties of Sika that merge final *n* and *ng* to *n* and those further west that do not (Lewis and Grimes 1995:603). In Western Lamaholot, the realisation of the suffix is mainly nasal, in some cases, a glottal stop <'> is combined with the nasal or found on its own. Nasals are either alveolar, velar or reduced to a nasality feature of the final vowel.

In many Austronesian languages a nasal suffix is associated with genitive or possessive marking. PAN \**ni* has been reconstructed as a 'marker of possession and part-whole relationships'. In several languages this has developed into a suffix (Blust and Trussel 2010). As Sika and Western Lamaholot show traces of a suffix going back to PAN \**ni*, leads to the conclusion that a reflex has been present in Proto-Flores-Lembata and that Central Lamaholot, Eastern Lamaholot and Kedang have lost this suffix on locative nouns. In possessive constructions, a reflex is still found in Central Lamaholot, such as CL-Central Lembata *-n(u)* '3SG.POSS' (cf. §9.2.3.1). For Kedang, a reflex *-n* is still found on adjectives in attributive position (cf. §8.3). Also taking the Kedang reflex *-n* into account, makes it likely to reconstruct PFL \**-n* for the possessive suffix found on locative nouns. In the western varieties of Sika and in WL-Alorese, PFL final \**-n* appears to have changed into *ŋ*.

### 9.3.6 The emergence of N-LOC

The distribution pattern of LOC-N and N-LOC over the languages of Nusa Tenggara Timur and Timor-Leste shows exactly the same pattern as the distribution of N-POSS and POSS-N discussed in §9.2. This is no coincidence, as in most languages with N-LOC, the locational constructions are structurally possessive constructions. The locative noun is formally a possessed noun and is marked as such by a possessive affix. Thus, the non-Austronesian word order of POSS-N is also found in the locational construction. This has been stated explicitly for Lamaholot and Alorese (Klamer 2012b:82-83; Klamer to appear).

The fact that locative constructions are expressed as possessive constructions alone is not a non-Austronesian feature. This feature is also found in Austronesian languages in western Indonesia. Also cross-linguistically, it is very common that possessive constructions with a nominal possessor are employed to cover a wide range of meanings, which are not all strictly possessive. The most common semantics expressed by possessive constructions

(after ownership) are kinship relations, part-whole relations and other kinds of abstract relations (Shopen 2007:178). As described in this section, the languages of Flores-Lembata and of Timor also use (inalienable) possessive constructions to express locational constructions. The Flores-Lembata languages extend the possessive construction even further, namely to attributive property constructions (cf. §8.3).

Nevertheless, there are more parallels than the word order within the LOC-N languages of the area on the one hand and the N-LOC languages on the other hand. The locative nouns of the LOC-N languages are not marked morphologically for possession. In contrast, locative nouns in the languages with N-LOC — both Austronesian and non-Austronesian — usually are possessed nouns that are marked morphologically for possession. Although possessed locative nouns are not a non-Austronesian feature in general, they might indeed be a non-Austronesian feature of this region. Thus, the re-analysis of the locative nouns as possessed nouns in the Austronesian languages of this area could have been reinforced due to contact.

Possibly the re-analysis of locative nouns as possessed nouns preceded the word order change in the possessive construction. Considered to be possessed nouns, locative nouns would automatically be affected by any change in the possessive construction. Therefore, assuming this order of changes, it becomes evident that the change of N-POSS to POSS-N automatically also caused the change of LOC-N to N-LOC. The fact that POSS-N and N-LOC is attested in exactly the same sample of Austronesian languages supports the hypothesis that the two developments are connected. For Flores-Lembata, both features were probably innovated at the level of Proto-Flores-Lembata because they are found throughout all FL languages but not in their closest relatives to the west, i. e. the languages of Central Flores, Western Flores and Sumba. This innovation in PFL is a structural innovation of word order but there is no shared innovation in forms. Some of the locative nouns used in the Flores-Lembata languages are retentions from PMP, such as words going back to PMP \*qunəj ‘soft core; pith’ used to express ‘inside’, but others are innovations in the subgroups, such as for example PCL \*ora ‘inside’ or the word *lolo* ‘top’ which is found in WL, EL, CL and KD but not in Sika. Without a Sika reflex, it remains unclear whether this item can be reconstructed to PFL or it spread through the languages after they had already split up into subgroups.



## 9.4 Post-nominal numerals

### 9.4.1 Overview

The modern-day Austronesian languages show three different patterns: (i) Noun-Numeral (N-NUM) as the dominant order, (ii) Numeral-Noun (NUM-N) as the dominant order or (iii) no dominant order (Dryer and Haspelmath 2013). However, the distribution of these patterns shows a clear tendency for NUM-N in western Indonesia, Malaysia, the Philippines, Taiwan and N-NUM in eastern Indonesia and Papua-New-Guinea. Thus, a dominant N-NUM word order is more frequent in areas where non-Austronesian languages are also spoken. It has been suggested that a consistent pattern of N-NUM in Austronesian languages could have been caused by contact with non-Austronesian languages (Reesink and Dunn 2018:934). N-NUM is the most frequent word order found in non-Austronesian languages of the area of eastern Indonesia and Papua-New-Guinea (Reesink and Dunn 2018:930).

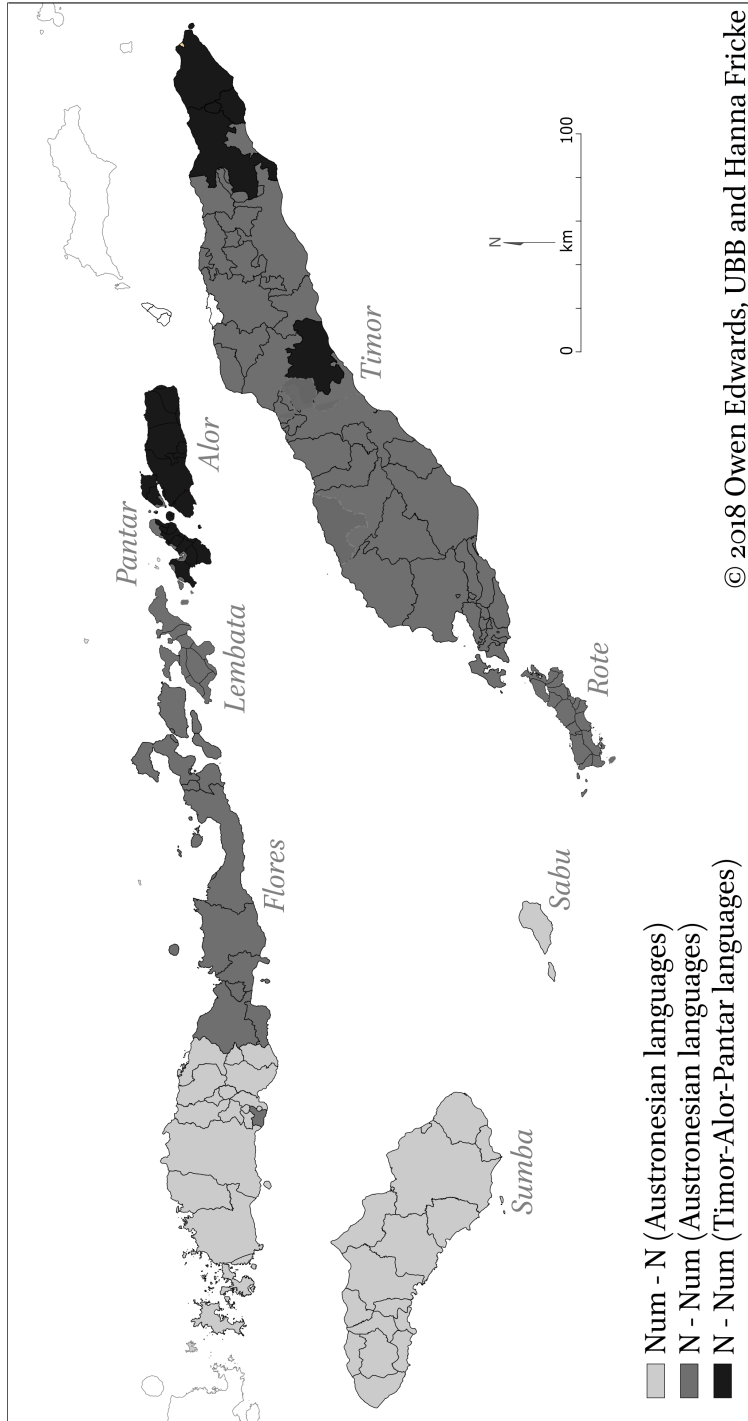
Reesink and Dunn (2018:934) have reconstructed both orders of noun and attributive numeral as possible ancestral states for Proto-Austronesian (PAN) and Proto-Malayo-Polynesian (PMP). The fact that both ancestral states can be reconstructed to PAN and PMP suggests that a N-NUM pattern could have been inherited from an Austronesian ancestor as a minor pattern. Due to contact with non-Austronesian languages this pattern became the exclusive order in languages that were in contact with non-Austronesian speakers.<sup>6</sup>

Looking closely at the languages of Nusa Tenggara Timur and Timor-Leste, precisely again the division of west and east relating to NUM-N and N-NUM becomes visible, as displayed on the map in Figure 9.3. Western Flores, Sumba and Sabu have NUM-N word order following the inherited Austronesian pattern. In contrast, the Austronesian languages of Timor, the Flores-Lembata languages, as well as the Central Flores languages have N-NUM following the typical non-Austronesian pattern, also found in the Timor-Alor-Pantar languages.

---

<sup>6</sup> It has to be noted that there are also a few examples of Austronesian languages with a dominant N-NUM order that are located outside of the contact area of eastern Indonesia. Dryer and Haspelmath (2013) lists the language Ma'anyan on Borneo and the language Paiwan on Taiwan as having N-NUM as their dominant order. There is no evidence to explain these cases of word order by contact.

Figure 9.3: Order of Numeral and Noun



This section is structured as follows. In §9.4.2, I describe the NUM-N order found on Sumba and in Western Flores to show that these languages, which are among the closest relatives of the Flores-Lembata languages, retained the typical Austronesian order in the numeral phrase. In §9.4.3, I show that differently to the languages in the western part of the area, the languages of Central Flores, Flores-Lembata, the AN languages of Timor have N-NUM order and that the same order is also found in the non-Austronesian Timor-Alor-Pantar languages. §9.4.4 is an overview of the etymology of numerals in the Flores-Lembata languages. In contrast to the non-Austronesian characteristic found in the order of the numeral phrase, the numeral lexemes themselves are overwhelmingly of Austronesian origin. Nevertheless, traces of non-decimal counting systems are attested which is different to the inherited Austronesian decimal system (Blust 2013:278). In §9.4.5, I discuss the emergence of the non-Austronesian N-NUM order in the Austronesian languages of the region, with a focus on the Flores-Lembata languages.

#### 9.4.2 NUM-N

In the languages of Sumba, Sabu and Western Flores, numerals are pre-nominal, thus follow the typical Austronesian pattern. Frequently, numerals are followed by a classifier. This classifier can be obligatory or optional depending on the language. In some languages, such as Hawu and Manggarai, the combination of classifier and numeral can also be placed post-nominally. However, this is a minor pattern, possibly showing topicalisation of nouns.

In Kambara, numerals are pre-nominal. In a noun phrase, a numeral is always combined with a classifier that follows the numeral. Kambara has five different classifiers that are used for different semantic classes of nouns, such as humans, animals, long objects or flat objects (Klamer 1998:139). An example is given in (38), where the classifier *ngiu* is placed in between the numeral *dua* ‘two’ and the noun *kamambi* ‘goat’.

- (38) Kambara  
*dua ngiu kamambi*  
 two CLF goat  
 ‘two goats’ (Klamer 1998:139)

In the Western Flores language Manggarai, numerals are also pre-nominal, as shown in (39a) and (39b). In Manggarai, there are two main classifiers

that can optionally be used between the numeral and the noun. These are *mongko* for things and animals, and *ngata/tau* for humans (Semiun 1993:13-14). The classifier *ngata* is used for one person, the classifier *tau* is for more than one as in (39b).

- (39) Manggarai
- a. *telu gelas*  
three glass  
'three glasses' (Semiun 1993:6)
- b. *sua-tau mensia*  
two-CLF human  
'two people' (Original translation: 'two persons') (Semiun 1993:43)

In Hawu on Sabu (40), numerals are also pre-nominal. Hawu has several different classifiers used according to the shape and other semantic properties of the nominal referent (Walker 1982:18-20).

- (40) Hawu
- héo bela bafu*  
nine CLF blouse  
'nine blouses' (Walker 1982:19)

In Manggarai (41a) and in Hawu (41b), a minor pattern of postposed numerals with classifier following the numeral is attested.

- (41) a. Manggarai
- tanah a-lingko*  
land one-CLF  
'an area of land' (Semiun 1993:43)
- b. Hawu
- tudi due bengu*  
knife two CLF  
'two knives' (Walker 1982:19)

The word order of N-NUM-CLF in the examples (41a) and (41b) indicates that the classifiers in languages like Hawu and Manggarai are best analysed as

nouns and the other nouns, here 'land' and 'knife', are pre-posed or topicalised. Under this analysis, the word order of NUM-N remains, as the numeral is preceding the nominal classifier.

In sum, the languages of Western Flores, Sumba and Sabu all have NUM-N word order. Some of these languages have the additional option of pre-posing the noun, while the classifier remains after the numeral, which leads to a N-NUM-CLF order.

### 9.4.3 N-NUM

#### 9.4.3.1 The Central Flores languages

In the Central Flores language Keo (42), numerals follow the noun and an obligatory classifier is placed in between the noun and the numeral. There is a range of different classifiers available for count nouns (Baird 2002:145-147).

- (42) Keo  
*sapa di'é tedu*  
 canoe CLF three  
 'three canoes' (Baird 2002:145)

This CLF-NUM combination following the noun (N-CLF-NUM) is different to the topicalised noun followed by a numeral and a classifier (N-NUM-CLF) in languages such as Hawu and Manggarai, discussed in §9.4.2 above. In the languages of Central Flores, the classifier is in between the noun and the following numeral. Analysing classifiers as nouns makes the numerals in these languages entirely post-nominal, thus following the N-NUM pattern. In the languages Hawu and Manggarai, the noun is preposed and the order of NUM-N is retained by the numeral and the classifier which is originally a noun.

#### 9.4.3.2 The Flores-Lembata languages

Throughout all Flores-Lembata languages, numerals are post-nominal. If a classifier is employed, it is placed between the noun and the numeral following the template N-CLF-NUM. With the numeral 'one', in most cases, no classifiers are used. For higher numbers, there are classifiers. However, there

is a lot of variation found in the number of different classifiers and in the degree of optionality of classifiers among the languages of Flores-Lembata.

In Sika, there are a couple of different obligatory classifiers for referents of different shapes and sizes (Fricke et al. 2019). In example (43) below, the classifier *teman* is used in between a compound noun and the numeral *hutu* ‘four’. The classifier *teman* is widely used for any round or bulky object of middle to big size.

- (43) SK-Hewa  
*'Ia pau wua-n teman hutu.*  
 DIST mango fruit-POSS CLF four  
 ‘There are four mangoes.’ (Fricke 2014a:40)

Western Lamaholot possesses several numeral classifiers that are used for measurements (Kroon 2016:152). They are mostly used for fruits, parts of plants, basically to make uncountable nouns countable, such as *lépa* ‘CLF.box’ in (44) which probably means something like ‘container’ and is used to make the uncountable noun *tahan* ‘rice’ countable.

- (44) WL-Lewoingu  
*tahan lépa to'u*  
 rice CLF.box one  
 ‘a box/container or rice’ (Nishiyama and Kelen 2007:29)

However, for many WL nouns, no classifier is needed, such as in example (45) from WL-Lewoingu, where the numeral *telo* ‘three’ follows directly the noun *hépe* ‘knife’. Also in WL-Alorese, we find a similar pattern. Nouns and numerals are merely juxtaposed, such as in (46).

- (45) WL-Lewoingu  
*hépe telo*  
 knife three  
 ‘three knives’ (Nishiyama and Kelen 2007:44)
- (46) WL-Alorese  
*ni ning aho rua*  
 3SG POSS dog two  
 ‘his two dogs’ (Klamer 2011:45)

In CL-Central Lembata, there is only one general classifier *ua* ‘CLF’ which is obligatorily used with any numeral above one. An example is in (47) where the noun *lamé* ‘man’ is followed by the general classifier *ua* and the numeral *jua* ‘two’.

- (47) CL-Central Lembata  
*lamé ua jua*  
 man CLF two  
 ‘two men’ (S2:1)

In Kedang, there are two optional classifiers that can accompany the numeral. The general classifier *urén* (48), and the more specific classifier *ulu* ‘seed, kernel, stone’ for round objects (Samely 1991a:96).

- (48) KD-Leuwayang  
*wéta' urén sué*  
 house CLF two  
 ‘two houses’ (Samely and Barnes 2013:662)

In sum, all Flores-Lembata languages all have post-nominal numerals. In Sika and Central Lamaholot, numerals higher than the numeral for ‘one’ are obligatorily accompanied by a classifier. In Kedang, there is the optional general classifier *urén*. Finally, in Western Lamaholot and Alorese, no general classifier exists but a couple of specific classifiers that are mainly used to make otherwise uncountable nouns countable.

#### 9.4.3.3 The AN languages of Timor

The Austronesian languages of Timor also have post-nominal numerals and optional classifiers, such as in Tetun (49a) and South Mambae (49b), or no classifiers, such as in Helong (49c) and Amarasi (49d).

- (49) a. Tetun  
*ata nia-k rua né'é*  
 slave 3SG-POSS two this  
 ‘these two slaves of her’ (van Klinken 1999:133)
- b. South Mambae  
*haru nora ruu*  
 shirt CLF two  
 ‘two shirts’ (Fogaça 2017:154)

## c. Helong

*Kaim sos asu tilu.*

1PL.EXCL buy cow three

'We bought three cows.'

(Balle 2017:15)

## d. Amarasi

*n-fee naan toon teun*

3-give DIST year three

'That one has been given three years.'

(Edwards 2016a:265)

## 9.4.3.4 Non-AN Timor-Alor-Pantar languages

In the non-AN Timor-Alor-Pantar (TAP) languages numerals are also post-nominal. Classifiers between noun and numeral are common in most of the languages of Alor and Pantar but cannot be reconstructed to Proto-Alor-Pantar (Klamer 2014a:150-152; Klamer 2014c). In the Western Pantar noun phrase in (50) the optional classifier *haila* 'CLF:area' is placed in between the noun *bla* 'house' and the numeral *ye* 'one'.

## (50) Western Pantar

*bla (haila) ye*

house CLF:area one

'one house'

(Holton 2014:56)

As in this example, the use of classifiers in the Alor-Pantar languages is not necessarily obligatory and there may be specific restrictions, such as in Kaera, where classifiers are not used with animals (Klamer 2014b:123) or in Adang, where numerals higher than one are mainly used with classifiers (Robinson and Haan 2014:249). In Wersing, classifiers are even not found at all (Schapper and Hendery 2014:466). Klamer (2014a) suggested that the classifiers in the Alor-Pantar languages developed through contact with Austronesian languages of the region (Klamer 2014a:159; Klamer 2014c).

In the TAP languages of Timor, classifiers are present but used less extensively. In Makasae for example, classifiers are mainly used for human or animal referents (51) and there is a tendency for classifiers to be optional with the numeral 'one'.



- (51) Makasae  
*Gi bai boku u suri.*  
 3SG pig CLF one shoot  
 'He shot a pig.' (Huber 2008:23)

In Makalero, classifiers are mainly associated with counting and there is no suitable classifier for all nouns (Huber 2011:120-121).

#### 9.4.3.5 Summary

The Austronesian languages of Central Flores, Flores-Lembata and Timor consistently postpose the numeral in relation to the noun that is counted. Classifiers are obligatory, optional or largely absent depending on the individual language. There is a tendency for the AN languages surveyed here that the further east the less important the use of classifiers appears to be. In the Central Flores language Keo, classifiers are obligatory, in the Flores-Lembata languages a mixed picture emerges, while in the languages of Timor classifiers are optional or lost.

The non-Austronesian Timor-Alor-Pantar languages have the same word order in the numeral phrase as the AN languages discussed in this section, thus postposed numerals in relation to the noun (N-NUM). Classifiers in between noun and numeral are a common but non-inherited feature in the languages of Alor-Pantar. In the TAP languages of Timor classifiers are also attested but used less.

#### 9.4.4 Etymology of numerals in Flores-Lembata

Flores-Lembata basic numerals are etymologically mainly of Austronesian origin and follow a decimal counting system inherited from Proto-Austronesian (Blust 2013:278). However, a few exceptions are found in the numerals for 'one', 'four', 'eight' and 'ten'. Table 9.6 gives an overview of Flores-Lembata basic numerals from one to ten in comparison to PMP forms. There is no data on Eastern Lamaholot numerals. Numerals that are not or not straightforwardly inherited from PMP are marked in bold and are discussed below.

Table 9.6: Basic numerals in the Flores-Lembata languages

	PMP	PFL	Sika	WL (AL)	WL (LWI)	CL (κκ)	Kedang
'one'	*əsa	*ha	<i>ha</i>	<i>tou</i>	<i>to'u</i>	<i>tu(né)</i>	<i>'udé'</i>
'two'	*duha	*dʒua	<i>rua</i>	<i>rua</i>	<i>rua</i>	<i>jua</i>	<i>suwé</i>
'three'	*təlu	*təlu	<i>telu</i>	<i>talo</i>	<i>telo</i>	<i>telu</i>	<i>télu</i>
'four'	*əpat	*əpat	<i>hutu</i>	<i>paa</i>	<i>paa</i>	<i>paat</i>	<i>apa'</i>
'five'	*lima	*lima	<i>lima</i>	<i>léma</i>	<i>léma</i>	<i>léém</i>	<i>lémé</i>
'six'	*ənəm	*ənəm	<i>ena</i>	<i>namu</i>	<i>nemung</i>	<i>enem</i>	<i>énéj</i>
'seven'	*pitu	*pitu	<i>pitu</i>	<i>pito</i>	<i>pito</i>	<i>pito</i>	<i>pitu</i>
'eight'	*walu	*valu	<i>walu</i>	<i>buto</i>	<i>buto</i>	<i>buto</i>	<i>butu rai</i>
'nine'	*siwa	*siva	<i>hiwa</i>	<i>hiwa</i>	<i>hiwa</i>	<i>siwa</i>	<i>lémé apa'</i>
'ten'	*sa-ŋa-puluq	*spulu	<i>pulu</i>	<i>kertou</i>	<i>pulo</i>	<i>spulo</i>	<i>pulu</i>

AL=Alorese, LWI=Lewoingu, κκ=Kalikasa (Central Lembata)

For the numeral 'one', Sika *ha* is a clear reflex of PMP \*əsa 'one' as PMP \*s > h is regular in Sika. All other Flores-Lembata languages have innovated the form for the numeral 'one'. The Lamaholot forms *tou*, *to'u* and *tuné* are all cognate. The second syllable of the CL word *tuné* is an insertion. The Kedang form *'udé* 'one' is probably not cognate with the other forms for 'one'. The origins of these numerals for 'one' in Lamaholot and Kedang remain unknown. There is a possible connection with the Timor-Alor-Pantar languages, as the vowel *u* also appears in the TAP numerals for 'one'. PAP \*nuk 'one' (Schapper and Klamer 2017:311), Makalero *u(n)* 'one' and Makalero *tu* 'first' may point to borrowing from TAP languages. However, as the words are very short, the evidence appears to be too thin and difficult to prove.

The Kedang numeral *suwé* 'two' is not straightforwardly cognate with the other forms for 'two' which are reflexes of PMP \*duha 'two', as a change of PMP \*d- > s is not regularly attested. However, it is likely that for this form an irregular change of PMP \*d- > PFL \*dʒ already occurred at the level of PFL, with subsequent \*dʒ > s in Kedang. Based on the Sika and Lamaholot forms for 'two', PFL \*dʒua 'two' has to be reconstructed. The reconstruction of PFL \*dua would not account for the present-day Lamaholot forms with initial *r* and *j* (cf. §5.2.2.6, §5.2.2.1). A change of final \*a > e also occurs in other Kedang words, such as PMP \*ina > Kedang *iné* 'mother'. The *w* in *suwé* 'two' could be an insertion in between the two vowels. Thus, Kedang *suwé*

‘two’ is most likely cognate with the other forms.

The Sika numeral *hutu* ‘four’ is most likely a borrowing from neighbouring Lio *sutu* ‘four’, going back to Proto-Central-Flores (PCF) \*wutu ‘four’ (Elias 2018:120). The change of \*s > h is regular in Sika (cf. §5.2.3.2).

The Kedang numeral *lémé apa* ‘nine’, composed out of *lémé* ‘five’ and *apa* ‘four’, shows a quinary system, in exactly the same way as found in the languages of Alor-Pantar which also combine numerals for ‘five’ and ‘four’ to create a numeral for ‘nine’ (Schapper and Klamer 2017:288). Thus, Kedang probably borrowed the quinary system for its numeral ‘nine’ from Alor-Pantar languages. Schapper and Klamer (2017:307) say that the borrowing of the quinary system could very well be related to cultural contact between the speakers of Kedang and Alor-Pantar languages. However, as discussed further below, the Kedang numeral for ‘nine’ could also be a remnant of an older non-decimal system.

The first part *ker* ‘ten’ of the Alorese numeral *kertou* ‘ten’ is clearly a borrowing from Alor-Pantar languages. For PAP \*qar ‘ten’ has been reconstructed (Schapper and Klamer 2017:311). The second part *tou* ‘one’ of the numeral ‘ten’ is a retention from Proto-Western Lamaholot (PWL) \*toʔu ‘one’. Since Alorese speakers settled on Pantar and Alor until today, there has been intense contact with speakers of Alor-Pantar languages (Moro 2018), therefore borrowing is very likely to occur.

The Kedang form *butu rai* ‘eight’ probably points to a now obsolete non-decimal counting system, as had been suggested by Schapper and Hammarström (2013:428) and Schapper and Klamer (2017:306). The numeral is composed of two words, *butu* and *rai* ‘many’. The form *butu* standing alone does not have any meaning in the modern language, apart from being used as an abbreviation for *butu rai* ‘eight’ (Samely and Barnes 2013:135,557).<sup>7</sup> As *rai* means ‘many’, *butu* could originally have meant ‘four’ in Kedang leading to the literal gloss ‘four many’ *butu rai* for the numeral ‘eight’. Although nowadays, the putative original \*butu ‘four’ has been replaced by *apaʔ* ‘four’, a numeral of Austronesian origin. Kedang’s former numeral *butu* ‘four’ probably ultimately comes from the same source as Proto-Central Flores (PCF) \*wutu ‘four’. The change of \*b > w is regular in Central Flores (Elias 2018:90).

<sup>7</sup> Schapper and Hammarström (2013:428) argue that *rai* means ‘two’, similar to the numerals in the Central Flores languages where the numeral ‘eight’ is composed of ‘two’ and ‘four’. However, as Kedang has *suwé* ‘two’ and *rai* ‘many’ this interpretation is unlikely.

The source could be PCEMP \**butu* ‘group, crowd, flock, school, bunch, cluster’ which has been reconstructed to Proto-Central-Eastern-Malayo-Polynesian (PCEMP) by Blust and Trussel (2010). In Kedang, this original meaning is still found in the fixed expression *butu bongan* ‘sit and visit’ (Samely and Barnes 2013:135). Here the word *butu* most likely retains a meaning more closely to the reconstructed PCEMP \**butu* ‘crowd, group, bunch’. The second word *bongan* in the expression *butu bongan* ‘sit and visit’ also means ‘visit, make a social call, sit and visit’ (Samely and Barnes 2013:120). From this evidence, I propose that Proto-Kedang (PK) \**butu* meant ‘group; bunch’ and also ‘four’. Also Proto-Alor-Pantar (PAP) \**buta* ‘four’ could be connected with PCEMP \**butu* ‘group, crowd, flock, school, bunch, cluster’.

The Lamaholot numeral *buto* ‘eight’ also remains unexplained when assuming a purely decimal system because it is etymologically related to numerals meaning ‘four’ in other languages, such as the Central Flores languages. If assuming that the Lamaholot counting system was also a mix of decimal and non-decimal, as I suggested for Kedang, and *buto* indeed originally meant ‘four’, then *buto* ‘eight’ in Lamaholot could be explained by originally having a second element similar to Kedang *butu rai* ‘eight’. The putative second part of the Lamaholot numeral ‘eight’, such as *rai* ‘many’ in Kedang, became unnecessary because the numeral ‘four’ was replaced by *paat* (< PMP \**əpat* ‘four’) and the mixed system was replaced by a decimal system which led to the interpretation of *buto* alone as ‘eight’. As mentioned earlier, also in Kedang the numeral *butu rai* ‘eight’ can be abbreviated to *butu* ‘eight’.

In sum, there was possibly a non-decimal system of ‘one, two, three’ and the word ‘bunch, group’ for any higher numeral in Kedang, Lamaholot and maybe also in the Alor-Pantar languages. Later the word for ‘bunch, group’ gained a more specific meaning, namely ‘four’, and by multiplication, this led to the numeral ‘eight’. It remains unknown whether there were more non-decimal numerals in this system because no traces are left. Nowadays in Kedang and Lamaholot, a decimal system with mainly Austronesian lexemes is the norm. But it is possible that there was a time where both systems were used. Such a situation is still found today in the AN language Mambae spoken on Timor. There are varieties of Mambae that use a decimal counting system, while others use a non-decimal system. The wordlists in Fogaça (2017:243-245) show that Central Mambae has a purely decimal system, while Northwest Mambae and South Mambae have a non-decimal sys-

tem for the numerals six to ten.

For Central Flores, it has been argued that the non-decimal system in the Austronesian languages of that area is a feature of non-Austronesian origin (Schapper and Klamer 2017:315). The remnants of non-decimal systems in the numerals 'eight' in Lamaholot and Kedang and also 'nine' for Kedang, could also be attributed to non-Austronesian contact. Or more precisely, the numeral 'eight' points to a pre-Austronesian non-decimal system that was probably present in these languages in addition to the new decimal system introduced from an Austronesian ancestor. Possibly both systems were competing at a certain point in time and finally the decimal system won, while the non-decimal system was lost, being kept in Kedang a bit longer than in Lamaholot. Meanwhile, the numeral 'ten' in Alorese points to more recent borrowing from Alor-Pantar languages. The numeral 'nine' in Kedang could also be a recent calque from AP languages, or it could be a retention of an older non-decimal system which was reinforced in Kedang (but not other FL languages) by contact with AP.

#### **9.4.5 The rise of post-nominal numerals**

In the previous sections, I have shown that the languages of Central Flores, of Flores-Lembata and the Austronesian languages of Timor underwent a change in word order from NUM-N to N-NUM. The N-NUM order is considered an innovation because Austronesian languages further west, such as in western Flores and on Sumba, as well as Austronesian languages in general have an inherited NUM-N word order, as has been shown in §9.4. At the same time, the counting systems of several languages that underwent this syntactic change show traces of non-decimal counting systems, as I have shown in §9.4.4. This again is an innovation in these Austronesian languages as a decimal counting system can be reconstructed to Proto-Austronesian. These two innovations, in word order and in counting system, are not necessarily connected directly but they both could have been caused by contact situations with non-Austronesian languages.

The change in word order that is attested in Central Flores, Flores-Lembata and in the AN languages on Timor could have either happened once when an ancestor of those languages that display the N-NUM order today was in contact with speakers of non-Austronesian languages, or the feature could have diffused through the various Austronesian subgroups concerned.

The scenario of a single event of change in an undefined ancestor language becomes unlikely when considering the genealogical relations. The closest relatives of Central Flores are the western Flores languages (Fernandez 1996). These did not undergo the change from NUM-N to N-NUM, neither do they show traces of non-decimal counting systems. In §5.5, I provide evidence for subgrouping the Central and Western Flores languages with the languages of Flores-Lembata and of Sumba. Therefore, any scenario of shared innovation for NUM-N would have to explain why the languages of Western Flores and Sumba do not show this change. Therefore, I suggest that at least three separate contact scenarios led to the pattern that is attested in Nusa Tenggara Timur and Timor-Leste today. Proto-Central Flores, Proto-Flores-Lembata and the proto-languages of Timor all underwent the change from NUM-N to N-NUM independently.

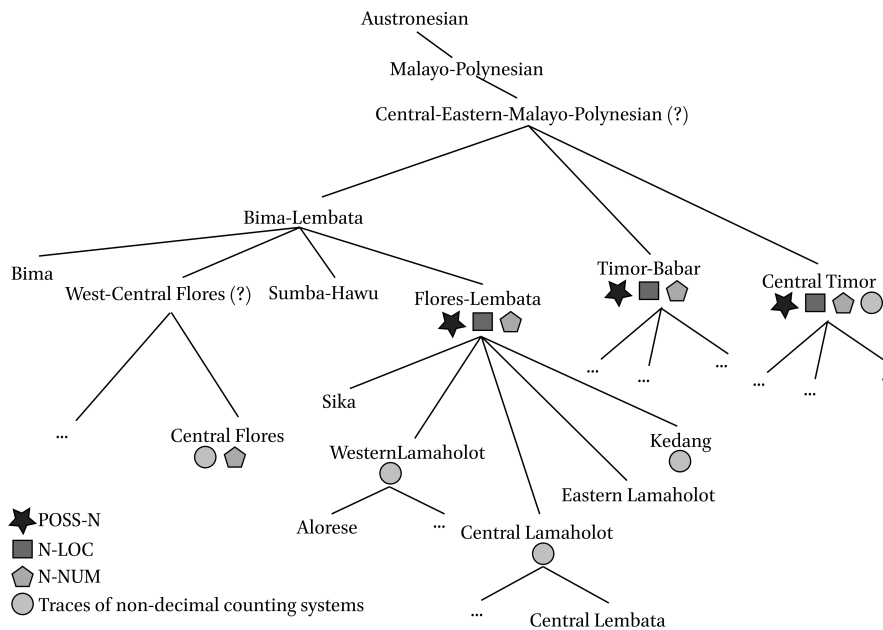
## 9.5 Conclusions

In this chapter, three non-Austronesian syntactic features of the noun phrase and the traces of non-decimal counting systems have been discussed. The syntactic features are found in a subset of the Austronesian and in all non-Austronesian languages of Nusa Tenggara Timur and Timor-Leste. In the Austronesian languages of this area these features are innovations, while in the non-Austronesian Timor-Alor-Pantar languages they are inherited. POSS-N, N-LOC and N-NUM are attested in the Flores-Lembata languages and in the AN languages of Timor. The feature of N-NUM spreads further including the Central Flores languages. I propose that these contact-induced word order changes took place in several proto-languages independently.

In Figure 9.4, the innovation of features is indicated with different symbols. The symbol is placed below the name of a subgroup in which all languages show the respective feature. Consequently, the feature can be reconstructed to the proto-language of the subgroup. The tree structure is based on the current knowledge on the languages investigated (cf. §1.3.1).

Proto-Flores-Lembata and the proto-languages of the AN languages of Timor each underwent independently the same two syntactic changes leading to N-NUM and POSS-N. In addition, as locative nouns were reanalysed as possessed nouns, they were moved to a post-nominal position, leading to N-LOC.

Figure 9.4: Innovations in the NP



Proto-Central Flores only switched the order of numeral and noun and gained N-NUM. I propose independent developments because, as long as there is no lexical or phonological evidence that could prove that Flores-Lembata and Timor form an innovation defined subgroup within the Austronesian languages of the area, there is no reason to argue for a single contact event. In contrast, there is evidence for a Bima-Lembata subgroup including PFL, Central Flores and the Austronesian languages further west on Flores and Sumba (cf. §5.5). Assuming word order changes on a higher level, such as Bima-Lembata or even higher, would demand an explanation why there are languages that did not inherit the new pattern.

Traces of non-decimal counting systems are an additional innovation found in the languages that underwent the word order change in the numeral phrase. These innovations are possibly also attributed to contact with non-Austronesian languages but there is not necessarily a causal connection with the change in word order. For Central Flores, the non-decimal counting system is found in all Central Flores languages. Therefore, it can be suggested that it emerged in Proto-Central Flores. In the Flores-Lembata

languages this is not the case. Only in Kedang, and possibly in Lamaholot, traces of non-decimal systems are found. Reconstruction of a non-decimal system to PFL is not straight-forward, though it is possible that decimal and non-decimal systems were in competition at this stage, leading to the mixed (though mostly decimal) systems seen in the present day languages.