Papuan-Austronesian contact in pre-modern eastern Indonesia

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1. Introduction

The study of language contact in eastern Indonesia has traditionally investigated the diffusion of various grammatical (not lexical) features across the borders of Papuan (PAP) and AN language families, across a macro-region spanning thousands of kilometers with hundreds of languages (for example, Klamer, Reesink & van Staden 2008; Reesink & Dunn 2018). Studies of lexical contact have remained limited, reflecting the traditional focus on studying similarities in basic vocabulary in order to reconstruct family relationships, treating effects of contact as a nuisance and ignoring lexical diversity. Over the last decade, studies of contact in the region have progressed in taking smaller scale approaches, focussing on smaller sub-regions or individual language pairs, and incorporating effects of contact in both grammar and lexicon (Robinson 2015; Edwards 2016; 2018; 2021; 2023; Moro 2018; 2019; Fricke 2019; Saad, Klamer & Moro 2019; Klamer & Saad 2020; Moro & Fricke 2020; Moro, Sulistyono & Kaiping 2023; Schapper & Huber 2023).

This chapter continues this approach, showcasing in detail how different types of language change point to different types of contact situations between AN and PAP languages. It first introduces the features that are diagnostic of cross-family AN and PAP contact in the region in section 2. Then it presents, in section 3, the contact that occurred in three sub-regions in eastern Indonesia; the regions are indicated in figure 1.[2] First the Halmahera archipelago (§3.1), where PAP languages show traces of contact with AN; then the region of East Flores and Lembata (§3.2), where AN languages show traces of contact with PAP; and finally the Alor and Pantar archipelago (§3.3), where we find both AN traces in PAP languages and PAP traces in an AN language. In each of these sub-regions, the outcomes of the language contact suggests different contact situations. Contact may have happened between a pair of languages, or between one and many. It may have happened in ancient as well as historical times; it likely had variable intensities and lengths; and involved bilingual or monolingual speakers, and only adults or adults as well as pre-adolescents.

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[2] The current chapter investigates 'pre-modern' contact, defined here as the time between approx. a century ago and the period when Austronesian (Malayo-Polynesian) arrived in the regions 3000-4,000 years ago (Pawley 2005; Bellwood 2017). This chapter does not discuss modern AN influences through AN Indonesian, the national language of Indonesia.

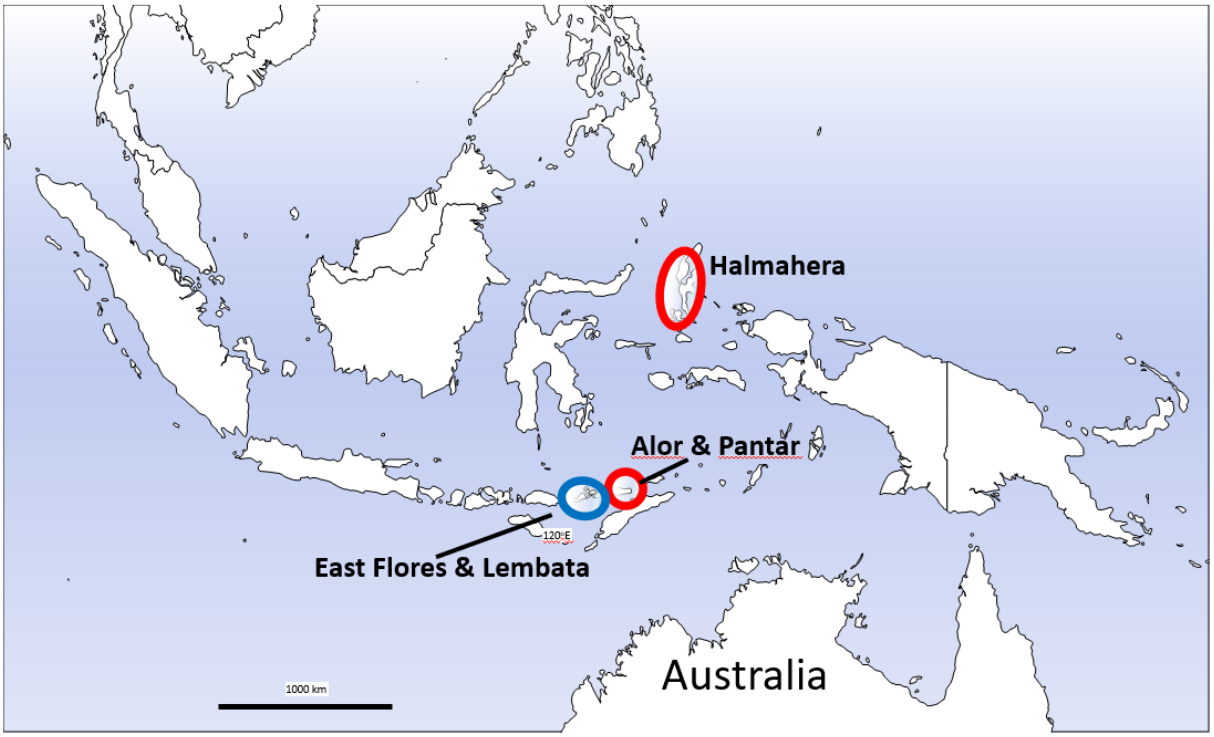

Figure 1. Map of Indonesia with the three subregions discussed in this chapter. Red = mainly PAP languages, blue = AN languages.

2. Signatures of PAP-AN cross-family contact in eastern Indonesia

This section reviews the specific features that have transferred across AN and PAP languages in eastern Indonesia, according to five general types of contact-induced change: lexical borrowing (§2.1), morphological borrowing (§2.2), syntactic convergence or restructuring (§2.3), additive transfer (§2.4) and morphological simplification (§2.5). The features discussed below will be further referred to in the case studies in section 3.

2.1. Lexical borrowing

All types of language contact result in the borrowing of words, because words are the most easily diffused feature of language, due to their high degree of metalinguistic awareness, their referential properties and easy segmentability. The number and semantic types of loan words however can vary, depending on the specific contact situation. Limited numbers of loan words are typically taken to suggest less intense contact than lexicons populated with many non-inherited words. The fact that loan words are restricted to certain specific semantic domains, such as technology, trade, social structures, subsistence, or religion, points to different types of contact than when loan words are part of the basic vocabulary of a language. Loan words may come from one or two source languages, or they originate from many different sources, which suggests a different type of contact situation.

In this chaper, AN loan words in PAP languages are recognized as such if they are formally and semantically similar to proto AN or proto MP forms as presented in Blust &

Trussel (2016)[3] (§3.1, 3.3), or if they are similar to forms of a lower AN subgroup, such as proto Flores Lembata (Fricke 2019), or proto Rote Meto (Edwards 2021) (§3.2, 3.3). PAP loans in AN languages of the region are those words that are related to proto-forms in PAP families of the region. Tentative lexical reconstructions for the North Halmahera family are available in Voorhoeve (1994) (§ 3.1). Lexical reconstructions of the Timor Alor Pantar (TAP) family, or its subfamily Alor Pantar (AP) are available in (Holton et al. 2012; Holton & Robinson 2017b; 2017a; Schapper & Huber & van Engelenhoven 2017a)(§3.3).

2.2. Morphological borrowing

While the lexicon is highly transferable in contact situations, the borrowing of bound morphemes is rarer. This has to do with the fact that morphology is a complex, integrated part of grammar with a relatively small functional load. Within morphology, morphemes that are functionally opaque or abstract (e.g. affixes encoding person and number of subjects) tend to be more resistant to borrowing than those with more concrete and semantically transparent meanings (e.g. affixes that express nominal plural) (Thomason 2001: 76-77; Gardani 2012: 78-79).

Also, the typological fit of the languages in contact plays a role in facilitating or prohibiting the transfer of bound morphemes: it is easier to borrow morphology from a language with parallel morphological structures than it is to borrow from a language with no such similarities (Thomason 2001: 77; Klamer 2002: 378–380).

For these reasons, post-adolescent second language learners who have passed the 'critical threshold' (Lenneberg 1967) for language acquisition have problems acquiring new morphological structures (Kusters 2003: 21, 48), and the morphological structures and forms of a second language that are not part of a speaker's first language are more likely to be simplified or generalised (Jarvis & Odlin 2000: 552–553). At the same time, bilingual children are able to dissociate grammatical meanings from their morphological forms, and are able to remap them on different forms in their other language (Sánchez 2004; 2006). This is why remapping of categories of one language onto morphological units of another language is usually found in speech of pre-adolescents.

In our region, the following morphemes have been borrowed from AN into PAP languages: a *CV*-prefix that derives nouns from verbs by reduplicating the initial CV-syllable of the base word, and a set of classifying prefixes on numerals (§3.1). Transferred morphology from PAP into AN languages includes a nominal plural suffix (§3.2).

2.3. Syntactic convergence or restructuring

Contact may lead to the restructuring of syntactic patterns in one language based on patterns found in the other, for instance in the restructuring of constituent order of clauses and NPs. Over the past twenty years, various publications have proposed structural features as typical

[3] Using the Austronesian Comparative Dictionary (ACD) here comes with the caveat that the lexicon from eastern Indonesian languages is severely under-represented in the reconstructions proposed there: of the 208 languages that Glottolog (Hammarström et al. 2023) lists as spoken in eastern Indonesia, less than 50% (102) are in the ACD, and of those represented, most (52) feature with less than ten words, of which 25 feature in the dictionary with just a single word. The empirical base for AN/PMP reconstructions relating to eastern Indonesian languages is thus still extremely small (Klamer 2019).

for AN or PAP languages in eastern Indonesia, so that these could be used to characterise typological types, diagnose cross-family contact and establish 'linguistic areas'; examples include Klamer 2002; Himmelmann 2005; Klamer & Reesink & van Staden 2008. (See the overviews in Klamer & Ewing 2010; Holton & Klamer 2018).

AN languages outside of eastern Indonesia typically have head-initial [verb-object] order, and negators in pre-predicate position. PAP languages are generally head-final [object-verb], and clause-final negation is typical for PAP (Reesink 2002). Possessive NPs in the PAP languages of eastern Indonesia typically have the order [possessor-possessum], as in (1), contrasting with the [possessum-possessed] order in western AN languages, illustrated in (2). But in eastern AN languages, possessor-possessum order is often attested, for example in Central Lamaholot-Lembata, (3). This so-called 'reversed genitive' in AN languages is generally seen as the result of contact with PAP languages (Grimes 1991: 292; Klamer et al. 2008: 123–128; Fricke 2019; Schapper & Gasser 2023).

(1) Sahu (North Halmahera, Visser & Voorhoeve 1987: 53)
ai *ngowa'a*
3SG.M.POSS child
'his child'

(2) Indonesian (own knowledge)
anak-nya *John*
child-3SG.POSS John
'John's child'

(3) Central Lamaholot-Lembata (Fricke 2019: 109)
na=kopo
3SG.POSS=child
'his child'

Syntactic convergence may also affect patterns of argument expression and alignment. For example, the expression of transfer ('give') events may change under contact (Moro & Klamer 2015; Villerius & Moro & Klamer 2020). In AN languages, 'give'-events are expressed with a single ditransitive verb that has two objects ("give x y"), or the theme as direct object and the recipient headed by a preposition ("give y to x"). In PAP languages, 'give'- events are more typically expressed by a serialization of monotransitive verbs, each with their own object (e.g. "take y give x") (Reesink 2013). AN languages that develop serialization constructions for 'give'-events may do this under influence of contact with one or more PAP languages (Moro & Fricke 2020).

2.4. Additive transfer

When a particular morpho-syntactic category from one language is introduced into another language that did not have this category before, the new feature is 'additive' (Trudgill 2016: 1) to the grammar of the target language. In eastern Indonesia, the introduction of a formal distinction between certain types of noun classes is an example of such additive transfer.

Encoding of alienable versus inalienable nouns, or masculine versus feminine nouns, is a feature of the PAP families of eastern Indonesia. In contrast, such noun classification is not a feature of western AN languages. Blust (1993: 258) claims that the alienability distinction is an innovation of the subgroup that comprises the AN languages of eastern Indonesia. Klamer et al. (2008) argue that the distinction has been introduced in the eastern part of the AN family through contact with PAP languages.

Another 'additive' feature in the AN languages of eastern Indonesia which may be due to contact with PAP is the marking of nominal plurality by means of a nominal affix, or by a plural word. In AN languages, nominal plural affixes are not wide-spread, while they are frequent in PAP languages (§3.2). As regards plural words, these are not commonly attested in western AN languages, but are frequent in AN languages of eastern Indonesia (Wu 2022). In these AN languages, plural words (and plural suffixes, §3.2) are often grammaticalized forms of third person plural pronouns. Language contact may have played a role in the evolution of nominal plural marking (Wu 2022: 19): when the concept of nominal plural is borrowed, the autochtonous third person plural pronoun is recruited to express this novel concept (§3.2).

2.5. Morphological simplification

Simplification of morphology is often an independent evolutionary process that occurs as a result of language internal structural imbalances, or universal principles of language development. For example, the universal drive of language learners to get a transparent one-to-one relation between meaning and form, leads them to regularize verb stems with irregular shapes. Simplifying morphology in order to get more transparent form-meaning relationships also happens in situations of language contact. However, the contact is hard to 'prove' with features that are absent. It is however possible to argue that the absence of morphology in language A is contact-induced when (i) language A is morphologically (much) simpler than its close relatives B and C; (ii) language A has one or more non-inherited features that are absent in B and C; and (iii) language A has been in contact with (unrelated) language D which does have such features, while B and C have not been in contact with this language. For example, language A has no derivational verb morphology, just employing verb stems, while the cognate verbs in its sister languages B and C have derivational morphology. And language A also has a plural word to mark nominal plurality, while sister languages B and C do not mark nominal plurality. Language A has been in contact with (unrelated) language D which also marks nominal plurality with a plural word, while language B and C have not shared this contact. In this case, we could argue that the derivational morphology in B and C are reflexes of the morphology of the ancestor they share with A, but that it has been lost in language A due to A being in contact with (unrelated) D. Concrete examples where one language lost most of its morphology, while its sisters retained it, include Sika, an AN language of eastern Flores (§3.2), and Alorese (§4). If morphological simplification can be connected with lexical borrowing and syntactic convergence with an (unrelated) language that has a very different morphological profile, or lacks morphology altogether, then the simplification can be linked to contact with that language.

3. Contact in smaller sub-regions of eastern Indonesia: three case studies

This section reviews a range of different contact outcomes and contact scenarios that occurred in smaller sub-regions of eastern Indonesia. For the Halmahera archipelago, I compare Sahu and Tidore, two sisters of the PAP North Halmahera family, and the different types of AN influence they have undergone (§3.1). For east Flores and Lembata, I discuss two sister AN languages of the Flores Lembata subgroup, Sika and Central Lamaholot-Lembata, and the different PAP influences attested in either of them (§3.2). Finally, I discuss the AN influence attested in the PAP family of Timor Alor Pantar languages (§3.3).

3.1. Halmahera archipelago

The languages spoken in northern Halmahera and islands to the west of it belong to the North Halmahera (NH) family of PAP languages. The languages in south-east Halmahera are AN, see figure 2.

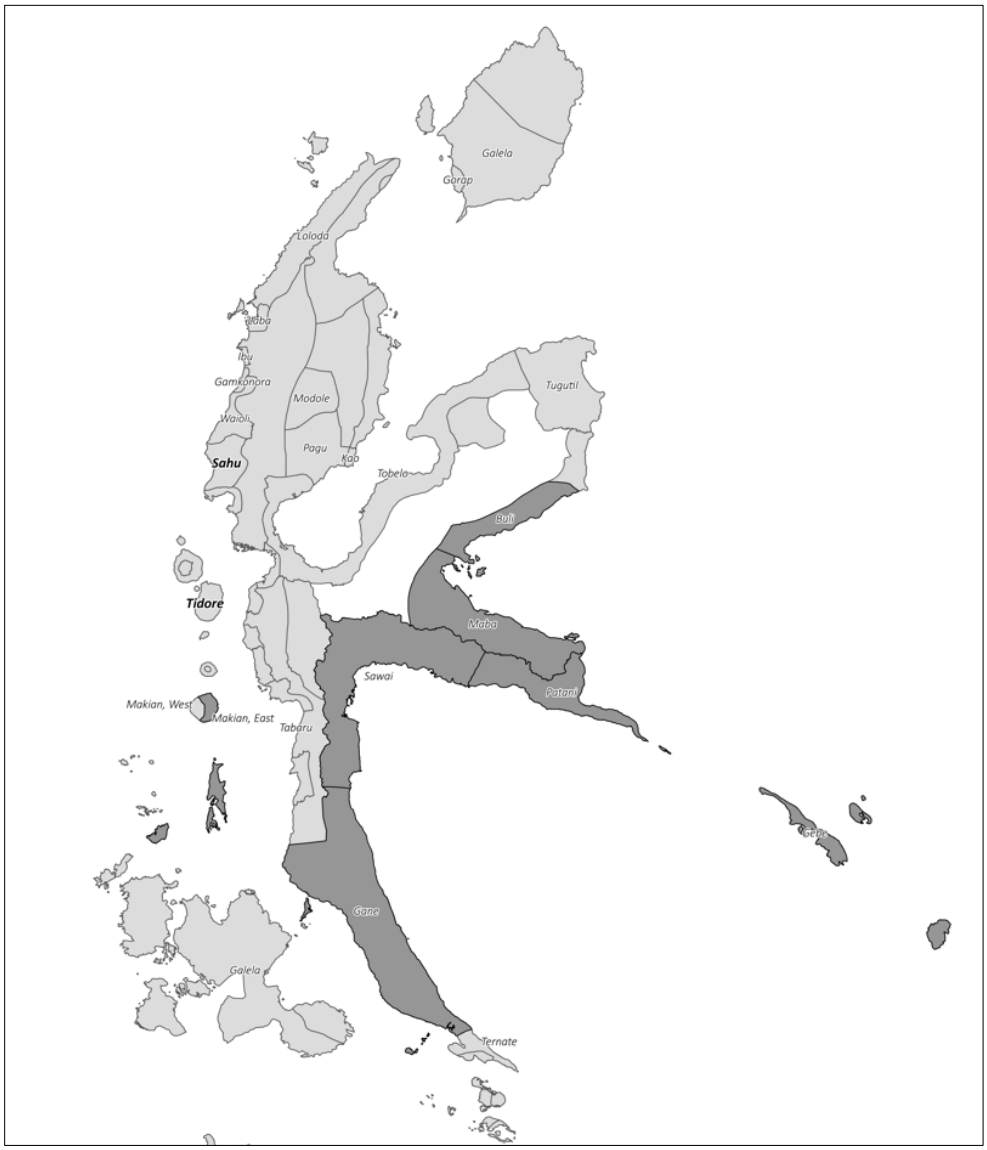

Figure 2. The PAP (light grey) and AN (dark grey) languages in Halmahera and adjacent islands. Located in the west, PAP Sahu (mainland) and Tidore (island) are printed in bold.

The North Halmahera (NH) family of PAP languages has a proposed structure as in figure 3. This structure is largely based on statistical analyses of similar lexical items (Voorhoeve 1982; 1988), with limited study of regular sound changes among cognates (Wada 1980), and limited reconstruction of proto NH vocabulary and morphology (Voorhoeve 1994). In the lexicostatistical analysis, the mainland languages of Northeast Halmahera have 70-85% lexical similarity; the insular languages have 80% mutual lexical similarity, and 50-70% similarity with the mainland languages; while West Makian has only 30% lexical similarity with Tidore.

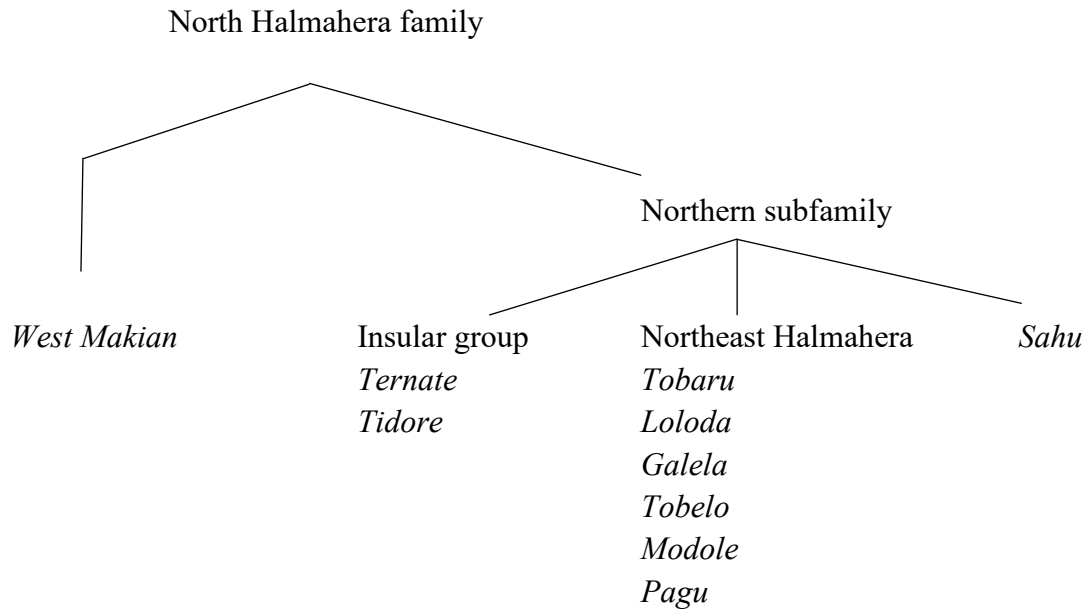

Figure 3. The North Halmahera language family based on lexicostatistical analyses of shared similarities in 100-item basic word lists (Voorhoeve 1982; 1988)

In this section I first discuss traces of ancient contact with AN donor language(s) that are attested across the NH family, and are reconstructable to proto NH. Then I compare the amount and type of AN influence attested in two NH languages: Tidore (46,000 speakers), spoken on Tidore island to the west of Halmahera, and Sahu (7,500 speakers), on the Halmahera mainland. Although Sahu is currently spoken close to the coast of mainland North Halmahera, according to Sahu traditions it was once spoken more inland, in the hills of North Halmahera, next to the region where Pagu is spoken today (Voorhoeve 1994:657), see figure 2.

Earlier reports indicate that mainland NH languages (like Sahu) are influenced less heavily by languages from outside of Halmahera than island NH languages (like Tidore), both in terms of vocabulary and grammar (Wada 1980:502; Voorhoeve 1994:653). This is likely due to the fact that the islands of Tidore, Ternate, Makian and Moti were the centre of international clove trade for more than two thousand years, and traders from eastern Java and Malacca, likely including speakers of AN languages, already travelled to these islands as early as the eleventh century. As a result, speakers on the spice islands have been exposed to more

frequent and intense contacts with AN speakers than speakers of languages on the mainland (Voorhoeve 1994).

Traces of ancient contact between proto NH and AN donor language(s) include lexical and morphological features. Voorhoeve (1988: 194–195) reports that 'across the board' more than 30% of the basic vocabulary is 'definitely or probably' of AN origin. An appendix in Voorhoeve (1994: 663–668) provides 136 provisional proto-NH reconstructions of presumed AN loan words. Some examples of these provisionally reconstructed NH forms and their PMP source forms are given in (4)-(5).

(4) proto NH *dilikana 'fireplace' (Voorhoeve 1994: 664)

e.g. modern Sahu *dîdîana* 'fireplace' (Visser and Voorhoeve 1987: 198)
< PMP *dalikan 'trivet, arrangement of three stones on which the cooking pot is placed' (Blust and Trussel 2016)

(5) proto NH *kalaw 'hornbill' (Voorhoeve 1994: 665)
e.g. modern Sahu *kore* 'hornbill' (Visser and Voorhoeve 1987: 202)
< PMP *kalaw (Blust and Trussel 2016)

The AN loans attested throughout the NH family partake in all the regular sound shifts in the NH languages according to Voorhoeve (1988: 194). This suggests that they were borrowed into proto NH from one or more AN languages that this ancestor language was in contact with.[4] Voorhoeve (1994) proposes that the major donor languages were AN languages from the Philippines. However, evidence available in the Austronesian Comparative Dictionary (Blust and Trussell 2016) indicates that for most of the 136 provisional proto NH reconstructions presented (Voorhoeve 1994: 663-668), no AN provenance can be established, and only four of them are similar to the proto Philippine forms listed in the Austronesian Comparative Dictionary.[5] So, on current evidence it is not possible to confirm that the forms classified as AN in Voorhoeve (1994), are in fact AN. In addition, it has long been debated whether there is a single Phillipine subgroup within AN (Ross 2005; 2020; Smith 2017; Reid 2020). It seems more appropriate to consider any ancient AN loans attested across the NH family as reflexes of PMP forms.

Another AN influence are the fossilized numeral classifiers attested in languages of the NH family. Numeral classifiers are very frequent across the entire AN family, and reflexes of proto MP *buaq 'fruit' (Blust 2009: 289) occur as general classifiers throughout the family, right down to the Oceanic subgroup. In contrast, numeral classifiers are extremely rare in PAP

[4] The literature does not mention an age for proto NH, but the lexical closeness between the North Halmaheran languages seem to suggest it is relatively young. Voorhoeve (1994: 651) suggests 'that the time depth of non-AN settlement in the north Moluccas is not very great and probably postdates the AN migrations which settled the surrounding parts of Indonesia.' If AN groups arrived in the surrounding area around 3000 years ago (Pawley 2005; Spriggs 2011, see §3.3) then proto NH is younger than that; but it predates the more recent settlement of AN speakers in Halmahera 'which must have moved from the West New Guinea area to Halmahera in the not too distant past (Blust 1978)'.

[5] The Austronesian reconstructions used in Voorhoeve 1994 are from Wurm & Wilson (1975), and they differ from the reconstructions proposed in the Austronesian Comparative Dictionary (ACD, Blust and Trussel 2016). As the latter reflects more recent research it is used here.

languages: no numeral classifiers are attested in any areal and/or genealogical cluster of PAP languages anywhere in mainland and eastern New Guinea, except for PAP languages spoken in AN-PAP contact zones (for details, see Klamer 2014a; 2014b). In other words, if we come across a PAP language with numeral classifiers or classifying prefixes, chances are high that they are a diffused AN trait. Nominal classifying systems are generally easily diffused (Nichols 1992: 124–143), but the actual classifying morphemes may be recruited from autochtonous lexemes (Klamer 2018).

In both Tidore and Sahu, numeral classifiers are found as prefixes on numerals; see Table 1. The forms *nga-* and *ngai-* are identical in the two languages (though the semantic classification of *ngai-* is different), which can be taken to suggest that these prefixes were part of their shared ancestor, proto NH. Proto NH likely borrowed the numeral classifying system from an AN source, while autochtonous forms were recruited to become the classifying prefixes. Note that the Tidore classifier *futu-* is not reflected in Sahu. This form may be derived from PMP *buaq 'fruit', as explained below.

	Prefix	**Classifies**	**Numeral 'two'**
Sahu	*nga-*	humans	*nga-mdîdî*
	ngai-	small objects	*ngai-dîdî*
	ngadî/u-	trees	*ngadî-dîdî*
	du-	houses	*du-dîdî*
Tidore	*nga-*	humans	*nga-malofo*
	ngai-	non-human animates and objects	*ngai-malofo*
	futu-	trees and plants	*futu-malofo*

Table 1. Fossilized numeral classifiers as prefixes on numerals in Sahu (Voorhoeve and Visser 1987: 47-49)[6] and Tidore (Van Staden 2000: 164-167).

In numerous AN languages across eastern Indonesia, reflexes of PMP *buaq used as numeral classifiers are found, either as free forms or as prefixes, see table 2. In some of these languages, only the first syllable or consonant of *buaq is etymological, see the Dobel, Batuley, Leti, Magey Matbat and Taba forms *fu/wu/vò-/pa-/p-* in table 2. Taba is an AN language spoken on Makian island, close to Tidore. In the analysis proposed here, the numeral classifier prefixes in Tidore and Taba are both derived from PMP *buaq.

Language	**Classifier**	**Meaning**	**Classifies**
Kambera	*wua/mbua*	'fruit'	general classifier for three-dimensional and abstract objects
Tetun Fehan	*fuan*	'fruit', 'heart'	whole roundish objects
Buru	*fuan*	'fruit'	any bulbous shaped thing
Dobel	*fusi*	'fruit'	fruits, other
Batuley	*fui*	'fruit'	sortal classifier for fruits

[6] Sahu also shows some general AN influences in its numeral domain: the numeral *siworo* 'nine' reflects PMP *siwa 'nine', and *latus* 'hundred' reflects PMP *Ratus 'hundred' (Visser and Voorhoeve 1987: 47) - although the latter could also be a modern loan from Malay/Indonesian *ratus* 'hundred'.

Leti	*vò-*	(none)	classifier attached to numerals 2-9
Magey Matbat	*pa-*	(none)	round objects, often fruits
Taba	*p-*	(none)	general classifier attached to numerals 1-9

Table 2. Classifiers related to PMP *buaq 'fruit' in AN languages of eastern Indonesia (cf. Klamer 2014a; Kaiping et al. 2019).[7]

A second morphological feature that was likely borrowed into proto NH is the ubiquitous AN reduplicative *CV*-prefix, which functions to derive instrumental nouns from verbs (among other things, see Blust 1998; Reid 2009). In AN languages of eastern Indonesia, this nominalizing *CV*- prefix also has synchronic reflexes, including in the languages spoken in the Moluccas, such as Buli on the Halmahera mainland (Maan 1951: 25–26) and Taba on Makian island, just south of Tidore (Bowden 2001), as well as Sawai (Whisler 1992: 27) on Seram island.[8] Reflexes of the *CV*-prefix are also found in the NH languages. In Tidore, the vowel in the prefix either copies the first stem vowel, or is /a, o/: *nau* 'male', *na-nau, no-nau* 'man'; *gahu* 'life', *go-gahu* 'life, customs', *lian* 'to help', *li-lian* 'help, assistance' (Van Staden 2000: 52, 128-129). In Sahu, the nominalising CV-prefixes is attested in forms like *touno* 'to heap up', *to-touno* 'a heap' (Visser and Voorhoeve 1994: 21). Reflexes of this prefix are also found in other NH languages like Tobelo and Pagu (but not in West Makian).

In sum, the ancient loans of possible PMP origin that follow regular sound changes in the NH language family indicate that proto NH was in contact with one or more AN languages. Additional evidence for such ancient AN contact comes from the borrowing of a classifying prefix on numerals, and a prefix *CV*- to derive nouns. Both Tidore and Sahu inherited these traces of this ancient AN contact.

In addition, the Tidore lexicon and syntax shows evidence of another stratum of AN contact which likely occured at a later stage: contact with Malay since the 15th C, when the sultanates of Tidore and Ternate came under the influence of the Malay language. By that time, the town of Malacca (on the west coast of today's Malaysia) had become the capital of a powerful Malay empire which exerted its influence with Malay literature, style of government and culture in many regions of the archipelago, including the spice islands in the Moluccas.[9] Malay was also the language of trade in the spice islands. The so-called 'Tidore' word list compiled by Pigafetta in 1521, is in fact a list of Malay words (Pigafetta 1994 [1521]), attesting to the fact that Malay was spoken on Tidore in the 16th Century.

[7] In this account, only the first syllable of *futu*- would be related to *buaq. Initial syllable reflexes of *buaq are attested in words for 'fruit' in other AN languages of eastern Indonesia, including for example Roma *wu+na,* Kisar *wo+in,* Geser *wo+i,* Biak *bo+n,* Warembori *bo+ro,* Irarutu *fô* [ɸo] (see Kaiping et al. 2019 for data and references). The /t/ in *fu+tu*- might signal an etymological relation with the word for 'root' in NH languages: Ternate *hutu* (Hayami-Allen 2001: 319) and West Makian *utu* (Voorhoeve 1982: 59), so that the Tidore classifier prefix *futu*- reflects a merger of the first syllable of PMP *buaq and the second syllable of NH *(C)utu* 'root'. Of course, it might also be the case that Tidore *futu* as a whole is related to the Ternate and West Makian words for 'root'. However, its classifying function as numeral prefix is unique for Tidore and reminiscent of similar constructions with reflexes in AN languages.

[8] In fact, the reduplicative prefix to derive instrumental nouns in these languages is *CVC*-, but as Bowden (2001) shows for Taba, the final C of the prefix is often assimilated with the initial root consonant, and may also be lost.

[9] The oldest Malay manuscripts from the Moluccas are two letters written by the sultan of Ternate to the king of Portugal, dated 1521 and 1522. The Malay used in these letters reflects the literary tradition of the Malay courts of Malacca (Litamahuputty 2012: 5). For accounts on the history of Malay, see Adelaar (2000) and Sneddon (2003).

Contact with Malay has caused significant changes in the Tidore lexicon and morpho-syntax. Presently, more than 30% of the Tidore lexicon (Van Staden 2000: 528–550) are classified as Malay words, more specifically, words used in North Moluccan Malay, the current lingua franca of the region. So this AN variety has influenced the lexicon of Tidore dramatically during the last 500 years.

In terms of constituent order, Tidore has diverged from the typical NH SOV word order to converge with the AN SVO word order of Malay (Van Staden 2000: 19). The NH languages typically mark both subject and object with prefixes on the verb, while AN languages would use a *suffix* to index objects, or have no object index at all. The fact that Tidore lacks object prefixes is possibly due to influence from Malay, which has neither subject nor object marking on the verb. In addition, Tidore developed a double negation construction, where the clause final negator *ua* (likely inherited from proto-NH, compare Sahu *'ua*) combines with a pre-predicate negator *kama,* compare the single negation in (7) and the double negation in (8). Tidore *kama* may also be used without *ua* if it combines with a final negative modal element, see (9). Pre-predicate negators are typical for AN languages, including NM Malay, and the introduction of a negator in pre-predicate position in Tidore is thus suggestive of AN influence. Note however that Tidore *kama* is not a loan from NM Malay. The NM Malay negator is *tara* 'no, not' (Paauw 2008: 135), which is related to proto MP **ta* 'no, not'.

Tidore

(6) *Ona=ge* *yo-tagi* *ua*
they=there 3N.A-go NEG
'They don't go' (Van Staden 2000: 41)

(7) *Mina* *mo-yuru* *te* *kama* *pake* *gula* *ua*
3SG.F 3SG.F.A-drink tea NEG use sugar NEG
'She drinks tea without taking sugar' (Van Staden 2000: 315)

(8) *Ngone* *kama* *fo-hoda* *mina* *rewa*
1PL.INCL NEG 1P.INCL-see 3SG.F not.anymore
'We don't hear her anymore' (Van Staden 2000: 27)

In contrast to Tidore, lexical influence from Malay has remained limited in Sahu. It borrowed some words from the Malay variety spoken on Ternate island.[10] It also has some loan words from Sangir, an AN language spoken on an island located between the Philippines and north Sulawesi. It is reasonable to assume that Sahu and Sangir speakers have been in contact at some point in history, because sea currents as well as the northwest monsoon favour a drift from the Sangir-Talaud archipelago towards Halmahera (Voorhoeve 1994: 652).

Sahu constituent order is variable: the orders SOV, SVO and OSV are all attested (Visser and Voorhoeve 1994: 55). It is tempting to ascribe this variation to AN influence, but in the

[10] Another language that exerted some lexical influence on Sahu is the NH language Ternate. Ternate was for a time during the spice trade at the beginning in the 16th century an important local language that influenced its neighbouring NH languages (Voorhoeve 1994).

absence of other syntactic AN influences in the language, it is better to look for language internal explanations. Because Sahu subject and object are indexed on the verb (in the order subject-object-verb), variable constituent order does not crucially encode grammatical relations, and likely functions to mark discourse saliency or topicality.

The loss of verbal inflection, and the convergence with certain syntactic AN patterns that happened in Tidore is not seen in Sahu. Sahu retained the typical NH pattern of marking both subject and object with prefixes on the verb.[11] It also retained the post-verbal negation *'ua,* and clause final verbs, and did not develop double negation constructions.

In sum, the closely related NH languages Sahu and Tidore share cognates which go back to old PMP loans at the proto NH level, pointing to AN contact at the time of the first NH speakers in North Halmahera. Both languages also share the classifying prefixes on numerals, and the nominalizing prefix *CV-*, which may also have been borrowed from AN at this ancestral stage. This morphological borrowing suggests that the ancient contact between proto-NH and AN speakers also involved pre-adolescents (§2.2). In addition, both Tidore and Sahu show a later layer of AN lexical influence from the regional Malay varieties used on Tidore and Ternate from the 16th century onwards. However, the transfer of Malay words into Tidore is massive, while it is very limited in Sahu. And only in Tidore did contact with Malay also lead to loss of verbal prefixes, grammatical convergence of clausal constituent order, and the introduction of a negator in preverbal position.[12] Such syntactic convergence typically happens in bilingual speaker communities (§2.3). Indeed, the fact that speakers of Tidore have been bilingual in Malay for centuries is reflected in their language. In contrast, there is no evidence for such long term bilingualism in Sahu and Malay.

3.2. East Flores and Lembata

In eastern Flores and the Solor Archipelago, the Austronesian languages belong to the Flores Lembata (FL) subgroup, which is part of the Bima Lembata subgroup of MP. Within FL, there are five subgroups: Sika, Western Lamaholot, Central Lamaholot, Eastern Lamaholot, and Kedang (Fricke 2019; 2023), see figure 4 and 5.

Historically, Malay has played a limited role in the Flores-Lembata region. After the fall of Malacca in 1641, speakers of Peninsular Malay fled to Larantuka, a port town on the coast of east Flores. Flores was a Portuguese colony at the time, and in Larantuka a variety of Malay with strong Portuguese and Peninsular Malay influences became the main language of the mixed population. It was not used much outside of Larantuka: in the wider Solor archipelago, the local languages of the FL family were the main means of communication until the first half of the 20th C, when a modern variety of Malay, different from Larantuka Malay, was introduced in primary education (Fricke 2019: 16).

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[11] Voorhoeve (1994: 658) mentions that the object prefixes have started to erode due to influence from Indonesian (which lacks object prefixes). They may have largely disappeared in the variety of Sahu that is spoken today.

[12] Note that in both languages, the order of elements in the NP follows similar (NH-PAP) patterns: possessors precede nouns; and nouns precede nominal modifiers, numerals and determiners. In the nominal domain, both languages retain systems to distinguish certain noun classes for gender and (types of) possession (Van Staaden 2000, Visser and Voorhoeve 1994, Voorhoeve 1994).

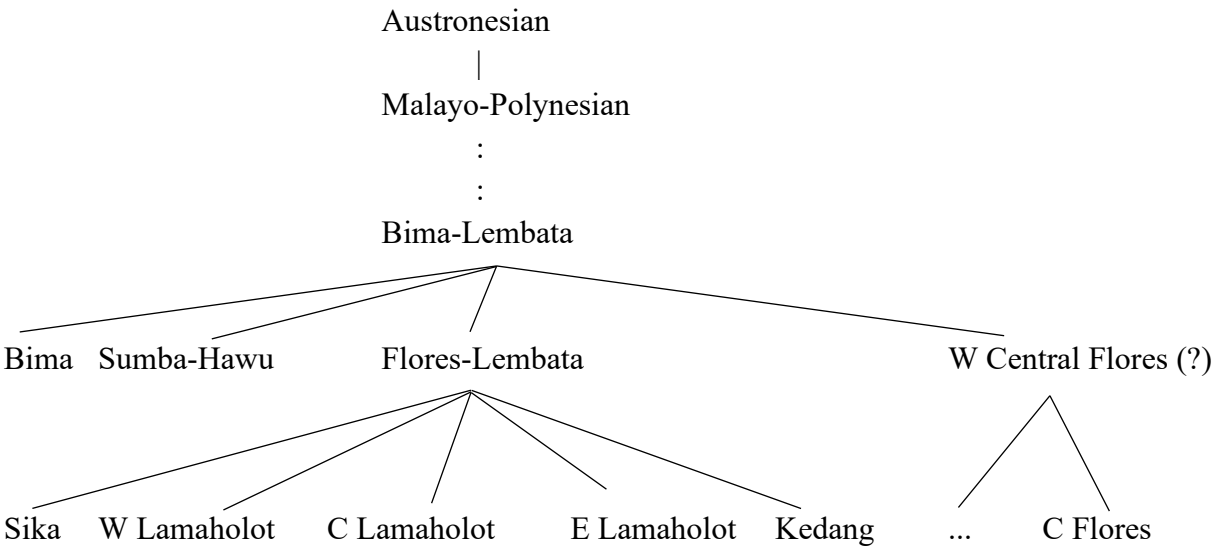

Figure 4. The Flores-Lembata languages and their genealogical affiliation (Fricke 2023: 143)

No PAP languages are currently spoken on Flores and Lembata; the closest PAP languages are the Timor Alor Pantar (TAP) languages spoken on the islands of Pantar and Alor, to the west of Lembata, see figure 5 (and §3.3).

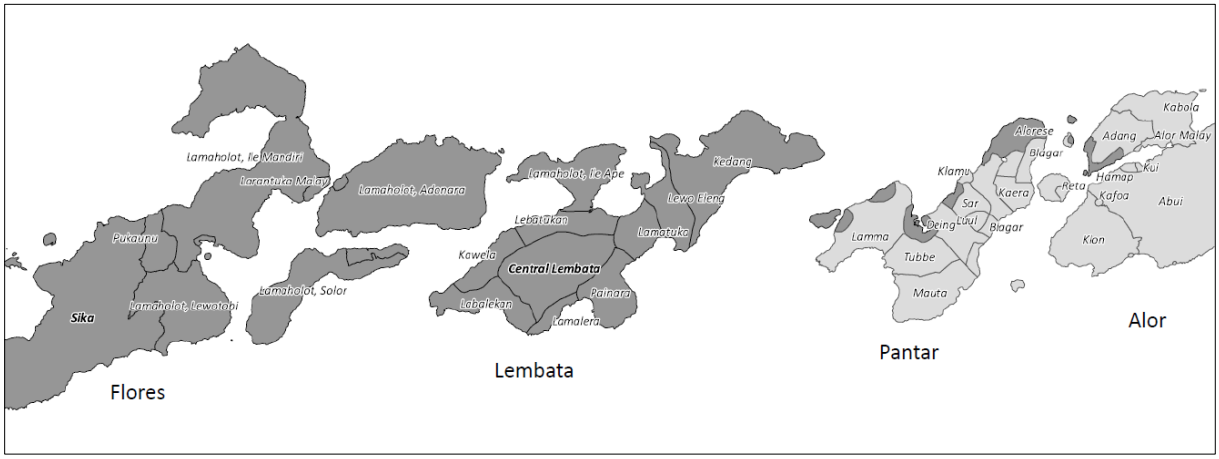

Figure 5. The AN (dark grey) Flores-Lembata languages Sika on Flores, and Central Lembata (or Central Lamaholot) on Lembata, with the PAP (light grey) languages of Pantar and Alor located in the east.

Despite the current absence of PAP languages on the Flores-Lembata islands, the FL languages show clear signs of having been in contact with languages that are PAP (or non-AN), as has been extensively demonstrated by Fricke (2019). In this section, I compare the contact-induced changes in the closely related languages Central Lamaholot (aka Central Lembata), and Sika, based on information presented in Fricke (2019, 2023).

C Lamaholot is spoken by 3,000 people in the central mountains of Lembata island (Fricke 2019). Sika has 175,000 speakers in eastern Flores (Arndt 1931; Bolscher 1982; Rosen 1986; Lewis & Grimes 1995; Pareira & Lewis 1998; Fricke 2014). The shared ancestor of these two languages, proto Flores Lembata (proto FL), already showed several non-AN features. For example, in proto FL, word order in the NP had changed from the typical AN [numeral-noun] and [possessum-possessor] order to become [noun-numeral], and [possessor-possessum]; and two deictic verbs ('come' and 'go') had been innovated in clause final position (Fricke 2019, chapter 9). The lexicon of proto FL as reconstructed by Fricke consists of 210 forms, of which 18% are not obviously descended from AN forms (Fricke 2019; 2023).

In all the daughters of proto FL, the number of non-AN words increases: C Lamaholot, with 53% non-AN lexicon (N=333) shows the highest increase, and Sika with 38% non-AN lexicon (N=220) shows the least increase (Fricke 2023, table 5.8). In other words, both languages have been affected by non-AN contact language(s) in their lexicon, but C Lamaholot much more so than Sika. This suggests that the contact with C Lamaholot may have been more intense and long-term than the contact with Sika.

This difference in contact intensity is also reflected in the non-AN morpho-syntactic properties of Sika and C Lamaholot. Besides the non-AN features that both languages inherited from their ancestor proto FL, in C Lamaholot, three additional non-AN features were adopted (cf. Fricke 2019, chapter 8-10).

The first non-AN feature that C Lamaholot adopted is an alienability distinction in possessive constructions. Inalienable possessive constructions use a nominal possessor suffix, as in (10a), while alienable constructions use a free possessor pronoun, as in (10b).

(9) C Lamaholot (Fricke 2019: 287)

a.	*(go)*	*najan-ga*
	1SG.POSS	name-1SG.POSS
	'my name'	
b.	*goé*	*kajor*
	1SG.POSS	wood
	'my wood'	

An alienability distinction is also found in the PAP languages of Pantar and Alor; the island of Pantar is located immediately east of Lembata, see figure 5. In contrast, Sika does not distinguish between inalienable and alienable possession, using possessive suffixes for both, and in this respect it follows western AN patterns, compare (11a-b):

(10) Sika (Fricke 2014: 39, 42)

a. *mé* *nimu-n*
child 3SG-POSS
'her/his children'

b. *lepo* *nimu-n*
house 3SG-POSS
'his/her house'

Second, C Lamaholot developed plural marking on nouns: plural alienable nouns are obligatorily marked with the suffix *-ja*, as in *ao-ja* 'dog-PL' (Fricke 2019: 319).[13] In contrast, Sika does not mark nominal plural. As mentioned above (§2.4), marking of nominal plurality by means of suffixes is not typical for AN languages of eastern Indonesia. However, plural marking does occur frequently in the PAP family spoken on Pantar and Alor, where a plural word follows the noun (Klamer & Schapper & Corbett 2017).

A third type of non-AN structural influence in C Lamaholot is attested in the domain of negation (Fricke 2017; 2019). AN languages typically show pre-predicate negation marking, while PAP languages of the region typically have post-predicate negation. It has been frequently observed that those AN languages which do have post-predicate (or clause-final) negation marking, are all located close to PAP languages (Klamer 2002: 375; Vossen 2016: 199–121, 202; Reesink & Dunn 2018: 936). As a result, final negation in AN languages has been argued to be a diffused PAP feature (Reesink 2002:246).

While proto Flores Lembata had pre-predicate negation (Fricke 2019), in C Lamaholot we find double negation, as is also the case in all the other Lamaholot varieties spoken on Lembata island (Fricke 2019: 397-398). In C Lamaholot, an original pre-predicate negator *ta* 'no, not' is combined with a clause-final negator *si*, as in (12). Pre-predicate *ta* is a reflex of proto MP **ta* 'no, not', with cognates all over the AN family; *si* was probably recruited from C Lamaholot *si(né)* 'a little' (Fricke 2019: 403). The PAP languages on Pantar and Alor, east of Lembata, all have final negation.

(11) C Lamaholot (Fricke 2019: 397)

Ta *na=mojip* *si*
NEG 3SG=live NEG
'It does not live'

The main negation pattern in the Sika variety described by Arndt (1931) is pre-predicate, as illustrated in (13a). However, Arndt (1931) also gives an example with double negation, with the final negator *e'ong*, in (13b). Fricke (2019: 397) observes that in the original translation of (13b), Arndt presents the negator 'not' in bold, which may suggest that the double negation in this example functions as an emphatic negation; a first stage in the grammaticalisation of double negation.

[13] Plural inalienable nouns do not take a plural suffix because with such nouns, the nominal suffix slot is already occupied by the obligatory possessor suffix, cf. (10a) above.

(12) Sika (Arndt 1931: 42)

a. *A'u* *éné* *ra'intang*
1SG NEG know
'I don't know'

b. *Nimu* *éné* *léta* *ata* *natar* *péhang* *e'ong*
3SG NEG invite person village other NEG
'He did **not** invite the people from the other village'

It may be that since Arndt wrote his grammar, Sika has developed double negation as a general pattern. Support from this comes from the Sika variety described by Fricke (2014), which has double negation not as an emphatic strategy, but rather as its most frequent negation pattern, see (14). The negator *é'o(n)* also functions as a negative existential in this variety of Sika. The pre-verbal negators *éné* in (13) and *é'on* in (14) are likely related.[14] Speculations about the source of the final negator *iwa* in (14) are presented in Fricke (2019: 402-403, 408).

(13) Sika (Fricke 2014: 9)

Dedi' *anak* *é'on* *puas* *iwa*
child little NEG satisfied NEG
'The little child is not satisfied'

None of the negators attested in C Lamaholot and Sika are cognate, and only *ta* in C Lamaholot is a reflex of a proto MP form. As argued in Fricke (2019), clause-final negation in the Flores Lembata languages is a grammatical innovation, and contact with non-AN languages leading to syntactic convergence is a very likely cause for this pattern in the Lamaholot varieties and in Sika. However, the variety in negator forms suggests that the negative constructions of C Lamaholot and Sika developed along separate paths.

In short, C Lamaholot adopted much (53%) non-AN lexicon and developed two additional non-AN morpho-syntactic categories, neither of which are attested in Sika: the alienability distinction, and the marking of nominal plural. C Lamaholot thus shows 'additive transfer' of morpho-syntactic categories from a non-AN source, Sika does not. And Sika adopted less (38%) non-AN lexicon.

Another important contrast between the languages is that from the Flores-Lembata subgroup, Sika is the only language which retained only some traces of proto MP person marking on its verbs (Rosen 1986), while the other Flores-Lembata languages, including C Lamaholot, retained much of the inflectional and derivational morphology of proto MP.[15]

[14] In turn, these forms might be related to AN Kedang *anung* 'reject, refuse, decline'(Samely 1991: 162). Kedang is spoken in north Lembata (Fricke 2019: 402).

[15] Fricke (2019: 44) suggests that a fossilised prefix in *k-* is a reflex of PAN *ka-...-an 'formative for abstract nouns (often deverbal)' or PAN *ka- 'formative for abstract nouns of quality (Blust and Trussel 2016). The high frequency of /p/ and /t/ as initial consonants in clusters with another non-liquid consonant in Central Lamaholot she explains by suggesting that these plosives might also be reflexes of derivational prefixes; possible sources

This suggests that morphological simplification has occurred in Sika, which is often interpreted as a sign of rapid language shift (Ross 2013: 30, 37). The rapid shift may have been preceded by a relatively short period of bilingualism involving mainly adult learners because adult learners typically do not acquire the unfamiliar morphology of their target language perfectly (see §2.5) (Fricke 2019: 416). The adults with a non-AN language background who were learning Sika imperfectly shifted to Sika, and as adult bilinguals are known to transfer a significant number of basic vocabulary from their first language into their second language, it is not surprising that they took along a seizable amount (38%) of their non-AN lexicon into Sika. Pre-adolescent learners can introduce new structures in a language (§2.4), but for Sika we have no evidence for such 'additive transfer' having happened, so we lack evidence that the language went through a stage with a significant amount of child bilingualism. The linguistic signal thus suggest that the bilingualism between Sika and non-AN language(s) involved adult language learners and was of relatively short duration, perhaps lasting only one generation, after which most of the non-AN speakers had shifted to Sika.

In contrast, the 'additive transfers' observed in Central Lamaholot, alongside the immense amount (53%) and the semantic diversity of non-AN words in its lexicon (see Fricke 2023), suggest a contact situation with long-term bilingualism, involving highly proficient, code-switching bilinguals, both adults and children, and lasting for several generations.

3.3. Alor and Pantar archipelago

The PAP languages of Alor and Pantar belong to the Timor Alor Pantar (TAP) family, specifically its daughter branch Alor Pantar (AP), see figure 6. (The other two branches of TAP languages are spoken on Timor island, and not further discussed here.)

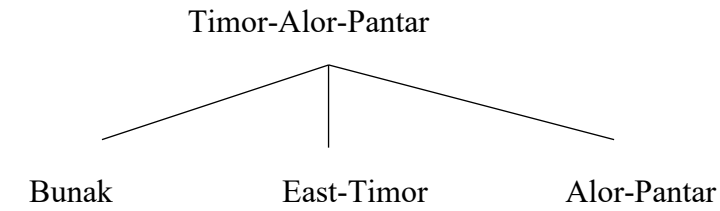

Figure 6. The three subbranches of the Timor-Alor-Pantar family (Holton et al. 2012; Holton & Robinson 2017c; Schapper, Huber & van Engelenhoven 2017; Kaiping & Klamer 2022).

are PMP *pa- 'causative prefix' and PMP *ta- 'prefix marking spontaneous or involuntary action' (Blust and Trussel 2016).

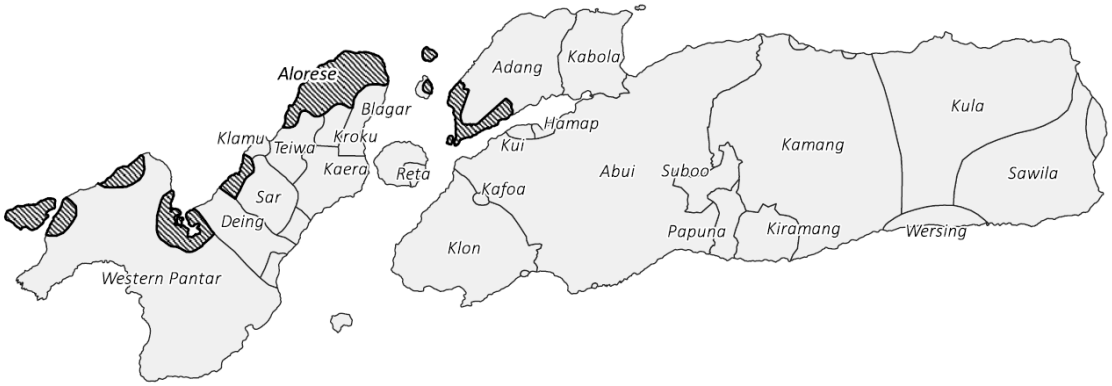

Figure 7. The PAP Alor-Pantar languages (white) on the islands of Pantar and Alor, with AN Alorese (grey shade) on the western coasts.

No Malay variety was used as a lingua franca in Alor and Pantar in pre-modern times. The local Malay variety that is currently spoken on the islands is based on Kupang Malay, which was introduced in Alor during the first half of the 20th Century.

This section investigates the traces of contact with AN languages as attested in the PAP languages of Alor and Pantar. To recognize possible AN lexemes in these languages, I used the proto Austronesian (PAN) or proto Malayo-Polynesian (PMP) reconstructions in Blust & Trussel (2016), and reconstructed forms of the lower level subgroups proto Flores-Lembata (PFL) (Fricke 2019) and proto Rote-Meto (PRM) (Edwards 2021).

Evidence of ancient contact between the Timor Alor Pantar languages and one or more AN donor language(s) includes proto TAP forms that are similar to proto MP forms, and are inherited throughout the family following regular sound changes. Examples are given in (15)-(16) (for argumentation and additional data see Klamer (2023a: 64–70)).

(14) protoTAP *baj ‘pig’ (where /j/ represents a glide); cf. Teiwa *baj,* Adang Lawahing *bi,* Abui *fe*, Kui *bei,* Sawila *pi*, Makasae *bai*; compare proto MP *babuy ‘pig’ (Klamer 2023: 65-66)

(15) proto TAP *asir ‘salt’; cf. Teiwa *jisar/hisar*, Adang Lawahing *{taŋ}hiri,*[16] Abui *ati,* Kui *ser,* Sawila *asira,* Makasae *gasi;* compare proto MP *qasiRa ‘salt’ (Klamer 2023: 68-70).

Ancient AN loans like these suggest AN contact at a stage when the TAP family had not yet diversified. If AN groups arrived in the area around 3000 years ago (Pawley 2005; Spriggs 2011), that may have been the earliest time when these AN loans were borrowed.

Besides these ancient loans in TAP, there are various types of AN (but demonstrably non-Malay, and non-Indonesian) lexical influences in the numeral systems of languages in Alor and Pantar (for more information, see Schapper & Klamer 2017). Furthermore, pre-modern

[16] Accolades separate the non-etymological part of this Adang compound.

but more recent AN loans into groups of TAP languages (which cannot be reconstructed to proto-TAP, unlike the ancient forms exemplified in (15)-(16) above) include words for 'king/ruler', 'slave', 'maize', 'seed', 'needle', 'to weave', 'sew', 'bride price', 'navel', 'breast', and 'skin'. These loans are scattered over various semantic domains, and show various levels of (ir)regularity in sound correspondences (for more information, see Klamer 2023: 70-89). While the AN provenance of these words is clear from the similarity in form and meaning with reconstructed forms of PAN, PMP, PFL or PRM (see the references above), in most cases, the exact individual source language(s) can no longer be traced. And in a few cases, the word for a particular concept has been borrowed from different regions. For example, the word for 'needle' in TAP languages of Pantar and West Alor is formally related to proto MP *batuR 'weave'; examples include Teiwa *bitaj/bati*, Blagar *batul,* Kabola *bataŋ*. Modern reflexes of this form are attested in the Austronesian Flores Lembata languages, e.g. Kedang *batur* and Alorese *batul* 'weave'. We can thus hypothesize that the 'needle' loans in the AP languages came from one or more languages in the Flores Lembata region. On the other hand, the TAP languages of east Alor and Timor have a word for 'needle' that is related to proto MP *zaRum 'needle'; examples include Sawila *da:mu* and Bunak *daun*. Related forms in AN languages of Timor are Tetun *daun,* and Kemak *daum*. In other words, for the concept 'needle', TAP languages borrowed two different AN words, coming from different source regions, one undergoing a semantic change.

These sporadic and diverse AN loans suggest that contact between AN and the TAP languages of Alor and Pantar was likely incidental, scattered, and rather superficial. In particular, it did not involve bilingual communities speaking a TAP and AN language, as that would have led to many more AN loan words than just a few scattered ones - compare the sizes of the non-AN vocabulary in Flores Lembata languages discussed in §3.2. Moreover, bilingual contact would also have left signatures in patterns of syntactic convergence or additive transfer, compare the patterns attested in Alorese discussed below. For example, under AN pressure, the dominant head-final order in TAP languages could have changed (perhaps partially) to AN head-initial order, e.g. by allowing (alternative) verb-object orders, or introducing an additional pre-verbal negator alongside the original post-verbal one, as has happened in Tidore (§3.1). Yet, to date, no traces of such alternative (head-initial) constituent orders have been attested in the TAP languages of Alor and Pantar. In this context it is important to note that the situation for the TAP languages of Timor is very different. These languages show more grammatical and lexical influence from AN, pointing to a more intense contact history with AN speaking populations.[17]

In sum, in ancient times, contact between speakers of AN and speakers of proto TAP resulted in a few loan words that were inherited throughout the family, following regular sound changes. Then, subsequent (pre-modern) contact with speakers of AN languages from different regions led to the borrowing of scattered AN words, largely pertaining to socio-cultural domains of trade, marriage negotiations, new technologies and societal structures.

[17] For example, in the TAP language Bunak, spoken in central-east Timor, a large non-inherited vocabulary coupled with morpho-syntactic changes point to a history involving prolonged or repeated periods of bilingualism. The modern lexicon of Bunak contains 30% of MP vocabulary including many items of core vocabulary (Schapper 2011: 37), and certain syntactic constructions in Bunak show a clearly AN (verb-medial) word order (e.g. in the 'give' construction Klamer & Schapper 2012: 196–197).

This contact does not seem to have caused any grammatical changes or additive transfers. There is thus no evidence that Alor Pantar languages were spoken by bilinguals who also spoke an AN language(s).[18] Nor is there evidence that there once was an AN speaking population on Alor or Pantar who shifted to an AP language.

4. Summary and conclusions

In contrast to earlier macro studies of contact in eastern Indonesia, this chapter focussed on three smaller sub-regions where contact between Papuan (PAP) and Austronesian (AN) languages has occurred. In the Halmahera archipelago, Sahu and Tidore, two closely related PAP (North Halmahera) languages both show traces that ancient contact between proto NH and one or more AN languages occurred, which may have involved pre-adolescent speakers. In addition, both languages show a later stratum of lexical influence from regional varieties of Malay, but the influence on Tidore is much larger than in Sahu, and only in Tidore did this contact also lead to grammatical convergence. This resonates with the long-term bilingual situation of contact of Tidore speakers with Malay, while no evidence for similar wide-spread bilingualism is found in Sahu.

In east Flores and Lembata, two AN sister languages of the Flores Lembata subgroup, Sika and Central Lamaholot, were compared on their PAP influences of the past. Not only did C Lamaholot adopt more non-AN lexicon than Sika, it also developed two additional non-AN morpho-syntactic categories. At the same time, Sika lost most reflexes of proto MP morphology. This outcome leads to the hypothesis that Sika has undergone a rapid language shift preceded by a relatively short period of bilingualism, lasting for perhaps only one generation, involving more adult second language speakers than children. The evidence in C Lamaholot, in contrast, suggests a contact situation of long-term bilingualism, with highly proficient, code-switching bilinguals in a non-AN language, involving adults as well as children, for several generations, before the shift took place.

Regarding the Papuan languages in the Alor and Pantar archipelago, very early, ancient contact with speakers of AN possibly resulted in a few loan words that were inherited throughout the Alor Pantar family, following regular sound changes. Subsequent pre-modern contact with speakers of AN languages from different regions led to the borrowing of scattered AN words, but this contact has not caused any significant grammatical changes or additive transfers. Thus, there is no evidence of AP speakers having been bilingual in (an) AN language(s), nor of an AN speaking population on Alor or Pantar that shifted to an AP language.

In contrast, the history of Alorese, the AN language neighbouring the AP languages, clearly involves long-term, stable bilingualism that has lasted for centuries, and continues until today. Earlier studies indicate that second language speakers of Alorese caused massive morphological loss (Klamer 2011; 2012; 2020; Moro 2019), additive transfer (Moro 2018), and ongoing syntactic convergence (Moro & Fricke 2020), but there is no evidence that speakers of AP languages massively shifted to Alorese. The lexicon of Alorese contains only about 5% loan

[18] The situation today is very different, and current bilingualism in Indonesian has likely led to the development of general classifiers in Alor Pantar languags as an 'emergent' contact-induced change under AN influence. It does not involve the transfer of structure or form from Indonesian, just the borrowing of a general classifier 'idea', and such changes only need one or two generations to happen, see Klamer 2018.

words from numerous AP languages (Klamer 2011; Moro et al. 2023). In this respect, the contact situation of Alorese is fundamentally different from the situation of Sika (§3.2). While both languages have undergone massive morphological simplification that was likely due to the imperfect second language learners who had a non-AN first language, with Sika, the bilingual situation ended in a relative quick shift, accompanied by a seizable amount (38%) of non-AN lexicon. In contrast, the Alorese contact situation that started about 600 years ago has not involved AP speaking communities shifting to Alorese, but rather continues to this day, in a context where Alorese appears to have more second language speakers than first language speakers. The Alorese case also shows that, while the level of lexical borrowing can often be used as an indicator of the type of contact situation, it should not be used as the only diagnostic of intensity of contact. Alorese shows that contact can be intense and long-term, as witnessed by the structural convergence and additive transfer, but with very limited lexical borrowing. The Vaupés region of the northwest Amazon is another place where intense contact occurred with little lexical borrowing. In the Vaupés region, the factors resisting lexical borrowing include a negative attitude towards language mixing, and local ideologies around emblematicity of words (Epps 2012). In Alorese, a clear factor working against heavy lexical borrowing is the presence of many different first languages, none of which is more dominant than the other.[19]

In conclusion, by looking in detail at the amount and type of lexical and morpho-syntactic contact-induced features in languages of smaller sub-regions we see that contact histories can differ fundamentally, even at the very lowest level: between sister languages and between neighbouring speech communities in very similar ecological environments. Contact took place between different combinations of languages; at different points in time; with variable intensities, involving monolinguals or bilinguals, and adults or pre-adolescents. The contact history of eastern Indonesia as reflected in its languages is a richly coloured mosaic, the pieces of which are currently being excavated one by one.

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[19] Limited lexical transfer is also found in creoles, where the presence of several first languages interfering with each other prevents transfer from a single first language (Muysken 2013: 717; Moro & Sulistyono & Kaiping 2023: 258)

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