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Number and quantity in East Nusantara

Papers from 12-ICAL, Volume 1

Marian Klamer and František Kratochvíl (eds.)

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This volume showcases the expression of number and quantity in a dozen minority languages spoken in Eastern Indonesia. While several papers offer a typological and comparative perspective, most contributions provide detailed descriptions of the numeral systems, universal quantifiers, classifiers, and the expression of nominal and verbal number in individual languages. Languages featuring in this volume include the Austronesian languages Sumbawa, Tolaki, Helong, Uab Meto, and Papuan Malay; the Timor-Alor-Pantar languages Abui, Bunaq, Kamang, Makalero, Sawila, and Western Pantar, and the West-Papuan language Tobelo.



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Preface and Acknowledgements

This volume contains a selection of papers that were presented at the workshop *Number in East Nusantara* that was organised as one of the panels at the 12th International Conference on Austronesian Languages (12-ICAL), held on 5 and 6 July 2012, in Denpasar, Bali, Indonesia. All the papers have been reviewed and revised before publication.

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1 *The Expression of Number in languages of East Nusantara: An Overview*

MARIAN KLAMER AND FRANTIŠEK KRATOCHVÍL¹

1 Introduction

Speakers refer to number by using numeral words, and so associate the notion ‘number’ with the words that are used for counting or ranking entities (*one, two, three; first, second, third...*). However, the grammatical category ‘number’ covers a much wider typological space. It includes such diverse areas as non-numeral quantification (*all, many, none,...*), the expression of number in nouns and pronouns (*singular, plural, dual, trial...*), and the syntax and semantics of numeral classifiers. In addition, the notion of nominal number needs to be separated from verbal number, a category relating to the semantics of the verb. Verbal number is about how often the action denoted by the verb is performed (i.e. the ‘iterative’ sense) or in parallel with multiple participants involved (i.e. the ‘distributive’ sense) (Veselinova 2013). Finally, many languages connect counting and quantification with different culturally significant practices.

Number is a conceptual category with universal relevance, but the means for signaling it are remarkably diverse across the languages of the world (Corbett 2000). Compared to the documentation of cardinal numerals, the wider typology of grammatical number expressions often receives less attention in grammatical descriptions. With this in mind, we organised a workshop to investigate the expression of number in a number of lesser-known Austronesian and Papuan languages spoken in a region referred to as East Nusantara. East Nusantara is the geographical area that is marked by the *Wallace line* in the west (see the dashed line in Figure 1), and includes near Melanesia (cf. Klammer and Ewing 2010). Linguistically and ethnically, this region constitutes the interface between the Austronesian and Papuan worlds. Papuans have lived in this area for more than 40,000 years, whereas Austronesians departed from Taiwan less than 6,000 years ago, and moved into this area sometime during the last 4,000 years. What was originally the Papuan area became largely Austronesianised through the incoming Austronesians, who assimilated with the original populations. However, Papuan languages continued to be spoken in Papua itself, as well as in outlier groups located to the west west and east of Papua proper. The westerly outlier groups of Papuan languages are spoken in Halmahera (North Moluccas) and the islands of Timor, Alor and Pantar. Note that the term ‘Papuan’ conventionally refers to a cluster of numerous unrelated language families that are non-Austronesian and spoken in New Guinea or its vicinity. ‘Austronesian’ is used here as shorthand for the Austronesian subgroup of Malayo-Polynesian languages spoken in eastern Indonesia and in East Timor,

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and neutral the debate about the internal structure of the Malayo-Polynesian subgroup (Blust 1993, Adelaar 2005a, Donohue and Grimes 2008, Blust 2009).

With the exception of Tetun, one of the two official languages of East Timor, none of the Austronesian or Papuan languages in East Nusantara have any official status. Most are spoken by very small speech communities; virtually all of them are severely endangered, being no longer learned by children, and few if any will survive to the end of the 21st Century. The quantity and quality of documentation is increasing, but compared to Africa, Australia, Eurasia, and the Americas, the Papua-Austronesian region is the linguistically least known and least documented area of the world (cf. Hammarström and Nordhoff 2012: 25-26).

The workshop, entitled *Number in East Nusantara*, was one of the panels held at the 12th International Conference on Austronesian Languages, which took place in early July 2012 in Denpasar, Bali, Indonesia. The current volume contains a selection of papers presented at the workshop. All the papers have been reviewed and revised before publication.

The papers in this volume are arranged according to the geographic location of languages discussed, from West to East, as shown on the map in Figure 1. The five Austronesian languages that are discussed in detail are **Sumbawa** (Shiohara), **Tolaki** (Donohue and Edwards), **Helong** (Balle and Cameron), **Uab Meto** (Metboki and Bellamy), and **Papuan Malay** (Kluge). The Papuan languages discussed in this volume belong to two different families. The language **Tobelo** (Holton) belongs to the North Halmaheran branch of the West Papuan family, while **Abui**, **Sawila** (Kratochvíl) **Bunaq**, **Kamang**, **Makalero** (Huber and Schapper) and **Western Pantar** (Holton) belong to the Timor-Alor-Pantar family. Most papers are descriptive, discussing numerals and the expression of number in one or two languages.

Two papers offer a broader comparative perspective. Klamer (this volume) discusses the numeral classifier systems in the Alor-Pantar languages, and offers a wider perspective on how the classifiers found in this Papuan family may relate to those found in Austronesian languages of the area. Huber and Schapper (this volume) observe an etymological relation between verbs meaning ‘finish’ or ‘be finished’, aspectual notions to do with completion or completeness, and expressions of universal quantification (‘all’) in three Papuan languages of the Timor-Alor-Pantar family, suggesting a grammaticalisation path between these categories.

In the remainder of this introductory chapter, we summarize the contributions of the various papers to the number-related topics mentioned in the first paragraph. Numerals as well as non-numeral quantifiers are discussed in §2, the expression of number in nominals in §3, numeral classifiers in §4, and verbal number in §5. Some brief notes on number from an anthropological perspective are given in §6, and on number and language contact in §7. In §8, a table summarizes the features that show a contrast along the genealogical division of Austronesian and Papuan languages of East Nusantara.

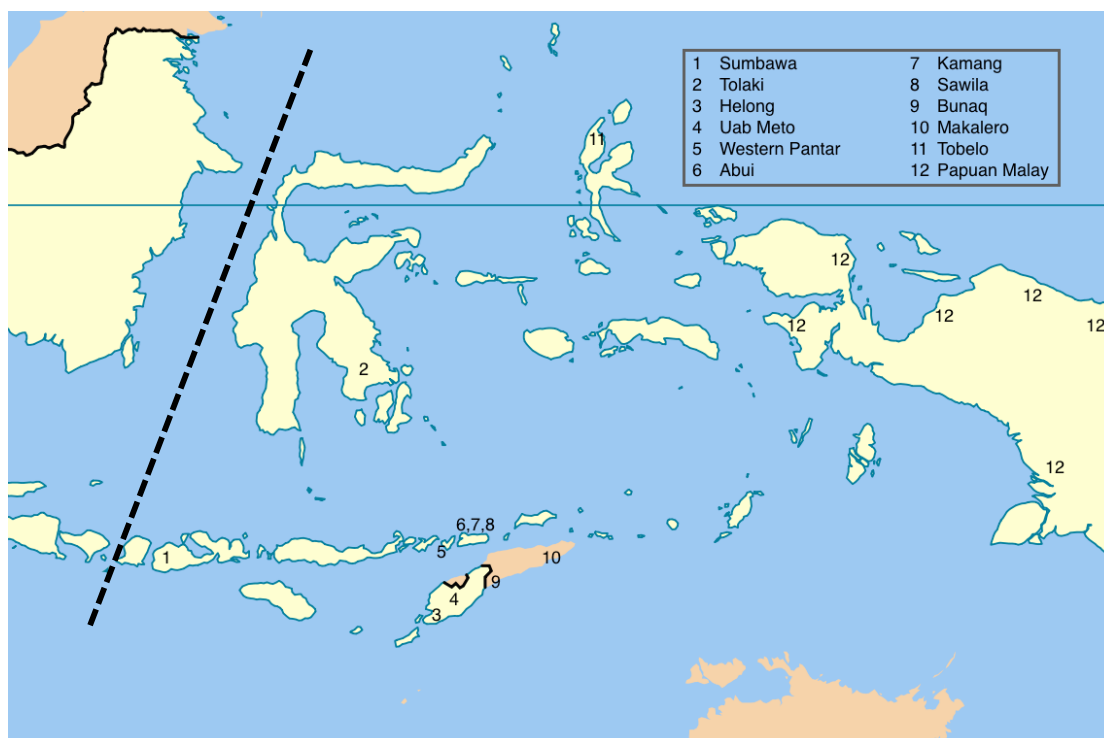


Figure 1: Geographic location of the languages discussed in this volume²

2 Numeral and non-numeral quantifiers

The number category is lexically manifested in numerals and non-numeral quantifiers. In the Austronesian family, research has focused on documenting the cardinal number systems, the formal composition of ordinals (the *x*-th), distributives (*x* by *x*), frequentatives (*x*-times) and fractions. In Austronesian, decimal systems predominate, though innovative forms with ternary and quinary bases, as well as complex numeral formations involving additive, subtractive, and multiplicative procedures, and systems mixing various types of bases are also attested (Blust 2009:268-282; Comrie 2013; Schapper and Hammarström 2013). Papuan languages are known in the typological literature on numerals for having body-part tally systems and, to a lesser extent, restricted numeral systems which have no cyclically recurring base (Laycock 1975, Lean 1992, Comrie 2013). Papuan languages are also typologically interesting for the fact that they often make use of bases other than the cross-linguistically most frequent decimal and vigesimal bases, such as quinary (Lean 1992) and senary bases (Donohue 2008, Evans 2009).

2.1 Cardinal numerals

All the Austronesian languages discussed in this volume have a decimal numeral system. The **Papuan Malay** system is analogous to Standard Malay/Indonesian, with some sound changes affecting the word-final codas and schwas (Kluge, this volume). In the other, there is variation in the composition of the numerals above ‘ten’. For example, in **Sumbawa** (Shiohara, this volume) the numerals ‘11’ to ‘19’ contain a decade form *olas* (related to Malay/Indonesian *belas*) which simply follows in juxtaposition to the lower

² The map is a modification of the Indonesia blank map released and available for public use under Creative Commons license at http://commons.wikimedia.org/wiki/File:Indonesia_blank_map.svg.

numerals 1-9, e.g. *dua olas* ‘twelve’, lit. ‘2 10’; the pattern also found in Malay/Indonesian. In contrast, some of the eastern neighbours of Sumbawa, such as Lamaholot (Nagaya 2012) or Alorese (Klamer 2011) form numerals higher than 10 in constructions where the higher numeral precedes the lower one, often including an operator word that signifies addition, e.g. Lamaholot *pulo nẽ’ẽ to’u* ‘eleven’, lit. ‘10 + 1’ (Nagaya 2012: 162). Languages discussed in this volume show similar patterns. In **Tolaki**, *rua-mbulo* ‘twenty’ (lit. ‘2 10’) precedes *oruo* ‘two’ to form *rua-mbulo oruo* ‘twenty two’, in **Uab Meto** the higher numeral *bo’ mese* ‘ten’ (lit. ‘10 1’) precedes the lower, and the two are linked with a prefix *m-*, e.g. *bo’ mese m-mese* ‘11’, lit. ‘[10 1] m-1’ (Metboki and Bellamy, this volume). **Helong** uses the additive marker *beas* to link decades 20 and up with lower cardinals, e.g. *buk dua beas esa* ‘twenty two’, lit. ‘[10 2] + 2’ (Balle and Cameron, this volume).

The Austronesian pattern of Uab Meto and Helong is also found in the Papuan languages discussed in this volume: in numerals above 10, the decade precedes the lower numeral, and an additive operator links the two, e.g. **Abui** *wal*, in *kar nuku wal jeting-sua* ‘eighteen’, lit. ‘[10 1] + [5-3]’. Abui has an etymological quinary base reflected in the forms for ‘seven’ and ‘eight’ (cf. *jeting* ‘five’ *sua* ‘three’ > *jeting-sua* ‘eight’). In **Abui** and **Sawila** (Kratochvíl, this volume) the base is synchronically more transparent than in **Tobelo** and **Western Pantar** (Holton, this volume). A comprehensive overview of the numeral systems of the Alor Pantar languages can be found in Schapper and Klamer (2014).

2.2 Ordinal numerals

Languages discussed in this volume show a regular derivation of ordinal numerals, and suppletive forms for *first* that are in some cases borrowed (as in **Sumbawa**). The distribution of ordinal patterns does not show any geographic bias.

Ordinal numerals in the Austronesian languages are derived by the cognate prefixes *ke-* (**Sumbawa**, **Helong**, **Papuan Malay**) and *ko-* (**Tolaki**), apparent reflexes of Proto Malayo-Polynesian **ika-* (Blust 2014). **Uab Meto** ordinal marker *no* diverges from this pattern (Metboki and Bellamy, this volume).

In **Tobelo**, ordinal numerals are composed by adding a prefix *ma-* to the cardinal numeral: *ohotu ma-hange* ‘the third night’, lit. ‘night *ma*-three’. The Alor-Pantar languages use a variety of strategies. Some details for Western Pantar, Sawila, and Abui are given in this volume; Klamer et al. (2014) present an overview of ordinal numerals in the Alor-Pantar languages.

2.3 Distributive numerals

Most languages discussed in this volume derive distributive numerals by reduplication. This is very common cross-linguistically, and it is also a very common strategy found in languages throughout Indonesia (Gil 2013). Most distributives discussed in this volume are created by full reduplication, as in **Helong** and **Papuan Malay**.

Partial reduplication is used in some of the Alor-Pantar languages, such as **Abui** or **Sawila** (Kratochvíl, this volume). When these languages create distributives out of compound numerals with a quinary base, only the second member is reduplicated; i.e., 5 1 ‘six’ > 5 1~1 ‘in groups of six’. A comprehensive discussion of the distributive numerals in the Alor-Pantar languages can be found in Klamer et al. (2014).

2.4 Referential properties of numerals

In many of the languages discussed here, the numeral ‘one’ can be used with indefinite reference, e.g. **Sawila** *imyaala saaku dana* ‘an old man’, lit. ‘man old one’ (Kratochvíl, this volume), and **Papuan Malay**, where *satu* ‘one’ can be used to encode ‘specific indefiniteness’ (Kluge, this volume). Some numerals have interpretations that are no longer strictly numeric. For instance, the **Abui** numeral *kar nuku* ‘ten’ (lit. ‘[10 1]’) can be used as a universal quantifier meaning ‘all’, and **Sawila** *yaku-tuwo* lit. ‘2-3’ may refer to a quantity of ‘several’ items (not necessarily 2 or 3). In **Abui**, cardinal numerals can also be used as terms of address. For example, *ayoku* ‘two’ can also be used to address two people: ‘the two of you, you two’ (Kratochvíl, this volume).

2.5 Non-numeral quantifiers

Relatively little is known about the forms, origins, developments and grammatical behaviour of non-numeral quantifiers in East Nusantara. Here we focus on universal quantifiers – expressions of concepts such as *every*, *all*, *each*, *any* and their morphosyntactic make-up (see Gil 2013). Many languages discussed in this volume seem to treat the universal quantifier ‘all’ as a predicate (with a person affix referring to the subject) or a nominal element (with a genitive affix). For instance, in **Abui** and **Sawila**, the universal quantifiers may be indexed for person. In **Abui**, the indexing is triggered by human entities only, while in **Sawila** it is always obligatory (Kratochvíl, this volume). Similar morphosyntactic marking of universal quantifiers has been also reported for Bantu, South and Mesoamerican languages, as well as some languages of West New Guinea (see Kratochvíl, this volume, for details).

Donohue and Edwards (this volume) compare the syntactic properties of the **Tolaki** universal quantifier *(ina-)luwuako* ‘all’ with the quantifiers *meha* ‘some’ and *dadio* ‘many’. While the first two admit genitive suffixes, *dadio* can be used as an intransitive verb whereby it takes on aspectual marking. Balle and Cameron (this volume) show that in **Helong**, a subset of non-numeral quantifiers admits the 3PL suffix *-s* with specific referents. **Tobelo** derives quantifiers through reduplication of the adverb *mata* ‘all’ > *ngomi mata~mata* ‘we all’, or the numeral *moi* ‘one’ > *moi~moi onyawa* ‘each person’. **Western Pantar** has a dedicated universal quantifier *gaterannang* ‘all’, which carries a fossilized third person possessor prefix *ga-* and may co-occur with the plural number word *marung* (Holton, this volume).

Huber and Schapper (this volume) discuss the relationship between universal quantifiers and aspect-encoding morphemes in **Bunaq**, **Kamang**, and **Makalero**. Although the direction of the grammaticalisation path remains unclear, the authors show that a formal and semantic connection exists between the universal quantifier and the expression of a completed state in these languages.

2.6 Syntactic properties of numeral and non-numeral quantifiers

In the Austronesian languages discussed, the syntactic position of quantifiers is variable. In **Tolaki**, it always precedes the quantified noun, either occurring outside the NP, or inside the NP it modifies. In **Sumbawa**, quantifiers have a variable syntax where they may precede or follow the noun, depending on the referential properties of the phrase. In the other Austronesian languages in this volume, **Helong** and **Uab Meto**, quantifiers follow the noun. Classifiers (and plural number words if they exist in the language) may occur between the head noun and the non-numeral quantifier. The Papuan languages discussed in this volume also place quantifiers after the head noun, and if they have

classifiers, these also occur between noun and quantifier. **Papuan Malay** shows both orders: apart from the Standard Malay order where the quantifier precedes the noun, Papuan Malay also allows the regional order where the quantifier follow the noun. This latter order is clearly contact-induced (Kluge, this volume).

Generally speaking, Sumbawa numerals pattern in the same way as verbal predicates. In **Tolaki**, numerals can become verbs: they are verbalized with a plural prefix (*tolu* ‘three’ > *mbe(N)-tolu* ‘be three’, and the resulting verb is then indexed for its subject, as is standard for all Tolaki verbs.

3 Number in nominals

Here we consider the expression of number in pronouns (§3.1), pronominal agreement or person markers (§3.2) and nouns (§3.3) in the languages discussed in this volume.

3.1 Number in pronouns

Number is commonly distinguished in the pronouns of the languages discussed in this volume. In the Austronesian languages, the original number distinction is usually maintained, as in **Tolaki**, where all pronouns are regular reflexes of the proto Malayo-Polynesian forms, as well as in **Helong** (Balle and Cameron, this volume) and in **Uab Meto** (Metboki and Bellamy, this volume). In **Papuan Malay** (Kluge, this volume) the third person plural pronoun *dorang* (or *dong*) is cognate with similar forms in other Pidgin-Derived Malay varieties (in terms of Adelaar and Prentice 1996; Adelaar 2005b). It is cross-linguistically common to neutralize the singular-plural distinction for the third person (Daniel 2013), as does **Sumbawa** (Shiohara, this volume).

Among Papuan languages discussed here, **Tobelo** and **Western Pantar** distinguish number in all persons (Holton, this volume), while in **Abui** and **Sawila** the distinction is not made consistently in the third person (Kratochvíl, this volume). In the Alor Pantar languages, number is marked in the first and second person by vowel grading: a low vowel (usually /a/) indicates singular, a high vowel (usually /i/) indicates plural.

When more than one participant is involved in an event, some of the languages discussed here can express the exact number of participants by combining numerals with a pronominal form (NUM + PRO, PRO + NUM). In **Helong** (Balle and Cameron, this volume) person suffixes can attach directly to the numeral; in **Abui** and **Sawila**, the pronominal form and the numeral are linked with the morpheme *ning*.

3.2 Number in person / agreement markers

Many of the languages discussed here index the person and number of syntactically privileged arguments (such as subjects) on verbs, and possessors are commonly indexed on nouns. None of the languages displays agreement on all constituents of a noun phrase, of the type commonly found in Romance or Slavic languages (Baerman and Brown 2013). It is more common to have just one, usually the phrase-final constituent, marked for number, as in **Helong** (Balle and Cameron, this volume).

Tolaki distinguishes number in all pronominal clitic paradigms (nominative, absolutive, dative, genitive), but the encoding of number is less strict for inanimate referents. A plural subject always selects a plural verb stem (with a prefix *mbeN-*) to which the pronominal clitic referencing the subject is then added (Donohue and Edwards, this volume). In **Helong**, number agreement shows a split: controllers can be specific objects, and subjects of verbs of motion or posture. Moreover, the plural agreement controlled by the subject

can also target other constituents such as question words and locations. **Abui** and **Sawila** neutralize the number distinction in third person prefixes (Kratochvíl, this volume).

3.3 Number in nouns

In the languages discussed here, the marking of plural number of nouns is generally optional. Nouns without overt number marking are ambiguous between singular and non-singular interpretations. **Sumbawa** expresses nominal number only by numeral or non-numeral quantifiers (Shiohara, this volume). **Tolaki** nouns without quantifiers are also ambiguous in number, but non-singular noun phrases can be marked with the enclitic =*Cako* which attaches to the end of the noun phrase.³ Tolaki also expresses number in nouns by partial reduplication (Donohue and Edwards, this volume).

In **Helong**, noun phrases can also be marked for plural number with a morpheme *-s*, which seems to have clitic-like properties, attaching to either the head noun, to the numeral following the head noun, or to the deictic at the end of the noun phrase. When plural *-s* attaches to kinship terms and proper names, it induces an ‘associative plural’ reading (i.e. it refers to *x* and *x*’s associates) (Balle and Cameron, this volume).

Uab Meto has a plural word *in*, which also appears as a suffix *-inu*, to mark plural on nouns. In the data given in Metboki and Bellamy (this volume) it occurs in complementary distribution with numerals. Grimes et al. (2012) report that in other dialects of Uab Meto, associative plurals are expressed with the third person plural pronoun *sin*. It is possible that this form is the diachronic source of the plural word *in* in Uab Meto.

Papuan Malay nouns are morphologically unmarked for number. Common strategies to express nominal plurality are modification with a plural pronoun (e.g. *dorang/dong* ‘3 PL’), modification with a quantifier, or reduplication of the noun. Plural pronouns combine with relational nouns and proper names to create an associative plural reading. While in other regional Malay varieties only third person pronouns can create associative plurals, in Papuan Malay all plural pronouns may be used in this function (Kluge, this volume).

Tobelo and **Western Pantar** nouns are not marked for number. Tobelo also lacks a plural number word, but in Western Pantar, nominal plurality can be expressed analytically with the plural word *marung*, which cannot co-occur with numerals or classifiers. The human nominalizing morpheme *wala* may function as an associative plural for nouns referring to humans, including proper names (Holton, this volume).

Plural words are commonly used in the Alor-Pantar languages, including **Abui** and **Sawila**. Proto-Alor-Pantar had a plural number word **non*, but many Alor-Pantar languages, including Abui and Sawila, have innovated new plural words. Plural words in the Alor-Pantar languages exhibit a wide variety of different syntactic properties and variable semantics (Klamer, Schapper and Corbett 2014). This is also seen in Abui and Sawila: the Abui plural word *loku* can force ‘recategorisation’ of mass nouns into count nouns, but Sawila *du* cannot achieve this. To create associative plurals, a dedicated associative marker is used (Kratochvíl, this volume).

4 Numeral classifiers

In many languages of East Nusantara, numeral quantification is closely tied with classifiers; words that provide additional semantic information about the noun class of the quantified entity. Two classifier types are commonly distinguished: *mensural* classifiers that impose units defined by quantity, and *sortal* classifiers that define units in terms of

³ The initial consonant of this clitic is lexically specified by the word it attaches to.

their kind or internal structure (Lyons 1977: 463). In the languages discussed here, classifiers are free morphemes that occur next to the numeral, but the structure of NPs with classifiers varies. **Tolaki** is the only language where numeral and classifier precede the noun, rendering the order [numeral-classifier]-noun. In **Papuan Malay**, the order of the numeral phrase remains the same, but this phrase may optionally be preceded by the noun, i.e. show the order noun-[numeral-classifier]. In **Helong**, **Uab Meto**, **Tobelo**, **Western Pantar**, **Abui** and **Sawila** (as well as all the other languages of the Alor-Pantar family), the noun also occurs in initial position, but here, it is followed by a numeral phrase where the classifier precedes the numeral: noun-[classifier-numeral]. (See also § 7).

The lexical sources of classifiers are transparent when they still have independent uses as nouns with meanings like ‘fruit’, ‘seed’, ‘bunch’, ‘part’, and so on. However, the chapters also report cases where the lexical source of the classifiers is unknown.

Some of the languages discussed in this volume have a dedicated classifier for humans; illustrations are the human classifiers in **Helong** (*at*) and **Uab Meto** (*tuaf*). **Tobelo** has a human classifier prefix *ya-*, which may be in the process of developing further into a human noun class marker.

In **Tolaki**, only two classifiers are found: one (*boto*) can only occur with nouns referring to animals and fruits, and the other (*pu’u* ‘tree [trunk]’) is only used with nouns for tree types. Tolaki has no classifier for humans (Donohue and Edwards).

Helong has a small inventory of classifiers with transparent lexical sources. In Helong, humans are treated as a separate class, while other nouns (especially food) may be classified according to their arrangement (Balle and Cameron, this volume). **Uab Meto** has a more elaborate classifier inventory than Helong, as it also distinguishes humans from non-humans. Only some of the Helong classifiers are also attested as nouns. There is a large number of sortal and arrangement classifiers with intriguing uses in traditional exchange, such as markets, ceremonies, wedding gifts, etc. (Methoki and Bellamy, this volume).

Tobelo classifiers classify nouns according to their shapes into various types of one-, two-, and three-dimensional objects. Tobelo has no classifier for nouns referring to humans. While Tobelo classifiers are obligatory with enumeration, **Western Pantar** classifiers are largely optional (Holton, this volume). Western Pantar has one general classifier (applicable to humans); the remaining classifiers distinguish various shapes and structures. In his paper, Holton (this volume) also illustrates variation between individual speakers when confronted with the same stimuli.

Abui and **Sawila** have a small set of only two or three classifiers that are used optionally (Kratochvíl, this volume). **Papuan Malay** also has a very reduced inventory of numeral classifiers. Attested is only the common noun *ekor* ‘tail’, which is used to count animals (Kluge, this volume). In having only one classifier, Papuan Malay is unlike many Austronesian languages spoken in the west (Himmelman 2005:173).

Klamer (this volume) offers a typological assessment of the classifier systems in East Nusantara with a particular focus on the languages of the Alor-Pantar family. The classifiers of six Alor-Pantar languages are discussed: **Teiwa**, **Western Pantar**, **Adang**, **Klon**, **Abui**, and **Kamang**. The author shows that the systems of these sister languages are all of quite different sizes, and that they make different types of classifications. This is then taken as the evidence that the classifier systems in Alor-Pantar are not inherited and a diachronic mechanism is proposed explaining their development. Although no lexical borrowing of classifiers is attested, it is argued that the innovation of the classifier systems in the languages of the Alor-Pantar family may be considered a case of structural

convergence with neighboring Austronesian languages, which all have classifier systems.⁴ Although classifiers are not a feature that is typically found in Papuan languages, parallel development of classifiers can be seen in other Papuan languages that are or were in contact with Austronesian languages, like the Papuan languages in Halmahera (Tidore, Tobelo), the Bird's Head (Mpur, Abun, Tehit, Maybrat, Sougb, Hatam), and Timor (Makalero, Makasae) (for references see Klammer, this volume).

5 Verbal number

Verbal number relates to the number of occurrences of an event denoted by the verb. Verbal number is typically expressed by using either a different lexeme, by reduplication, or by derivation, i.e. affixes with meanings such as 'repeatedly' (Corbett and Fedden 2012). Two types of verbal number are commonly distinguished (Veselinova 2013): *iteratives* indicate the number of repetitions of an event, while *distributives* refer to the number of parallel occurrences of an event; typically carried out by multiple agents.

5.1 Iteratives

Iteratives are usually derived by combining a dedicated marker (which is the translational equivalent of 'times' in English) with a numeral. If the numeral follows the head noun, then it also follows the iterative marker. In **Helong**, iterative expressions are formed with the noun *oe* 'time(s)' and a numeral (e.g. *oe dua* 'twice', lit. 'time two') or the verb *lalis* 'run' and a numeral (e.g. *lalis dua* 'twice', lit. 'run two'). The shape of the verb does not change when it is iterative. Some iterative phrases can also be derived by reduplication in Helong (e.g. *lelo~lelo* 'every day', lit. 'day~day') (Balle and Cameron, this volume). **Uab Meto** expresses iteratives in a similar way, by combining the word *hae* 'time(s)' with a numeral, e.g. *hae' nua* 'for the second time, twice' (Metboki and Bellamy, this volume). **Western Pantar** and **Tobelo** also express the number of repetitions of an event by combining a lexeme 'time(s)' with a numeral. For example, Western Pantar *me atiga* 'three times' (lit. 'time(s) three'), and Tobelo *hara hinoto* 'twice' (lit. 'time(s) two'). **Sawila** derives iterative verbs with an applicative prefix (Sawila *ma-tuo* 'APPL-three'), while Abui derives an iterative verb that can be inflected for aspect by combining the numeral with a locative proclitic *mi* 'in' and a light verb *ng* 'see': *mi=ng=sui-di* 'three times', lit. IN=SEE=three-get.CONT'. The form of the Abui iterative verb is the same as the form used for distributives (see the next section), except that the numeral base is not reduplicated here.

5.2 Distributives

Tobelo marks distributives with a verbal prefix *koki-* which indicates that an action is carried out by or affects each member of a group individually (Holton, this volume). **Abui** and **Sawila** have a number of constructions to express distributives, distinguishing whether events occurs in parallel, or in parallel and with a maximal effect (Kratochvíl, this volume). In the chapters on the other languages, distributives are not discussed.

⁴ The term 'structural convergence' is used in the sense of Matras (2009:234-274), referring to the development of parallel lexical, grammatical, and conceptual patterns in languages engaged in long-term language contact, which is a defining characteristic of linguistic areas, as in our case is the East Nusantara (Klammer et al. 2008).

6 Number in anthropological-linguistic perspective

Number expressions form the core of various cultural interactions such as payment negotiations (trade, bride price, compensations, debts), religious practices (divination, structure of rituals), as well as traditional time keeping (months of the year, clan genealogies). Compared to the study of numeral forms, relatively little attention has been given to the ethnological study of numbers and indigenous mathematical operations in the Austronesian world; Barnes' (1982) report of the arithmetic of traditional calculations of marriage presentations and debts and the ritual and symbolic roles of numerals in Kedang being a notable exception.

Metboki and Bellamy (this volume) describe the various functions of classifiers in the Amanuban dialect of **Uab Meto**. Their paper presents the classifier system employed in enumeration of animals gifted in ceremonial exchanges such as weddings or welcome parties. The system tracks the birth order and number of siblings of highly valued animals such as cows and pigs. They also discuss the use of numerals and classifiers with kinship terms, with reference to children or siblings, as well as crop planting formulas that indicate the proportion of different crop types that are planted together (e.g. corn with eggplants, or corn with beans).

Kratochvíl and Delpada (2012) described the counting system used in **Abui** bride price negotiations and the calculation of interest. This system is based on *moko* drums, to some extent equivalent of a local currency, and used to play much larger role in the Alorrese society (Bernet Kempers 1988:363-366; Laufer 2009; Simanjuntak et al. 2012). The Dutch colonial administration banned the *moko*-based monetary system in the Alor-Pantar as late as 1913-1914 and imposed its own silver and copper coins based currency to collect taxes destroying a large number of *mokos* in the process (Bernet Kempers 1988:366). The system persisted in the traditional exchanges (bride price and fine payments) but is gradually being abandoned by communities in the Alor archipelago. The reasons often given is shortage of *mokos* and the unsustainable debt levels that borrowing of *mokos* generates (Kratochvíl and Delpada 2008, 2012). The cultural practices associated with counting require further research.

7 Number expressions and language contact

Numeral systems and numerical expressions are susceptible to the kinds of sociolinguistic changes that arise through language contact. Often, the numeral systems of dominant languages replace the systems of other languages, starting with the higher numerals. This process is also at work in the Papuan languages of East Nusantara, where the higher cardinal numbers are often Malay loans, e.g. *ratu* 'hundred' and *ribu* 'thousand'.

The order of the numeral and noun in the noun phrase also shows clear geographical patterns. While the order numeral-noun is found in most of Indonesia and the Philippines, the reverse pattern, noun-numeral, is found in the New Guinea area (Dryer 2013b). The languages discussed in this volume tend to follow the latter pattern, whether they are Austronesian or Papuan, indicating a strong areal signal of the New Guinea type, see also §4. In this respect, **Papuan Malay** is particularly interesting; it has a variable order of noun and numeral, while Standard Malay or Indonesian have a fixed numeral-noun order. Papuan Malay only developed over the last 130 years or so (unlike other Malay varieties in the larger region; Kluge 2014:11), which indicates that a word order change like this can occur in a relatively short period. Another domain where contact appears to have played a role is in the classifier systems. Contact with Austronesian languages has triggered or

enhanced the development of such systems in the Papuan languages of East Nusantara (Klamer, this volume).

8 Summary and conclusions

By way of summary, we present some of the features that have been discussed in this chapter in Table 1. We focus on those features that appear to have different values in the Austronesian and Papuan languages of East Nusantara.

Table 1: Features of number expressions in Austronesian and Papuan languages of East Nusantara (ENUS)

Feature	Austronesian in ENUS	Papuan in ENUS
Numeral system	Decimal	Decimal and quinary
Additive marker in higher numbers	Sometimes	Default
Derivation of ordinals	PMP <i>*ika-</i>	Variable
Derivation of distributive numerals	Reduplication	(Partial) reduplication
Order in NP	[Numeral-Classifier]-Noun Noun-[Numeral-Classifier] Noun-[Classifier-Numeral]	Noun-[Classifier-Numeral]
Marking of plural nouns	No marking, or Enclitic	Plural number word
Numeral classifier(s)	Inherited ⁵	Possibly contact-induced
Non-numeral counting systems	Livestock, planting	Bride price negotiations

While the chapters in this volume only present data on about ten of the several hundreds of languages spoken in East Nusantara, they already give a glimpse of the enormous variety in number expressions found in the area. It is clear that interactions between speakers of Austronesian and Papuan languages resulted in the diffusion of certain structural features in both directions. The indigenous expressions for number as discussed in this volume are currently under pressure from the major languages of interethnic trade and national education, namely Indonesian in Indonesia, and Tetun and Portuguese in East Timor. It is our hope that this volume will contribute to preserving some of the linguistic diversity in the region.

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⁵ Blust (2014) reconstructs **buaq* ‘fruit’ and **batu* ‘stone’ as classifiers for Proto-Malayo-Polynesian, and **daun* for Proto-Central-Eastern Malayo-Polynesian. This may suggest that classifiers were an areal feature of pre-Austronesian languages in the area; they are contact-induced innovations in Proto-Malayo-Polynesian.

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2 Numerals in Sumbawa

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1 Introduction

Sumbawa is a language spoken in the western part of Sumbawa Island in Indonesia. According to Lewis et al. (2013), the population of Sumbawa speakers numbered about 300,000 in 1999. Sumbawa belongs to the Malayo-Sumbawan subgroup of languages, a (western) subgroup of the Malayo-Polynesian branch of the Austronesian language family. It is the easternmost language in this group (Adelaar 2005). Map 1 shows the distribution of Sumbawa and its neighboring languages.

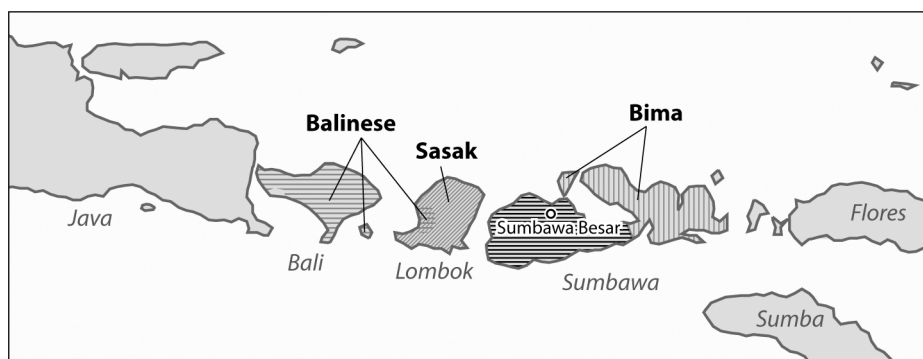


Figure 1: Sumbawa and its neighbors, based on Moseley et al. (2007:148, 153)

Mahsun (1999) distinguishes four main Sumbawa dialects:

- (a) *Sumbawa Besar* dialect, widely spoken in Central Sumbawa,
- (b) *Taliwan* dialect, spoken near Taliwan in the northwestern part of West Sumbawa,
- (c) *Jereweh* dialect, spoken near Jereweh in the central-eastern part of West Sumbawa,
- (d) *Tongo* dialect, spoken near Tongo in the southern part of West Sumbawa.

The data presented in this study are from the Sumbawa Besar dialect,² which functions as a lingua franca for speakers of different dialects throughout the Sumbawa-speaking area. The discussion offers a two-part overview of Sumbawa numerals. The first part presents an

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² See Shiohara (2012) for a description of this dialect. The data on which this paper is based were collected in the towns of Sumbawa Besar and Empang during fieldwork periods totaling approximately 10 months altogether between 1996 and 2013. I am grateful to the people who assisted me in my research, especially Dedy Mulyadi (Edot), Papin Agang Patawari (Dea Papin Dea Ringgi), and the late Pin Awak (Siti Hawa).

overview of Sumbawa numerals, and the second part deals with their morphosyntactic features.

2 Sumbawa numerals and quantifiers

This section gives an overview of Sumbawa cardinal numerals (section 2.1) and forms derived from them (2.2), non-numeral quantifiers (2.3).

2.1 Cardinal numbers

The list of Sumbawa cardinal numbers from one to twenty is given in Table 1.³

Table 1: Sumbawa cardinal numerals (1-20)

1	<i>sópó’/se-/sai</i>	11	<i>s-olas</i>
2	<i>dua</i>	12	<i>dua-olas</i>
3	<i>telu</i>	13	<i>telu-olas</i>
4	<i>empat</i>	14	<i>empat-olas</i>
5	<i>lima</i>	15	<i>lima-olas</i>
6	<i>enam</i>	16	<i>enam-olas</i>
7	<i>pitu’</i>	17	<i>pitu-olas</i>
8	<i>balu’</i>	18	<i>balu-olas</i>
9	<i>siwa’</i>	19	<i>siwa-olas</i>
10	<i>se-pulu</i>	20	<i>dua-pulu</i>

For ‘one’, the two free forms *sópó’* and *sai* and the prefix form *se-* are distinguished from one another. *sópó’* is a semantically unmarked form referring to the number of an entity. (e.g., *tau sópó’* ‘one person’, *balé sópó’* ‘one house’). The prefix *se-* may also be attached to a noun, and indicates the number (e.g., *se-tau* ‘one person’, *se-balé* ‘one house’); in this position, the prefix *se-* is replaceable to the free form *sópó’*. *se-tau* and *sópó’ tau/tau sópó’* both refer to ‘one person’ without any semantic difference.

In addition, *se-* may be attached to constituents indicating number units (*-olas* ‘-teen’, *-pulu* ‘ten’) to derive numerals with complex forms (*se-pulu* ‘ten’, *se-ratis* ‘100’). The third form, *sai*, is used to indicate a digit (the ‘ones place’) in numerals of more than 20 (e.g., *dua-pulu-sai* ‘21’, *telu-pulu-sai* ‘31’).) The form *sópó’* may not be used to derive complex forms of numerals in this way. The form *sai* may stand alone, in which case it is exclusively used for counting up to a certain number (e.g., *sai, dua, telu, empat...* ‘one, two, three, four...’).

The numerals denoting numbers from 11 to 19 are indicated by the combination of a numeral from one to nine and the form *-olas*. (In *solas* ‘11’, the schwa in the prefix *se-* ‘one’ is dropped.)

Multiples of ten are denoted by juxtaposition of the numbers ‘two’ to ‘nine’ shown above and the formative *-pulu* ‘ten’, thus:

³ The transcription employed here essentially follows the orthography of Indonesian, using the following conventions: *ng* for [ŋ], *ny* for [ɲ], *c* for [tʃ], *j* for [dʒ], *y* for [j], and *e* for [ə]. There are also some additional distinctions in the transcription of some vowels, as in open-mid unrounded front vowel *è* [ɛ], close-mid unrounded front vowel *é* [e], open-mid rounded back vowel *o* [ɔ], and close-mid rounded back vowel *ó* [o]. Finally, an apostrophe (') is used to show word-final stress when it is heavier than usual (e.g., *sólé* ‘borrow’).

dua-pulu ‘20’, *telu-pulu* ‘30’, *mpat-pulu* ‘40’, *lima-pulu* ‘50’ ... *balu-pulu* ‘80’,
siwa-pulu ‘90’

Numbers between multiples of ten are denoted by juxtaposition of the above form with a individual digit, for example:

dua-pulu-sai ‘21’, *dua-pulu-dua* ‘22’, *dua-pulu-balu* ‘28’, *dua-pulu-siwa* ‘29’,
telu-pulu-sai ‘31’, *telu-pulu-dua* ‘32’, *telu-pulu-balu* ‘38’, *telu-pulu-siwa* ‘39’,
siwa-pulu-sai ‘91’, *siwa-pulu-dua* ‘92’, *siwa-pulu-balu* ‘98’, *siwa-pulu-siwa* ‘99’.

The morpheme denoting a unit of a hundred is *-ratis*, for example:

se-ratis ‘100’, *dua-ratis* ‘200’, *balu-ratis* ‘800’, *siwa-ratis* ‘900’.

The forms above are complexly combinable, for example:

se-ratis-dua-pulu-sai ‘121’, *dua-ratis-dua-pulu-dua* ‘222’.

As in Malay, the morpheme denoting a unit of one thousand is *ribu*; it appears in all numbers between 1000 and 999,999. The number 1,000,000 is denoted by *se-juta*; thus:

se-ribu ‘1000’, *dua-ribu* ‘2000’ ...
se-pulu-ribu ‘10,000’, *dua-pulu-ribu* ‘20,000’
se-ratis-ribu ‘100,000’, *dua-ratis-ribu* ‘200,000’
se-juta ‘1,000,000’.

Sumbawa numerals from one to ten are all reflections of the forms in Proto-Austronesian (PAN; see Zorc 1995, Blust’s online dictionary). The configuration of numerals between 11 and 19 follows the same rules as in Malay (Sneddon 2010: 189) in that it adopts the cognate form of Malay *-belas*, indicating ‘teen’. This feature is shared by the western neighbors namely Sasak and Balinese, which form the same Bali-Sasak-Sumbawa subgroup in Malayo-Sumbawan subgroup (Adelaar 2005), but not by the neighboring languages to the east (e.g., Bimanese and Lamaholot). The eastern neighbors belong to the different subgroup and indicate cardinal numerals between 10-19 by juxtaposition such as ‘ten + one’, e.g., *sampuru ica* ‘11, lit. ten one’, *sampuru dua* ‘12’ in Bimanese (Made Sri Satyawati, p.c.) and *pulu nã?ã to?u* ‘11, lit. ten with one’, *pulu nã?ã rua* ‘12’ in Lamaholot (Naonori Nagaya, p.c.).

For numbers between 21 and 29, the western neighbors employ a loanword from old Javanese (Zoetmulder 1983:1026), *-likur* ‘tween’ (e.g., *se-likur* ‘21’, *dua-likur* ‘22’, in both Balinese and Sasak). As shown above, Sumbawa employs simple juxtaposition of constituents indicating two and ten along with a digit in the ‘ones’ place to refer to numbers between 21 and 29 (e.g., *dua-pulu sai* ‘two-ten one, 21’, *dua-pulu dua* ‘two-ten two, 22’). The forms with *-likur*, however, are still retained in expressions to count the phases of the moon. For example, *telu-likur* ‘23’ denotes the 23rd night after the new moon, that is, the waning half-moon.

2.2 Derivation from cardinal numerals

Ordinal numbers are derived from cardinal numerals by the prefix *ke-* (e.g., *ke-dua* ‘the second’, *ke-telu* ‘the third’). The only exception is the word for ‘the first’, that is, *pertama*, which is presumably borrowed through Malay from the Sanskrit प्रथम *prathamá* (e.g., *tau pertama* ‘the first (best) person’). The form derived from the ordinal numeral indicating ‘one’, that is, **ke-sópó* or **ke-sai*, is not accepted by native speakers.

Another prefix, *se-*, attaches to cardinal numerals. The resultant form denotes the concept ‘all the definite entities in some group of base number *x*’ (e.g., *se-dua* ‘both’, *se-telu* ‘all three’, and *se-mpat* ‘all four’). The combination of the bound morpheme *-kodèng* and a numeral may be used to specify the number of an entity. The combination normally follows a noun, as in (1)–(3).⁴

- (1) *bèang mo kaji roko se-kodèng*
 give AMC 1SG.HON cigarette one-entity
 ‘Give me a cigarette.’
- (2) *ka=ku-gita bodok dua-kodèng tonè nta*
 PST=1SG=look cat two-entity a.little.while.ago here
 ‘I saw three cats here a little while ago.’
- (3) *aku ada anak telu-kodèng*
 1SG have child three-entity
 ‘I have three children.’

The occurrence of the combinational form with *-kodèng* is always optional. It can be replaced by an unmarked cardinal numeral in all the examples that include the *-kodèng* combination above. Thus, (4) expresses the same meaning to (1) above.

- (4) *bèang mo kaji roko*
 give AMC 1SG.HON cigarette
 ‘Give me a cigarette.’

The combinational form with *-kodèng* may be used independently, that is, without being preceded by a common noun. Sentence (5) below offers an example.

- (5) *Dua anak, soai se-kodèng salaki se-kodèng*
 Two child female one-entity male one-entity
 ‘(There are) two children; one is a girl and one is a boy.’

2.3 Non-numeral quantifiers

Sumbawa employs the following quantifiers:

<i>serèa</i>	‘all’ (from the verb <i>rèa</i> ‘big’, prefixed with <i>se-</i> ‘one’),
<i>peno</i>	‘many/much’,
<i>sedi</i>	‘a few/a little’, and

⁴ Glosses adhered to the Leipzig Glossing Rules, with the following additions: AMC aspect-mood clitic, UNEXP unexpected, HLT highlighting, HON honorific, INTERR interrogative.

pida ‘how many/much’.

All the quantifiers above may be used for both count and mass nouns (e.g., *peno* ‘sedi tau’ ‘many/a small number of people’, *peno/sedi mè* ‘a lot of/a small amount of rice’).

The interrogative quantifier *pida* ‘how many’ or ‘how much’ occurs in the clause initial position like the other interrogative words in this language.

- (6) *pida* *mo* *umir* *sia?*
 how many AMC age 2SG.HON
 ‘How old are you?’

The reduplicated form *pida-pida* indicates a relational indefinite amount similar to English ‘as much as’ or ‘as many as’, implying a large number or amount.

- (7) *pida-pida* *mo* *ya=ku-beli*
 how many AMC FUT=1SG-buy
 ‘I will buy as much as you have’ or ‘I will buy as many as there are.’

The syntactic properties of the quantifiers will be shown in section 4.

3 Number in pronouns and nouns

Sumbawa has two sets of pronouns: unmarked pronouns and honorific pronouns. Number is distinguished only in first- and second-person pronouns. The list of Sumbawa personal pronouns is presented below, in Table 2.

Table 2: Sumbawa personal pronouns

person	unmarked	honorific
1SG	<i>aku</i>	<i>kaji</i>
2SG	<i>kau</i>	<i>sia</i>
1PL.INCL	<i>kita</i>	
1PL.EXCL	<i>kami</i>	
2PL	<i>kau</i>	<i>nènè</i>
3	<i>nya</i>	<i>diri</i>

Number is not grammatically indicated for nouns. Reduplication, which is often used as an indication of plurality in Malay and other neighboring languages, is not employed in Sumbawa (see Sneddon 2010: 20-22 for nominal reduplication in Malay). Only the use of a quantifier or a numeral can express the plurality of an NP referent (e.g., *tau serèa* ‘all the people’, *bua sedua* ‘both fruits’).

4 Syntax of Sumbawa numerals and quantifiers

Sumbawa numerals and quantifiers exhibit a distinctive syntactic property in their attributive use that may be called “floating.” This property enables us to claim that numerals and quantifiers form a distinct syntactic category. We will discuss this point in 4.1 and then examine the other syntactic properties exhibited by this category in 4.2.

4.1 Numeral and quantifier floating

When Sumbawa numerals and quantifiers are used attributively, their position in a given clause varies depending on the information status of the referent, that is, its (in)definiteness. Before we examine this point, we will describe the canonical structure of the NP. In Sumbawa, a modifier follows the head noun within an NP. That is, the head noun stands in the initial position in a noun phrase. Either a noun or a verb⁵ may occur as a modifier. Some examples follow.

- (8) *balè batu*
house stone
‘a stone house’
- (9) *balè guru*
house teacher
‘a teacher’s house’
- (10) *balè rango*
house big
‘a big house’
- (11) *tau nyoro*
person steal
‘thief’ (lit. ‘stealing person’)

Besides attributive nouns or verbs, the head noun can be modified by a possessor noun or pronoun, a numeral or quantifier, or a demonstrative, in that order. Only the head noun is an obligatory constituent of the NP. Examples are given below.

SUMBAWA NP: N_{HEAD} (attributive N/V) (possessor PRON/N) (NUM/QUANT) (DEM)

- | | N _{HEAD} | attributive | possessor | NUM/QUANT | DEM | translation |
|------|----------------------|-----------------------|-----------|-------------------|-------------------|-------------------------|
| (12) | <i>balè</i>
house | <i>balong</i>
good | | | <i>ta</i>
this | ‘this house’ |
| (13) | <i>bale</i>
house | <i>balong</i>
good | | <i>dua</i>
two | <i>ta</i>
this | ‘these two good houses’ |
| (14) | <i>dengan</i> | <i>balong</i> | | <i>peno</i> | <i>ta</i> | |

⁵ Sumbawa does not recognize adjectives as an independent syntactic word class. Words denoting properties and words denoting actions exhibit similar syntactic features, whether in the attributive use, as shown in this section, in examples (10) and (11), or in the predicative use discussed in section 4.2, example (31) and (32); therefore, they may be viewed as a category of verb.

- | | N _{HEAD} | attributive | possessor | NUM/QUANT | DEM | translation |
|------|-------------------|-------------|-------------|------------|-----------|---------------------------|
| | person | good | | many | this | ‘these many good friends’ |
| (15) | <i>anak</i> | | <i>guru</i> | <i>dua</i> | <i>ta</i> | |
| | child | | teacher | two | this | ‘these two teachers’ |
| (16) | <i>anak</i> | | <i>sia</i> | <i>dua</i> | <i>ta</i> | ‘these two your children’ |
| | child | | 2SG | two | this | |

In addition to the modifiers shown above, a relative clause introduced by the relativizer *adè* may occur before the demonstrative.

- (17) *dengan balong dua adè ka=laló kóna ta*
 PST=1SG=look cat two REL PST=go to.there this
 ‘These two good friends who went there.’

As mentioned above, numerals and quantifiers exhibit variation in position. They may occur in positions preceding or separated from the head nouns that they semantically modify.⁶ Compare (13) above to (18) and (19) below.

- (18) *ada dua balè balong*
 exist two house good
 ‘There are two good houses.’
- (19) *ada balè balong nan dua*
 exist house good that two
 ‘The good houses are two.’

Word order in these cases is determined by the information structure of the clause. When the referent of the whole NP is definite, the numeral occurs within the NP; in contrast, when the referent is indefinite or the number denoted by the numeral is the focus of the sentence, the numeral is separated from the head noun. When the referent of the NP that includes the numeral has been introduced in a previous sentence, as in (20), the numeral occurs in the NP, following the head noun.

- (20) *ka=maté ké Tau Jepang nan?*
 PST=die INTERR person Japan that

⁶ This phenomenon is similar to one observed in Japanese, which Nakanishi (2008) describes as “numeral float.” Nakanishi (2008: 287-319) offers the following examples, where the numeral *san* ‘three’ and the person classifier *-nin*, occur in non-canonical positions.

Kinoo san-nin-no kasyu-ga utat-ta.
 yesterday [three-CL-GEN singer]-NMLZ sing-PST

Kinoo kasyu san-nin-ga utat-ta.
 yesterday [singer three-CL]-NMLZ sing-PST

Kasyu-ga kinoo san-nin utat-ta.
 singer-NMLZ yesterday three-CL sing-PST
 ‘Tree singers sang yesterday.’

nósoka *maté,* *telas* *si* *tau* *Jepang* *telu* *nan*
 NEG.UNEXP die alive AMC [person Japan three that]
 ‘Did the Japanese (i.e., specific Japanese people already mentioned in the previous discourse) die?’ ‘No, they didn’t die. The three Japanese are still alive.’

In example (21), the referent of numeral *telu* or quantifier *peno* is in the focus of the sentence. In this case, the numeral or quantifier occurs outside the NP.

- (21) *pida* *tau* *Jepang* *adè* *tedu* *nta?*
 how.many person Japan REL stay here
- telu/peno* *tau* *Jepang* *adè* *tedu* *nta*
 three/many person Japan REL stay here
 ‘How many Japanese live here?’ ‘Three/Many Japanese live here.’

In example (22) below, which is a passage from a famous Sumbawa legend titled *Tutir Lalu Kurekkure* ‘Story of Kurekkure’, the numeral *pitu* ‘seven’ occurs twice, indicating the number of young girls being discussed. In the first sentence, in which the young girls are newly introduced to the story, *pitu* occurs before the head noun, whereas in the second clause, which makes reference to the same girls, *pitu* occurs within the NP.

- (22) *ada* *pitu’* *tau* *dadara*
 exist [seven person young (of.girls)]
- tau* *dadara* *pitu* *nan* *sarèa* *basanak-soai*
 person young (of.girls) seven that all be.sisters
 ‘There are seven girls. The seven girls are all sisters.’

Consider the following example, cited from the same story. In the first clause, the speaker confirms the number of girls, and we can say that the numeral occurs after the demonstrative, that is, outside of the NP, because the number of entities is the focus of the discourse. In the second clause, however, the numeral *pitu* occurs in the NP, since ‘the **seven** girls’ have already been introduced to the discourse by the previous clause.

- (23) *kan* *ada’* *anak* *datu* *nan* *pitu*
 you.know exist child king that seven
- soai* *serèa’* *datu-dara* *pitu*
 female all princess seven
 ‘The said children - you know, there are the king’s children - are **seven**, and **the seven** princesses are all female....’

Positional variation determined by the (in)definiteness of the NP is mentioned in Greenberg (1978:284) as one of 54 cross-linguistically generalizable characteristics concerning numeral systems; Brown (2005:578) has made similar observations concerning the Malayo-Polynesian (Northwest Sumatran) Nias.

4.2 Syntactic behavior of numerals and quantifiers

From the distinct syntactic features mentioned above, we can consider that numerals and quantifiers form a distinct syntactic category in Sumbawa. The syntactic properties of numerals and quantifiers of course vary across languages;⁷ in this section, we examine the syntactic behavior exhibited by Sumbawa numerals and quantifiers.

4.2.1 Numerals in the predicate

Sumbawa predicates may be headed by either a noun or a verb. In (24), the predicate head is a noun, while in (25) and (26) it is a verb.

- (24) *guru* *aku*
 teacher 1SG
 ‘I am a teacher’

- (25) *rango* *anak-kaku*
 big child-1SG.GEN
 ‘My child is big.’

- (26) *ka=teri* *jam* *nan*
 PST=fall clock that
 ‘The clock dropped.’

A tense-aspect-mood (TAM) marker normally occurs with a verbal predicate but not with a nominal predicate. For example, the future tense marker *ya=* may occur with a verb, as in examples (27) and (28).

- (27) *ya=rango* *anak-kaku*
 FUT=big child-1sg.gen
 ‘My child will be big.’

- (28) *ya=teri* *jam* *nan*
 FUT=fall clock that
 ‘The clock will drop.’

As the unacceptability of sentence (29) below shows, the future tense marker cannot occur with a noun.⁸

- (29) **ya=guru* *aku*
 FUT=teacher 1SG
 (intended meaning) ‘I will be a teacher.’

⁷ Croft calls quantifiers “the classic example of an intermediate syntactic category” (1991:133).

⁸ The future status of a nominal predicate like “will be a teacher” is expressed by a copula *dadi* with the future marker *ya* and the noun.

Ya=dadi *guru*.
 FUT=become teacher
 ‘S/he will be a teacher/they will be teachers.’

The numeral and quantifier displays distinctly verb-like behavior in this context. The future tense marker *ya=* may be directly attached to the numeral.

- (30) *ya=telu/peno anak-kaku*
 FUT=three/many child-1SG.GEN
 ‘I will have three/many children.’

Relativizability can also be used as a criterion to distinguish a verbal predicate from a nominal predicate. That is, a verbal predicate may be relativized by *adè*, while a nominal predicate may not.

- (31) *balè adè rango*
 house REL big
 ‘a big house’
- (32) *pipis adè ka=ilang*
 money REL PST=lost
 ‘lost money’
- (33) **balé adè batu*
 house REL stone
 (intended meaning) ‘a stone house’
- (34) **masalah adè pipis*
 problem REL money
 (intended meaning) ‘financial trouble’

A predicate in which a numeral and a quantifier is the head can be relativized by *adè*, as in (35) below, can therefore be considered a verbal predicate.

- (35) *anak adè telu/peno*
 money REL three/many
 ‘the three/many children’

4.2.2 Inability to head an NP

In Sumbawa, only a noun or pronoun can head an NP. That is, numerals, like verbs, cannot function as NP heads.

- (36) **datang telu/peno nan*
 come three/many that
 (intended meaning) ‘The three come.’
- (37) **ada telu/peno nan*
 exist three/many that
 (intended meaning) ‘The three/many are there.’

A meaning something like ‘the ones that are three’ is denoted by an *adè* clause, which can be considered to be a headless relative clause, as in (38) and (39).

- (38) *datang adè telu/peno*
 come REL three/many
 ‘The three/many come.’
- (39) *ada adè telu/peno*
 exist REL three/many
 ‘The three/many are there.’

5 Final remarks

This paper offered an overview of Sumbawa numerals. Sumbawa numerals from one to ten are all descendants of the corresponding forms in Proto-Austronesian (see Zorc 1995). The configuration of numerals between 11 and 19 follows the same rules as in Malay (Sneddon 2010:189), in that it adopts the reflex of *-blas* ‘teen’ in Malay.

Numerals greater than 21 are indicated by the juxtaposition of the formatives (e.g., *dua-pulu-dua* ‘two-ten two, 22’ and *telu-ratis-telu-pulu-telu* (three-hundred three-ten three, 333’). As for the numerals between 21 and 29, however, a trace of the old Javanese formative *-likur* ‘tween’ is observed; forms such as *dua-likur* ‘two-tween, 22’ or *telu-likur* ‘three-tween, 23’, which are used as ordinary numerals in the western neighbor languages (Balinese and Sasak), are retained in Sumbawa only in expressions for counting the phase of the moon; for instance, the form *dua-likur* refers to ‘the moon of the 22nd night from the new moon’ in Sumbawa.

Numerals and quantifiers have a distinct syntactic property that may be called “floating”; when used attributively, a numeral or quantifier may occur either within or outside the NP that it semantically modifies. This positional variation is determined by the (in)definiteness of the NP referent. When the referent is definite, the numeral or quantifier occurs after the head noun, while when it is indefinite, the numeral or quantifier occurs in a position separate from the semantic head. This property supports the claim that numerals and quantifiers form a distinct syntactic category in Sumbawa exhibiting similar syntactic properties to verbs, in that they may head verbal predicates but may not head an NP.

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3 *Number in Tolaki*

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1 Introduction

In this paper we investigate the category of number in Tolaki (ISO 693-3: lbw), an Austronesian language spoken on mainland southeastern Sulawesi.² The category of number is relevant to Tolaki, and is a morphological category realized both in the NP and on the verb, but it is not *consistently* marked. In particular, although we must recognize a distinction between singular, dual and plural, nowhere do we find explicit three-way marking that targets just these categories.

In section 2 we give an overview of Tolaki quantifiers. We begin with a discussion of the numeral system, before moving on to the methods employed to enumerate participants and the formation of ordinal numbers. We conclude this section with a discussion of the quantifiers *luwuako* ‘all’ *omeha* ‘some’ and *dadio* ‘many’.³

In section 3 we discuss number in the noun phrase. We discuss the non-singular enclitic *-Cako*, reduplication and the manifestation of number in the genitive clitics.

In section 4 we discuss the different expressions of number in the verb phrase. We discuss different uses of the singular and non-singular forms of the pronominal clitics, the plural prefix *mbeN-* and the inclusory construction. We conclude our discussion in section 5 with a discussion of an innovative system that has arisen in the speech of some urban speakers for explicitly marking the number of possessums.

2 The numeral system

We begin our discussion of number in Tolaki with an overview of the numeral system. The Tolaki numeral system is decimal; the numbers 1–10 are shown in Table 1. All of the numerals are descended from Proto-Austronesian etyma (see Mead 1998:45 footnote 27 for further discussion) and have absolute, rather than relative reference.

Multiples of ten are formed with a proclitic bound numeral followed by the element *mbulo*, historically the numeral ‘10’, *pulo*, prenasalised with a nasal linking element, *N* and regular voicing of stops following a nasal.⁴ In all cases the proclitic numeral is

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² Unless otherwise cited, data is drawn from fieldwork conducted mainly at the beginning of 2012. The variety of Tolaki described in this paper is spoken in the Unaaha and Wawotobi regencies (within the *Konawe* dialect area). Speech that appears specific to Kendari is flagged as ‘urban’. The authors would like to thank their main informants, Darmin, Untung, Sukur Tabara and Omar Pidani.

³ We do not discuss distributives, as we do not currently have any data on their expression.

⁴ Compare *pu'u* ‘tree’ + *pundi* ‘banana’ → *pu'u-N-pundi* → *pu'umbundi* ‘banana tree’.

etymologically related to the corresponding independent numeral, though the relationship has become opaque in some cases.⁵

Table 1: Tolaki Numerals

Numerals		Multiples of ten	
1	<i>o'aso</i>	10	<i>hopulo</i>
2	<i>oruo</i>	20	<i>rua-mbulo</i>
3	<i>otolu</i>	30	<i>tolu-mbulo</i>
4	<i>o'omba</i>	40	<i>pato-mbulo</i>
5	<i>olimo</i>	50	<i>lima-mbulo</i>
6	<i>o'ono</i>	60	<i>onoma-mbulo</i>
7	<i>opitu</i>	70	<i>pitu-mbulo</i>
8	<i>hoalu</i>	80	<i>halu-mbulo</i>
9	<i>osio</i>	90	<i>sio-mbulo</i>
10	<i>hopulo</i>	100	<i>aso-etu</i>

Numerals between 10 and 20 are formed with the number ten followed by the relevant numeral, i.e. *hopulo o'aso* 'eleven', *hopulo oruo* 'twelve' etc.

The proclitic forms found with multiples of ten are also used in combinations with other nouns; commonly in units of measure as in example (1) below, or proper names as in (2).⁶

- (1) *halu-are o-galu*
 eight-are CN-rice.field
 'eight ares (100m²) of rice field'
- (2) *Haluoleo*
halu-oleo
 eight-day
 'Haluoleo' (a Tolaki culture hero)

In general, these same proclitic forms are used for multiples of a hundred and multiples of a thousand. For multiples of a hundred the second element is *etu*; for multiples of a thousand the second element is *sowu*.

⁵ For instance, at first glance *o'omba* and *pato-* appear completely unrelated. However, both derive from PAN *Se(m)pat (eg., Zorc 1995), via different pathways, with one reflecting a form with *m and the loss of the final consonant, the other reflecting a form without the *m but retaining the final *t.

⁶ Glosses follow the list of standard abbreviations in the Leipzig Glossing Rules, with the following exceptions: ACCID 'accidental passive', CN 'common noun', eSi 'older sibling', NFIN 'non-finite', NSG 'non-singular', ORD 'ordinal number', PN 'proper noun', SPEC.RC 'specific relative clause' ySi 'younger sibling'. The common noun prefix occurs only on unmodified common nouns; a proper noun will take *i-* (compare (10) and (45)).

Examples are given in standard Tolaki orthography, with hyphens (-) added to indicate clitic and morpheme breaks. Tolaki letters have the same values as Indonesian equivalents, with the exception of the apostrophe <'> which represents the glottal stop /ʔ/. Full sentences receive appropriate capitalisation and punctuation. A capital 'N' (i.e. *poN-*) indicates a word or morpheme after which the morphophonemic process of prenasalisation occurs. Under this process the voiceless stops /p, t, k/ become the prenasalised stops /mb, nd, ng/. Two lines of Tolaki are given in examples when this morphophonemic process operates. The top line shows the standard orthography, the second line the morpheme breaks.

- (3) a. 200 *rua-etu*
 b. 2000 *rua-sowu*

However, the proclitic occasionally takes an unexpected form with some multiples of a hundred and a thousand. There is disagreement among speakers over some of these forms. Those numbers, which are known to occur with unusual proclitic elements, are given below:

- (4) a. 600 *noma-etu*
 b. 4,000 *omba-sowu*
 c. 6,000 *ono-sowu, onoma-sowu*

When constructing large numerals, thousands precede hundreds, hundreds precede multiples of ten and multiples of ten precede single units. For millions the Indonesian *juta*⁷ is used; *aso juta* ‘one million’. Some examples of large numerals are given in (5) below.

- (5) a. 22 *rua-mbulo oruo*
 2-10 2
 b. 231 *rua-etu tolu-mbulo o'aso*
 2-100 3-10 1
 c. 78,433 *pitu-mbulo halu-sowu pato-etu tolu-mbulo otolu*
 7-10 8-1000 4-100 3-10 3
 d. 923,560 *sio-etu rua-mbulo tolu-sowu lima-etu onoma-mbulo*
 9-100 2-10 3-1000 5-100 6-10

2.1 Enumeration

The most common way of enumerating the number of individuals in a group is by using a verb derived from the independent numeral. Such verbs are derived with the plural prefix *mbeN-*, which takes the form *N-* before other prefixes (see section 4.3). As is standard for all verbs (see section 4.1), the subject is indexed with a person proclitic.

- (6) *Laa'ito* *anaro* *rombendolu.*
 laa-'i-to ana-ro ro-mbeN-tolu
 exist-3SG.ABS-PRF⁸ child-3NSG.GEN 3NSG.NOM-PL-three
 ‘They have three children.’ (*lit.* ‘Their children are three.’)

⁷ Note that Tolaki does not have the phoneme /ɟ/ and most instances of foreign /ɟ/ are assimilated to Tolaki /d/; i.e. Indonesian *janji* ‘promise’ > Tolai *dandi*. Despite these facts, *juta* has so far never been encountered in the expected assimilated form ***duta*.

⁸ The existential verb *laa* optionally indexes the introduced noun with the 3SG.ABS enclitic *-i*. When an aspectual enclitic such as the perfect *-to* also occurs such indexation is obligatory.

- (7) *Kimbeohai* *kimbelimo*
 ki-N-peo-hai ki-mbe-limo
 1NSG.EXCL.NOM-PL-be.kin-sibling 1NSG.EXCL.NOM-PL-five
 ‘I am one of five brothers and sisters.’ (*lit.* ‘We are siblings, we are five.’)

Another enumeration strategy is for an independent numeral to precede the enumerated noun as in example (8):

- (8) *Laa oruo sapi-nggu.*
 exist two cow-1SG.GEN
 ‘I have two cows.’ (*lit.* ‘There are two cows of mine.’)

As a final option for numerals inside NPs, Tolaki displays a limited classifier system. Some enumerated nouns can optionally be preceded by the classifier *boto*; this word has no known meaning as an independent noun. There appears to be an animacy restriction on which nouns can take this classifier; only nouns denoting animals and fruit have been attested with it.

- (9) *Laa rua-boto o-sapi.*
 exist two-CLF CN-cow
 ‘There are two cows.’
- (10) *Laa rua-boto o-taipa.*
 exist two-CLF CN-mango
 ‘There are two mango (tree)s.’
- (11) **laa rua-boto o-buku*
 exist two-CLF CN-book
 ‘There are two books.’

In the case of trees, we find *pu’u* ‘tree [trunk]’ used as a classifier, as shown in example (12). Nouns from other semantic domains have not been attested functioning as alternate classifiers.

- (12) *Pia-mbu’u pu’umbundi-mu?*
piaN-pu’u pu’uN-pundi-mu
 how.many-CLF:tree tree-banana-2SG.GEN
 ‘How many banana trees do you have?’ (*lit.* ‘How many are your banana trees?’)

The classifier *boto* can also be used as the only instantiation of a noun that is known, or can be gauged from context. This is shown in example (13) c. below, where the classifier *boto* stands for *opundi* ‘banana’ or *o’ase* ‘banana bunch’. The context immediately preceding example (13) c. is given in examples (13) a. and b. which show that the banana tree and its fruit have already been established as highly topical.

- (13) a. *Lako-no-to o-hada mo-mone.*
 go-3SG.GEN-PRF CN-monkey NFIN.INDF.P-climb
 ‘Then the monkey went climbing.’

- b. *Tepe'ekano imumu mbundi, mereurehu'i,*
 te-pe'eka-no i-mumuN-pundi me-reurehu-'i
 ACCID-ascend-3SG.GEN LOC-top-banana.tree NFIN.INTR-sit-3SG.ABS
 'Having ascended to the top of the banana tree, he sat down'
- c. *ano po'alo o'aso boto ano ponggaa.*
 a-no po-alo o'aso **boto** a-no poN-kaa
 and-3SG.NOM INDF.P-take one CLF and-3SG.NOM INDF.P-eat
 'and takes a single one and he eats.'
 (Untung 2009:30)

2.2 Ordinal Numbers

Ordinal numbers are formed from the independent numeral bases seen in Table 1 prefixed with the ordinal marker *ko-*. It is not clear how ordinals of multiples of ten, hundred or a thousand would be formed, as these do not arise often in natural speech, and Indonesian forms tend to be used when the need arises.

Ordinal numbers most commonly occur in specific relative clauses. Specific relative clauses are marked by reduplication of the first syllable of the verb in the relative clause. An example is given in example (14):

- (14) *Kaaka-nggu ko~ko-tolu po'opo no-hori me-rapu*
 eSi-1SG.GEN SPEC.RC~ORD-three not.yet 3SG.NOM-side NFIN.INTR-marry
 'My third older sibling is not married yet.'
 (lit. 'My older sibling [who is] the third has not yet married.')

2.3 Non-numeral quantifiers

The quantifier meaning 'all' can occur in a variety of different forms according to idiolectal variation. All the different forms are derived from the root *luwuako*⁹, or the metathesised form *wuluako*. To this root some speakers add the prefix *ina-* while genitive enclitics also occur in certain contexts. The different forms are summarised in (15).

- (15) *(ina-) luwuako (-GEN)*
wuluako

This quantifier occurs in two main syntactic positions. It can occur outside the NP, typically immediately preceding it, or else inside the NP it modifies, in which case it precedes the head noun and the 3SG.GEN enclitic *-no* usually occurs. An example of *inaluwuakono* external to the NP is given in example (16) and an example of *luwuako* NP internally is given in example (17).

- (16) *Mowohu-'iro-to, ro-kaa-'i inaluwuako-no o'-ika*
 full-3NSG.ABS-PRF 3NSG.NOM-eat-3SG.ABS all-3SG.GEN [CN-fish]_{NP}
 'They're full, [because] they ate all of the fish.'
- (17) *Luwuako toono i-Kandari no-to'ori-komiu-to*
 [all person]_{NP} LOC-Kendari 3SG.NOM-know-2NSG.DAT-PRF

⁹ Historically composed of *luwu-* 'all' plus the NSG enclitic *-Cako* (see section 3). Related languages, such as Moronene, have only the form *luwu* 'all' (Mead 1999:150).

‘Everyone in Kendari knows you now.’

Alternately, this quantifier can occur at the end of the sentence. Any core argument may be the restriction of a floating quantifier. Example (18) is a simple example of a floated quantifier in a clause. In this example we see a verb, an NP coding the S argument, and a clause-final quantifier. The quantifier can be shown to be external to the NP referent by the position of the genitive clitic *-nggu*, since genitive clitics attach to the end of the NP (Edwards 2012:43); the position of *inaluwuako* following this clitic shows that it must be external to the NP (other tests also indicate that *inaluwuako* does not form a constituent with *banggonanggu*). The interpretation of *inaluwuako* is uncontroversially restricted to the S argument; uncontroversially, because in this example there is no alternative argument that can lead to an alternative interpretation.

- (18) *Ro-mbe-leu* *banggona-nggu* *inaluwuako*.
 3NSG.NOM-PL-come [friend-1SG.GEN]_{NP} all
 ‘My friends all arrived.’

In example (19) the quantifier can likewise be shown to be external to the NP, as the common noun prefix *o-* only appears on unmodified nouns (Edwards 2012:40). In this example the floated quantifier can ambiguously refer to either the A or the P, with its reference being determined by discourse context.

- (19) *Ro-kaa-'i* *o'-ika* *inaluwuako*
 3NSG.NOM_i-eat-3SG.ABS_j [CN-fish_j]_{NP} all_{i,j}
 ‘They ate all the fish.’ / ‘They all ate the fish.’

The use of genitive enclitics with *luwuako* ‘all’ is productive. In addition to the forms with final *-no*, we also find other clitics, such as the 1NSG.EXCL clitic *-mami* illustrated in example (20).

- (20) *Sa-luwuako-mami* *pewangu,* *luwuako-no* *toono*
 when-all-1NSG.EXCL.GEN get.up all-3SG.GEN person

moko-me'aro-ro.
 DESID-hungry-3NSG.GEN
 ‘After we all got up, everyone was feeling hungry.’

Additionally, instead of the form *(ina)luwako-no* with a singular genitive enclitic, as illustrated by example (16), a form with a non-singular genitive enclitic, *(ina)luwako-ro*, also occasionally occurs. Not all speakers find this form grammatical.

The quantifier *omeha* ‘some’ can refer to part of a single individual, or a subset of a group of individuals. Like *luwuako*, *omeha* can occur with or without a genitive clitic (when affixed with a genitive clitic, it does not take the common noun prefix, following the general pattern in which *o-* is only found with unmodified NPs, and *meha* is a separate NP, appositive to *okue*). This is illustrated in example (21) a. and (21) b. respectively.

- (21) a. *Kuponggaa* *omeha* *okue*.
 ku-poN-kaa o-meha o-kue
 1SG.NOM-INDF.P-eat CN-some CN-cake
 ‘I ate some cake(s).’

- b. *Kuponggae mehano okue.*
 ku-poN-kaa meha-**no** o-kue
 1SG.NOM-INDF.P-eat some-3SG.GEN CN-cake
 ‘I ate some of the cake(s).’

The quantifier *dadio* ‘many’ is extremely common. The variant form *hadio* has been recorded in the speech of one of our informants. When it directly modifies a noun phrase it occurs post-nominally, as in example (22). The failure of the common noun prefix *o-* to occur on the noun *hada* ‘monkey’ in (22) shows that *dadio* is NP internal.

- (22) *Lako-ro-to hae hada dadio pe-tuha i'-aiwoi.*
 go-3NSG.GEN-PRF also [monkey many]_{NP} INTR-descend LOC-river
 ‘Then the many monkeys also went down to the river.’ (Untung 2009:33)

Much more commonly, however, *dadio* occurs as an intransitive verb, as in in example (23). Here we see *dadio* as the predicate, and the subject modified by the relative clause *laa mete'olu* (in which *laa* ‘exist’ shows the same grammaticalisation into a progressive as does English ‘be’).

- (23) *Dadio-to mahasiswa laa me-te'-olu.*
 many-PRF students PROG NFIN.INTR-ACCID-wait
 ‘There were many students [who were] waiting.’

Examples such as (23) with a verbal quantifier, as well as examples like (6) with a verbal numeral, reflect the preferred strategy for quantification in Tolaki; that is, to use a verb rather than to modify the noun phrase.

3 Number in the noun phrase

The Tolaki free pronouns are all derived from forms that can be reconstructed to Proto-Malayo-Polynesian (Ross 2002:36). They distinguish two numbers (singular and non-singular), with an inclusive/exclusive contrast in the first person. This is the expected contrasts found in a wide range of Austronesian languages of Southeast Sulawesi and beyond in the region. They are presented in Table 2.

Table 2: Independent Pronouns

	SG	NSG
1	<i>inaku</i>	<i>inggami</i>
1,2		<i>inggito</i>
2	<i>inggo'o</i>	<i>inggomiu</i>
3	<i>iee</i>	<i>ihiro</i>

In addition to non-singular functions, the non-singular second person pronoun *inggomiu* is also used with a singular referent to show politeness to the addressee.

Nouns without overt marking are ambiguous between singular and non-singular interpretations, as shown in the two alternative translations of (24). In (25) the overt numeral forces a non-singular interpretation.

- (24) *anadalo*
child
'a child' / 'children'

- (25) *oruo anadalo*
two child
'(the) two children'

Non-singular noun phrases can be overtly marked by the dedicated clitic *-Cako* which attaches to the end of the noun phrase. The initial consonant of this suffix is lexically specified by the word it attaches to. This initial consonant can be /ʔ/, /h/ or Ø.¹⁰

- (26) *Te'eni banggona-'ako-no o-wonggi ...*
say friend-NSG-3SG.GEN CN-snail
'The snail's friends said: ...' (Untung 2009:58)

- (27) *Inono purundawa Tolaki-'ako.*
this vegetable Tolaki-NSG
'These are [all] Tolaki vegetables.'

Another way to express a non-singular meaning is through reduplication. This is rare, and the more common use of reduplication is to express that the noun does not conform to the ideal stereotype of the reduplicated noun. With this kind of reduplication, the first two syllables of the noun root are copied and added to the left edge of the root. The simple noun *o'osu* 'mountain' in (28) is shown reduplicated in (29).

- (28) *o'-osu*
CN-mountain
'mountain(s)'

- (29) *osu~osu*
REDUP~mountain
'mountains, mountain range' / 'hill' (that is, not as high as a real mountain)

Finally, number manifests itself in the noun phrase in the genitive clitics used to mark possession. The genitive clitics are given in Table 3 below.

Table 3: Genitive Clitics

	SG	NSG
1	<i>-nggu</i>	<i>-mami</i>
1,2		<i>-ndo</i>
2	<i>-mu</i>	<i>-miu</i>
3	<i>-no</i>	<i>-ro</i>

¹⁰ The form of this suffix varies not only between lexemes but also between speakers. Thus, while the suffix begins with a glottal stop after *banggona* in example (26), after the same word in example (48), which represents data from a different speaker (of the same dialect), it begins with /h/.

The genitive clitics have the same set of distinctions as the free pronouns, and, as with the free pronouns, non-singular forms can be used with singular reference to show politeness to the referent. Unlike the case with the free pronouns, however, among the genitive clitics the 3rd person forms, as well as the 2nd person forms, are used in this way.

An example of the 2NSG and with a possible politeness reading is given in (31) and an example of the 3NSG enclitic being used to show politeness to the referent is given in example (32).

- (30) *Opio ana-mu?*
 how.many child-2SG.GEN
 ‘How many children do you (SG) have?’
- (31) *Opio ana-miu?*
 how.many child-2NSG.GEN
 ‘How many children do you (NSG/SG.POLITE) have?’
- (32) *Ikeni i-laika-ro Pa-Ali ...*
 here LOC-house-3NSG.GEN Mr.-Ali
 ‘Here, in Mr. Ali (POLITE)’s house ...’

Within the noun phrase then, we find the following phenomena regarding number: there is a dedicated set of independent pronouns that distinguish singular and non-singular referents, in which the non-singular 2nd person forms can be used to encode politeness when referring to a singular argument. There is a non-singular enclitic *-Cako* for noun phrases; reduplication of a head noun can be used to mark non-singularity (among other functions); and there are genitive clitics which display a sensitivity to the number of the possessor, and participate in the politeness shift found with the free pronouns.

4 Number in the verb phrase

Number is a salient feature of verbal morphology in a number of ways. In this section we shall see that number is marked on portmanteau agreement clitics (4.1), which sometimes can be used in non-canonical and more highly specific ways (4.2). There is also a purely number-specifying prefix that divides number in a different way to that found on the agreement clitics.

4.1 Pronominal clitics

There are numerous agreement paradigms on verbs. For local persons (that is, highly animate participants) the SG/NSG contrast is enforced, though not rigidly, as we shall see, while for third person participants (especially inanimates) the SG/NSG contrast is only erratically present.¹¹ Only the nominative affixes are shown here; other verbal paradigms include the absolutive, dative, and genitive¹², and all of the comments we make for the nominative are also applicable for the other pronominal paradigms.

¹¹ We suspect the contrast is present only when speakers, aware of number contrasts, hypercorrect.

¹² For data on these other paradigms see Mead (1998:121–144, 209) and Edwards (2012:47–53).

Table 4: Nominative Clitics

	SG	NSG
1	<i>ku-</i>	<i>ki-</i>
1,2		<i>to-</i>
2	<i>u-</i>	<i>i-</i>
3	<i>no-</i>	<i>ro-</i>

For the first person forms, the number contrast is rigidly enforced. Singular forms are used for singular participants, and non-singular forms for non-singular participants. This is shown in (33) – (35) below in which a non-singular reading is impossible when a singular clitic is used, and visa-versa:

- (33) *Ku-lako.*
1SG.NOM-go
'I/*we went'
- (34) *Ki-lako.*
1NSG.EXCL.NOM-go
'We/*I went'
- (35) *To-lako.*
1NSG.INCL.NOM-go
'We/*I went'

As with the independent and genitive pronouns, the 2nd person non-singular forms can be used for politeness. This is shown in example (37) below in which, can only be read as having a singular referent if it is also read as showing politeness to this referent.

- (36) *U-lako.*
2SG.NOM-go
'You (SG/*NSG) went'
- (37) *I-lako.*
2NSG.EXCL.NOM-go
'You (NSG/SG.POLITE) went'

However, in contrast to the 1st and 2nd person clitics, the 3SG forms can be used for both singular *and* non-singular referents, as in (38). The 3NSG forms can be used only for non-singular referents, as in (39).

- (38) *No-lako.*
3SG.NOM-go
'He/she/it went' / '**They went.**'
- (39) *Ro-lako.*
3NSG.NOM-go
'They went' / *'He/she/it went.'

Even with explicitly enumerated referents as in (40) and (41), or those marked explicitly with the non-singular enclitic *-Cako* as in (42), it is possible to use the ‘singular’ forms of the indexation clitics:

- (40) *No-leu inaruo kaaka-nggu.*
 3SG.NOM-come both eSi-1SG.GEN
 ‘Both my brothers came.’
- (41) *Noterumba ruambu'u pundinggu.*
 no-terumba rua-N-pu'u pundi-nggu.
 3SG.NOM-fall.over two-LKR-CLF banana-1SG.GEN
 ‘Two of my banana trees fell over [in the storm].’
- (42) *No-mo'isa tonde-hako-nggu.*
 3SG.NOM-fall glass-NSG-1SG.GEN
 ‘All my glasses fell down [during the earthquake].’

However, when the referent is modified with *dadio* ‘many’ it is unacceptable to use the 3rd person singular form *no-*, and the non-singular form *ro-* must be used instead. The plural prefix *mbeN-* in example (43) is discussed in section 4.3.

- (43) *Rombenderumba pu'umbundi dadio.*
 ro-mbeN-terumba pu'uN-pundi dadio.
 3NSG.NOM-PL-fall.over tree -banana many
 ‘Many banana trees fell over [in the storm].’
- (44) **Noterumba pu'umbundi dadio.*
 *no-terumba pu'uN-pundi dadio.
 3SG.NOM-fall.over tree -banana many
 ‘Many banana trees fell over [in the storm].’

Within the pronominal clitics then, we find that the form filling the 3SG slot of the paradigm (*no-*) agrees with both singular and non-singular participants, yet paradigmatically it still contrasts with the non-singular form (*ro-*), which only agrees with non-singular referents. We could call the 3rd person ‘singular’ form a ‘non-non-singular’.

4.2 Inclusory construction

The first person non-singular pronominal affixes can also be used in a first person inclusory construction (Lichtenberk 2000), referring to the speaker and other participants introduced by NPs. In these constructions a pronoun is used to sum the features of the two referents, thus *we (and) you* can mean ‘you and I’, and refer to only two people. Pre-empting the discussion in 4.3 we note that in the case of the inclusive pronominal forms, the inclusory construction (Lichtenberk 2000) must refer to at least three referents, as can be seen in (45) c. This is not the case for the exclusive pronominal forms, as shown in (45) b. For contrast, the clause without any NPs added is shown in (45) a; here the reference is only to the first person non-singular exclusive subject, with minimally two referents.

- (45) a. *Ihawi ki-lako i-Taipa.*
 yesterday 1NSG.EXCL.NOM-go LOC-mango

‘Yesterday we went to mango beach.’

- b. *Ihawi ki-lako hai-nggu i-Taipa.*
 yesterday 1NSG.EXCL.NOM-go ySi-1SG.GEN LOC-mango
 ‘Yesterday my younger sibling and I went to mango beach.’
- c. *Ihawi to-mbe-lako hai-nggu i-Taipa.*
 yesterday 1NSG.INCL.NOM-PL-go ySi-1SG.GEN LOC-mango
 ‘Yesterday you, my younger sibling and I went to mango beach.’

As well as a verbal use, this inclusory construction is also found in the noun phrase in possessive constructions, as shown in example (46) b. which contrasts with simple possessive constructions such as the one shown in (46) a.:

- (46) a. *Inono haape-mami.*
 this mobile.phone-1NSG.EXCL.GEN
 ‘This is our phone.’
- b. *Inono haape-mami i-Hasrul.*
 this mobile.phone-1NSG.EXCL.GEN PN-Hasrul
 ‘This phone belongs to me and Hasrul.’

Taking into account the pronominal affixes and this inclusory construction, we thus find three numbers distinguished, four if we take into account the underspecification of the 3SG forms. In Table 5 we can see simple nominative agreement pronominals marking singular number (*ku-* or *u-*), non-singular (*ki-*, *to-*, *i-* and *ro-*), and neutral number (*no-*). Pronominals in the inclusory construction specify non-singular (*ki-*, *i-*) or plural (*to-*). These are shown in Table 5.

Table 5: Tolaki Number Distinctions

	nominative form:	participants: simple agreement	inclusory
‘1SG’	<i>ku-</i>	1	–
‘2SG’	<i>u-</i>	1	–
‘3SG’	<i>no-</i>	1,2,3+	–
‘1NSG.EXCL’	<i>ki-</i>	2+	2+
‘1NSG.INCL’	<i>to-</i>	2+	3+
‘2NSG’	<i>i-</i>	2+	(2+)
‘3NSG’	<i>ro-</i>	2+	–

4.3 The plural prefix

The prefix *mbeN*¹³ is also used in Tolaki to mark a number category. It marks that the subject is ‘plural’, a category which is defined in Tolaki as referring to three or more referents (thus excluding dual reference). Earlier we have used ‘non-singular’ to refer to any category, both dual and plural, that refers to more than one individual, and we continue in this usage, refining it when the morphology allows us into dual and plural. Examples

¹³ When this prefix occurs before another prefix which begins with the voiceless bilabial plosive /p/, it takes the allomorph *N-*. See Table 1 example (7) in section 2.

(47) a. and (48) a. show the use of this prefix with a plural subject. The ungrammatical examples (47) b. and (48) b. show that this prefix is obligatory when the subject is plural (three or more).

- (47) a. *Ihawi ki-mbe-lako hai-nggu kaaka-nggu i-Taipa.*
 yesterday 1NSG.EXCL.NOM-PL-go ySi-1SG.GEN eSi-1SG.GEN LOC-mango
 ‘Yesterday my younger sibling, my older sibling and I went to mango beach.’
- b. **Ihawi ki-lako hai-nggu kaaka-nggu i-Taipa.*
 yesterday 1NSG.EXCL.NOM-go ySi-1SG.GEN eSi-1SG.GEN LOC-mango
 ‘Yesterday my younger sibling, my older sibling and I went to mango beach.’
- (48) a. *Ihawi ki-mbe-lako banggona-hako-nggu i-Taipa.*
 yesterday 1NSG.EXCL.NOM-PL-go friend-NSG-1SG.GEN LOC-mango
 ‘Yesterday my friends and I went to mango beach.’
- b. **Ihawi ki-lako banggona-hako-nggu i-Taipa.*
 yesterday 1NSG.EXCL.NOM-go friend-NSG-1SG.GEN LOC-mango
 ‘Yesterday my friends and I went to mango beach.’

Note that because an inclusory construction with the 1st person inclusive prefix always refers to at least three participants (you, me and one other), as described above, it is impossible to use 1NSG.INCL forms in an inclusory construction without the plural prefix *mbeN-*, as shown by the ungrammaticality of example b.

- (49) a. *Ihawi to-lako i-Taipa.*
 yesterday 1NSG.INCL.NOM-go LOC-mango
 ‘Yesterday you and I went to mango beach.’
- b. **Ihawi to-lako hai-nggu i-Taipa.*
 yesterday 1NSG.INCL.NOM-go ySi-1SG.GEN LOC-mango
 ‘Yesterday you, my younger sibling and I went to mango beach.’
- c. *Ihawi to-mbe-lako hai-nggu i-Taipa.*
 yesterday 1NSG.INCL.NOM-PL-go ySi-1SG.GEN LOC-mango
 ‘Yesterday you, my younger sibling and I went to mango beach.’

The combination of pronominal prefixes (described earlier in table 4) and the plural prefix *mbeN-* shows a grammatical sensitivity to dual which is not otherwise attested in the language. The dual reading is constructed from the absence of the plural prefix on a verb that is inflected for a non-singular subject.

Number:	1	2	3+
Label:	SG	DU	PL
pronominal prefix	<i>no-</i>	<i>ro-</i>	<i>ro-</i>
<i>mbeN-</i>	-	-	<i>mbeN-</i>

Note, however, that this sensitivity to dual does not appear to hold throughout the whole of the Tolaki speech area. Thus in the Tolaki spoken in Ueesi village, the second most

northerly village along the Konawe river, example (50) occurred in a text with an explicitly dual subject.¹⁴ The context of this example is that a man, *Lakiwa*, and his newly acquired wife *Samba-sambaria* are going to his home for the first time.

- (50) *Ari nggiro'o ro-mba-lako dunggu ri-laika-no Lakiwa*
 from that 3NSG.NOM-PL-go enter LOC-house-3SG.GEN Lakiwa
 'After that, they [Lakiwa and Samba-sambaria] went and entered Lakiwa's home.'

Another restricted context in which the prefix *mbeN-* occurs with an explicitly dual referent is in the enumeration of participants. It was noted in section 2.1 that the most common method for enumerating participants is by deriving a verb from the independent numeral. Such numeric verbs always have the prefix *mbeN-*, even if the number is two. Thus in example (51), the dual participant *potehanggu* 'my cousin(s)', introduced in (51) a., is enumerated in (51) b. the plural prefix *mbeN-* occurs.

- (51) a. ... *karna laa poteha-nggu me-sikola i-Jogya.*
 because EXIST cousin-1SG.GEN NFIN.INTR-study LOC-Jogja
 '... because my cousins were studying in Jogja[karta].'
 b. *Laa ro-mbe-ruo~ruo.*
 PROG 3NSG.NOM-PL-REDUP~two
 'There were two of them.' (*lit.* '[They were] being two')

5 A final twist

Cross-linguistically it holds, on the basis of interpretations of real-world semantic plausibility, that if an item is possessed by a plural possessor, it is highly likely to itself be plural, especially if the possessive relationship is inalienable. This tendency is shown and explained in Table 6.

While singular possessors can be combined with plural possessums and be completely felicitous, plural possessors combined with singular possessums are often pragmatically marked. A phrase such as 'our house' does not carry special implicatures, but 'our mango' carries a strong implication that the mango is intended for shared consumption. Similarly, 'our child' cannot easily be uttered unless the speaker is referring to the other parent of the child. Finally, when a plural possessor is combined with a singular inalienably possessed item, the effect is strange. 'Our head', if referring to a body part, carries a strong *alienable* implicature. This, then, is a marked structure from a pragmatic perspective.

¹⁴ This example also displays other atypical features, including the form of plural prefix; *mba-* (instead of 'standard' *mbe-*) and the form of the locative prefix *ri-* (instead of 'standard' *i-* or *ni-*).

Table 6: Number among Possessors and Possesums

	SG	PL
SG	my house	my houses
	my mango	my mangoes
	my child	my children
	my head	
PL	our house	our houses
	our mango	our mangoes
	our child ~	our children
	our head (?)	

As a result of this markedness, a minority of urban speakers have extended the meaning of the 3NSG.GEN agreement that is normally used to index person and number of *the possessor* to index the non-singular nature of the *possessum*.

Examples (52) – (55) show the different uses of the possessive in similar morphological frames. In (52) we see the simple (indeed, only) interpretation possible with a 3SG.GEN clitic on the possessum. (53) shows the simplest interpretation of a 3NSG.GEN clitic: the possessor is plural, here ‘Ali and his wife’. In (54) we see an alternative, and very common, use of the 3NSG.GEN clitic, to index a singular possessor but with honorification. The final use, shown in (55), sees the same 3NSG.GEN morpheme used to mark a singular, non-honorified possessor with a plural possessum.

- (52) *Ana-no* *i-Ali*
 child-3SG.GEN PN-Ali
 ‘Ali’s child.’ simple possessive construction
- (53) *Ana-ro* *i-Ali* *ronga* *wali-no*.
 child-3NSG.GEN PN-Ali with spouse-3SG.GEN
 ‘Ali and his wife’s child.’ plural possessor construction
- (54) *Ana-ro* *i-Ali*
 child-3SG.GEN PN-Ali
 ‘Ali (who I respect)’s child.’ honorific possessive construction
- (55) *Ana-ro* *i-Ali*
 child-3SG.GEN PN-Ali
 ‘Ali’s children.’ plural possessum construction

6 Conclusions

Number in Tolaki is a distributed morphological category, with reference dependent on the distinctions made at different morphological positions within the one word (section 4.3). We have also seen that the same morphemes can be underspecified for number in particular semantic environments (section 4.1), and that number marking in the NP is rarely obligatory. Finally, we have also seen that different constructions (honorification, plural possessum) can be morphologically signalled by the use of the same morphemes, with only pragmatic interpretations distinguishing the different senses.

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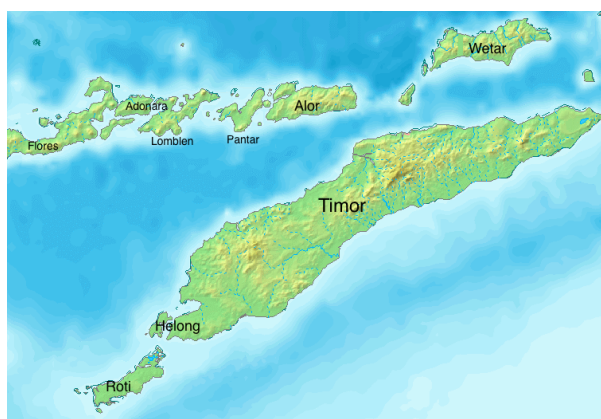
4 *The interplay of quantifiers and number in Helong grammar*

MISRIANI BALLE AND STUART CAMERON¹

1 Introduction

Helong [ISO: heg] is an Austronesian language spoken at the western end of Timor Island and immediately to the west on the island of Semau.² Small communities of Helong speakers can also be found across Indonesia including Bali and Jakarta. The total number of speakers is unknown but is estimated around 14,000-17,000 (Grimes et al, 1997: 41-42). Most Helong people are farmers and also fish for their livelihood. There are three dialects: Helong Funai, Helong Bolok, and Helong Pulau.

Helong Funai is used in Helong communities in and around the provincial capital of Kupang, Nusa Tenggara Timur. This dialect has extensive loan words and intonation similar to Uab Meto to the east. Helong Bolok can be heard spoken in a few villages (Bolok, Oe Nesu, Bone Ana, Kuan Heum, Kolhua) on the mainland of Timor island. This dialect more closely resembles the Helong used on Semau island but is heavily impacted by Kupang Malay. Of the three dialects Helong Pulau is considered by most Helong speakers to be more pure and not yet too influenced by Uab Meto, various Rote languages/dialects, and Kupang Malay. All examples in this paper are from the Helong Pulau dialect.



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Figure 1: Location of Helong speaking communities in the Timor area, Eastern Indonesia³

Within the region, Helong is unusual that it does not inflect vowel initial verb roots for person or number unlike many of the surrounding languages (C. Grimes, p.c.). It has long and short vowels, glottal stop, extensive metathesis, initial CC sequences involving /h/ and the plural suffix *-s* which can affix to almost any word ending in a vowel, regardless of the word's grammatical function. The consonant and vowel inventory is fairly simple, as illustrated below:

Table 1: Helong consonants (loan phonemes in round and graphemes in square brackets)

	labials		apicals		laminals		dorsals		glottals
stops	p	b	t	d	(c)	(j)	k	g	ʔ [ʻ]
nasals	m		n		(ɲ)		ŋ [ng]		
fricatives	f		s						h
laterals and trills			l		(r)				
semivocals	(w)				(j) [y]				

Table 2: Helong vowels

	front	central	back
high	i		u
mid	e		o
low		a	

The remainder of this paper examines various ways in which Helong handles quantity and number.

2 Numbers

Numbers in Helong follow a standard base ten system with the counting unit preceding the counter. Section 2.1 discusses cardinal numbers, followed by ordinal (2.2) and distributive numbers (2.3).

2.1 Cardinal numbers

There are two ways of stating numbers over twenty, an indigenous long form *beas* and a short form, *-s*. The use of the Helong number system on Semau is robust and is especially evident in the domains of finances, negotiations and livestock management. For example, the Helong system is exclusively used when buying fish at the beach, selling chickens to the Helong chicken vendor and counting money at church. It is considered very poor form to mix Helong with Malay counting terms. Indeed on Semau the Indonesian or Malay counting system is far less preferred and used only with non-Helong speakers.⁴

³ The map is a modification of the Map of Timor, released under the Creative Commons license at <http://commons.wikimedia.org/wiki/File:Timor.png>.

⁴ The glossing adheres to the Leipzig Glossing Rules. The complex deictic system (see Table 11) is simplified and we differentiate only the proximal, distal and remote forms. The gloss PAUS (pause) is used for the particle *lam*, whose main function is to break up the information load and flow.

Table 3: Helong cardinal numerals (1-30)

<i>mesa</i>	one	<i>hngul esa</i>	eleven	<i>buk dua beas esa</i>	twenty one
<i>dua</i>	two	<i>hngul dua</i>	twelve	<i>buk dua beas dua</i>	twenty two
<i>tilu</i>	three	<i>hngul tilu</i>	thirteen	<i>buk dua beas tilu</i>	twenty three
<i>aat</i>	four	<i>hngul aat</i>	fourteen	<i>buk dua beas aat</i>	twenty four
<i>lima</i>	five	<i>hngul lima</i>	fifteen	<i>buk dua beas lima</i>	twenty five
<i>eneng</i>	six	<i>hngul eneng</i>	sixteen	<i>buk dua beas eneng</i>	twenty six
<i>itu</i>	seven	<i>hngul itu</i>	seventeen	<i>buk dua beas itu</i>	twenty seven
<i>palu</i>	eight	<i>hngul palu</i>	eighteen	<i>buk dua beas palu</i>	twenty eight
<i>sipa</i>	nine	<i>hngul sipa</i>	nineteen	<i>buk dua beas sipa</i>	twenty nine
<i>hngulu</i>	ten	<i>buk dua</i>	twenty	<i>buk tilu</i>	thirty

Table 4: Helong counting units

<i>beas</i>	Ones
<i>buk</i>	tens
<i>ngatus</i>	hundreds
<i>lihu</i>	thousands
<i>juta</i>	millions (a Malay loan)

The pattern of counting units preceding the numeral can be found in other surrounding languages such as Amarasi and Uab Meto (Charles Grimes, p.c.). Although an equivalent of *beas* in either of these languages is not found. Below are some examples of larger numbers expressed with both the long form *beas* and the plural marker *-s*.

- (1) *Buk tilu **beas** dua*
ten three UNIT two
'thirty two'
- (2) *Buk **tilu-s** dua*
ten three-PL two
'thirty two'
- (3) *ngatus aat buk dua **beas** itu*
ten four ten two UNIT seven
'four hundred twenty seven'
- (4) *ngatus aat buk **dua-s** itu*
ten four ten two-PL seven
'four hundred twenty seven'

2.2 Ordinal numbers

The ordinal number system in Helong is straightforward. There is a unique word for ‘first’ (*hmunan*) and *ke* preceding a numeral indicates rank. Further work is necessary to determine whether *ke* is separate or is in fact a prefix or proclitic.

Table 5: Helong ordinal numerals (1-10)

<i>hmunan</i>	first	<i>ke eneng</i>	sixth
<i>ke dua</i>	second	<i>ke itu</i>	seventh
<i>ke tilu</i>	third	<i>ke palu</i>	eighth
<i>ke aat</i>	fourth	<i>ke sipa</i>	ninth
<i>ke lima</i>	fifth	<i>ke hngulu</i>	tenth

Examples of the use of Helong ordinal numerals can be seen below.

- (5) *Un ana hmunan na saap hidi kon, mate.*
 3SG child first DIST marry finish also die
 ‘His first child married, then died.’
- (6) *Na un bata ke dua la na.*
 DIST 3SG sister ORD two DIST DIST
 ‘That is his second sister, [that one].’
- (7) *Un ana ke dua la saap nol atuil Lote mo ke tilu*
 3SG child ORD two DIST marry and person Rote but ORD three

la saap nol atuil Australia.
 DIST marry and person Australia
 ‘His second child married with a Rotenese person but his third child married with an Australian.’
- (8) *Ni un ana ke lima la nia.*
 PROX 3SG child ORD five DIST PROX
 ‘This is her fifth child.’
- (9) *Henok na-m, in hua-koet ke itu.*
 name DIST-PAUS REL descendant ORD seven
 ‘Henok is the seventh descendant.’

2.3 Distributive numerals

Distributive numerals in Helong are derived by full reduplication, as shown in (10)-(12).

- (10) *Tode-s dua~dua le halin nahi-s deken.*
 lay-PL DISTR~two so then fall-PL NEG
 ‘Lay them in pairs so they will not fall.’

- (11) *Oen hai-s tilu~tilu muid lalan.*
 3PL plant-PL DISTR~three follow order
 ‘They plant them in threes following a path/line.’
- (12) *Un nanit bating pola kua-s daid dua~dua.*
 3SG slice divide lontar.palm.leaf REMOTE-PL become DISTR~two
 ‘He has already sliced the lontar palm leaves into pairs over there.’

3 Classifiers

Certain Helong count nouns require a classifier when used with numbers. The classifier follows the head noun and is followed by the numeral. The classifier inventory can be seen in Table 6 below.

Table 6: Helong numeral classifiers

classifier	usage	source
<i>at</i>	with humans	person
<i>hbutu</i>	items tied together	bushel, bundle
<i>daka</i>	banana hands	comb, hand
<i>tuni</i>	banana bunches	bunch
<i>salat</i>	hanging fruit (grapes, rambutan, tamarind)	cluster
<i>bua</i>	generic classifier (animals, livestock)	group

The classifier *at* must be used with *atuli* ‘person’, as shown in (13-16).

- (13) *Atuil at hngul dua na-s maa daek hulung.*
 people CL.PERSON ten two DIST-PL come work help
 ‘Those twelve people came to help.’
- (14) *Bihat Lote at dua maa-s tukar sil ne kaim*
 woman Rote CL.PERSON two come-PL change salt at 1PL.EXCL
uma lua.
 DIST REMOTE
 ‘Two women from Rote came and traded salt at our house.’ (Balle 2008:34)
- (15) *Atuli at mes deng one la, atuil balu.*
 person CL.PERSON one from 3PL DIST people new
 ‘One of these people is a newcomer.’
- (16) *Oen tadu atuli at tilu le laok meo-s.*
 3PL order person CL.PERSON three to go visit-PL
 ‘They_i order three people to go see them_j.’

The use of the classifier *bua* is optional, and an example of its use can be seen in (17). Other shapes are indicated with classifiers *hbutu* ‘bundle’, *daka* ‘comb’, and *salat* ‘cluster’.

- (17) *Asu bua mes sii mo ngae-s hidi-s toang.*
 cow group one only but corn-PL finish-PL all
 ‘[There is] just one group of cows but all the corn is gone.’
- (18) *Ku tode-s hbutu baku-bakun na?*
 2SG stack-PL bundle how.many DIST
 ‘How many are you bundling in each stack?’
- (19) *Bua lu muik daka mamō kose.*
 banana REMOTE have comb many much
 ‘The banana [bunch] over there has lots of hands/combs.’
- (20) *Laok nui kit hmake salat dua ta saa ela.*
 go pick 1PL.INCL tamarind cluster two or what like.that
 ‘Let’s go pick two bunches of tamarind like that.’

The following three examples do not require the use of classifiers, because the focus is on the number of individuals and not on their shape.

- (21) *Un lako tene se kai fuu-n mesa.*
 3SG go stop.temporarily at tree shadow-3SG one
 ‘He went to rest in the shade of a tree for a little while.’ (Balle 2008:37)
- (22) *Un lako diin kee se alas sua, ta nal tilu tilu*
 3SG go pull bird at bush REMOTE so able dove three
 ‘He went to shoot birds with a slingshot in the forest, and was able (to get) three doves.’
- (23) *Fesat na tele nal aus-tutu lima.*
 party DIST kill able buffalo five
 ‘For that feast, five buffaloes were killed.’

Temporal phrases do not require the use of classifiers, as shown in (24-26).

- (24) *Oe mesa-n na un maa se lia.*
 time one-GEN DIST 3SG come at PROX
 ‘He came here once.’
- (25) *Bingin dua ka halas un maa kata-s.*
 day two DIST then 3SG come take-PL
 ‘Two days later, he came and got them.’
- (26) *Bingin tilu halas-sam oen pait maa-s*
 day three just.then 3PL return come-PL
 ‘In three days then they will come back.’

4 Non-numeral quantifiers

This section discusses Helong non-numeral quantifiers. The equivalents of the English quantifiers *some*, *few*, *several*, *most* and *few* can be seen in Table 7. Some of these quantifiers admit the plural agreement marker *-s*.

Table 7: Helong non-numeral quantifiers (i)

quantifier	gloss	compatible with <i>-s</i> (PL)
<i>dehe</i>	‘some’	yes
<i>ila</i>	‘several’	yes
<i>tenga</i>	‘part, other’	yes
<i>ila lo</i>	‘several’	no
<i>namemap</i>	‘most’	no
<i>bubuit</i>	‘little, few’	no

These quantifiers occur at the end of the noun phrase, as shown in (27-35). Quantifiers *dehe*, *ila* and *tenga* may be unmarked (non-specific referent) or marked with *-s* (specific plural referent). The quantifiers *namenap*, *bubuit* and *ila lo* are always unmarked.

- (27) *Atuil muti deeh lako-s son.*
 people white some go-PL already
 ‘Some white people have already gone.’
- (28) *Atuli deeh lako-s son.*
 people some go-PL already
 ‘Some people have already gone [non-specific plural].’
- (29) *Atuil dehe-s lako-s son.*
 people some-PL go-PL already
 ‘Some of those people have already gone [specific plural].’
- (30) *Oen ila-s lako-s lius son.*
 3PL several-PL go-PL arrive already
 ‘Those several people have already arrived.’
- (31) *Kaim daad lelo ila lo se la-ng.*
 1PL.EXCL stay day several at DIST-1PL.GEN
 ‘We stayed there for several days.’
- (32) *Manu tenga-s maa-s kaa son, mo tenga la-s*
 chicken some-PL come-PL eat already but some DIST-PL

maa-s bii.
 come-PL yet
 ‘Some of the chickens have come and eaten already but some are yet to come.’

- (33) *Manu tenga-s lako-s molat ne alas sua.*
 chicken some-PL go-PL perch at forest REMOTE
 ‘Some chickens went roosting in the forest.’
- (34) *Oen hai namekap klapa lu son.*
 3PL plant most garden REMOTE already
 ‘They planted most of the far garden already.’
- (35) *Dauk bel auk bula bubuit le.*
 scoop give 1SG peanut few PART
 ‘Please give me a few peanuts.’

The Helong equivalents of totality, equivalents of the English *all* and *many* are listed in Table 8. Only *nuli* and *hutu* can take the plural suffix *-s*.

Table 8: Helong non-numeral quantifiers (ii)

quantifier	Gloss	compatible with <i>-s</i> (PL)
<i>mamo, mamamo</i>	‘many’	no
<i>toang, totoang</i>	‘all’	no
<i>hut, hutu</i>	‘many, lit. crowded’	yes
<i>mamo kose</i>	‘plenty, lit. many lots’	no
<i>mamo tene</i>	‘plenty, lit. many big’	no
<i>mamo naseke</i>	‘too much’, lit. many excessive’	no
<i>nuli</i>	‘entire, lit. complete’	yes
<i>ketang kaa to</i>	‘way too many, lit. cockatoos eating seeds (idiom)’	no

The universal quantifiers listed in Table 8 are exemplified below.

- (36) *Nia-s totoang un sii man in dake.*
 PROX-PL all 3SG alone that REL work
 ‘She alone has done all of these.’
- (37) *Totoang na-s in bele ki un in-aman na-s.*
 all DIST-PL REL give PROX 3SG parents DIST-PL
 ‘All of the things that her parents gave to her.’
- (38) *Hutu-s lako-s laling dela.*
 many-PL go-PL brought.out chair
 ‘Many went and brought out chairs.’
- (39) *Hlukat unus tene na-s ai kaa nuli-s toang son.*
 rubbish pile big DIST-PL fire eat entire-PL all already
 ‘The fire eats up that whole big pile of rubbish.’
- (40) *Amo nu bali le ketang kaa to!*
 eh REMOTE like as [cockatoo eat seed]_{QUANT}
 ‘Eh, it’s like way too many people over there, lit. like cockatoos eating seeds.’

In addition to the quantifiers denoting large number or quantity, the equivalents of the English *none*, *alone*, and *each* are listed in Table 9.

Table 9: Helong non-numeral quantifiers (iii)

quantifier	gloss	compatible with -s (PL)
<i>ase</i>	‘none, nothing’	no
<i>sii</i>	‘alone, by oneself’	yes
<i>mesa-mesa</i>	‘each, individually’	no

None of these quantifiers is compatible with the plural suffix *-s*.

- (41) *Auk ana-ng ase.*
 [1SG child-1SG.GEN]_{subject} [none]_{predicate}
 ‘I have no children.’ lit. ‘My children are none.’

Note that the forms *sii* ‘alone’ and *mesa* ‘one’ undergo full reduplication to derive distributive forms, but only *sii* is compatible with the plural *-s*. Partial reduplication of *mesa* ‘one’ derives an adjective with the sense of ‘unique’, as shown in (46).

- (42) *Oen sii-s lako-s Buhun.*
 3PL only-PL go-PL place
 ‘Only they go to Buhun.’

- (43) *Daek saa lo, oen si~sii-s tuun.*
 work what NEG 3PL DISTR~only-PL just
 ‘Whatever job there is, they themselves just want to control it.’

- (44) *Oen mesa~mesa-m tao oen nena!*
 3PL DISTR~one-PAUS do 3PL part
 ‘Each of them does their own part.’

- (45) *Mesa~mesa-m no~nool un osa.*
 DISTR~one-PAUS DISTR~with 3SG work
 ‘Each of them has their own work.’

- (46) *Planet ta in puit se lelo la ela ka, me~mesa isi.*
 planet DIST that appear at sun DIST like.that DIST ADJ~one really
 ‘That planet appearing at the sun like that is really rare/unique.’

5 Frequency and repetition

Helong uses two terms to indicate frequency of an event or its repetition. *Oe* ‘time’ is used with a noun or noun phrase and *lalis* ‘run’ (glossed elsewhere as ‘times’) is used when referring to frequency of an action or verb, as shown in (47)-(48).

- (47) N NUM FREQ NUM
Minggu mesa-m oe dua.
 week one-PAUS time two
 ‘Two times in one week.’

- (48) N NUM PREDICATE FREQ NUM
Minggu mesa-m nalo-s lalis dua.
 week one-PAUS feed-PL run two
 ‘Feed them twice a week.’

Examples of the sentences containing the frequency or repetition specification can be seen below. Note that the predicate may either precede the frequency specification (49) or follow the noun phrase describing the period and is followed by the phrase indicating the frequency, as in (48).

- (49) *Lui Otan na-s maa Kopang minggu mesa-m oe dua.*
 boat place DIST-PL come place [week one-PAUS time two]_{frequency}
 ‘The boats from Otan come to Kupang twice a week.’

- (50) *Auk nahi-ng motor oe aat son.*
 1SG fall-1SG motorcycle [times four]_{frequency} already
 ‘I fell of the motorcycle four times.’

- (51) *Nadidingun deen le lelo mesa-m nalo-s lalis dua le.*
 forget PROH to day one-PAUS feed-PL times two PART
 ‘Don’t forget to feed them twice a day please.’

- (52) *Auk kom le tia meo mi lalis tiul son mo daid lo.*
 1SG like to go visit 2PL times three already but become NEG
 ‘I wanted to visit you three times, but it never happened.’

Besides numeral phrases, frequency can be indicated in relation to calendar. Full reduplication of words such as *lelo* ‘day’ derives frequency words such *lelo~lelo* ‘daily’.

- (53) *Lelo~lelo lam un lako tasi tutungus.*
 FREQ~day then 3SG go sea continuously
 ‘He goes fishing every day.’

- (54) *Un in daek lelo~lelo-n na ela son na.*
 3SG that work FREQ~day-GEN DIST like.that already DIST
 ‘What he works on every day is just like that.’

- (55) *Auk haman oe~oe mo un ming dadale lo.*
 1SG call FREQ~time but 3SG hear lower NEG
 ‘I called repeatedly but he doesn’t hear at all.’

- (56) *Kaing oe~oe kon un ela son na.*
 forbid FREQ~time also 3SG like.that already DIST
 ‘However you forbid him, he is always like that.’

6 Numerals with pronominal suffixes

Helong pronouns exist only as a free or short/metathesized form. However, when plural pronouns are used in conjunction with number such as the example, ‘the five of us’, the number is normally inflected as shown in following table. This process only occurs with numbers ending in a vowel. The process is not entirely regular; the person distinction is partly collapsed in with numbers 5 and above, where the first person inclusive ends in *-ng* and cannot be distinguished from the first person exclusive and from the second person plural.

Table 10: Helong person suffixed numerals (2-9)

number	1PL.INCL	1PL.EXCL	2PL	3PL
free form	<i>kita~kit</i>	<i>kami~kaim</i>	<i>mia~mi</i>	<i>one~oen</i>
2	<i>dua-t</i>	<i>dua-m, dua-ng</i>	<i>dua-m</i>	<i>dua-s</i>
3	<i>tilu-t</i>	<i>tilu-m, tilu-ng</i>	<i>tilu-m</i>	<i>tilu-s</i>
4	<i>aat</i>	<i>aat</i>	<i>aat</i>	<i>aat</i>
5	<i>lima-ng</i>	<i>lima-m, lima-ng</i>	<i>lima-m</i>	<i>lima-s</i>
6	<i>eneng</i>	<i>eneng, enem</i>	<i>eneng, enem</i>	<i>eneng</i>
7	<i>itu-ng</i>	<i>itu-m, itu-ng</i>	<i>itu-m</i>	<i>itu-s</i>
8	<i>palu-ng</i>	<i>palum, palung</i>	<i>palung, palum</i>	<i>palu-s</i>
9	<i>sipa-ng</i>	<i>sipam, simang</i>	<i>sipa-m</i>	<i>sipa-s</i>

Examples of the precise quantification with numerals suffixed with person markers can be seen below. In all cases, the plural pronoun has to precede the numeral, which if ending in a vowel, will admit the person suffix.

- (57) *Maa le kit dua-t taok tia.*
 come to 1PL.INCL two-1PL.INCL go now
 ‘Let us two go now.’

- (58) *Kaim dua-m nia-m, iin mesa.*
 1PL.EXCL two-1PL.EXCL PROX-PAUS foot one
 ‘We two are best friends. Lit. We two are one foot.’

- (59) *Nang le oen dua-s sii-s daku-s.*
 let to 3PL two-3PL alone-PL scoop-PL
 ‘Just let the two of them scoop [those things] alone.’

- (60) *Hidi na kon kaim dua-m Esther pait.*
 finish DIST also 1PL.EXCL two-1PL.EXCL name return
 ‘After that, Esther and I both went home.’

- (61) *Oen tilu-s lii naseke.*
 3PL three-3PL frighten too.much
 ‘The three of them were very scared.’

- (62) *Mi lima-m hal kita-s lako-s.*
 2PL five-2PL carry 1PL.INCL-PL go-PL
 ‘You five carry them for us and go.’

7 Plural marker -s

The plural marking suffix *-s* attaches to stems ending in open syllable and records the plural number of various elements in a clause including subject, verb, object, location, number, and deictic.

7.1 -s on nouns and noun phrases

For noun phrase constructions, *-s* attaches to either the head noun (64), the number (66) or the deictic at the end of the noun phrase (63). Other non-numeral modifiers never take *-s* in a noun phrase. The structure of a noun phrase in Helong is shown in (61):

- | | | | | | | |
|--|-----------|------|------|-----|-------|--|
| | HEAD.NOUN | MOD1 | MOD2 | NUM | DEICT | |
|--|-----------|------|------|-----|-------|--|
- (63) *Tana-ana blutu mea dua na-s.*
 child small red two DIST-PL
 ‘Those two small babies.’
- (64) *Atuli-s tek le nahdede-s sam oen parsai lo.*
 people-PL say that tell-PL then 3PL believe NEG
 ‘[Those] people said that [when they] told them they didn’t believe.’
- (65) *Biklobe la-s hal kai mo bihata-s naus ui.*
 men DIST-PL carry wood but women-PL take water
 ‘The men carry wood while women take water.’
- (66) *Oen lima-s lako-s ne Kupang.*
 3PL five-PL go-PL at place
 ‘The five of them went to Kupang.’

The associative plural (i.e. the named referent and the group associated with that referent) follows the same pattern; the words ending in open syllable admit the plural suffix *-s*, as in (67)-(68). Similarly if the focal referent ends in a vowel then *-s* is simply added to the end of the noun phrase as in examples (67)-(68). If the focal referent does not end in a vowel, associates may be indicated by adding the suffix *-s* to the following verb if that verb is a verb of motion or posture, as in (69), see also section 7.5.

- (67) *In toma ka lam, papa-s man nuting bele-n.*
 REL right DIST then father-ASSOC who search give-3SG
 ‘Really, it’s the father and company who should find him one.’
- (68) *Nana Penina-s mudi-s bii-s ne Onan Batu-s.*
 name name-ASSOC follow-PL still-PL at place-PL
 ‘Aunt Penina and company are still at Onan Batu.’

- (69) **Paulus mudi-s bii-s ne Akle-s.**
 name follow-ASSOC still-PL at place-PL
 ‘Paulus and company are still at Akle.’

7.2 -s on deictics

Deictics are worthy of special discussion as they are marked for number as well as marking location, time, events, and referent tracking in the discourse. The base forms are given in bold face. The remaining forms are derived from the base form through a consonant harmony, which assigns the base form a consonant onset homologous with the last consonant of the preceding word, e.g. *pasar rua-s*, *haep pa*, *hnodet tia-s*, etc.

Table 11: Helong deictics

PROXIMAL (<i>i</i>)		DISTAL (<i>a</i>)		REMOTE (<i>u</i>)	
SINGULAR	PLURAL	PROXIMAL	PLURAL	PROXIMAL	PLURAL
<i>i</i>	<i>i-s</i>	<i>a</i>	<i>a-s</i>	<i>u</i>	<i>u-s</i>
<i>ia</i>	<i>ia-s</i>	<i>na</i>	<i>na-s</i>	<i>ua</i>	<i>ua-s</i>
<i>kia</i>	<i>kia-s</i>	<i>ka</i>	<i>ka-s</i>	<i>kua</i>	<i>kua-s</i>
<i>lia</i>	<i>lia-s</i>	<i>la</i>	<i>la-s</i>	<i>lua</i>	<i>lua-s</i>
<i>mia</i>	<i>mia-s</i>	<i>ma</i>	<i>ma-s</i>	<i>mua</i>	<i>mua-s</i>
<i>nia~nian</i>	<i>nia-s</i>	<i>na</i>	<i>na-s</i>	<i>nua~nuan</i>	<i>nua-s</i>
<i>ngia</i>	<i>ngia-s</i>	<i>nga</i>	<i>nga-s</i>	<i>ngua</i>	<i>ngua-s</i>
<i>pia</i>	<i>pia-s</i>	<i>pa</i>	<i>pa-s</i>	<i>pua</i>	<i>pua-s</i>
<i>ria</i>	<i>ria-s</i>	<i>ra</i>	<i>ra-s</i>	<i>rua</i>	<i>rua-s</i>
<i>sia</i>	<i>sia-s</i>	<i>sa</i>	<i>sa-s</i>	<i>sua</i>	<i>sua-s</i>
<i>tia</i>	<i>tia-s</i>	<i>ta</i>	<i>ta-s</i>	<i>tua</i>	<i>tua-s</i>

Examples of the use of the deictics can be seen below. In (70)–(71) the deictic *ia-s* agrees with the subject. The number agreement also appears with specific objects (72).

- (70) *Lahin oen maa-s se ia-s.*
 yesterday 3PL come-PL at PROX-PL
 ‘Yesterday they came here.’
- (71) *Oen laok nini-s son nia-s.*
 3PL go sleep-PL already PROX-PL
 ‘They have gone to bed now.’
- (72) *Ikan man maam in nala nga-s mes nuli nabale.*
 fish that mother REL get DIST-PL one live still
 ‘One of the fish (plural) that mother caught is still alive.’ (Balle 2008:54)
- (73) *Manu ka-s sail puting bul in hai son na-s.*
 chicken DIST-PL dig out peanuts REL plant already DIST-PL
 ‘Those chickens dug out those peanuts that had already been planted.’

- (74) *Un dake-s le laok hee-s bel leol-sake lua-s.*
 3SG work-PL to go sell-PL to east REMOTE-PL
 ‘He caught them and went selling them to the easterners [on Semaui Island] over there.’
- (75) *Kai mes tuun puti deng tiih hlalis sua-s.*
 wood one appear outward from roof row REMOTE-PL
 ‘One of the rafters is sticking out from the roof more than the others over there’
 (Balle 2008:49).

7.3 -s on question words

Plurality about what is being queried is marked on the question word as in the following two examples.

- (76) *Lam na-s asii-s sa?*
 then DIST-PL who-PL then
 ‘Then who are they?’
- (77) *Un daek asaa-s tu~tuun nua lo.*
 3SG work what-PL RED~just REMOTE NEG
 ‘[I don’t know] what she is working on over there.’

7.4 -s on locations

For verbs of motion and posture (see section 7.5) with plural subjects, the location must be marked for number where possible, that is on nouns ending in an open syllable, as in (78)-(81), but not on those with a consonant coda (82). Example (81) shows that phrasal locations allow the plural -s also on modifiers, if these end in an open syllable, such as *tuu* ‘dry’.

- (78) *Oen lako-s muna Kolbano-s.*
 3PL go-PL first place-PL
 ‘They go first to Kolbano.’ (Balle 2010:24)
- (79) *Hutu la-s lako-s ne Ui Asa-s lahin son.*
 crowd DIST-PL go-PL at place-PL yesterday already
 ‘The crowds have been going to Ui Asa since yesterday.’
- (80) *Nana Penina-s mudi-s bii-s ne Onan Batu-s.*
 aunty name-PL follow-PL still-PL at place-PL
 ‘Aunty Penina and company are still at Onan Batu.’
- (81) *Paulus laok muid dael tuu-s tuun.*
 name go follow [ground dry-PL]_{path} only
 ‘Paulus and others just travelled by land.’
- (82) *Hutu la-s lako-s lius ne Bautinan son.*
 crowd DIST-PL go-PL arrive at place already
 ‘The crowds have arrived at Bautinan.’

7.5 -s marking the subject of verbs of motion and posture

Some verbs of motion and posture take the set of verb suffixes listed in the Table 12 to indicate the subject. A free pronoun is not required to indicate the subject. This unusual verb class resonates with Pawley's (1973) discussion of verbs of motion and posture in Oceanic languages (which he calls *intradirective*), which are semantically intransitive, but grammatically or morphologically marked as transitive. The person doing the action of the verb (Actor) is also the one whose location or position is being changed (Undergoer). Examples of their use can be seen in (81)-(82) and (87)-(88) below.

Table 12: Helong motion and posture verbs paradigm

	PRONOUN	SUFFIX	<i>lako</i> 'go'	<i>lali</i> 'run'	<i>dada</i> 'stay'	<i>nini</i> 'sleep'
1SG	<i>auk</i>	-ng	<i>lako-ng</i>	<i>lali-ng</i>	<i>dada-ng</i>	<i>nini-ng</i>
2SG	<i>ku</i>		<i>lako</i>	<i>lali</i>	<i>dada</i>	<i>nini</i>
3SG	<i>un</i>		<i>lako</i>	<i>lali</i>	<i>dada</i>	<i>nini</i>
1PL.INCL	<i>kit</i>	-ng	<i>lako-ng</i>	<i>lali-ng</i>	<i>dada-ng</i>	<i>nini-ng</i>
1PL.EXCL	<i>kaim</i>	-m/-ng	<i>lako-m,</i> <i>lako-ng</i>	<i>lali-m,</i> <i>lali-ng</i>	<i>dada-m,</i> <i>dada-ng</i>	<i>nini-m,</i> <i>nini-ng</i>
2PL	<i>mi</i>	-m	<i>lako-m</i>	<i>lali-m</i>	<i>dada-m</i>	<i>nini-m</i>
3PL	<i>oen</i>	-s	<i>lako-s</i>	<i>lali-s</i>	<i>dada-s</i>	<i>nini-s</i>

7.6 -s with other verbs

In transitive verbs, -s refers to specific plural objects known from the text or context. When combined with motion and posture verbs in a serial verb construction as in (89), every verb ending in a vowel can be marked by -s.

- (83) *Auk tadu-s le lako-m teka-s le maa tia, mo.*
 1SG order-PL to go-PAUS say-PL to come now but
 'I did order them to go and tell the others to come now, but [they didn't].'
- (84) *Baki Yuhanis situ-s noan, oen lako-s son.*
 uncle name answer-PL saying 3PL go-PL already
 'Uncle Yuhanis answered them that they had already gone.'
- (85) *Un butu-s babanan le hal nola-s lako-s son.*
 3SG tie-PL nicely and carry.on.shoulder bring-PL go-PL already
 'He tied them nicely and carried them [home].'
- (86) *Un kose baut tasi ka-s niu~niu halas-sam hosa-s.*
 3SG wipe stone sea DIST-PL INTENS~clean only-PAUS cook-PL
 'She rubbed those shellfish very clean first and then cooked them.' (Balle 2008:45)
- (87) *Sosa-s lahin le laok bele-s son, mo oen tao-s ne*
 buy-PL yesterday and go give-PL already but 3PL make-PL at

saa lo?!

what NEG

‘I bought them yesterday and already gave them, but don’t know where they were put.’

(88) *Doha-s tia-m tene-s sam tao hii kit lo nian.*

guard-PL later-PAUS big-PL then make listen 1PL.INCL NEG obvious

‘Look after them, then later when they are bigger obviously they won’t care about us at all.’

(89) *Mo oen haung lali-s boka-s lako-s nang soleng kami.*

but 3PL raise run-PL leave-PL go-PL leave throw.out 1PL.EXCL

‘But they got up, ran, leaving us behind.’

(90) *Ti nahi-s toang tama-s lako-s ui dale-s, mo sa.*

thus fall-PL all enter-PL go-PL water inside-PL but MOD

‘But then they all fell into the water.’

8 Summary and discussion

The use of the numeral system and number marking is robust in the grammar of the Semau dialect of Helong. This is evident from the fact that Helong is still used in the domains of finance, negotiations and livestock management. It is a good sign to see in a language with endangered dialects. The use of the suffix *-s* is extensive in Helong. It has multiple functions including:

- (a) to indicate the following numeral is the final one in a numeral sequence,
- (b) to indicate a specific plural referent (rather than generic or non-specific) for non-numeral quantifiers,
- (c) to mark plural on nouns,
- (d) to mark associative plural,
- (e) to mark specific third person objects on verbs (as opposed to non-specific or generic objects),
- (f) to mark subject on verbs of motion and posture, and finally,
- (g) to mark location and time phrases in clauses with verbs of motion and posture.

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5 *Expressions of quantity in the Amanuban dialect of Uab Meto*

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1 Introduction

This paper describes expressions of quantity in the Amanuban dialect (henceforth Amanuban) of Uab Meto, a Central-Eastern Malayo-Polynesian language spoken in the South Central Timor Regency of East Nusa Tenggara by around 700,000 people (2009 census). Amanuban possesses an interesting set of quantity expressions that are used in different contexts. Most of the data used here is gathered from corpus data, with examples stemming from everyday communicative interactions in a variety of discourse situations.

In terms of number words, Amanuban possesses cardinal and ordinal numerals, fractions and addition phrases, all of which are categorized into grammatical classes and combine differently with nouns depending on the cultural context. This study has also found that, generally, expressions of quantity behave as measurers and numeral classifiers. The measuring function can be observed in examples (1) and the classifying function in (2). Note that measuring terms can vary, depending on the properties of their referents, viz. examples (1a) and (1c), which contain different terms for ‘bunch’.²

- | | | | | | | | | | |
|-----|----|-----------------------------|--------------------|-------------|--|----|-------------------------|---------------------|-------------|
| (1) | a. | <i>laukhau</i> | <i>futu</i> | <i>mese</i> | | b. | <i>sisi</i> | <i>noni</i> | <i>niim</i> |
| | | cassava | CLF | one | | | meat | CLF | five |
| | | ‘a bunch of cassava’ | | | | | ‘five strings of meat’ | | |
| | c. | <i>puah</i> | <i>ki’</i> | <i>nua</i> | | d. | <i>oe</i> | <i>lanan</i> | <i>nua</i> |
| | | areca.nut | CLF | two | | | water | CLF | two |
| | | ‘two bunches of areca nuts’ | | | | | ‘take some water twice’ | | |
| (2) | a. | <i>tui</i> | <i>nono</i> | <i>teun</i> | | b. | <i>niti</i> | <i>ta’u</i> | <i>nee’</i> |
| | | pen | CLF | three | | | bracelet | CLF | six |
| | | ‘three pens’ | | | | | ‘six bracelets’ | | |
| | c. | <i>nu’e</i> | <i>papa</i> | <i>haa’</i> | | | | | |
| | | wound | CLF | four | | | | | |
| | | ‘four wounds’ | | | | | | | |

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² Orthographical conventions: /ʔ/ glottal stop, long vowels are represented by two identical vowels, as in *niim* ‘five’, two different vowels represent diphthongs, e.g. *nua* ‘two’ (see Middelkoop, 1950).

These examples show that the unmarked constituent order is Noun-Classifier-Numeral. In addition, the use of classifiers is obligatory, in order that nouns and their referent are clear for the interlocutor, since the classifier can alter the shape, arrangement or frequency of the noun being classified. The frequent use of classifiers for numeration and semantic specificity in Amanuban is an indication both of the commonality of this areal feature, as well as their manifold value in the language.

2 An overview of the Amanuban dialect

Uab Meto is a language-dialect complex spoken by various tribes on Timor Island and consists of the following dialects: *Amfoang*, *Fatule'u*, *Amabi*, *Amanuban*, *Amanatun*, *Mollo*, *Miomafo*, *Insana*, *Kusa* and *Malea* (Grimes et al., 1997: 33).



Figure 1. Dialects of Uab Meto (in italics)³

Amanuban is spoken by the inhabitants of three major sub-districts: Central, East and West Amanuban. The total number of speakers of Uab Meto as a continuum is more than 600,000 (Grimes, et al. 1997: 36). Of this total, approximately 1,000 speak the Amanuban dialect. Amanuban is used for daily communication, in contexts such as marketplace transactions, church services, public services and governmental affairs. In these contexts, a wide array of expressions is used by Amanuban people to quantify objects and events.

As a native speaker of Amanuban, the first author (YM) aims to provide a detailed description of quantity expressions in his language as well as to characterize the cultural contexts associated with them. For this reason, accurate descriptions of the context and the pragmatics of the uses of the discussed expressions will be provided throughout this chapter.

³ The map is a modification of the Map of Timor, released under the Creative Commons license at <http://commons.wikimedia.org/wiki/File:Timor.png>. The location of the dialects is based on the knowledge of the first author.

the lesson, the middle of the month, side or back), which indicate a specific part of something; (ii) **quantitatives** (words used to quantify uncountable nouns), and (iii) **collectives** (words used to quantify countable nouns, such as *a bunch of flowers, a bag of sweets*), whose application is specific to a certain arrangement.

With reference to countable nouns, Gil (2011) categorises classified referents of three above types into two types: high countability and low countability nouns. High countability nouns consist of nouns such as ‘man’, ‘woman’, and ‘book’, i.e. objects that are unitary and can be readily enumerated individually. Low countability nouns, on the other hand, are typically nouns that must be measured rather than enumerated. The difference between both groups can also rest heavily on the optional and obligatory nature of the numeral classifiers that accompany them, and also provide semantic information about said nouns. The presence of either optional or obligatory classifiers potentially introduces additional complexity into the examination of the situational and register-type context.

In Amanuban, countability is a factor determining which classifier is used for particular referents. In order to count the total number of highly (culturally and cognitively) countable items such as corncocks, the numeral classifiers are required. Mensural classifiers would be required, on the other hand, when one refers to the arrangement of certain objects, where their countability is less important or obvious. When dealing with arrangement, i.e. spatial organization of objects referred to by countable or uncountable nouns, however, Amanuban speakers categorise the referent according to common cultural norms or beliefs.

4 Amanuban numeral system

In this section, the key components of the numeral system of Amanuban will be presented, beginning with the cardinal numerals (4.1), then passing to object-specific non-numeral counting systems (4.2), and ordinal numbers (4.3).

4.1 Cardinal numbers

Amanuban possesses a base ten counting system, whereby each numeral from one to ten (inclusive, referred to here as the Basic Numbers (BN)) is monomorphemic. Multiples of ten are formed by concatenating *bo* ‘ten’ and one of the lower numbers, which is preposed by a third person singular marker. The terms for ‘hundred’ and ‘thousand’ are also monomorphemic, but are combined to form *nifun natun* ‘one hundred thousand’. The Basic Numbers are listed in Table 1.

Table 1: Amanuban cardinal numerals (1-10)

<i>mese</i>	one	<i>nee</i> ’	six
<i>nua</i> ’	two	<i>hiut</i>	seven
<i>teun</i>	three	<i>faun</i>	eight
<i>haa</i> ’	four	<i>sio</i> ’	nine
<i>niim</i>	five	<i>bo</i> ’ <i>mese</i>	ten (lit. ten one)

Examples of compound numbers formed using the cardinal *bo* ‘ten’, (abbreviated as the combination *bo* + BN) are found below.

- (3) a. 11 *bo' mese m-mese*
 ten one 3SG-one
- b. 20 *bo' nua*
 ten two
- c. 32 *bo' tenu m-nua'*
 ten three 3SG-two

The cardinals *natun* 'hundred' and *nifun* 'thousand' combine with the basic numbers and *bo'* 'ten' to form higher cardinals, as shown in (4).

- (4) a. 101 *natun mese m-mese*
 hundred one 3SG-one
- b. 111 *natun mese m-bo' mese m-mese*
 hundred one 3SG-ten one 3SG-one
- c. 1,001 *nifun mese m-mese*
 thousand one 3SG-one
- d. 1,025 *matun mese m-bo' nua m-niim*
 thousand one 3SG-ten two 3SG-five
- e. 13,400 *nifun bo'-mese m-tenu m-natun haa'*
 thousand ten-one 3SG-three 3SG-hundred four
- f. 100,100 *nifun natun mese m-natun mese*
 thousand hundred one 3SG-hundred one

The cardinal *yuta* 'million' is borrowed from Malay.⁵ It is used in the same way as the other higher cardinals: *yuta mese* '1,000,000'. The cardinal numbers described here are the recital forms in Amanuban. In enumeration they have to be combined with a classifier, which will be discussed in section 5.

4.2 Object-specific non-numeral counting systems

Amanuban possesses specific terms for counting certain amounts of culturally salient objects, such as corn and animals (pigs, cows). Key amounts in the specific counting systems are four and multiples thereof, ten and 12 (a dozen). The specific counting morphemes can be considered to be nominal classifiers that are postposed to the nominal referent. In the list that follows we can observe the terms used for counting corn, noting the interaction between the different counting systems (bonds, tens, bundles, dozens, horses and ears).

⁵ The Malay word *juta* 'million' is a loan from the Sanskrit *ayuta* अयुता 10⁹.

Table 2: Amanuban corn counting system⁶

UNIT	GLOSS	CORN EARS	EQUIVALENT OF
<i>pune</i>	ear	1	n.a.
<i>tbu'u</i>	4.piece.set	4	4 <i>pune</i>
<i>tani</i>	bond	40	10 <i>tbu'u</i>
<i>'tobu</i>	bundle	400	10 <i>tani</i>
<i>bikase</i>	horse	4,000	10 <i>'tobu</i>
<i>tuke</i>	dozen	40,000	10 <i>bikase</i>

In (5), and example of the use of one of the corn units can be seen in context.

- (5) *toon le' i u-pen pena' tuke sio'*
 year REL PROX 1SG-get corn dozen nine
 'This year, I get nine dozens of corn.'

Pairs (*pasan*) are particularly salient for counting animals, as shown in (6).

- (6) a. *fafi pasan mese* b. *manu pasan teun*
 pig pair one chicken pair three
 'a pair of pigs (2 pigs)' 'three pairs of chickens (6 chickens)'

As indicated above, 12 (i.e. a dozen) is also an important number for counting domestic animals such as chickens, pigs, goats, cows, horses and buffalos, as in (7).

- (7) *bikase tuke niim*
 horse dozen five
 'five dozen horses (60 horses)'

It is also worth noting that the numeral classifiers elaborated here are not the numerals used in unmarked enumeration, which is central to the non-specific counting system in 4.1. Similar object-specific non-numeral counting systems have been reported in many other Austronesian languages (see, e.g., Bender & Beller 2008 for an overview of such a system in Tongan).

4.3 Ordinal numbers

Ordinal numerals are derived by the ordinal marker *no* placed after the noun and before the numeral. The numeral is marked with the third person prefix.

- (8) *uab no n-tenu*
 talk ORD 3SG-three
 'the third talk, third subject matter'

⁶ A bond costs about fifteen thousand rupiah up to twenty thousand rupiahs. The cost depends on the quality of the corn: its size, length, and density.

The form *no* is also used as a classifier for flat, flexible objects, such as paper, (card)board or clothes. The classifier in combination with these nouns also seems to have the ordinal meaning, as in (9).

- (9) a. *sul nu n-hitu'* b. *ben no m-bo nua'*
 paper CLF 3SG-seven board CLF 3SG-ten two
 'the seventh page of paper' 'the twentieth sheet of board'

The ordinal forms that do not require the ordinal marker *no* are: *ahunut* 'first', *amnemat* 'next', *afinit* 'last' and *amunit* 'end'. These forms are nominalizations and can also be used as temporal adverbials.

- (10) *amneem ahunut le' i es leko'*
 come first REL PROX REL good
 'The first one to come is good.'
- (11) *ulan a-mnemat le' i t-seen leko'*
 rain NMLZ-come REL PROX 1PL.INCL-plant now
 'Let's plant on the next rain.'
- (12) *haan a-finit le' i ka leko fa*
 news NMLZ-end REL PROX NEG1 good NEG2
 'The last (previous) news is not good.'
- (13) *kalu m-nen hanaf a-munit t-kais m-uto*
 if 2SG-listen message NMLZ-end 2SG-PROH 2SG-angry
 'Don't be angry if you listen to the last message.'

5 Numeral classifiers

As discussed in section 3, Aikhenvald (2000) divides numeral classifiers into *sortal* and *mensural* classifiers. Amanuban sortal classifiers can be seen in Table 3.

Table 3: Amanuban numeral classifiers

CLASSIFIER	GLOSS	RANGE	LEXICAL SOURCE
<i>tuaf</i>	CLF.PERSON	humans	person
<i>'koe</i>	CLF	animals, fruit	fruit (tamarind, peanut)
<i>nono'</i>	CLF.LONG	long objects	wooden or iron stick
<i>tuka</i>	CLF.SHORT	short objects	
<i>batis</i>	part	divisible objects	
<i>otes</i>	portion	meat portion	
<i>helit</i>	slice	meat slice	
<i>nono</i>	string	thin meat slices	
<i>'niima</i>	handful	mung beans	
<i>matnaan</i>	half	food	
<i>stena</i>	half	time periods	

CLASSIFIER	GLOSS	RANGE	LEXICAL SOURCE
<i>fua</i> ’	CLF.FRUIT	fruits	fruit
<i>futu</i>	CLF	string (coconut, meat, tubers)	
<i>kaa</i> ’	CLF	bunch of bananas	
<i>nesa</i> ’	CLF	meat and tubers	
<i>nama</i> ’	CLF	customary distribution unit	
<i>pune</i>	CLF	banana stem, corn ear	

5.1 Morphosyntactic properties of Amanuban numeral classifiers

With numerals, the classifiers are obligatory; their omission renders the phrase ungrammatical, as shown in (14). The classifiers follow the head noun and are followed by the numeral.

- (14) a. *atoni tuaf niim* b. **atoni niim*
 man CLF.PERSON five man five
 ‘five men’
- c. *ika ‘koe hiut* d. **ika hiut*
 fish CLF seven fish seven
 ‘seven fish’

As shown in the examples above, humans are classified with *tuaf* and animals with *‘koe*. Inanimate objects such as *nisif* ‘tooth’ can also be classified with *‘koe*, as well as certain foodstuffs, such as chilli, tamarind and peanut. Longish objects are classified with *nono*’.

- (15) a. *nisif ‘koe mese* b. *tui’ nono’ niim*
 tooth CLF one pen CLF.LONG five
 ‘one tooth’ ‘five pens’

The classifiers above stand in different semantic classes. The classifier *nono*’ ‘long’ modifies the head noun ‘pen’, which is long in shape. If, however, the pen being discussed is short, then the classifier *tuka* ‘short’. Classifying characteristics, then, do not have to be inherent.

5.2 Distribution of Amanuban mensural classifiers

In this section, we consider various expressions of quantity represented by mensural classifiers in Amanuban and their associated nominal referents. The first expression is *batis* ‘part’. There are three semantic classes of *batis*: arrangement, time and quantity. In the arrangement class we find the term *batis* ‘one part of the whole division’. In these instances, size is not measured, and the referent is mostly non-liquid. For instance, when a cake is divided into five pieces, the person who gets a piece could say the sentence in (16).

- (16) *au u-pein kokis batis mese*
 1SG 1SG-get cake part one
 ‘I get one part of cake.’

Batis can also be used to refer to half of a time period, as in (28).

- (17) *au m-eup au lene toon tenu m-batis*
 1SG 1SG-work 1SG farm year three 3SG-part
 ‘I [have] work[ed] at my farm for three and a half years.’

In terms of telling the time, in this category we find *stena* ‘half’ as in (29).

- (18) *sten bo’ mese m-nua’*
 half ten one 3SG-two
 ‘Half past eleven (lit. half of twelve).’

In the quantity category we find the classifier *ma-tana* ‘half of an object’ which refers to inanimate food objects such as rice, corn, potato and fruit (19) as well as liquids such as oil, water, and sugar, as in (20).

- (19) *tulun kau mnees kaol matnana es*
 help 1SG.OBJ rice sack CLF one
 ‘Help me with half a sack of rice.’

- (20) *au mas ‘ain ko min noah boit matnana es*
 1SG will leave 2SG.OBJ oil coconut bottle half one
 ‘I will leave you a half bottle of coconut oil.’

In the list that follows in (21), the classifiers that are used to quantify foodstuffs are listed, grouped in a two-way categorisation, according to arrangement and quality (cf. *batis*, *stena*, and *tnana*’ for a three-way classification of other nouns, according to arrangement, time and quantity).

- | | |
|---|--|
| <p>(21) a. <i>sis otes mese</i>
 meat CLF.portion one
 ‘one chopped portion of meat’</p> <p>c. <i>sisi nono niim</i>
 meat CLF.string five
 ‘five strings of meat’</p> <p>e. <i>sisi tupu sio’</i>
 meat CLF nine
 ‘nine heaps of meat’</p> | <p>b. <i>sisi helit nua’</i>
 meat CLF.slice two
 ‘two slices of meat’</p> <p>d. <i>sisi nutu teun</i>
 meat CLF three
 ‘three small pieces of meat’</p> <p>f. <i>sisi nama’ bo’ haa’</i>
 meat CLF ten four
 ‘forty groups of meat’⁷</p> |
|---|--|

⁷ When a cow is butchered for a party or feast, the meat would be cut into large slices or *nama*’. The *nama*’ are distributed equally to all the participants, based on the family units and their place of residence (place, village) and the amount of family units reported by each family representative.

g. *sisi futu teun*
 meat CLF three
 'three bundles of meat'

h. *sisi nesa' teun*
 meat CLF ten
 'three dense pieces of meat'⁸

Note that *tupu*, *kupu* and *ubu* can be considered similar measurers in terms of their possible referents. They all classify collections of nouns, both countable and uncountable that can be spread across an area, with the exception of liquids. For example, during harvest time farmers would pick up the matured corn then throw it on the land in heaps. Each heap of corn may reach half a metre high. The corn collectors would then collect the corn and put it into sacks or bags. That said, *ubu* is different from *tupu* and *kupu*, in the sense that it refers to something that is heaped neatly. For example, a seller might re-configure heaps of salt, onion or fish to make them look high or neat, thereby increasing their value and demand.

In addition to classifiers found in relation to meat, we also find instances where classifiers referring to specific countability and unitizing functions are used for counting the same referent. The choice of classifier is based on categories of primary meaning, arrangement, measurement, size, and quality for indigenous fruit, vegetables and nuts.

In example (22) we can observe different classifiers being used with the same referent, here 'banana'. The classifier *fua'* has the primary, lexically independent, meaning of 'fruit'. The other examples refer to measurements or arrangements of the same fruit. In Indonesian, the principal contact language, the general term for fruit is used as the classifier for all kinds of fruit, for example *dua buah mangga* 'two mangoes', *tiga buah melon* 'three watermelons'.

- | | | | |
|------|---|----|--|
| | PRIMARY MEANING ⁹ | | ARRANGEMENT |
| (22) | a. <i>uki fua' nee'</i>
banana CLF six
'six bananas' | b. | <i>uki pune sio'</i>
banana CLF nine
'nine stems of bananas' |
| | ARRANGEMENT | | |
| | c. <i>uki kaa' faun</i>
banana CLF eight
'eight bunches of bananas' | | |

Tubers such as *laukhau* 'cassava' and *laukloli* 'sweet potato' select different classifiers, as shown in (23)-(24).

- | | | | |
|------|---|----|--|
| | PRIMARY MEANING | | SIZE |
| (23) | a. <i>laukhau nesa' teun</i>
cassava CLF three
'three dense cassavas' | b. | <i>laukhau tuka' nua'</i>
banana CLF two
'two short cassavas' |
| | ARRANGEMENT | | ARRANGEMENT |
| | c. <i>laukhau nopu nua</i>
cassava CLF two
'two clumps of cassava' | d. | <i>laukhau nutu teun</i>
cassava CLF three
'three small pieces of cassava' |

⁸ Here 'dense' means more specifically that the meat is thick and without bones. A concise rendition in English is difficult.

⁹ Primary meaning here refers to the inherent quality of the object, its most natural state.

- (24) a. PRIMARY MEANING
laukloli nesa' faun
 sweet.potato CLF eight
 'eight dense sweet potatoes'
- b. SIZE
laukloli tuka' nua'
 sweet.potato CLF two
 'two short sweet potatoes'
- c. ARRANGEMENT
laukloli tupu sio'
 sweet.potato CLF nine
 'nine heaps of sweet potato'

The mensural classifier *pisa'* refers to pieces of food items such as *kokis* 'cake' or *oinfatu* 'sugarcane', as shown in (25). The mensural classifier *amu* refers to packs.

- (25) a. MEASUREMENT
kokis pisa' niim
 cake CLF five
 'five pieces of cake'
- b. MEASUREMENT
kokis amu nua'
 cake CLF two
 'two packs of cake'
- c. MEASUREMENT
puta'-laka' pisa ana nua
 sago CLF small two
 'two small pieces of sago'
- d. MEASUREMENT
oinfatu pisa 'naek nua
 sugarcane CLF big two
 'two big pieces of sugarcane'
- e. ARRANGEMENT
oinfatu amu nua
 sugarcane CLF two
 'two packs of sugarcane'

Spices with pod fruits such as *unus* 'chilli peppers' and *kiu* 'tamarind' combine with the same set of classifiers and measure words, as shown in (26)-(27).

- (26) a. PRIMARY MEANING
unus fua teun
 chilli CLF three
 'three chillies'
- b. MEASUREMENT
unus koe teun
 chilli CLF three
 'three pods of chilli'
- c. MEASUREMENT
unus amu niim
 chilli CLF five
 'five packs of chilli'
- d. ARRANGEMENT
unus tupu sio'
 chilli CLF nine
 'nine heaps of chilli'
- (27) a. PRIMARY MEANING
kiu fua teun
 tamarind CLF three
 'three tamarinds'
- b. MEASUREMENT
kiu koe teun
 tamarind CLF three
 'three pods of tamarind'

MEASUREMENT
 c. *kiu* ***amu*** *nua*
 tamarind CLF two
 ‘two packs of tamarind’

MEASUREMENT
 d. *kiu* ***bua***’ *teun*
 tamarind CLF three
 ‘three balls of tamarind’

ARRANGEMENT
 e. *kiu* ***tupu*** *sio*’
 tamarind CLF nine
 ‘nine heaps of tamarind’

ARRANGEMENT
 f. *kiu* ***bonat*** *sio*’
 tamarind CLF nine
 ‘nine packs of tamarind’¹⁰

Classifiers combining with nuts that can be tied together in bunches by their stalks such as *puah* ‘betelnut’ and *noah* ‘coconut’ are exemplified in (28)-(29).

(28) a. PRIMARY MEANING
 puah ***fua***’ *teun*
 betelnut CLF three
 ‘three betelnuts’

MEASUREMENT
 b. *puah* ***kii***’ *faun*
 betelnut CLF eight
 ‘eight stalks of betelnut’

MEASUREMENT
 c. *puah* ***pisa***’ *nua*
 betelnut CLF two
 ‘two pieces of betelnut’

ARRANGEMENT
 d. *puah* ***tupu*** *niim*
 betelnut CLF five
 ‘five heaps of betelnut’

(29) a. PRIMARY MEANING
 noah ***fua***’ *teun*
 coconut CLF three
 ‘three coconuts’

MEASUREMENT
 b. *noah* ***kii***’ *faun*
 coconut CLF eight
 ‘eight stalks of coconut’

MEASUREMENT
 c. *noah* ***pisa***’ *nua*
 coconut CLF two
 ‘two pieces of coconut’

ARRANGEMENT
 d. *noah* ***futu***’ *hiut*
 coconut CLF seven
 ‘seven strings of coconut’

ARRANGEMENT
 e. *noah* ***tupu*** *sio*’
 coconut CLF nine
 ‘nine heaps of coconut’

Finally, nuts and beans combine with a distinct set of mensural classifiers refer to customary arrangements found at markets.

(30) a. PRIMARY MEANING
 fuakase ***fua***’ *haa*’
 peanut CLF four
 ‘four peanuts’

MEASUREMENT
 b. *fuakase* ***koe***’ *teun*
 peanut CLF three
 ‘three pods of peanuts’

¹⁰ The classifier ‘*bonat* ‘pack’ is different from *amu* ‘pack’ in that the former can only be made of palm leaves, whereas the latter can be made of any material.

- | | |
|--|--|
| <p>MEASUREMENT</p> <p>c. <i>fuakase</i> <i>nopu</i> <i>bo'</i> <i>nua</i>
 peanut CLF ten two
 'twenty clumps of peanuts'</p> | <p>ARRANGEMENT</p> <p>d. <i>fuakase</i> <i>tupu</i> <i>niim</i>
 peanut CLF five
 'five heaps of peanuts'</p> |
|--|--|
-
- | | |
|--|--|
| <p>MEASUREMENT</p> <p>(31) a. <i>fuanutu</i> <i>'niima</i> <i>haa'</i>
 mung.bean CLF four
 'five handfuls of mung beans'</p> | <p>MEASUREMENT</p> <p>b. <i>fuanutu</i> <i>klas</i> <i>niim</i>
 mung.bean glass five
 'five glasses of mung beans'</p> |
|--|--|
-
- | | |
|--|--|
| <p>MEASUREMENT</p> <p>c. <i>fuanutu</i> <i>mok</i> <i>haa'</i>
 mung.bean mug four
 'four mugs of mung beans'</p> | |
|--|--|

5.3 Classifiers in parallel expressions for planting and ceremonial exchanges

Many speakers of Amanuban are farmers who cultivate corn, various nuts, cassava, sweet potatoes and other crops. Planting practices of various crops, indicating whether these are planted individually, in groups, or in combination with other seeds are captured in formulaic expressions that we will refer to here as *planting parallel expressions*. These expressions consist of two juxtaposed NPs, which contain the head noun naming the crop, followed by a classifier and a numeral indicating the ratio. The head of the second NP is marked with a possessive prefix. Examples can be seen in (32)-(33).

- | | | | | | |
|------|-------------------------------------|-------------|---------------|---------------------|-------------|
| | FIRST CROP | | SECOND CROP | | |
| (32) | <i>pena</i> <i>lanan</i> | <i>mese</i> | <i>t-kaut</i> | <i>lanan</i> | <i>mese</i> |
| | corn CLF | one | 3SG-eggplant | CLF | one |
| | 'one way corn and one way eggplant' | | | | |
-
- | | | | | | |
|------|-------------------------------------|-------------|--------------|--------------------|-------------|
| | FIRST CROP | | SECOND CROP | | |
| (33) | <i>pena</i> <i>fua'</i> | <i>tenu</i> | <i>t-fua</i> | <i>fua'</i> | <i>mese</i> |
| | corn CLF | three | 3SG-bean | CLF | one |
| | 'three corn [kernels] and one bean' | | | | |

Another example of parallel expressions with classifiers comes from ceremonial exchange formulas. The significance and value of certain ceremonies is marked by the exchange of gifts in the form of livestock. For example, during an engagement ceremony, the groom is expected to present the bride's family with two cows and some pigs. These animals must be male. The entire community may present gifts to welcome important guests, where the perceived importance and the length of stay of the guest are in some relation to the number of gifted animals. For example, an important guest staying for three days should be presented with three bulls.

The ceremonial exchange parallel expressions contain special classifiers that are not literally used to refer to the maleness of the entity itself. Rather, these classifiers realize a meaning of prestige or respect related to a particular event in which the animal has a ceremonial role. The animals are listed according to their value in the formula, starting with the most valued (cows) and then naming the less valued ones (pigs and other animals). An example of the formula can be seen in (34). Note that the head of the second NP is marked with the third person prefix *t-*.

- (34) PRESTIGIOUS GIFT LESS PRESTIGIOUS GIFT
bia keso naek nua t-faif mone naek mese
 cow CLF big two 3SG-pig CLF big one
 ‘two big bulls and one big boar’

Animals may be also used to pay fines. Pigs are especially valued for this purpose. The reliance on pigs as the preferred animals for ceremonial exchanges is also reflected in the rich classifier inventory. The classifiers are listed according to the price of the animal, from the most expensive to the cheapest. Note that animals referred to as *tunaf* (young females that have not yet had piglets, calves, puppies, or laid eggs) are not commonly exchanged.¹¹

Table 4: Amanuban classifiers for animals in ceremonial exchanges

CATEGORY	<i>fafi</i> ‘pig’	<i>bia</i> ‘cow’	<i>asu</i> ‘dog’	<i>manu</i> ‘chicken’	LEXICAL SOURCE
adult male	<i>mone</i>	<i>keso</i>	<i>mone</i>	<i>nai</i> ‘rooster’	<i>mone</i> ‘male’
adult female			<i>opo, opu</i>		<i>opo, opu</i> ‘female’
young female			<i>tunaf</i>		
young animal			<i>tipu</i>		
young			<i>ana</i>		<i>ana</i> child
younger sibling	<i>oil</i>				

Simple examples of the use of the above classifiers are illustrated below, for *asu* ‘dog’.

- (35) a. *asu mone haa’* b. *asu opu nua’*
 dog CLF four dog CLF two
 ‘four male dogs’ ‘two female dogs’
- (36) *asu mone le’ naa upan nifun natun mese*
 dog CLF REL DIST cost thousand hundred one
 ‘The male dog costs one hundred thousand rupiah.’

For pigs and cows, the birth order and number of siblings that a pig or cow has is important in determining its value. The classifier *oil* combines with numerals to indicate the number of younger siblings: *oil mese, nua, tenu’*, or *haa’* ‘one, two, three, or four younger siblings’. For example, for *oil nua* there are two younger animals born after the one the term refers to. The use of the classifier *oil* is shown below.

- (37) *fafi oil mese fe’ ka na-hoin nitfa*
 pig CLF one just NEG 3SG-give.birth not.yet
 ‘My pig with one younger sibling has not given birth yet.’
- (38) *au bia oil haa’ fe’ ka na-poi nitaf*
 1SG cow CLF four just NEG 3SG-exit not.yet
 ‘My cow with four younger siblings is not sold yet.’

¹¹ *Tunaf* has three meanings: (i) a female who has not yet given birth while her siblings already have, (ii) a very young baby from the other siblings, and (iii) for all mammals in their respective contexts.

Roosters have traditionally been used for fighting and the gamblers highly prize their strong spurs. The male term *nai* can be also used without the head noun, as shown in (39).

- (39) *nai* *'naek* *mese*
 rooster large one
 'one big rooster'

5.4 Classifiers and kinship systems

In Amanuban we can observe an interesting interaction between classifiers and kinship terms, including their position within the family (see, again, Urton 1997 for a discussion of a similar link in Quechua). In (40) are listed the expressions of family size, all of which indicate how many children are in the family unit.

- | | | | | | | |
|------|------------|---------------|-------------|-------------|---------------|-----------------|
| (40) | 1 child | <i>li'ana</i> | <i>mese</i> | 6 children | <i>li'ana</i> | <i>nee'</i> |
| | 2 children | <i>li'ana</i> | <i>nua'</i> | 7 children | <i>li'ana</i> | <i>hiut</i> |
| | 3 children | <i>li'ana</i> | <i>teun</i> | 8 children | <i>li'ana</i> | <i>faun</i> |
| | 4 children | <i>li'ana</i> | <i>haa'</i> | 9 children | <i>li'ana</i> | <i>sio'</i> |
| | 5 children | <i>li'ana</i> | <i>niim</i> | 10 children | <i>li'ana</i> | <i>bo' mese</i> |

It is worth noting that a family with only a single male is called *mone mese*. A single-female family is known as *feot mese*. If the child is the only one then she or he is called *li'an mese* meaning 'single child' or 'only child'. In addition, both *mone* and *feto* have literary-based meanings: *mone* 'male' and *feto* 'female'. To say, for example, 'she is the single or the only child', in Amanuban one would simply say, *in le na li'an feot mese*.

Ordinal numbers show the position of children according to birth order, some of which also indicate size. Some Papuan languages and other Austronesian languages also possess such a system (see Reesink 2014). Taking the example of a five-children family, the various terms that can be attributed to each child are presented below.

- | | | | | | | |
|------|----|-------------------------|---------------|----|--|------------------|
| (41) | a. | <i>li'an</i> | <i>ahunut</i> | b. | <i>li'ana</i> | <i>'nae tef'</i> |
| | | child | first | | child | first womb |
| | | 'firstborn child (M/F)' | | | 'firstborn child/son (M)', ¹² | |
| | c. | <i>li'an</i> | <i>nua'</i> | d. | <i>li'an</i> | <i>tenu'</i> |
| | | child | two | | child | three |
| | | 'second child (M/F)' | | | 'third child (M/F)' | |
| | e. | <i>li'an</i> | <i>tnana'</i> | f. | <i>li'an</i> | <i>haa'</i> |
| | | child | middle | | child | four |
| | | 'middle child (M/F)' | | | 'fourth child (M/F)' | |
| | g. | <i>li'an</i> | <i>nima'</i> | h. | <i>li'an</i> | <i>muni'</i> |
| | | child | five | | child | last |
| | | 'fifth child (M/F)' | | | 'last child (M/F)' | |

¹² The term *liana 'naetef* is used only for those of the male sex, reflecting the fact that Amanuban society is patrilineal. Besides, this term is applicable in usage even though male child is born after one or more female children.

i. *li'an tu'af*
 child last
 'last child (M/F)'

j. *li'ana 'heut susu*
 child wean breast
 'last feeding child (M/F)'

In the following examples, we can see the importance of pairs in talking about, in this case two, children. By using the classifier *pasan* 'pair', children can also be counted in twos, as in (42)-(43).

(42) *li'ana' pasan mese*
 child pair one
 'a pair of children, two children'

(43) *au an-h-inu pasan nua', mas ka-ti~tit fa bife*
 1SG child-POSS-PL pair two but NEG-RED~have NEG female
 'My children are two pairs (four), but there are no females.'

Aside from its meaning 'pair', *pasan* can also indicate the plural number of the head noun 'child', similarly to the English *a couple of*, as shown in (44).¹³

(44) *m-onen he Usi n-fe ko li'ana pasan mese*
 2SG-pray IRR God 3SG-give 2SG.OBJ child pair one
 'Pray for God to give you children!'

5.5 Numeral classifiers for indefinite mass nouns

This section discusses numeral classifiers that modify indefinite mass nouns, such as 'children' and 'people'. The classifier *mnutu'* is used to describe a group, of unknown size, of little children, and can be seen in (45). The focus of the classifier is 'little' (as of the referents, not the size of the group).

(45) *m-hunun kit-li'ana mnuut in le' naa he kais*
 2SG-shout 1PL.INCL-child CLF PL REL DIST IRR PROH

na-keok in
 3SG-noisy PL
 'Call out to the children to tell them not to be noisy!'

The morpheme *peon* refers to a group of people or animals with an unknown total number that has just passed through or come into the presence or line of sight of a person, as in (46).

(46) *hai le' m-iit peon es fe n-fini n-leku-n le' i*
 1PL.EXCL REL 1PL.EXCL-SEE CLF one just 3PL-pass 3PL-by-3PL REL PROX
 'We are the ones who saw a group just pass by here.'

¹³ To clarify, a pair of children may consist of a boy and a girl, a pair of boys, or a pair of girls.

The classifier *pukan* means ‘group’. It can refer to a group of humans, a group of animals, or a group of something else, consisting of an indefinite number in certain contexts, as shown in (47).

- (47) *asiit pukan nua na-'ko Tuafutu fe n-siin lalin*
 singer CLF two 3PL-from place just 3PL-sing finish
 ‘Two groups of singers from Tuafutu have just finished singing.’

The number of members in each group is unknown and the classifier *pukan* can be used with nouns referring to animals, or inanimate objects.

- (48) *oto na-sae-ba 'bibi pukan nua*
 car 3SG-carry-PROG goat CLF two
 ‘The car is carrying two herds of goats.’

- (49) *bia n-euk nan pena pukan teun*
 cow 3SG-eat PREP corn CLF three
 ‘The cow eats up three sectors of corn.’

Both *pukan* and *peon* ‘group’ can also be used for definite nouns. Their function here is to refer to a unit, consisting of a set number of component parts known to the speaker. In (50), the speaker knows that the group of singers in a competition, referred to with *pukan*, consists of twenty people, since this is the expected size of a choir (50), just as eleven is the expected number for a soccer team (51).

- (50) *hai a-siit pukan nua no-kan et lomba*
 1PL.EXCL NMLZ-sing CLF two 3PL-join PREP competition
 ‘Our two choir groups are taking part in this competition.’

- (51) *au 'fain e-u kuan o-k a'bae bol peon mese*
 1SG go.back 1SG-to village 1SG-with player ball CLF one
 ‘I go home together with a group of soccer players.’

6 Verbal number

Amanuban quantifies the number of iterations of an event with the term *hae* ‘times’ followed by a numeral, such as *hae' mese* ‘for the first time, once’. Another example can be seen in (52).

- (52) *i m-neeman hae nua' i ka n-EEK fa sa'~saa'*
 3POSS 3SG-come times two PROX NEG1 3SG-carry NEG2 INDEF~thing
 ‘He comes for the second time but does not carry anything’

The construction is also found in the idiom used for counting time by the number of bell strokes [*taub hae* NUM], heard in regular intervals before church services. The question-answer pair below illustrates how this expression is used.

(53) Q: *taub hae fauka' es he t-nao n-eu kle?*
 bell times how REL IRR 1PL.INCL-go 1PL.INCL-to church
 'At which bell should we go to the church?'

A: *taub hae mese i nak he t-nao nai'*
 bell times one PROX say IRR 1PL.INCL-go now
 'When the bell rings the first time, that means we have to go.'

7 Conclusion

The Amanuban dialect is rich in expressions of quantity whose properties are expressed by numeral classifiers for certain objects in specific cultural contexts. The numeral classifiers are frequently used, and are indeed obligatory, to make these objects more clearly identifiable in speech, either classifying the referent inherently or temporarily quantifying it. Accordingly, the expressions of quantity, which are represented by numeral classifiers (in both mensural and sortal forms), emphasise semantic categories of size, shape, quality and arrangement. The same classifier can also refer to the same noun in both indefinite and definite forms. They can be used for both animate (humans, animals) and inanimate referents.

By categorizing a noun in a certain way, Amanuban is making use of both classificatory (e.g. shape, arrangement) and measuring properties to explain its countability. Given that the expressions of quantity are varied in these classes, then, one must use a contextual expression, which fits the referent to a particular set or subset, such as animals, foodstuffs or groups. Further research is, however, necessary to examine more carefully the distinction between classifiers and adjectives to tease apart their differing functions and semantics.

Indeed the results of this introductory, explorative study also extend our knowledge and understanding of quantity expressions in this still understudied language, since the data have been presented in common cultural contexts. Recognising the importance of situation and pragmatics in classification (and, for that matter, any other semantic domain) is key to improving our understanding of the category, the language and its speakers.

References

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6 *Numeral classifiers and number in two Papuan outliers of East Nusantara*

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1 Introduction

This chapter compares numeral classifiers in Tobelo (ISO 639-3 tlb, North Halmaheran) and Western Pantar (ISO 639-3 lev, Timor-Alor-Pantar), two genealogically unrelated Papuan outliers spoken in East Nusantara. While both languages make extensive use of numeral classifiers, the number of semantic categories delineated by these classifiers is much more restricted in Western Pantar. Moreover, the two languages carve up semantic space quite differently. The languages also differ in terms of grammaticization of numeral classifiers. In this respect Western Pantar classifiers behave much more like lexical items, retaining lexical denotation alongside their classifier function. In contrast, Tobelo classifiers are generally obligatory and may have no independent lexical use.

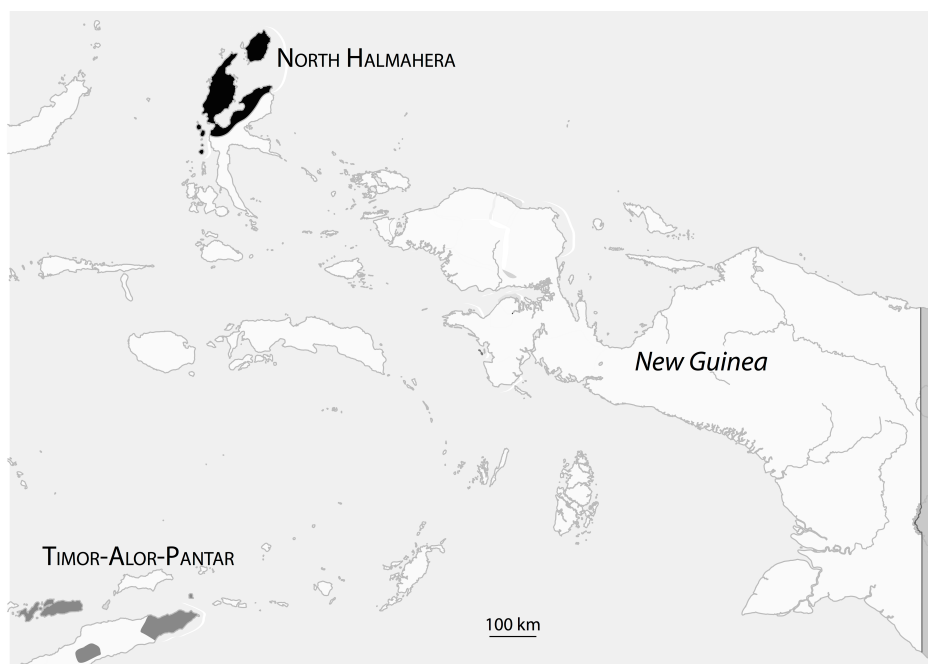


Figure 1: Location of North Halmaheran and Timor-Alor-Pantar language areas in relation to mainland New Guinea

Although early comparative work noted similarities between the North Halmaheran and Timor-Alor-Pantar languages (Anceaux 1973, Capell 1944), there is insufficient evidence

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to support a genealogical relationship (Robinson & Holton 2012). More than 1000 km separate the two language families, and there is no evidence of historical contact between the groups (see Figure 1). What the two families share in common is their status as outliers surrounded by unrelated Austronesian languages but likely related to Papuan languages of New Guinea. They represent the most distant Papuan outliers in terms of distance from the New Guinea mainland. The languages differ in terms of their contact history with their Austronesian neighbors. The North Halmaheran languages have undergone significant contact-induced change (Voorhoeve 1994), though Tobelo is the least affected by this influence, retaining verb-final word-order and a templatic verb structure.

Tobelo and Western Pantar share several typological features which have been noted by Foley (1998) as typically Papuan. Both languages have a preposed possessor construction; clause-final negation; verb-final word-order (though with much pragmatic variation); and objects indexed on the verb. The first two of these features are also recognized by Klammer, Reesink & van Staden (2008) as typical features of the East Nusantara linguistic area. Both languages also index objects via prefixes on the verb. In addition, Tobelo also obligatorily marks subject, whereas subject-marking is extremely limited in Western Pantar. Both languages also have an inclusive/exclusive opposition in first person plural, a typically Austronesian feature. However, the languages differ in terms of the alienability distinction, another characteristic feature of East Nusantara. Tobelo (and other North Halmaheran languages) does not overtly distinguish alienable versus inalienable possession.

Table 1: Realization of typological features characteristic of Papuan languages (Foley 1998) and the East Nusantara linguistic area (Klammer, Reesink & van Staden 2008) in Tobelo and Western Pantar

	Papuan	East Nusantara	Tobelo	Western Pantar
r/l distinction	no		yes	yes
prenasalized stops	yes		no	no
preposed possessor	yes	yes	yes	yes
clause-final negation	yes	yes	yes	yes
verb-final	yes	no	yes	yes
subject-marking	yes		yes	(no)
object-marking	yes		yes	yes
inclusive/exclusive		yes	yes	yes
alienable/inalienable		yes	no	yes

To this list of characteristic typological features we might add numeral classifiers, a feature which is widespread in the Papuan languages of East Nusantara (Klammer, Reesink & van Staden 2008: 108) and also found in both Tobelo and Western Pantar. Given the large number of typological similarities, the fact that both languages have numeral classifiers is not surprising. However, there are significant differences in the structure and function of the classifier systems in the two languages.

Before proceeding to discuss numeral classifiers we first review some basic properties of number in the two languages. The data in this chapter are drawn primarily from first-hand field work, supplemented by published descriptions of Tobelo (Holton 2003, Huetting 1908a, b, 1936).²

² Field work with Tobelo (1992, 1995) and Western Pantar (2004-2010) was made possible with the generous support of the Henry Luce Foundation (grant P95280F348B164); the US National Endowment for the Humanities; the Hans Rausing Endangered Languages Documentation Project; the US National

2 Overview of number in Tobelo and Western Pantar

This section provides background on the representation of number in Tobelo and Western Pantar, including: numeral systems (§2.1), universal quantifiers (§2.2), number in pronouns (§2.3), number in nouns (§2.4), syntax of numerals (§2.5), and verbal number (§2.6). Numeral classifiers will be discussed in §3.

2.1 Numeral systems

Both Tobelo and Western Pantar have decimal numeral systems in which numerals above ten are formed by combining a numeral with a tens base. In Tobelo the conjoining morpheme is the standard conjunction *de*. Western Pantar uses a distinct morpheme *wali* ‘more’.

Table 2: Numerals 1-20 in Tobelo and Western Pantar

	Tobelo	Western Pantar
1	<i>moi</i>	<i>anuku / ye</i>
2	<i>hinóto</i>	<i>alaku</i>
3	<i>hange / ruange</i>	<i>atiga</i>
4	<i>iata / ruata</i>	<i>atu</i>
5	<i>motoa</i>	<i>yasing</i>
6	<i>butanga</i>	<i>hisnakkung</i>
7	<i>tumidi</i>	<i>betalaku</i>
8	<i>tuhange</i>	<i>betiga</i>
9	<i>hiwo</i>	<i>anukutannang</i>
10	<i>ngimoi</i>	<i>keanuku</i>
11	<i>ngimoi de moi</i>	<i>keanuku wali ye</i>
12	<i>ngimoi de hinóto</i>	<i>keanuku wali alaku</i>
13	<i>ngimoi de hange</i>	<i>keanuku wali atiga</i>
14	<i>ngimoi de iata</i>	<i>keanuku wali atu</i>
15	<i>ngimoi de motoa</i>	<i>keanuku wali yasing</i>
16	<i>ngimoi de butanga</i>	<i>keanuku wali hisnakkung</i>
17	<i>ngimoi de tumidi</i>	<i>keanuku wali betalaku</i>
18	<i>ngimoi de tuhange</i>	<i>keanuku wali betiga</i>
19	<i>ngimoi de hiwo</i>	<i>keanuku wali anukutannang</i>
20	<i>monaoko</i>	<i>kealuku</i>

The Tobelo numerals *ruange* ‘three’ and *ruata* ‘four’ are used only for counting humans. These forms may possibly be derived from *hange* and *iata*, respectively, though the source of the prefix *ru-* is not clear. The Tobelo human numerals ‘three’ and ‘four’ may also have been borrowed; compare Sahu *roange* ‘three’ and *rata* ‘four’. Western Pantar has two synonymous forms for the numeral ‘one’. The short form *ye* is not used in counting but occurs only as a modifier.

In Tobelo tens are formed by prefixing *mori-* to a lower numeral (see Table 3). The exception to this is the numeral *monaoko* ‘twenty’, which has no obvious relation to the numeral *hinóto* ‘two’. This latter form has likely been innovated in Tobelo. The

unexpected penultimate stress shows that *hi-* must be a prefix, likely the causative.³ So Tobelo *hinóto* derives from a causative applied to a unidentified root **noto*. In contrast, the forms for ‘two’ in the related languages Ternate *romdidi* (Hueting 1907) and Sahu *romdidi* (Visser & Voorhoeve 1987) do serve as the basis for the formation of the higher numeral ‘twenty’, *nyagiromdidi* and *nyagiromdidi*, respectively in those two languages. Tabaru, a language variant closely related to Tobelo, retains the original form *modidi* ‘two’ but has *monaoko* ‘twenty’, as in Tobelo (Fortgens 1928).

Tobelo *ngimoi* ‘ten’ is derived from *moi* ‘one’ plus a morpheme *ngi* which may be related to the noun *ngi* ‘place, container’. Hueting (1936: 372) speculates that this ‘ten’ may be an innovation corresponding to two hands as a container. In Western Pantar the tens morpheme is *ke-* and applies regularly to all lower numerals to derive multiples of ten: ‘ten’, ‘twenty’, etc.

Table 3: Tens numerals in Tobelo and Western Pantar

	Tobelo	Western Pantar
10	<i>ngimoi</i>	<i>keanuku</i>
20	<i>monaoko</i>	<i>kealaku</i>
30	<i>moruange</i>	<i>keatiga</i>
40	<i>moruata</i>	<i>keatu</i>
50	<i>moritoa</i>	<i>keyasing</i>
60	<i>moributanga</i>	<i>kehisnakkung</i>
70	<i>moritumidi</i>	<i>kebetalaku</i>
80	<i>morituhange</i>	<i>kebetiga</i>
90	<i>morihwo</i>	<i>keanuk(u)tannang</i>

Higher order bases for hundreds and thousands are borrowed into both languages from Malay: Tobelo *o ratuhu* ‘one hundred’ and *o saana* ‘thousand’; Western Pantar *ratu* ‘hundred’ and *ribu* ‘thousand’. Western Pantar also has the base *sanlak* ‘ten thousand’, ultimately from Sanskrit.

Both languages show evidence of an etymological quinary base reflected in the forms for ‘seven’ < 5 + 2 and ‘eight’ < 5 + 3. In both languages these numerals consist of a prefix—Tobelo *tu-* and Western Pantar *be-*, followed by the numeral ‘two’ or ‘three’. Tobelo *tuhange* ‘eight’ transparently contains *hange* ‘three’, and Western Pantar *beatiga* ‘eight’ transparently contains *atiga* ‘three’. Western Pantar *betalaku* ‘seven’ includes an epenthetic consonant which joins the prefix with *alaku* ‘two’. The form for ‘two’ appearing in the Tobelo *tumidi* ‘seven’ reflects the original Tobelo numeral ‘two’, cognate with Tabaru *modidi*, which has since been replaced by the modern Tobelo form *hinóto* ‘two’.

Tobelo *hiwo* ‘nine’ is a loan from Austronesian (cf. PAN *Siwa). In spite of the resemblance between Western Pantar *atiga* and Malay *tiga*, the Western Pantar form is unlikely to be a loan, given that neighboring Austronesian languages Lamaholot and Alorese have *telo*. Western Pantar *anukutannang* ‘nine’ is etymologically subtractive, literally ‘leave behind one’ (cf. *tannang* ‘leave behind’).

³ In Tobelo stress falls on the first syllable of tri-syllabic roots when the final two syllables of the root have the same vowel. The fact that Tobelo *hinóto* has stress on the penultimate syllable indicates that the root must be *-noto*.

2.1.1 Ordinal numerals

In Tobelo ordinal numerals do not have a distinct form but instead are indicated by the use of the relational noun marker *ma-*. Cardinal numerals differ in that they occur without a noun marker.

Tobelo⁴

- (1) *o-hutu hange*
 NM-night three
 ‘three nights’
- (2) *o-hutu ma-hange*
 NM-night NM-three
 ‘the third night’

In Western Pantar ordinals are indicated with a similar morpheme *maing* preceding the numeral.

Western Pantar

- (3) *ung atiga*
 night three
 ‘three nights’
- (4) *ung maing atiga*
 night ordinal three
 ‘the third night’

2.1.2 Distributive numerals

Distributive numerals express the notion of doing things in groups of a certain number. In Tobelo distributive numerals occur as verbs and are formed by full reduplication of the numeral. This process is restricted to lower order numerals.

Tobelo

- (5) *hokonaa ya-pali ya-moi~moi*
 like.this 3PL.3-roll.up 3PL.3-DISTR~one
 ‘They roll them up one by one like this.’

In Western Pantar distributive numerals are formed by reduplication of the rightmost element of the numeral. Any numeral, including higher order complex numerals, can be reduplicated to form a distributive.

Western Pantar

- (6) *doru kaka ye~ye attang pinni haggi*
 board CLF DISTR~one hand hold take
 ‘They took the boards one at a time.’

⁴ Glossing follows Leipzig conventions with the following additions: ACT actor, UND undergoer, REP repetitive, and NM noun marker. In the Tobelo orthography employed here *ly* represents a palatal lateral glide. Gemimates in Western Pantar are represented by doubled consonants.

- (7) *aname ye hauwe tukiŋ gaiti alaku, ratu alaku~alaku he*
 person one rock gather closed two hundred DISTR~two DISC
 ‘Each person gather two rocks, two hundred rocks each.’ [klamu089]

2.2 Universal quantifiers

In Tobelo universal quantification is expressed via a reduplication of the adverb *mata* ‘all’ or the numeral *moi* ‘one’. The form *mata-mata* follows the noun which it modifies, while the form *moi-moi* precedes the noun.

Tobelo

- (8) *ngomi mata~mata mi-ma-okoino o-gahi ma-deteke-oka*
 1PL.EXCL RDP~all 1PL.EXCL-REFL-stand.watch NM-sea NM-beside-LOC
 ‘We all stood watch beside the water.’
- (9) *mata~mata i-ma-koki-habebe-ilye*
 RDP~all 3-REFL-DISTR-loin.cloth-UP
 ‘All (of them) were wearing a loin cloth.’
- (10) *moi~moi o-nyawa i-wi-ngaku*
 RDP~one NM-person 3-3M-believe
 ‘Each one believes.’

Quantification in Western Pantar is expressed with the form *gaterannang*. This form contains a fossilized third-person prefix *ga-*, and thus universal quantification resembles an adnominal possession construction, with *gaterannang* following the noun. It may also co-occur with the plural marker (12), in which case it follows the plural marker.

Western Pantar

- (11) *ning gaterannang biring*
 1PL.EXCL all run
 ‘We all ran.’ [darang020]
- (12) *gang ai lamuli marung gaterannang gi-ong kaluang*
 3SG 3SG.POSS hero PL all 3PL-COMPL call

ma imam mising
 come there sit
 ‘He called all of his heroes to come there and sit.’ [pubila179]

An additional strategy for expressing the equivalent of ‘each’ or ‘every’ in Western Pantar is through the use of the first-person distributive plural pronominal prefix *ta-*. This prefix sometimes occurs in the citation forms for body parts nouns which are obligatorily possessed. However, it is extremely rare in natural discourse, where it is used to express individuation, as in (13). Its usage is limited to first person reference.

Western Pantar

- (13) *ta-gas* *be* *ta-buka* *yattang*
 1DISTR-reflection shadow 1DISTR-body same.length
 ‘(Each of) our shadows is as long as (each of) our bodies.’

2.3 Number in pronouns and pronominal affixes

Both Tobelo and Western Pantar distinguish number in independent pronouns and pronominal prefixes. Tobelo has distinct pronominal prefix paradigms for actor and undergoer referents, but both paradigms make the same number distinctions. In addition, both independent pronouns and pronominal prefixes distinguish gender for third person singular and human versus non-human for third person plural. These distinctions can be illustrated by the independent pronoun paradigm in Table 4.

Table 4: Tobelo independent pronouns

	SG	PL
1	<i>ngohi</i>	<i>ngomi</i> (EXCL) <i>ngone</i> (INCL)
2	<i>ngona</i>	<i>ngini</i>
3	<i>una(nga)</i> (M) <i>mun(anga)</i> (F)	<i>ona(nga)</i> (human) <i>ena(nga)</i> (non-human)

Western Pantar has distinct independent pronoun paradigms indexing actor and undergoer referents (Table 5). In both paradigms, as well as in pronominal prefixes, number is indicated via vowel grading. Unlike Tobelo, Western Pantar does not have distinct actor and undergoer paradigms for person-marking affixes.

Table 5: Western Pantar independent pronouns, actor (act) and undergoer (und) paradigms

	ACT		UND	
	SG	PL	SG	PL
1	<i>nang</i>	<i>ning</i> (EXCL) <i>ping</i> (INCL)	<i>naing</i>	<i>ni'ing</i> (EXCL) <i>pi'ing</i> (INCL)
2	<i>hang</i>	<i>hing</i>	<i>haing</i>	<i>hi'ing</i>
3	<i>gang</i>	<i>ging</i>	<i>gaing</i>	<i>gi'ing</i>

Number is not obligatorily marked on nouns in either language but instead may be indicated via pronominal affixes. Pronominal prefixes are obligatory in Tobelo for both actor and undergoer referents. Because of this the marking of number is also obligatory in Tobelo. In contrast, only a small subset of transitive verbs in Western Pantar require that their undergoer argument be marked on the verb, while actor arguments are not generally marked. In the examples below Tobelo pronominal prefixes distinguish singular (14a) versus plural (14b) nominal arguments; while the equivalent Western Pantar form (15) is ambiguous between singular and plural readings.

Tobelo

- (14) a. *o-ngohaka wo-ari~ari*
 NM-child 3SG.M-RDP~cry
 ‘The boy is crying.’
- b. *o-ngohaka yo-ari~ari*
 NM-child 3PL.HUM-RDP~cry
 ‘The children are crying.’

Western Pantar

- (15) *kaweni halli*
 child cry
 ‘The child is crying.’ / ‘The children are crying.’

In both languages the number distinction is robust for first and second person referents but is limited for third persons. Human singular referents are distinguished by gender, while human plural referents are not. Tobelo distinguishes *yo-* 3PL.HUM from *i-* 3PL.NONHUM.

Tobelo

- (16) *yo-honenge*
 3PL.HUM-die
 ‘They [human] died.’

Number is not marked in Tobelo for the third person non-human referents.

- (17) *i-honenge*
 3-die
 ‘It/they [non-human] died.’

In cases where the gender of the human referent is unknown, the third person plural prefix is used.

- (18) *o-nyawa yo-boa*
 NM-person 3PL.HUM-come
 ‘Someone is coming.’

In addition to the pronouns and pronominal affixes marking singular and plural there is limited evidence for the marking of dual number. Hueting (1936:334) reports a dual morpheme (*bo*)*ri* which may occur following the pronominal prefix and preceding the verb stem, but this has not been confirmed in more recent documentation (Holton 2003).

Tobelo

- (19) *manga-lako yo-bori-ruhutu-oka*
 3PL.POSS-eye 3PL-DU-close-PFV
 ‘They both closed their eyes.’ (Hueting 1936: 334)

Western Pantar also lacks a dual morpheme, though duals are attested in several closely related Alor-Pantar languages. Teiwa has a complete paradigm of dual pronouns, transparently derived from plural pronouns by suffixing *-raxau* (perhaps related to *raq* ‘two’).

Teiwa (Alor-Pantar; Klamer 2010: 82)

- (20) *ni-raxau ina, yi-raxau ina*
 1PL.EXCL-DU eat 2PL-DU eat
 ‘We two eat, you two eat.’

Klon has a full paradigm of dual free pronouns, though unlike Teiwa it has no dual in pronominal prefixes.

Klon (Alor-Pantar; Baird 2008: 158)

- (21) *Pransina gi-man ele her agai bo ibiq yo ele g-ebeer*
 P. 3POSS-father 3DU descend go SEQ fish DEM 3DU 3UG-kill
 ‘Pransina and her father went down and they (two) killed the fish.’

The use of the numeral ‘two’ as a predicate marking dual is discussed in the following section.

2.4 Number in nouns

Tobelo nouns are not directly marked for number (though see §2.6 below). In Western Pantar nominal number may be optionally indicated via the plural word *maru(ng)*. Plural words are a characteristic feature of Alor-Pantar languages. In Western Pantar the plural word may occur with both animate (22) and inanimate referents (23).

Western Pantar

- (22) *wenang marung ging pia*
 old.man PL 3PL.ACT descend
 ‘The old men went down.’ [bm016]
- (23) *pia gi hai sampan marung sing*
 descend 3PL.POSS canoe PL ART
 ‘(They) went down to their canoes.’ [conflict042]

The plural word cannot occur with numerals (24) or with numeral classifiers (25).

- (24) **ke’e kealaku maru*
 fish twenty PL
- (25) **ke’e bina/dis maru*
 fish CLF/CLF PL

The plural word cannot occur with mass nouns, for which the quantifier *haweri* ‘much, many’ is used instead. For example, *hissi haweri* ‘lots of salt’. The plural word cannot occur independently in the noun phrase slot (26), though it can occur in a noun phrase in apposition with a pronoun, as in (22) above.

- (26) **marung lama ta*
 PL walk IPFV

Plural words are also found in related Alor-Pantar languages, including Teiwa *non*, Kamang *nung*, Klon, *onon*, Abui *loku*, Kula *duwa*, and Sawila *du*. These forms are not cognate with Western Pantar *marung*. Moreover, they exhibit different syntactic properties. Unlike Western Pantar *marung*, Kamang *nung* can occur independently, while Teiwa *non* cannot occur in apposition with a pronoun (Schapper & Klammer 2011). Although many of these plural words share a common origin, there is much variation in their syntactic properties across the languages.

While the plural word *marung* cannot occur with proper names, the human nominalizing morpheme *wala* may also function as an associative plural for nouns referring to humans, including proper names. This is shown in (27), where the form *wala* extends the reference to a group of warriors under the direction of the leader *Deka Ang*.

- (27) *Deka Ang wala sura si kang rakki ya wang i-ti'ang*
 D.A. person letter ART hit tear road exist PROG-sleep
 ‘Deka Ang and his men tore up the letter and leaving it lying on the road,’
 [pubila045]

In both Tobelo and Western Pantar numerals may be used as predicates to express the number of the noun. There is no theoretical limit on the numerals which can be used in these constructions, but it is much more common with the lower order numerals, especially ‘two’.

Tobelo

- (28) *ngomi i-mi-hinoto i-mi-bole ma mi-ruba-ua*
 1PL.EXCL 3-1PL.EXCL-two 3-1PL.EXCL-tired but 1PL.EXCL-trip-NEG
 ‘The two of us were tired but we didn't trip.’
- (29) *ngomi mi-ruange mi-ma-hi-kagaro mi-oiki*
 1PL.EXCL 1PL.EXCL-three 1PL.EXCL-REFL-CAUS-decide 1PL.EXCL -go
 ‘We three decided to go.’

Western Pantar makes extensive use of the numeral ‘two’ as a predicate in serial verb constructions, leading to an incipient dual marker. These duals are transparently analyzable as a combination of a plural person-marking prefix combined with a reduced form of the numeral *alaku* ‘two’.

Table 6: Western Pantar dual markers from *alaku* ‘two’

FORM	GLOSS	TRANSLATION
<i>pilaku</i>	1DU.INCL	‘the two of us’
<i>nilaku</i>	1DU.EXCL	‘the two of us (excluding another)’
<i>hilaku</i>	2DU	‘the two of you’
<i>ilaku</i>	3DU	‘the two them’

Western Pantar

- (30) *pilaku pi-mising ta ber ye pi-asang*
 1DU.INCL 1PL.INCL-sit IPFV issue one 1PL.INCL-say
 ‘Let's the two of us sit down and talk about this matter.’ [tonu247]

However, these incipient dual markers may still occur with independent plural pronouns.

2.5 Syntax

The position of the numeral within the noun phrase is identical in Tobelo and Western Pantar. In both languages the numeral immediately follows the numeral classifier, if present. Western Pantar differs only slightly in having an adjective position immediately to the right of the noun.

- (31) Structure of the Tobelo noun phrase
[N Clf Num Dem]_{NP}
- (32) *o-bole o-uhanga moi nenanga*
NM-banana NM-CLF one this
'This one bunch of bananas.'
- (33) Structure of the Western Pantar noun phrase
[N Adj Clf Num Dem Art]_{NP}
- (34) *bila kalla ye inam si*
cliff small one there ART
'That one small cliff there.'

2.6 Verbal number

Tobelo can mark iteration of an event via the repetitive aspectual suffix *-oli*. Though it can be used to mark multiple repetitions of an event, this morpheme is not strictly an iterative, for it more typically signals an additional occurrence of event.

Tobelo

- (35) *i-wi-hiri-oli*
3-3M-sick-REP
'He is sick again.'
- (36) *ahi-dodiawo ya-hinóto i-hi-garo-oli ya-ato mi-oiki-oli*
1POSS-friend 3PL.3-two 3-1-coax-REP 3PL.3-say 1PL.EXCL-go-REP
'My two friends coaxed me again, saying, let's go again.'

The repetitive may also occur with numerals, where it indicates a number of additional repetitions corresponding to the numeral to which it is affixed.

- (37) *o-hutu hinóto-oli dina o-hongana-oka*
NM-night two-REP landward NM-forest-LOC
'for two more nights in the forest.'

Number of repetitions can also be expressed with the morpheme *hara* 'times' preceding the numeral. The use of *hara* differs from *-oli* in that the former does not indicate additional repetitions but just a total number of repetitions.

- (38) *hara hinóto mi-oiki o-berera-ika*
times two 1PL.EXCL-go NM-town-ALL
'We have gone to town two times.'

The two forms of *hara* and *-oli* may be combined.

- (39) *hara moi-oli t-a-diai*
 times one-REP 1SG-3-make
 ‘I also made one more.’

The Tobelo distributive prefix *koki-* indicates that an action is carried out by or affects each member of a group individually. This prefix occurs immediately preceding the verb root and following the reflexive marker, if present. It is one of four prefixes which may occur in this position of the verb template, the others being the intensifier *hido-*, the habitual *toba-* and the continuative *kete-*. Only one of these morphemes may appear in this prefix slot.

Tobelo

- (40) *ma-homoa yo-koki-honeng-oka*
 NM-other 3PL-DISTR-die-PFV
 ‘I also made one more.’
- (41) *o-Morotai-iha gaanga yo-koki-boa yo-karajanga*
 NM-M.-landward DEM 3PL-DISTR-come 3PL-work
 ‘They each came to Morotai to work.’
- (42) *gang-oka dau o-tau muruono naga i-ma-koki-tingaka-ika*
 there-LOC below NM-house many exist 3-REFL-DISTR-separate-ALL
 ‘Down there many houses were each scattered around.’

Western Pantar *me* ‘times’ functions similarly to Tobelo *hara* and *-oli* to indicate the number of repetitions of an event. This morpheme occurs immediately preceding the numeral.

Western Pantar

- (43) *aname ye bloppa me atiga*
 person one shoot times three
 ‘Each person shot three times.’ [publia114]

3 Numeral classifiers

Classifiers are intermediate systems along a cline between lexicon and morphosyntax (Grinevald 2007: 95). Although they share many similarities with measure terms such as ‘glass of water’ (sometimes referred to as mensural classifiers), classifiers differ from such lexical items in that they form a grammatical subsystem. On the other hand, they differ from noun class systems such as grammatical gender in that they are not entirely grammaticized. Classifiers may be optional, their occurrence may be pragmatically motivated, and their usage may vary from speaker to speaker. Moreover, as intermediate systems, classifiers may simultaneously retain their original status as lexical items while also functioning in a grammatical role to indicate the nature of the object being counted. That is, a given classifier may not only have an identifiable lexical source, it may also retain that lexical function in other contexts.⁵ Though superficially similar, the Tobelo and

⁵ Aikhenvald (2000) adopts a stricter definition of numeral classifiers which excludes those morphemes which occur as lexical items without a numeral. By this criterion only some of the morphemes listed here

Western Pantar numeral classifier systems vary along many of the aforementioned parameters. This section describes numeral classifiers in Tobelo and Western Pantar in turn. The systems are compared in the discussion in the following section (§4).

3.1 Tobelo numeral classifiers

In Tobelo numeral classifiers occur following the head noun and preceding the numeral. They are syntactically nouns which occur in apposition to the head noun. However, numeral classifiers are morphosyntactically distinguished from regular nouns by the *o*-noun marker rather than *ma*-. This criterion distinguishes the classifier usage from ordinary lexical usage. In Tobelo all nouns must be preceded by either the noun marker *o*-, the relational noun marker *ma*-, or a pronominal prefix indexing the person and number of a possessor. Bare stem noun do not occur except under special conditions. For example, the morpheme *liranga* ‘coil of rope’ can be used with the relational noun marker *ma*- to indicate a dependency relation with the head noun *hidete* ‘sail’ (44). In this case *liranga* is not a classifier but a noun which modifies *hidete* ‘sail’. The term *o-hidete ma-liranga* is lexicalized as a reference to the stripes of a sail. In contrast, with the *o*- noun marker *o-liranga* (45) functions as a classifier for counting rope-like objects which can be bundled into coil. All examples given in this subsection are from Tobelo unless otherwise noted.

- (44) *o-hidete ma-liranga moi*
 NM-sail NM-coil one
 ‘one of the sail’s stripes’ (literally, ‘one of the coils of the sail’)

- (45) *o-gumini o-liranga moi*
 NM-rope NM-coil one
 ‘one bunch/hank of rope’

The ability to criterially distinguish classifier usage from lexical usage is a defining feature of the numeral classifier system in Tobelo and other North Halmaheran languages. Notice that in the related language Loloda classifiers do not occur with the *o*- noun marker, but their occurrence can still be distinguished by the lack of a noun marker.

Loloda (North Halmaheran; van Baarda 1904: 349)

- (46) *o-wola utu metoa*
 NM-house CLF five
 ‘five houses’

Tobelo classifiers may occur with complex nouns, in which case they have scope over the entire noun phrase.

- (47) *o-bole ma-gomuku o-utu moi*
 NM-banana NM-ripe NM-CLF one
 ‘one ripe banana’ (Huetting 1908b: 84)

Using the noun marker criterion we can distinguish sixteen numeral classifiers in Tobelo, as listed in Table 7. All of these except *ngai* have a clear lexical source. The

for Tobelo and Western Pantar could be considered true classifiers, and the full functional and grammatical domain of numeral classifiers would be obscured.

semantic relationship between the lexical source and the shape or dimension being classified is not always obvious. For example, the counting of bamboo using a term deriving from ‘to swallow’ probably originates in the use of bamboo drinking vessels. The counting of two-dimensional flexible objects using a term deriving from ‘coil of rope’ probably originates in the weaving of fabric envisioned as coils. The use of *utu* ‘hair’ to count houses may be related to the use of thatch roofing on houses. Still, the lack of complete semantic transparency is evidence of the partial grammaticization of the Tobelo numeral classifiers.

Table 7: Tobelo numeral classifiers

CLF	usage	source
<i>baha</i>	aren palm fibers	‘end’
<i>belaka</i>	long 2-dim objects	‘to split’
<i>biono</i>	sago bread	‘face’
<i>dehoro</i>	torches	‘resin’
<i>dodai</i>	dried fish	‘plate’
<i>gahumu</i>	3-dim objects, animates, default	‘be whole, solid’
<i>guriti</i>	long 1-dim objects	‘to sew’
<i>hara</i>	roof plates	‘turn, times’
<i>hidete</i>	boats	‘sail’
<i>liranga</i>	cloth, flexible 2-dim objects	‘coil of rope’
<i>nahiri</i>	bamboo	‘a swallow (of drink)’
<i>ngai</i>	fish and hair	?
<i>tobiki</i>	broken off piece	‘break’
<i>tudili</i>	palm roof thatch	‘peck’
<i>uhanga</i>	bunches of discrete objects	‘bunch’
<i>utu</i>	long thin, houses	‘stem, hair’

Tobelo numeral classifiers cover a wide semantic space which includes one-dimensional objects, flexible two-dimensional objects, inflexible two-dimensional objects, and three dimensional objects. The default three-dimensional classifier *gahumu* can be used with nearly any object. Some examples of classifier usage are given in (48).

- (48) a. *o-gakana o-gahumu hinóto*
 NM-knife o-CL two
 ‘two knives’
- b. *o-katu o-tudili moi*
 NM-roofing NM-CL one
 ‘one piece of roofing material’
- c. *o-tau o-utu tumidi*
 NM-house NM-CL seven
 ‘seven houses’
- d. *o-keteko o-biono hange*
 NM-sago.bread NM-CL three
 ‘three sago breads’
- e. *o-nauoko o-ngai ngimoi*
 NM-fish NM-CL ten
 ‘ten fish’
- f. *o-tiba o-nahiri tuhange*
 NM-bamboo NM-CL eight
 ‘eight sticks of bamboo’

- | | |
|---|--|
| g. <i>o-aoto</i> <i>o-belaka</i> <i>hange</i>
NM-plank NM-CL three
‘three planks’ | h. <i>o-hilo</i> <i>o-dehoro</i> <i>hange</i>
NM-torch NM-CL three
‘three torches’ |
| i. <i>ami-manemane</i> <i>o-guriti</i> <i>hinóto</i>
3F.POSS-necklace NM-CL two
‘her two necklaces’ | j. <i>o-kudohua</i> <i>o-baha</i> <i>moi</i>
NM-hair.net NM-CL one
‘one hair net’ |
| k. <i>o-hidete</i> <i>o-liranga</i> <i>hange</i>
NM-sail NM-CL three
‘three sails’ | l. <i>o-bole</i> <i>o-uhanga</i> <i>moi</i>
NM-banana NM-CL one
‘one bunch of bananas’ |

Notably absent from the list of classifiers in Table 7 are classifiers for humans (the classifier *gahumu* can be used with animates other than humans). An additional classifier *ya* for humans is discussed separately below. It derives from a pronoun and does not occur with a noun marker and hence is not part of this standard set of numeral classifiers. The focus of Tobelo classifier system is on describing characteristics of objects in the physical world.

Classifiers are not completely obligatory in Tobelo, but it is difficult to assess the degree to which they are optional. On the one hand, all of the forms cited in (48) would seem odd without a classifier, but on the other hand it is relatively easy to find examples without classifiers, such as (49).

- (49) *o-gogogere* *i-dadi* *o-tau* *moi*
 NM-dwelling.place 3-make NM-house one
 ‘The village was made up of one house.’ [paca]

One generalization which does hold is that for those nouns which admit numeral classifiers, a classifier is obligatory (or at least more felicitous) in contexts which involve counting or enumeration. Thus, it would be odd to omit the classifiers in (50).

- (50) *de* *ma-hira~hira-ka* *w-olyomo* *o-bole* ***o-utu*** *moi*,
 and NM-RDP~be.first-PFV 3SG.M-eat NM-banana NM-CLF one
 ‘In the beginning he ate one banana.’

ma-hinoto *w-olyomo* *o-bole* ***o-utu*** *hinoto*,
 NM-two 3SG.M-eat NM-banana NM-CLF two
 ‘The second time he ate two bananas.’

wo-gogere *de* *w-olyomo* *o-bole* ***o-utu*** *hange*.
 3SG.M-stay and 3SG.M-eat NM-banana NM-CLF two
 ‘He continued and ate three bananas.’ (Huetting 1908a: 176)

In other contexts the classifier may be unnecessary, as in (51).

- (51) *y-a-ihā* *de* *o-bole* *moi* *m-a-lye*
 3PL-3-landward and NM-banana one 3SG.F-3-one
 ‘They went landwards and she got a banana.’ (Huetting 1908a: 73)

Numeral classifiers can be used anaphorically without the head noun.

- (52) *ma-majanga o-gahumu tumidi i-boa-ino,*
 NM-deer NM-CLF seven 3-come-ALL
 ‘Seven deer approached,’

o-gahumu butanga ka i-tuga y-a-ino
 NM-CLF six thus 3-measure 3PL-3-ALL
 ‘six came closer,’

o-gahumu moi gena ma-amō~amoko i-dadu unanga-ino
 NM-CLF one DEM NM-RDP~large 3-against 3SG.M-ALL
 ‘one large one approached him.’ (Huetting 1908a: 198)

In addition to the classifiers listed in Table 7 there is an incipient human/non-human distinction which derives from the third-person human plural pronominal prefix. As with almost all Tobelo roots, numerals can be used as predicates. And almost all predicates index person and number via pronominal prefixes. Numeral predicates with human arguments employ the portmanteau pronominal prefix *ya-*, which derives from the third person human plural actor prefix *yo-* and the third person undergoer prefix *a-*, as in (53). However, with non-human referents numeral predicates cannot be indexed with a pronominal prefix.

- (53) *mi-a-hukunu-oka ahi-dodiawo ya-hinoto i-hi-garo-oli*
 1PL.EXCL-3-sell-PFV 1POSS-friend 3PL.3-two 3-1-coax-REP
 ‘Having sold (it) my two friends coaxed me again.’ [tugutil013]

- (54) *naga o-hoana motoa (*ya-motoa)*
 exist NM-village five 3PL.3-five
 ‘There are five villages.’

This construction is extremely common with the numeral ‘two’, where it functions something like the Western Pantar incipient dual marker *ilaku* (see Table 6), of similar origin.

- (55) *ya-hinoto yo-honenge-oka mia-riaka*
 3PL.3-two 3PL-die-PFV 1PL.EXCL.POSS-older.sibling
 ‘Our two elder siblings already died.’ [JasonMaloku]

The human numeral classifier *ya-* may be in the process of developing further into a human noun class marker. It occurs unexpectedly in a number of constructions. For example, the standard negative existential construction employs the predicate *koiwa* ‘not exist’. However, with human plural referents the form *koyaiwa* may be used.

- (56) *ngohi-daluki koiwa*
 1POSS-palm.wine not.exist
 ‘I don’t have any palm wine.’

- (57) *manga-ngohaka koyaiwa*
 3PL.POSS-child not.exist.PL
 ‘Their children were gone.’

Human numeral classifier prefixes are also found in the related languages Tidore and Sahu.

3.2 Western Pantar numeral classifiers

Western Pantar makes extensive use of numeral classifiers describing the shape or structure of an object. As in Tobelo, Western Pantar classifiers follow the noun phrase and precede the numeral. In contrast to Tobelo, Western Pantar classifiers are in most cases optional. All examples given in this subsection are from Western Pantar unless otherwise noted.

- (58) *bla* (*haila*) *ye*
house CLF.area one
‘One house.’

Numeral classifiers may be obligatory in cases where they provide additional specifying information, as with mensural classifiers. In (59) the classifier *bina* ‘detached’ indicates individual fish as opposed to bundles of fish. This example is only marginally acceptable if the classifier is omitted.

- (59) a. *ke’e bina dinni?*
fish CLF.general how.many
‘How many individual fish?’
b. *?ke’e dinni?*
fish how.many

The choice of classifier may distinguish measures. Thus, the classifier *bina* (60a) indicates that the fish are to be counted individually, while the classifier *dis* (60b) indicates that the fish are counted in strings of individual fish tied together.

- (60) a. *hap bina alaku*
fish CLF.general two
‘Two individual fish.’
b. *hap dis alaku*
fish CLF.stringer two
‘Two stringers of fish.’

The choice of classifier may distinguish perceived shape. This can be seen in responses to the visual stimuli in Figure 2. Both images show cassava set upon a tree stump: three cassava in the left image, and one cassava in the right image.



Figure 2: Visual stimuli for elicited examples (61) (left) and (62) (right) (Ameka, de Witte & Wilkins 1999)

The responses inspired by these stimuli yielded different classifiers from the same speaker. For the leftmost image with three cassava the speaker used the elongated object classifier *gamma* (61), while for the rightmost image with a single cassava the same speaker used the fruit classifier *hissa* (62).

- (61) *teikari gamma atiga yattu haila tukka tang ti'ang*
 cassava CLF.elongate three tree base short on lie
 'Three cassava lying on a tree stump.' [pspv2.47]

- (62) *teikari hisa ye yattu haila tukka tang ti'ang*
 cassava CLF.fruit one tree base short on lie
 'One cassava lying on a tree stump' [pspv2.23]

The speaker later justified this choice by noting the elongated, pointy nature of the cassava in the leftmost image, as compared to the rounded character of the cassava in the rightmost image. Cassava roots come in many shapes and sizes, and speakers of Western Pantar are keenly aware of this, as cassava is a staple food in the region. Moreover, the leftmost image shows the cassava with the tips pointing toward the camera, while the rightmost image shows a side view which obscures the ends of the cassava. The visual stimuli were ostensibly not designed to elicit such responses, but speakers of Western Pantar use classifier choice to distinguish these details.

Unlike Tobelo, there are no clear morphosyntactic criteria which distinguish classifier usage from lexical usage in Western Pantar. Classifiers may retain their lexical properties while also serving a classificatory function. Distinguishing classifier from lexical usage can be particularly difficult when the head noun has broad semantics, as with the noun *hatua* in (63), which may refer to a coconut palm, the coconut, or the leaf stem of that plant. The numeral classifier serves both to classify the shape of the referent and at the same time to provide lexical reference for the referent.

- (63) a. *hatua hisa ye*
 coconut CLF.fruit one
 'one coconut'
- b. *hatua waya ye*
coconut CLF.leaf one
 'one cocount leaf stem'
- c. *hatua haila ye*
coconut CLF.base one
 'one cocount palm'

Nonetheless, for many nouns the classifier provides no additional lexical information but merely serves to classify the noun. The classifier *gamma* is used with elongated objects. It derives ultimately from a body part noun *-mma* 'nose ridge' inflected for third person. In (64) *gamma* is used as a classifier indexing the shape of the cassava. In this case the form *gamma* does not specify a particular kind of cassava or particular aspect of the cassava; *gamma* is simply the classifier which is used when counting cassava. This usage

thus lies more toward the grammaticized end of the cline between lexicon and morphosyntax.

- (64) *tekari gamma atu mua tang ti'ang*
 cassava CLF.elongated four ground on lie
 'Four cassava laying on the ground.' [pspv2.42]

Though structurally identical, the usage of *gamma* in (65) has a much stronger lexical function, similar to the examples in (63). The form *gamma* does not merely classify but also indicates that the reference is to a stick rather than an entire tree. The noun *yattu* 'tree' alone has a very broad semantics, so the form *yattu gamma* could potentially be interpreted as a compound meaning 'stick'.

- (65) *yattu gamma ye boti ge'e tang ti'ang*
 tree CLF.elongated one basket rim on lie
 'A stick of wood lying across the rim of a basket.' [pspv2.43]

Three lines of evidence suggest that the use of *gamma* in (65) is actually classificatory, not merely lexical. First, only one instance of *yattu gamma* occurs in the corpus without a following numeral, so there is a strong correlation between the use of *gamma* with *yattu* and counting. Second, there is another lexical item *koi* 'branch' which is more typically used with *yattu* to refer to a tree branch, as in (66).

- (66) *ang ai a-ume yattu koi allang gob me pinni*
 4SG.ACT 4SG.POSS 4SG-inside tree branch then thus LOC hold
 'He thought they were tree branches so grabbed them.' [frog099]

Finally, a third argument for considering *gamma* a classifier is its ability to be used without the head noun and with the numeral in counting objects. Thus, in response to a question 'How many sticks?' one can reply *gamma ye*, omitting explicit reference to the noun *yattu* 'tree'. The response **koi ye* is not possible. Similarly, anaphoric reference in discourse can be achieved with just the classifier, as in (67).

- (67) *wesarani gamma alaku mua tang ti'ang,*
 cassava CLF.stick.like two ground on lie

gamma yasing haggi tang yabung pering
 CLF.stick.like five take on lean pour
 'Two cassava laying on the ground, five leaning against them.' [pspv1.51]

Only classifiers can have this anaphoric counting function. While not perfect, these tests do allow us to discriminate between classificatory and lexical usage in Western Pantar, even in the absence of clear morphosyntactic criteria.

There are ten numeral classifiers in Western Pantar, listed in Table 8. All Western Pantar numeral classifiers have a readily identifiable lexical source, though not all classifiers retain their original lexical function. Notably absent from this list is a classifier referring to humans or animates.

Table 8: Western Pantar numeral classifiers with usage and lexical source

CLF	usage	source
<i>bina</i>	general classifier	‘detached’
<i>haila</i>	objects with areal extent	‘base, area’
<i>dawal</i>	rope-like object (rope, nylon, cable thread, etc.)	(‘roll, coil’)
<i>dis</i>	object strung on a string	(‘stringer’)
<i>kakka</i>	long, stiff, flat objects	‘stiff’
<i>gamma</i>	elongated objects	‘nose ridge’
<i>hissa</i>	fruit, contents	‘fruit’
<i>kassi</i>	split-off objects, measured objects	‘split’
<i>lu’a</i>	rounded object	‘rounded, oblong’
<i>waya</i>	flat, flexible objects	‘leaf’

Two of the classifiers, *dawal* and *dis*, are recognized by speakers as having a lexical meaning but are used only as classifiers. The remaining eight classifiers may occur as lexical items or as classifiers. For example, *bina* occurs as a verb meaning ‘to be detached’ in (68), and *waya* occurs as a referential noun in (69).

- (68) *gai noang bina*
 3SG.POSS sarong detached
 ‘His sarong is undone.’

- (69) *yattu galapung gatta gai waya takki*
 tree bend.over finish 3SG.POSS leaf pick
 ‘Bend the tree over and pick its leaves.’

The general classifier *bina* may combine with other classifiers to form compound classifiers. There is no semantic distinction between the use of the general classifier *bina* alone in (70) and the compound form *hissa bina* in (71). It may be that the compound form serves to further distinguish the classificatory function from the lexical function.

- (70) *maggi bina ye g-abbu tang tasing ti’ang*
 banana CLF.general one 3SG.POSS-stomach on fall.down lay
 ‘One banana fell down on his stomach.’ [peripheral19]

- (71) *maggi hissa bina ye yattu haila tukka tang tasing*
 banana CLF.fruit CLF.general one tree base short on fall.down
 ‘one banana fell on the tree stump’ [peripheral11]

Although the classifier *bina* may serve as a general classifier for many types of nouns, some nouns cannot be used with classifiers. This is particularly true of nouns denoting modern objects, such as footballs and bottles. Although one might expect an elongated object like a bottle to admit the classifier *gamma*, forms such as **botol gamma ye* are rejected by speakers.

There is variation in the usage of classifiers among speakers, as is typical for languages with a large set of numeral classifiers (Aikhenvald 2006). We can observe these differences in responses to fixed visual stimuli provided by the Picture Series for Positional Verbs (Ameka, de Witte & Wilkins 1999). In response to an image which shows a cloth

spread on a table one speaker did not even use a numeral (72), while another used a numeral without a classifier (73).

- (72) *noang mea tang pidding*
sarong table on spread
'A sarong spread out on a table.' [pspv1.14]

- (73) *noang ye mea tang pedding*
sarong one table on spread
'One sarong spread out on a table.' [pspv2.14]

That is not to say that individual speakers are consistent in their use of classifiers. In response to another visual stimulus showing a cloth hanging over the edge of a table, the same speaker who failed to use a numeral in (72) used in this instance both a numeral and a classifier (74). In contrast, the speaker who used the numeral in (73) here omits the numeral in (75).

- (74) *noang waya ye mea tang maiyang gai sar diakang haulang*
sarong CLF one table on place 3POSS edge descend hang
'One sarong placed on a table with its edge hanging down.' [pspv1.49]

- (75) *noang sanai mea galing wang maiyang gai sar dekan*
sarong traditional table edge exist place 3POSS edge descend
'A traditional sarong placed on the edge of a table with its edge hanging down.'
[pspv2.49]

Numeral classifiers are also found in the other languages of Alor-Pantar, though the degree of grammaticization of the classifier system varies across the languages. In Klon numeral classifiers have grammaticized as proclitics and no longer occur as independent words.

Klon (Baird 2008)

- (76) *ga ge ete ih ong, up=tong ma ana=tong g-en*
3ACT 3POSS tree fruit this CLF=three come CLF=three 3-give
'He brought three pieces of fruit and gave them to the three (people).'

Choice of classifier is also not consistent across languages. For example, the Klon classifiers *up* and *ana* in (76) have Western Pantar cognates *uppur* 'seed' and *aname* 'person', respectively, yet neither of these is used as a classifier in Western Pantar. Another example can be found in the Abui example in (77), where the classifier *kasing* is used for flat, flexible objects. This classifier has its origin in a word meaning 'splinter' and is clearly cognate with the Western Pantar classifier *kassi*, which derives from the verb meaning 'to split'. However, Western Pantar uses the classifier *waya* in this construction, not *kassi* (78).

Abui (Kratochvíl 2007: 153)

- (77) *kabala kasing karnuku*
cloth CLF.splinter ten
'Ten pieces of cloth.'

Western Pantar

- (78) a. *sabu waya keanuku*
 cloth CLF ten
 ‘ten pieces of cloth’
- b. **sabu kassi keanuku*
 cloth CLF ten
 ‘one cocount leaf stem’

In Teiwa the general classifier is *bag* ‘seed’, whereas Western Pantar uses *bina* ‘detached’ for this function. Teiwa numeral classifiers are also more highly grammaticized (see Klamer, this volume). This variation can be taken as evidence of recent grammaticization of classifier systems in Western Pantar and other Alor-Pantar languages.

4 Discussion

Some 1000 km separate the Tobelo and Western Pantar language regions, and there is no evidence of a genealogical relationship. Nonetheless, the two languages share many features with respect to the marking of number. Both show traces of an earlier quinary numeral system evidenced in the modern forms for the numerals ‘seven’ and ‘eight’, and both mark number in pronouns and pronominal affixes. Most notably, both languages have fairly elaborate systems of numeral classifiers which lie toward the lexical end along a cline of grammaticization.

However, a closer examination of the classifier systems in each language reveals significant differences. The Tobelo system is much larger, with some sixteen classifier morphemes as compared to ten in Western Pantar. The systems also carve up the semantic space differently. For example, Western Pantar *bina* (from a verb meaning ‘detached’) is used to classify fish, animals, and other non-human living things; while in Tobelo fish are counted with *ngai* and non-fish animals are counted with *gahumu*, a generic classifier for three-dimensional objects, living and non-living. Tobelo classifiers are also more semantically opaque. At least one Tobelo classifier has no identifiable lexical source, and for several others the semantic connection between classifier and lexical usage is not obvious. In Western Pantar all classifiers retain clear lexical overtones. Though classifiers are not strictly obligatory in either language, they occur much more frequently in Tobelo, and there are many more contexts in which numeral classifiers are obligatory in Tobelo than in Western Pantar. Tobelo classifiers also differ in that classifier usage can be distinguished from lexical usage based on overt morphosyntactic criteria. In Western Pantar it is often difficult or impossible to draw a clear line between classifier and lexical usage. Based on these observations some might be reluctant to call these Western Pantar morphemes classifiers at all. But regardless of how one labels them, the numeral classifier system remains an important part of the language which warrants both description and explanation.

The choice to focus in this chapter on just one North Halmaheran language and one Alor-Pantar language is admittedly opportunistic. The evidence suggests that there may be as much intra-family variation in the realization of numeral classifiers as there is variation between the two languages Tobelo and Western Pantar. This seems especially true for the Alor-Pantar family (see Klamer, this volume). Moreover, some of the variation in our knowledge of the classifier systems in Tobelo and Western Pantar may be due to differing data sets. While the analyses of both languages are based on elicited and textual data, the

Western Pantar analysis draws also on experimental data using visual stimuli. Application of this methodology to Tobelo might yield additional information about classifier usage.

Looking beyond the North Halmaheran and Alor-Pantar families classifier systems are ubiquitous throughout the region.⁶ However, the classifier systems found in the Austronesian languages near to the Alor-Pantar region are generally much smaller and more highly grammaticized. Kambera has just five numeral classifiers, only one of which is still lexical (Klamer 1998: 136). Ke'o has just two general classifiers, in addition to several unique classifiers, each of which can be paired with only a single noun (Baird 2002). On the other hand, classifier systems found in the region of the North Halmaheran languages are much more similar to that found in Tobelo. Both Austronesian Taba (Bowden 2001) and Papuan Mpur (Odé 2002) have large classifier systems, though both are more highly grammaticized than in Tobelo.

Numeral classifier systems exist along the fuzzy boundary between lexicon and morphosyntax, so there is much leeway for these systems to evolve in unique ways. Comparing numeral classifiers in these two Papuan outlier languages reveals significant differences in those systems, in spite of their superficial similarities. It is hoped that this comparison will eventually contribute to a greater understanding of the grammaticization and emergence of classifier systems, both within East Nusantara and more broadly.'

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7 *Numeral classifiers in the Papuan languages of Alor and Pantar*

A comparative perspective

MARIAN KLAMER¹

1 Introduction

When a language forms a new class of numeral classifiers, this is often due to a language internal process of grammaticalization (cf. Aikhenvald 2000). In this paper I argue that this process of grammaticalization can be both internally motivated and modelled after functions that speakers encounter through contact with other languages.²

On the basis of recently collected survey data I investigate the history of the numeral classifiers in six Papuan languages, spoken on the islands of Alor and Pantar. The six languages of my sample cover most of the Alor-Pantar region, and represent the major subgroups of the Alor-Pantar family. I argue (i) that the classifiers found in the languages today have not been inherited from proto-Alor-Pantar, but are a later development in each of the languages; and (ii) that this development must have taken place under influence from Austronesian languages with classifiers.

Numeral classifiers are “morphemes that only appear next to a numeral, or a quantifier; they may categorize the referent of a noun in terms of its animacy, shape, and other inherent properties” (Aikhenvald 2006:466). Two basic types of numeral classifiers are generally distinguished: mensural and sortal classifiers. A mensural classifier “individuates in terms of quantity”, and a sortal classifier “individuates whatever it refers to in terms of the kind of entity that it is” (Lyons 1977:463). Most, if not all, languages have mensural classifiers, while the worldwide distribution of sortal classifiers is more restricted (see Gil 2011). In this paper, the term ‘classifier’ will refer to sortal numeral classifiers only; mensural classifiers will not feature here.

In the Alor-Pantar archipelago, some 20 Papuan (‘non-Austronesian’) languages are spoken (see Map 1). Together these form the Alor-Pantar (AP) subgroup of the Timor-Alor-Pantar (TAP) family (Holton et al. 2012, Schapper et al. 2012). There is evidence that the Alor-Pantar languages originate from the Straits region between the two islands (Robinson and Holton 2012). The Papuan character of the TAP languages has long been recognized in the literature. Until recently, most authors have assumed that the TAP family belongs to the putative Trans-New Guinea family, but as there is no lexical evidence

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² I wish to thank members of the audience at the ICAL conference in Bali in July 2012 for their valuable feedback on the oral presentation of this paper, and the two anonymous reviewers for helpful comments on the written version.

supporting this position, Holton et al. (2012) instead propose that the TAP group should be considered a distinct family, unrelated to Trans-New Guinea, which is also the position taken here. The TAP family appears to be relatively young; calculations by Holman et al. (2011) suggest it to be some 3,500 years old. There is good evidence that the Alor-Pantar languages have been in contact with Austronesian languages since prehistoric times: Austronesian loans have been reconstructed back to proto-Alor-Pantar (Holton et al. 2012: 114) and there is Austronesian influence in Alor-Pantar numeral systems (Schapper and Klamer 2014).



Figure 1. Location of the Alor-Pantar languages in Eastern Indonesia

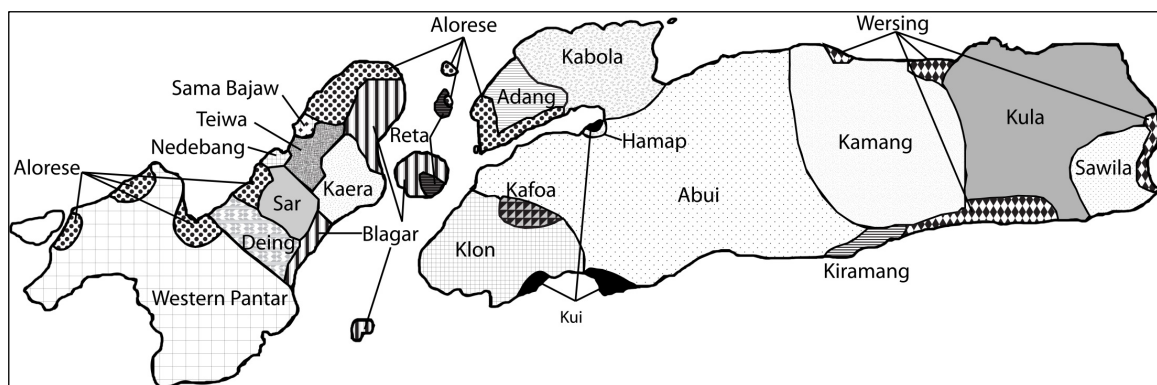


Figure 2. Map of the Alor-Pantar languages

This paper is structured as follows. In section 2 I present the classifiers in my sample of six Alor Pantar languages, and argue that there is no evidence to reconstruct one or more classifiers for proto-Alor-Pantar. Instead, they must be the result of different types of relatively autonomous developments in individual languages that yet need to be scrutinized. In section 3, I briefly review the literature suggesting that numeral classifiers

are not a feature typically found in Papuan languages. However, the Papuan languages that do have numeral classifiers are found in areas where Austronesian-Papuan contact existed. This indicates that classifiers in Papuan languages may be due to contact (section 3.1). I then present some evidence that classifiers are typically found in Austronesian, which supports the contact scenario (section 3.2). In section 4 I summarize the conclusions.

2 Numeral classifiers in Alor Pantar are not inherited

Numeral classifiers are found throughout the Alor-Pantar family, in languages spoken across the two islands. In this section, I argue that no classifier is reconstructable for proto-Alor Pantar, and that classifiers in Alor Pantar probably developed out of nouns.

Illustrations of numeral classifiers in the sample languages are given in Table 1-6 below. The column ‘Meaning’ represents the lexical meaning of source of the numeral classifier; in this column, the value ‘none’ means that today’s speakers do not attribute a meaning to the form, while ‘not reported’ indicates that the source does not include information about the meaning.

Tables 1-6 present the languages in geographical west-to-east order: Teiwa (Table 1) and Western Pantar (Table 2) on Pantar island; Adang (Table 3) and Klon (Table 4) on the western part of Alor; Abui in central Alor (Table 5) and Kamang in central-east Alor (Table 6), see Figure 1 for language locations.

Table 1. Classifiers in Teiwa (Klamer 2010, 2014)

Form	Meaning	Classifies
<i>bag</i>	‘seed’	general classifier for everything but humans and fruits/tubers
<i>-man3</i>	(none)	humans
<i>kam</i>	‘long fruit’	long fruits, e.g. tamarind, banana
<i>yis</i>	‘cylindrical fruit’	cylindrical fruits and tubers, e.g. taro, cassava
<i>quu’</i>	‘round fruit’	round fruits, e.g. mango, papaya, lemon, pumpkin, coconut

Table 2. Classifiers in Western Pantar (Holton, this volume; to appear)

Form	Meaning	Classifies
<i>bina</i>	‘detached’ ⁴	general classifier
<i>haila</i>	‘base, area’	objects with areal extent
<i>dawal</i>	‘roll, coil’	rope-like objects (e.g. rope, nylon, cable thread)
<i>dis</i>	‘stringer’	objects strung on a string
<i>kakka</i>	‘stiff’	long, stiff, flat objects
<i>gamma</i>	‘nose, point of land’	sticklike objects
<i>hissa</i>	‘fruit’	fruit, contents
<i>kassi</i>	‘to split’	split-off objects
<i>lu’a</i>	‘rounded, oblong’	rounded object
<i>waya</i>	‘leaf’	flat, flexible objects

³ This form must take an obligatory person-marking prefix.

⁴ Western Pantar is unique among the languages surveyed here in recruiting classifiers from nominal as well as non-nominal lexemes.

Table 3. Classifiers in Adang (Robinson and Haan, to appear)

Form	Meaning	Classifies
<i>pa'</i>	non-round fruit	general classifier for objects of many shapes and sizes; e.g. arrows, drums, borrowed nouns, birds, fish ⁵
<i>beh</i>	'leaf'	flat, flexible objects (leafs, money notes)
<i>bo'</i>	(none)	flat, rigid, large objects, incl. fields
<i>bo'</i>	'log'	long, cylindrical, rigid objects, e.g. bamboo, logs
<i>'ahang</i>	'slice'	flat, rigid, small objects, e.g. wood, walls
<i>'anemeng</i>	'sheet'	non-flat, flexible objects, e.g. clothes, rope, string
<i>el</i>	(none)	rigid, standing objects, e.g. buildings, trees
<i>'afail</i>	'seed'	small rigid objects, e.g. corn kernel, rice grain
<i>'ir</i>	(none)	long, cylindrical, jointed objects, e.g. bamboo, sugarcane
<i>kumang</i>	'piece'	short, cylindrical objects, e.g. logs, eels, snakes
<i>pir</i>	'round fruit'	round objects, e.g. fruits, animals, people
<i>puh</i>	(none)	hanging objects, e.g. banana blossoms, corn ears
<i>bar</i>	'bunch'	short, clustered, hanging objects, e.g. coconut bunches, earrings, bells, betel nut
<i>buil/buling</i>	'stem'	long, clustered hanging objects, e.g. banana bunches, rice

Table 4. Classifiers in Klon (Baird 2008)

Form	Meaning	Classifies
<i>ip</i>	'amount'	objects (formal usage)
<i>up</i>	'amount'	objects (informal usage)
<i>ana</i>	(not reported)	human classifier

Table 5. Classifiers in Abui (Schapper 2010)

Form	Meaning	Classifies
<i>upi</i>	'fruit'	fruits, animals
<i>lohu</i>	'long [thing]'	bronze drums, larger animals
<i>kasing</i>	'bit'	man-made items
<i>-ning6</i>	(not reported)	human classifier

Table 6. Classifiers in Kamang (Schapper, to appear)

Form	Meaning	Classifies
<i>uh</i>	(none)	general classifier
<i>ning</i>	(none)	human classifier

In numeral NPs in the Alor-Pantar languages the classifier follows the noun, and precedes the numeral: [NOUN - CLASSIFIER - NUMERAL]. An illustration is (1), with the Teiwa general classifier *bag*:

⁵ The Adang default classifier *pa' (a)* is derived from a noun originally meaning 'small non-round fruit' and is now used 'to count any non-liquid object', including borrowed items, birds and fish (Haan 2001: 296).

⁶ This form must take an obligatory person-marking prefix.

Teiwa

- (1) *Qarbau* *bag* *ut* *ga'an* *u*
 water.buffalo CLF four DEM DIST
 'Those four water buffalos'

The following general observations can be made relating to the data presented in Table 1-6. First, the inventories of classifiers differ significantly in size. For instance, Adang has 14 classifiers while Kamang has only 2.

Second, the classifier lexemes differ significantly in their shape, the lexical source from which they derive, as well as their classifying function. While the set contains some parallel forms (e.g., the classifiers originating from 'leaf' in W Pantar *waya* and Adang *beh*, and the human classifier *ning* in Abui and Kamang), no cognates are found across the sample.

Third, a number of the languages have a 'general' classifier, which functions to classify nouns outside the semantic domains of the other, semantically more specific, classifiers (c.f. Zubin and Shimojo 1993, Shimojo 1997). Although these lexemes share a common general classifying function, they derive from different lexical sources: Teiwa *bag* < 'seed', Western Pantar *bina* < 'detached', Adang *pa'* < 'non-round fruit', and Kamang *uh* (meaning of source unknown), so that no proto-form for a general classifier can be constructed.

Finally, each of the languages uses its classifiers to make classifications of quite different nature. For instance, in Teiwa, fruits are not classified together, but in different classes according to the shape of the fruit (*kam*, *yis*, *quu'*), while in Adang, fruits are classified together with animals and people (*pir*), Western Pantar classifies fruits with 'contents' (*hissa*), and Klon and Kamang do not classify fruits at all. The few languages that classify animals put them in a class with fruits and humans (Adang *pir*), or with inanimate items (Abui *lohu*).

In sum, the survey data presented in this section show that (i) numeral classifiers are very common in Alor-Pantar languages, but (ii) they have variable shapes and origins, and make very different semantic classifications, so that (iii) no classifier is reconstructable for proto-Alor Pantar.

If this is correct, then the classifiers attested in the individual languages must have developed after the split up of proto-Alor Pantar. They are not inherited from the proto language, but have developed independently in the individual languages. The data presented here suggest that classifiers in Alor Pantar developed out of nouns.

It seems that nouns indicating the parts of a plant, such as 'fruit', 'leaf', and 'seed' are among the preferred sources for numeral classifiers. Illustrations of such part-of-whole nouns in Teiwa are given in (2a-d), where the generic plant name *wou* 'mango-hood'⁷ combines with the part-of-whole nouns *bag* 'seed', *wa'* 'leaf', *qaau* 'flower', and *heer* 'stem, base' in order to refer to certain particular parts of a mango-plant:

Teiwa

- (2) a. *wou* *bag*
 mango-hood seed
 'mango seed(s)'
- b. *wou* *wa'*
 mango-hood leaf
 'mango leaf(s)'

⁷ *Wou* is glossed as 'mango-hood' because (unlike what the gloss 'mango' would suggest) *wou* by itself has no referential meaning: it must combine with a fruit classifier *quu'* to refer to (a) mango fruit(s).

c. *wou* *qaau*
 mango-hood flower
 ‘mango flower(s)’

d. *wou* *heer*
 mango-hood stem
 ‘mango tree(s)’

It is plausible that classifiers such as Teiwa *bag* developed out of the part-of-whole noun ‘seed’ through structural reanalysis of an ambiguous phrase structure. This is illustrated in (3)–(5). Part-of-whole nouns like Teiwa *bag* in (5) can develop into a classifier through reanalysis of their structural position. As a part-of-whole noun, it is part of a nominal compound, (3), but such a structure may be reanalyzed into the one in (5), where *bag* is clearly functioning as a general classifier, via ambiguous structures like the one in (4). (4) is ambiguous because *bag* can be analyzed here as either a part-of-whole noun within a nominal compound *wou bag* that is followed by a NUMeral (as in (3)); or as a numeral classifier that combines with a numeral into a NUMeral Phrase *bag yerig* (as in (5)).

Teiwa

(3) [N_{HEAD} NUM]_{NP}
 / \ |
 [*wou* *bag*] _N *yerig*

(4) *wou* *bag* *yerig*
 mango-hood seed three
 ‘three mango seeds’

(5) [N_{HEAD} NUMP]_{NP}
 | / \ |
 bala’ [*bag* *yerig*]
 bed CLF three
 ‘three beds’

What these few examples are meant to illustrate here is how a numeral classifier can develop out of a part-of-whole noun through a simple (‘re-bracketing’) reanalysis of the structure of numeral NPs. I have argued elsewhere (Klamer 2014) that this is what may have happened in Teiwa. The historical trajectories of the classifiers in the other languages mentioned above still need to be investigated. However, what is clear from the data presented in this section is that nouns, especially part-of-whole nouns are among the preferred sources for the numeral classifiers that developed in the Alor-Pantar languages.

3 Numeral classifiers in Alor Pantar as an Austronesian feature

3.1 Numeral classifiers in Papuan languages

From a Papuan perspective, it is interesting to find that classifiers have developed across the Alor-Pantar family. Numeral classifiers are not at all typical for Papuan languages. Neither Foley (1986, 2000) nor Aikhenvald and Stebbins (2007) mention numeral classifiers among the features that are typical for Papuan languages. In addition, the numeral classifiers map by Gil (2011) lists two dozens of Papuan languages across New Guinea, and all of them lack numeral classifiers. This does not mean that there are no

Papuan languages with classifiers at all: Aikhenvald (2000:123) mentions ten such languages.⁸ However, these languages occur in scattered locations, and are members of different Papuan families in the eastern part of New Guinea. In contrast to this, there are geographical clusters of Papuan languages with numeral classifiers on the western side of New Guinea, as shown in Figure 3. Apart from the languages of Alor and Pantar, we find Papuan languages with classifiers on Timor, in the Bird's Head of mainland New Guinea, as well as in Halmahera.

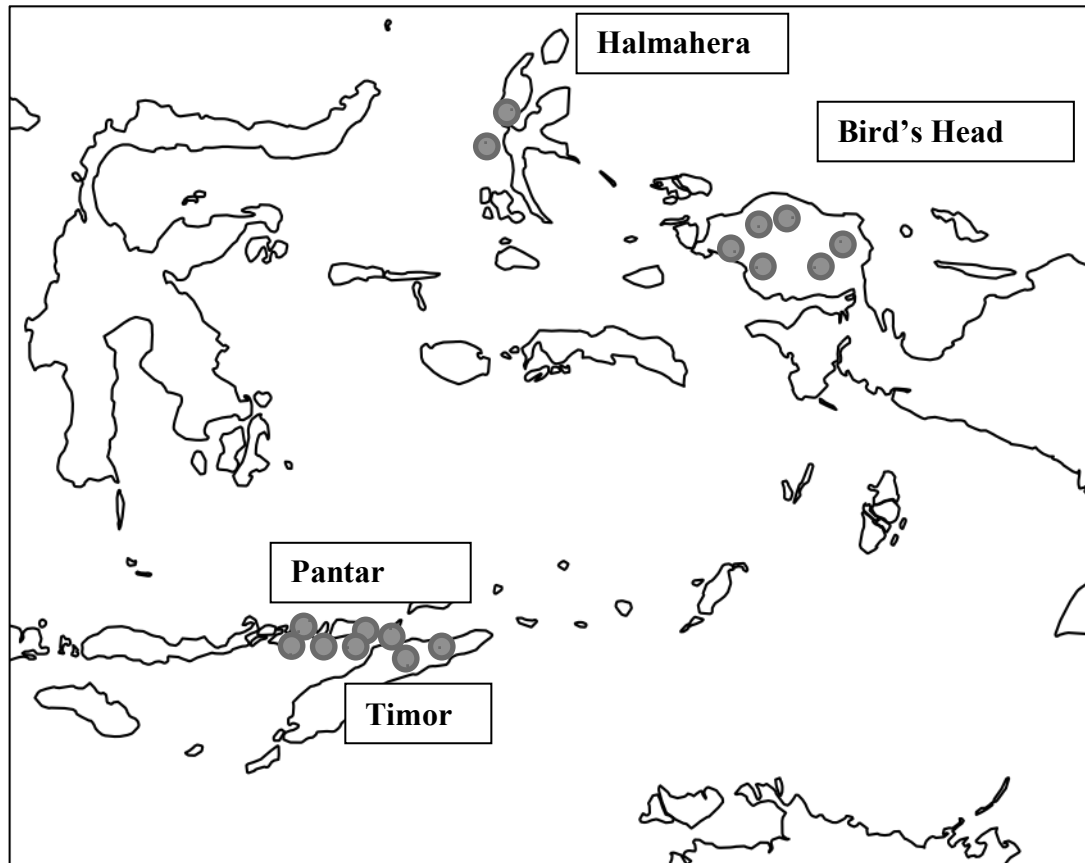


Figure 3. Papuan languages with numeral classifiers in eastern Indonesia, represented as grey dots

These areas are exactly the ones where we know that longstanding and intense contacts between Papuan and Austronesian speaking groups have existed, and resulted in diffusion of Austronesian features into Papuan languages (e.g. the inclusive-exclusive person distinction), or Papuan features into Austronesian (e.g. the alienable-inalienable possessor distinction).⁹

On Timor, the Papuan languages Makasae and Makalero have classifiers and couple these with other traces of Austronesian influence (Huber 2008, 2011). Papuan languages of the Bird's Head with classifiers include Mpur (Odé 2002), Abun (Berry and Berry 1999), Tehit (Flassy 1991), Maybrat (Dol 1999), Sougb (Reesink 2002b) and Hatam (Reesink

⁸ Iwam, Abau (in the East Sepik province), Chambri, Wogamusin, Chenapian (in the Lower Sepik), Angave, Tanae (in the Gulf Province), Folopa (in the Highlands), and Wantoat, Awará (in the Morobe province).

⁹ See Klamer, Reesink and Van Staden 2008; Klamer and Ewing 2010, Holton and Klamer, to appear, and references cited there.

1999), and these languages combine classifiers with Austronesian influence in e.g. word order, pronouns, numerals and lexicon (Voorhoeve 1989). An example from Mpur is (6):

Mpur (Odé 2002:83)

- (6) *Jan bik denur*
 house CLF three
 ‘Three houses.’

Before the advent of Indonesian, centuries of contact existed between Papuan speakers of the Bird’s Head and surrounding Austronesian speakers (the Wandamen in the south-east, people from the Raja Ampat islands in the south, and the Biak-Numfor in the north). Austronesian languages such as Biak were used as languages of wider communication in and around the Bird’s Head (van den Heuvel 2006), and it is very likely that this led to the diffusion of Austronesian features in the local Papuan languages (cf. Reesink 2002a:25-26). In Halmahera, the languages Tidore (Van Staden 2000:166-167) and Tobelo (Holton, this volume) also have classifiers. Old Austronesian loans are found throughout North Halmaheran Papuan languages suggest a very long period of contact between Papuan and Austronesian languages (Voorhoeve 1994).

In short, while numeral classifiers are extremely rare in Papuan languages generally, and do not occur in areal and/or genealogical clusters anywhere in mainland and eastern New Guinea, we do find them in Papuan languages spoken in those areas of Indonesia where Austronesian-Papuan contact is, or has been intense. I do not think this is accidental: it strongly suggests that Papuan classifiers developed under contact with Austronesian.

3.1 Numeral classifiers in Austronesian languages

In section 2 we saw that there is no evidence that proto-Alor-Pantar had one or more classifiers. We thus have to assume that classifiers in the individual Alor-Pantar languages developed after the proto-language split up.

In addition, the areal patterns discussed in the previous section suggest that this development was enhanced, or reinforced, by contact with Austronesian classifier languages. I propose that there have been at least two layers of contact: one very recent, and one presumably much more ancient.

The very recent contact involves Indonesian, the national language of Indonesia. As today’s language of interethnic communication, media and education, Indonesian is spoken as a second language by virtually everyone on Pantar and Alor. It also is the first language of an increasing number of children. The dominant role of Indonesian is a relatively recent phenomenon that started after the 1960’s, roughly correlating with the increasing number of Indonesian primary schools established in rural areas.

In this context it must be noted that Malay, which was the trade language in many parts of eastern Indonesia in pre-colonial times and the *lingua franca* of the Dutch East Indies, did not play a significant role in the history of the languages of Alor and Pantar. Alor and Pantar were under very remote Portuguese control until 1860, and Dutch colonial influence only became apparent in the first decades of the 20th century. In the Dutch era, few speakers of the local Papuan languages went to school and learned Malay (Klamer 2010:14 and references cited there). There is no evidence whatsoever that a Malay variety was used as a *lingua franca* across the islands in the past. Indeed, the local Malay variety that is currently spoken in the major town of Kalabahi is clearly based on the Malay variety that developed in the provincial capital of Kupang on Timor (Jacob and Grimes 2003) and has been introduced during the last few decades.

As today's most dominant language in the archipelago, Indonesian is influencing the local Papuan languages of Alor Pantar in many ways. Indonesian has a set of sortal classifiers that are obligatory in numeral contexts. Of these, the classifier *buah*, which is derived from a noun meaning 'fruit', is the "most general classifier [which] has almost lost any semantic, conceptual content" (Hopper 1986:323) and "classifies things that do not have definite types and shapes" (Chung 2010:553).¹⁰ An illustration is shown in (7).

Indonesian

- (7) *dua* ***buah*** *mobil*
 two CLF car
 'Two cars'

In this respect, Indonesian *buah* is similar to the general classifiers in Teiwa (*bag*), Western Pantar (*bina*), Adang (*pa'*) and Kamang (*uh*). It is very likely that recent, ongoing and intensive contact with Indonesian has been the driving force behind a development where these indigeneous lexemes became used as general classifiers over time. However, it must be emphasized that this is not a case of borrowing an Indonesian lexeme: neither form nor semantics of *buah* are copied in any of the languages. Indonesian *buah* derives from 'fruit', and as a general numeral classifier it classifies objects and fruits, not animals. In contrast, the Teiwa, Western Pantar, Adang and Kamang general classifiers do not derive from 'fruit' and do not generally classify fruits. The only feature shared by Indonesian *buah* and the general classifiers in these four languages is their *general* classifying function. This function may have been copied from Indonesian onto the various different lexemes in the local languages. In other words, the general Indonesian classifier *buah* may have driven or enhanced the development of general classifiers in the local Papuan languages of Alor and Pantar. Recent contact with Indonesian has thus lead to the development of general classifiers.

However, the numeral classifiers in Alor-Pantar languages were already in existence before the speakers got in contact with Indonesian. If the classifier sets developed due to contact with Austronesian classifier languages, as proposed above, this contact must have been from an earlier, more ancient date.

Classifiers are attested throughout the Austronesian-speaking world outside of Taiwan, that is, in the Malayo-Polynesian languages.¹¹ Examples include the Vietnam language Cham, Moken/Moklen on the Tai-Malay Peninsula, Belait in northern Borneo, Nias west of Sumatra, Mori Bawah in Sulawesi and Sama Bajau in the southern Philippines and eastern Indonesia (cf. Blust 2009:282-283, Himmelmann 2005: 173). Reflexes of the numeral classifier reconstructed for proto-Malayo-Polynesian **buaq* (Blust 2009:289) are found as general classifiers across the entire family, right down to the Oceanic subgroup.

We have good evidence that the Alor-Pantar languages have been in contact with Austronesian languages since the latter arrived in the area some 3000 years ago (Pawley 2005:100), as Austronesian loans have been reconstructed back to proto-Alor-Pantar (Holton et. al. 2012:114). Also, there are various types of Austronesian (but demonstrably non-Malay, non-Indonesian) lexical influences in the numeral systems of some of the Alor-Pantar languages (Schapper and Klamer 2014).

¹⁰ *Buah* is a reflex of the proto-Malayo-Polynesian noun **buaq* 'fruit' discussed below.

¹¹ All the Austronesian languages spoken outside of Taiwan, including those of Indonesia and the Oceanic languages, belong to the Malayo-Polynesian subgroup. When I use the term Austronesian here, it refers to "the Malayo-Polynesian subgroup of Austronesian".

Obvious candidates for contact with Alor-Pantar languages are (the predecessors of) the Austronesian languages spoken in the vicinity of Alor and Pantar, in eastern Indonesia. So it is useful to chart the occurrence of numeral classifiers in Austronesian languages spoken in eastern Indonesia. The number of languages spoken in eastern Indonesia may be estimated at 200-250 – a figure that is vague for lack of data (Hammarström and Nordhoff 2012), and we currently have grammatical information on some 25-30 of these languages (Klamer 2012). A cursory inspection of the existing grammars showed that most of them have numeral classifiers; examples are given in Table 7, and charted in Figure 4.

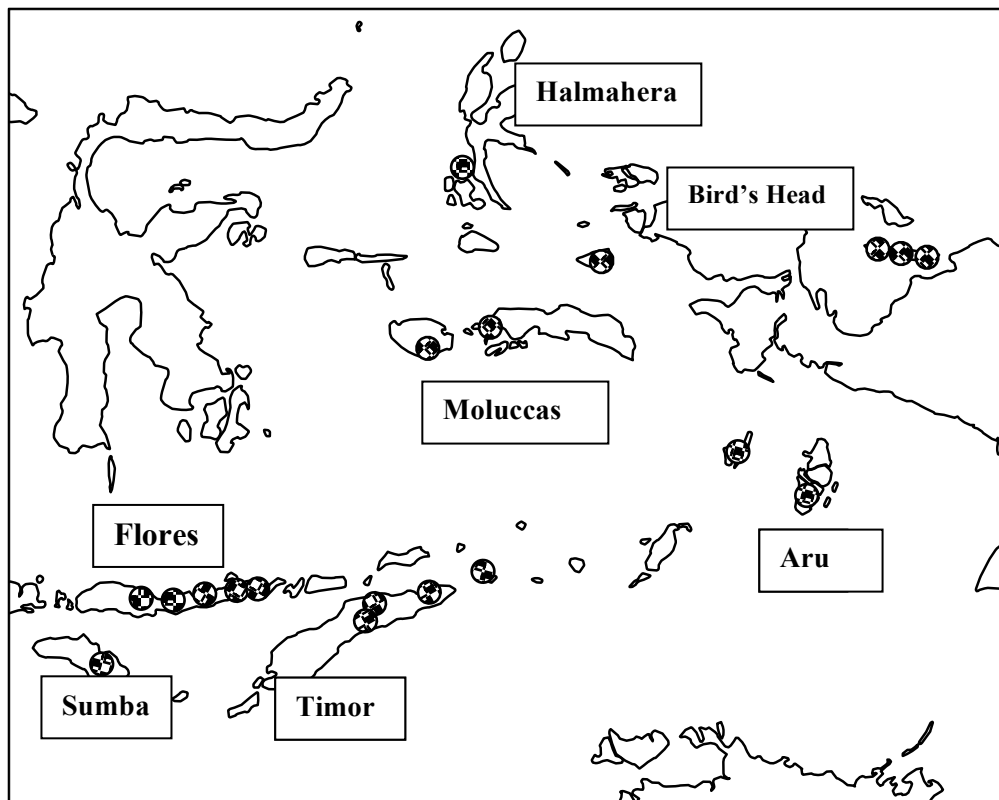


Figure 4. The Austronesian languages with numeral classifiers in eastern Indonesia from Table 7, represented as speckled dots

Table 7. Austronesian languages with numeral classifiers in eastern Indonesia

Region/island	Language	Source
Flores	Manggarai	Burger 1946
	Rongga	Arka 2008
	Kéo	Baird 2001, 2002
	Sika	Arndt 1931
	Hewa	Hanna Fricke (fieldnotes, 2014)
Timor	Tetun Fehan	Williams-van Klinken 1999
	Tetun Dili	Williams-Van Klinken et. al. 2002
	Waimaha	Hull 2002
	Leti	Van Engelenhoven 2004
Aru	Dobel	Hughes 2000
	Kei	Geurtjens 1921
Moluccas	Buru	Grimes 1991
	Larike	Laidig and Laidig 1995
Halmahera	Taba	Bowden 2001

Region/island	Language	Source
Bird's Head's region	Magéy Matbat	Remiisen 2010
	Kurudu	Anceaux 1961
	Ambai	Silzer 1983
	Munggui	Anceaux 1961
Sumba	Kambera	Klamer 1998

Illustrations of the classifiers found in the Austronesian languages of eastern Indonesia are given in Table 8-14. For reasons of space, I only present one language per island. Reflexes of the proto-Malayo-Polynesian form **buaq* 'fruit' are printed in bold.

Table 8. Numeral classifiers in Rongga (Flores) (Arka 2008)

Form	Meaning	Classifies
<i>mori</i>	'God'	humans
<i>ata</i>	'person'	humans
<i>esa</i>	(none)	general classifier for everything but humans animals and trees, including abstract objects (house, clan, idea, book title)
<i>eko</i>	'tail'	animals
<i>pu'u</i>	('pole?')	living standing trees
<i>li'e</i>	'fruit'	fruit-like three dimensional objects
<i>kura</i>	'bunch'	palm fruits such as coconuts
<i>wole</i>	'bunch'	banana, corn, rice
<i>kise</i>	'grain'	corn, tooth
<i>toko</i>	'log of wood'	non-flat, round, long objects (pipe, bamboo tube, sarong)
<i>mbi'i</i>	(none)	flat, thin, rigid, long objects (plank, board)
<i>nolo</i>	(none)	flat, thin, bendable, foldable objects (bamboo rope, shirt)

Table 9. Numeral classifiers in Tetun Fehan (Timor) (Van Klinken 1999:104-105)

Form	Meaning	Classifies
<i>na'in</i>	'noble', 'owner'	humans
<i>matan</i>	'source', 'eye'	large domestic animals that are eaten (pig, buffalo)
<i>lolon</i>	'trunk'	long objects (candle, fish, rib, woven cloth)
<i>tahan</i>	'leaf'	thin flat objects (clothing, betel pepper, book)
<i>fuan</i>	'fruit', 'heart'	whole roundish objects (betel nut, coconut, cabbage, egg, sea shell)
<i>musan</i>	'seed'	very small round objects (tablet)

Table 10. Numeral classifiers in Dobel (Aru) (Hughes 2000:158-159)

Form	Meaning	Classifies
<i>fatin</i>	'body'	humans, trees
<i>fusi</i>	'fruit'	fruits, other (e.g. human shouts, dog barks)
<i>yafir</i>	'shaft'	long, pole-shaped objects (trousers)
<i>rakwin</i>	'leaf'	thin flat objects (leaf, cloth)
<i>fa'il</i>	(none)	thicker flat objects (plank, sago filter)
<i>kwasir</i>	(none)	boats and villages

Table 11. Numeral classifiers in Buru (Moluccas) (Grimes 1991:306-310)¹²

Form	Meaning	Classifies
<i>geba</i>	‘person’	humans
<i>ihér</i>	‘thing’	general classifier used if other classifiers are unknown or unimportant
<i>fatan</i>	‘trunk’	long, large and round (tree trunks, waves, bodies of (dead) animals)
<i>kisen</i>	‘bald’	live pigs and chicken
<i>isin</i>	‘content’	tubers
<i>fuan</i>	‘fruit’	any bulbous shaped thing (fruit, vegetables, wok, bread, pearl)
<i>somon</i>	‘part’	whole clothes
<i>lahin</i>	‘root’	trees
<i>fatun</i>	‘stone’	rock-like objects
<i>tian</i>	‘belly’	corn
<i>kasén</i>	‘section’	things that have natural divisions (bamboo, language)
<i>somon</i>	‘part’	(no information)
<i>engan</i>	‘piece’	meat, cloth (implies usability of piece)
<i>lafan</i>	‘sheet’	thin, flat things (leaves, paper, cloth)
<i>wangan</i>	‘digit’	of definable length (finger, short strip of bamboo)
<i>walan</i>	‘strip’	objects with salient feature of length (hair, strip of pandanus leaf for weaving)
<i>walen</i>	‘pole’	bamboo
<i>turen</i>	‘short’	short length of wood, bamboo
<i>kodon</i>	‘straw’ (?)	house structures
<i>kihan</i>	‘seed’	small seeds, rice, sand
<i>folin</i>	‘stalk’	bananas
<i>dahan</i>	‘hand’	bananas
<i>pongon</i>	‘cluster’	betelnut, grapes

Table 12. Numeral classifiers in Taba (Halmahera) (Bowden 2001:252-263)¹³

Form	Meaning	Classifies
<i>p-</i> ¹⁴	(none)	general classifier attached to numerals 1-9
<i>i-, sis=</i>	(none)	animal classifier attached to numerals 1-9, day/sun, month/moon
<i>mat=</i>	(none)	humans
<i>mot=</i>	(none)	small, square flat thin and cut objects
<i>wato-</i>	(none)	small oblong shaped objects (not cut) (pen, match)
<i>hola</i>	(none)	pieces of wood, sticks
<i>luklik</i>	‘to roll s.th.’	rolled up objects (cigarette)
<i>ai</i>	‘tree’	trees
<i>awa</i>	‘stalk’	bunches of fruits growing together on a stalk
<i>ising</i>	‘hand’	hands of bananas
<i>kop</i>	‘grain’	grains of rice and corn

¹² I have included here the Buru forms that are classified as sortal and/or mensural, and excluded those that are classified separately as mensural classifiers by Grimes.

¹³ The boundary between sortal and mensural classifiers in Taba is unclear. I have excluded here the forms that seemed transparently mensural.

¹⁴ Prefix to numerals, probably derived from proto-form **buaq*, see the discussion below.

boka ‘skewer’ things skewered on a stick

Table 13. Numeral classifiers in Magey Matbat (Misool, W of Bird’s Head) (Remijsen 2010:287-290)

Form	Meaning	Classifies
<i>nun-</i>	(none)	animates
<i>ha-</i>	(none)	boats and houses
<i>di-</i>	(none)	long sharp objects
<i>pa-</i>	(none)	round objects, often fruits
<i>ta-</i>	(none)	sago biscuits
<i>i-</i>	(none)	general classifier for everything else including abstract nouns

Table 14. Numeral classifiers in Kambera (Sumba) (Klamer 1998:139, Onvlee 1984)

Form	Meaning	Classifies
<i>tau</i>	‘person’	humans
<i>iu/ngiu</i>	(none)	animals
<i>wua/mbua</i>	fruit	general classifier for three dimensional and abstract objects (fruit, cup, house, month)
<i>pungu/mbungu</i>	pole	oblong objects (stick, needle)
<i>wàla/mbàla</i>	leaf	flat thin objects (cloth, paper)

The data presented in Table 8-14 contrast with the view expressed by Blust (2009: 282), who remarks that “[classifiers] are reported sporadically in eastern Indonesia”. Indeed, numeral classifiers are almost univesal in the Austronesian languages of eastern Indonesia. And those languages that do not have numeral classifiers as independent words often have prefixes to numerals that can be shown to historically derive from one or more classifier(s). Illustrations include the prefix *p-* in Taba (Table 12), probably derived from proto-Austronesian/Malayo-Polynesian **buaq* (Bowden 2001: 244), and the prefix *pa-* in Magey Matbat (Table 13), illustrated in (8), which is likely to be of the same source:

Magey Matbat (Remijsen 2010: 287)

- (8) *Ho^lng pa-lu^l*
mango CLF-two
‘two mangos’

A further illustration of a grammaticalised numeral classifier is the (synchronically meaningless) prefix *v(ò)-* in Leti, which is found only attached to the numerals ‘two’ to ‘nine’, e.g. *vò-rua* ‘two’, *vò-telu* ‘three’ (Van Engelenhoven 2004:164). This prefix is also a reflex of proto-Malayo-Polynesian **buaq*, compare Leti *vua/vua* ‘fruit’ (Van Engelenhoven 2004:447).¹⁵

¹⁵ Similar constructions where classifiers have become meaningless affixes attached to numerals are reported for Oceanic, where “generally, the numeral and classifier are bound to each other in one or the other order” (Lynch, Ross and Crowley 2002:73).

In short, numeral classifiers are very common in the Austronesian languages of eastern Indonesia, and while they show a lot of variation in shape and categorical functions, reflexes of pMP **buaq* are found across the region.

Classifiers are also attested widely in the Oceanic subgroup of Austronesian. A number of classifiers have been reconstructed for proto-Oceanic (pOC), including the general classifier **puaq* literally ‘fruit’ in (9). Other reconstructed forms are the classifier for animate beings **mwane*, a classifier for wooden or elongated objects (**kaiu*) and one for persons (**tau*) (Lynch et al. 2007:74). The Oceanic languages with classifiers include those listed in (10) below (taken from Lynch et al. 2002:73-74). Major subgrouping information is included in brackets.

Proto-Oceanic (Lynch et.al. 2002:73)

- (9) *ta* ***puaq*** *tolu* *a* *niuR*
 ART CLF three ART coconut
 ‘Three coconuts’

- (10) The Admiralties family (a primary subgroup of Oceanic languages)
 The Kilivila family (< Western Oceanic linkage)
 Sudest (Papuan Tip < Western Oceanic linkage)
 The North Bougainville linkage (< Meso-Melanesian linkage < W Oceanic linkage)
 The Cristobal-Malaitan languages (< SE Solomonian family < CE Oceanic linkage)
 The Nuclear Micronesian family (< CE Oceanic linkage)
 The languages in New Caledonia (<S Oceanic linkage < CE Oceanic linkage)
 The Polynesian languages (<Central Pacific linkage < CE Oceanic linkage)

All this goes to show that classifier languages are found across the three primary subgroups of Oceanic, as well as across the subgroups *within* each of these subgroups, and that they are reconstructed for proto-Oceanic. Classifiers must have been quite commonly used in proto-Oceanic. For instance, Lynch et. al (2002:74) mention that a word like **niuR* ‘coconut’ depended on a classifier for its disambiguation, as the meaning of **niuR* itself embraced the notion of the tree, its fruit, and the contents of the fruit.

Since Proto Malayo-Polynesian had one classifier (**buaq*) and Proto Oceanic had four (**puaq*, **mwane*, **kaiu*, **tau*; see above), it is safe to assume that the Malayo-Polynesian (Central Eastern Malayo Polynesian, Blust 2009) languages of eastern Indonesia today had at least one classifier, and possibly more, since they constitute the link between Malayo-Polynesian and Oceanic, shown in Figure 5.

In sum, numeral classifiers are found all across the Austronesian languages spoken outside of Taiwan; they are heavily attested throughout eastern Indonesia; and they have been reconstructed for the Oceanic subgroup. On the other hand, they are not typically found in Papuan languages, except for those that are spoken in the vicinity of Austronesian languages, including the languages of Alor and Pantar. This makes it likely that contact with Austronesian languages has contributed to the development of numeral classifiers in the Papuan languages of Alor and Pantar.

Note again that the contact did not involve a diffusion of lexemes: no similarity in shape or semantics exists between classifiers in Alor-Pantar languages and classifiers of Austronesian languages in the area. In particular, reflexes of the reconstructed proto Malayo-Polynesian form **buaq*, which are found throughout the Austronesian family, do not occur in any of the Alor-Pantar languages.

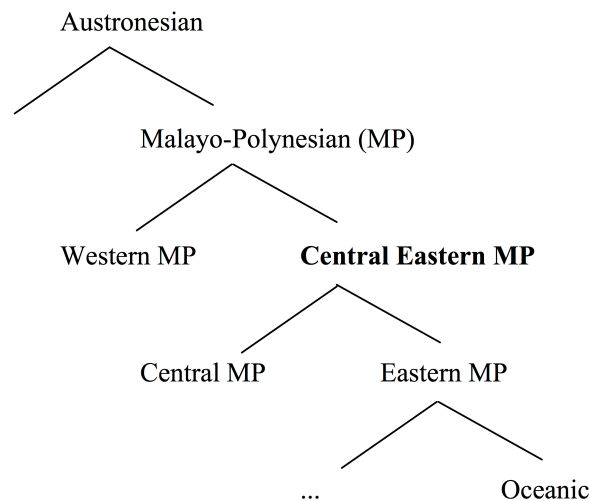


Figure 5. Austronesian language family and its main branches

4 Conclusions

Survey data on Alor-Pantar numeral classifiers indicate that numeral classifiers are very common in Alor and Pantar, but have variable shapes and origins, and make very different semantic classifications. No classifier is reconstructable for proto-Alor-Pantar. This in turn suggests that the classifier systems found in the family developed after the split up of proto-Alor-Pantar. This is not a surprising finding, as it is well known that classifier sets are highly volatile and always develop out of other lexical classes such as nouns.

However, from a Papuan point of view, the development of sets of numeral classifiers seems rather unusual, as numeral classifiers are extremely rare in Papuan languages generally. They do not occur in any areal and/or genealogical cluster of Papuan languages, *except* for three areas in eastern Indonesia: the Bird's Head, Halmahera and Timor-Alor-Pantar. These are exactly the three Indonesian regions known to have undergone long term Austronesian-Papuan contact, resulting in diffusion of structural features.

Classifiers are typical for Austronesian languages, and the Austronesian languages in eastern Indonesia almost universally have them, so it seems plausible that the development of classifiers in the Alor-Pantar languages was triggered or enhanced by (ancient) Austronesian influence.

In addition, recent and intensive contact with Indonesian may have lead to the development of general classifiers in a good number of Alor-Pantar languages, as functional copies of the Indonesian general classifier *buah*.

The contact did not involve any borrowing of lexemes: no similarity in shape or semantics exists between classifiers in Alor-Pantar languages and classifiers of Austronesian languages in the area. In particular, no reflexes of the reconstructed proto-Malayo-Polynesian form **buaq*, which are found throughout the Austronesian family, are attested in the Alor-Pantar languages surveyed here. Neither has the grammatical structure of Austronesian numeral NPs been copied. In Austronesian NPs, the classifier follows the numeral, while the position of the noun varies, thus we find [NUMERAL - CLASSIFIER - NOUN] (as in Indonesian *dua buah rumah* 'two CLF houses') but also [NOUN - NUMERAL - CLASSIFIER] (as in colloquial Malay *rumah dua buah* 'houses two CLF') (Blust 2009: 283-

284). In contrast, in numeral NPs in the Alor-Pantar languages the classifier precedes the numeral: [NOUN - CLASSIFIER - NUMERAL].¹⁶

This suggests that the Alor-Pantar classifiers indeed constitute an independent development. What speakers may adopted from Austronesian, however, is the propensity to reanalyse lexemes they already had at their disposal (such as part-of-whole nouns) and grammaticalise them as classifiers in numeral expressions.

By comparing the numeral classifier sets used in the Alor-Pantar languages with each other, as well as with classifier patterns of Papuan and Austronesian languages more generally, we have seen that most of the Alor-Pantar numeral classifiers developed out of nouns. The process of grammaticalization was not only internally motivated, but also modelled after functions found in Austronesian languages with numeral classifiers.

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¹⁶ Note that example (8) from Austronesian Magey Matbat does not represent the proto-Austronesian structure. It is more likely a structure that is based on a Papuan substrate of the Raja Ampat islands.

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8 *Number in Abui and Sawila*

FRANTIŠEK KRATOCHVÍL¹

1 Introduction

This paper deals with the expression of the category of number in the grammars of Abui and Sawila, two Papuan languages of the Alor-Pantar Archipelago of Eastern Indonesia, shown in Figure 1.² Both languages belong to the Alor branch of the Alor-Pantar family (Holton et al. 2012).³

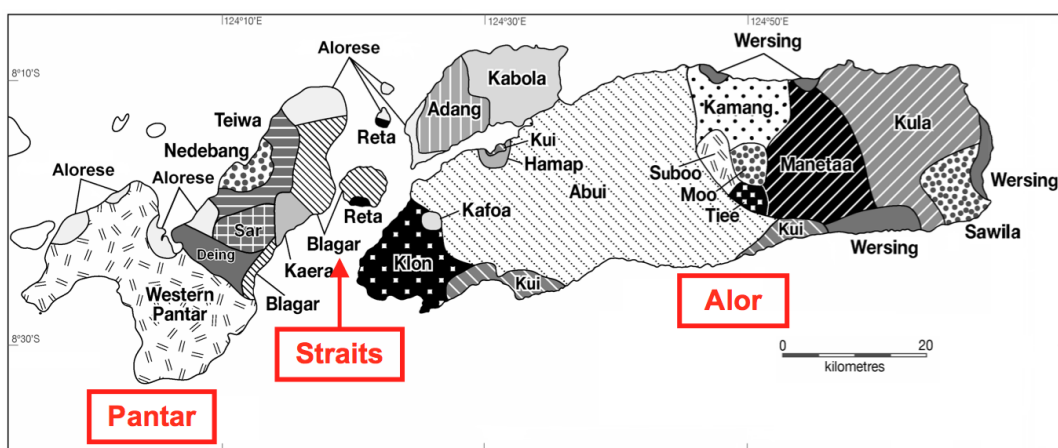


Figure 1. Linguistic situation in the Alor-Pantar Archipelago

By treating two closely related languages, the paper illustrates the degree of grammatical variation in the family and contributes to a better understanding of grammatical change in these languages. The paper also detects structural convergence in the conceptualization of number with the Austronesian languages spoken in the area (see also Holton, this volume; Klamer, this volume).⁴

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³ Abui (iso 639-3:abz) is spoken in the central part of the main island Alor by about 16,000 speakers. Sawila (iso 639-3:swt) is spoken in the east of Alor by about 3,000, whom are mostly bilingual in neighboring Wersing or Kula; all three languages are classified as belonging to the East Alor branch (Holton et al. 2012) and display many regular sound correspondences and structural similarities (Schapper and Hendery 2014; Williams and Donohue, 2014).

⁴ The data presented in this paper comes from the corpora of Abui and Sawila (both between 100,000-125,000 words), collected between 2003-2013 and 2007-2013. Glosses follow the Leipzig Glossing Conventions with the following additions: AD addressee-perspective, AGT agentive pronoun, ASSOC

1.1 Typological profile

Abui and Sawila display many structural similarities. Their phonemic inventories are relatively simple, with phonemic vowel length and lexicalized stress found in both languages, and marginal tone found in Abui. Both languages are head-marking, verb-final, and moderately agglutinative (with limited fusion in Sawila). Negation particles occur post-verbally and verb serialization and clause chaining are extensive in Abui and Sawila.

Abui verbs are highly fluid in argument selection and indexing. Sawila verbs are more rigid but their valence can be modified by applicative prefixes. Both languages display semantic alignment in the sense that Donohue and Wichmann (2008) and other chapters therein use this label. In Abui, semantic alignment is detected in both free pronouns and person prefixes (Kratochvíl 2007, 2011, 2014a; Fedden et al. 2013, 2014). In Sawila, only free pronouns show semantic alignment; the selection of person prefixes with verbs is lexicalized in Sawila (Kratochvíl 2014b). Both Abui and Sawila mark aspect through verbal suffixes, particles or verb serialization. In certain clause types, Sawila also marks mood.

1.2 Number in Abui and Sawila grammar

Abui and Sawila have a quinary (5-10) and decimal (10 and above) number system (Section 2.1), which common to the entire Alor-Pantar family (Schapper and Klammer 2014). However, they differ in the derivation of ordinals (2.2) and distributives (2.3). In both languages, the reference of certain numerals may be relative and cover concepts such as *all*, or *together* (2.4). Both languages have universal quantifiers (i.e. *every*, *each*, *all*) that index the quantified entity with a person prefix (Section 3). In Abui, the indexing is sensitive to the animacy status of the quantified entity; in Sawila it is sensitive to the homogeneity of the quantified entity.

Number in nouns is marked with a plural word, and the marking is optional in both languages (4.1). As expected for OV languages, the plural word follows the noun in both cases (see Dryer 1989:880). An associative plural is encoded with dedicated markers in both languages (4.2). The noun phrase structure is almost identical in both languages, as shown in (1).

- (1) Abui NP: DEM (POSS) POSS-N_{HEAD} MOD (CLF) ASSOC PL/NUM QUANT DET
 Sawila NP: (POSS) POSS-N_{HEAD} MOD (CLF) ASSOC/PL NUM QUANT DET

In pronouns and person prefixes, number is marked only for first and second person (Section 5), and is underdifferentiated in third person forms. Classifiers appear to be in an early stage of grammaticalization and are likely a language-contact induced feature (see Klammer, this volume). There are two classifiers in Abui used with some regularity (6.1). In Sawila, there are two classifiers, which are used with very low frequency (6.2). Verbal number is systematically encoded in both languages (Section 7).

2 Numeral systems

Abui and Sawila have a quinary (5 and above) and decimal (10 and above) numeral system, where numerals higher than 6 are derived from the base *yeting* ‘5’. The form for

associative, CONT continuative, EVID evidential, FIN final form, I/II paradigm numbers, INC inchoative, LNK linker, MOD modal, NFIN non-final form, ORD ordinal, POT potentive pronoun, PRIOR priorative, SEQ sequential, SIM simultaneous, SPC specific determiner.

‘6’ is simplex in Abui, but compound and regular (5+1) in Sawila. Ordinal numerals are derived in Abui with a third person possessive prefix but distributives are derived through partial reduplication. Sawila ordinals are derived with the prefix *wii-*, distributives with *ma-*.⁵

2.1 Cardinal numerals

Abui and Sawila cardinal numerals are listed in Table 1. The Abui inventory is conservative; all forms are regular reflexes of the pAP forms. Sawila has innovated the numeral for ‘1’ (possibly *sun-dana*), replaced the simplex form for ‘6’ with a compound form ‘5+1’, and innovated the additive operator in numerals within ‘decades’. The additive operator *ga-rising* consists of a root *rising* ‘increase’ and a third person prefix *ga-*. The reconstructed proto-Alor-Pantar forms (Holton et al 2012; Schapper and Klamer 2014) are listed in the last column.

Table 1: Numerals 1-19 in Abui and Sawila

	Abui	Sawila	pAP
1	<i>nuku</i>	<i>sundana, dana</i>	* <i>nuk</i>
2	<i>ayoku</i>	<i>yaku</i>	* <i>araku</i>
3	<i>sua</i>	<i>tuo</i>	*(a) <i>tiga</i>
4	<i>buti</i>	<i>araasiku</i>	* <i>buta</i>
5	<i>yeting</i>	<i>yootine</i>	* <i>jiwesin</i>
6	<i>talaama</i>	<i>yootingsuno</i>	* <i>talam</i>
7	<i>yetingayoku</i>	<i>yootingyaku</i>	*5+2
8	<i>yetingsua</i>	<i>yootingtuo</i>	*5+3
9	<i>yetingbuti</i>	<i>yotaraasiku</i>	*5+4
10	<i>karnuku</i>	<i>adaaku</i>	* <i>qar</i>
11	<i>karnuku wal nuku</i>	<i>adaaku garising sundana</i>	* <i>qar wali(η) nuk</i>
12	<i>karnuku wal ayoku</i>	<i>adaaku garising yaku</i>	* <i>qar wali(η) araku</i>
13	<i>karnuku wal sua</i>	<i>adaaku garising tuo</i>	* <i>qar wali(η) (a)tiga</i>
14	<i>karnuku wal buti</i>	<i>adaaku garising araasiku</i>	* <i>qar wali(η) buta</i>
15	<i>karnuku wal yeting</i>	<i>adaaku garising yootine</i>	* <i>qar wali(η) jiwesin</i>
16	<i>karnuku wal talaama</i>	<i>adaaku garising yootingsuno</i>	* <i>qar wali(η) talam</i>
17	<i>karnuku wal yetingayoku</i>	<i>adaaku garising yootingyaku</i>	* <i>qar wali(η) 5+2</i>
18	<i>karnuku wal yetingsua</i>	<i>adaaku garising yootingtuo</i>	* <i>qar wali(η) 5+3</i>
19	<i>karnuku wal yetingbuti</i>	<i>adaaku garising yotaraasiku</i>	* <i>qar wali(η) 5+4</i>

Higher numerals (decades, hundreds, thousands, and numerals in between) list first the denominator (naming the power of ten) and then the numerator, as in the Abui *kar*_{denominator} *ayoku*_{numerator} = ‘20’. Sawila numerals between 20-90 require the prefix *ma-* to be attached to the numerator: *adaaku*_{denominator} *ma-raku*_{numerator} = ‘20’, displaying the common Eastern Alor pattern, shared with Kula and Wersing (Schapper and Klamer 2014). The numerals for ‘1,000’ and higher numerals such as ‘1,000,000’ are Malay loans in both languages.⁶

⁵ When attached to verbal roots, *wii-* and *ma-* derive applicative verbs.

⁶ Numerals in both languages are cognate with the other AP languages except for the Sawila form *sundana* ‘one’. Note also that Sawila *yaku* ‘two’ has an allomorph *raku* in *adaaku maraku* ‘twenty’.

Table 2: Higher numerals in Abui and Sawila

	Abui	Sawila
20	<i>kar-ayoku</i>	<i>adaaku ma-raku</i>
30	<i>kar-sua</i>	<i>adaaku ma-tua</i>
40	<i>kar-buti</i>	<i>adaaku ma-araasiku</i>
50	<i>kar-yeting</i>	<i>adaaku ma-yootine</i>
60	<i>kar-talaama</i>	<i>adaaku ma-yootingsuno</i>
70	<i>kar-yetingayoku</i>	<i>adaaku ma-yootingyaku</i>
80	<i>kar-yetingsua</i>	<i>adaaku ma-yootingtua</i>
90	<i>kar-yetingbuti</i>	<i>adaaku ma-yootarasiku</i>
100	<i>aisaka nuku</i>	<i>asaka dana</i>
200	<i>aisaha ayoku</i>	<i>asaka yaku</i>
300	<i>aisaha sua</i>	<i>asaka tua</i>
1000	<i>rifi nuku</i>	<i>riibu dana</i>
2000	<i>rifi ayoku</i>	<i>riibu yaku</i>
3000	<i>rifi sua</i>	<i>riibu tua</i>

More complex numerals are formed by listing the denominators followed by their numerators and by linking the last number between 1-9 with the additive operator. Because both communities acquire numeracy skills in school, larger numbers regularly trigger code-switching into Malay.

- (2) Abui: *rifi yetingsua aisaha nuku kar yetingbuti wal ayoku*
 Sawila: *riibu yootingtuo asaka dana adaaku ma-yootarasiku ga-rising yaku*
 1000 8 100 1 10 9 operator 2
 ‘8192’

In Abui, stand-alone cardinal numerals can be used in vocatives (referring to the addressee), as shown in (3). In Sawila, cardinal numerals occur in vocative phrases, but have to accompany a proper term of address (typically a kinship term), as shown in (4), a fragment taken from Acts 3:3 (Healing the Lame Beggar).

Abui

- (3) *ayoku! na fa hedo he-wahai=ya iti ri=ning=ayoku*
 two 1SG.AGT MOD 3.FOC 3.LOC-look=SEQ there 2PL.AGT=in.number=two
 ‘hey, you two! I am looking at that, it’s you there’ [ATMA.57]

Sawila

- (4) *Saaku yaku! Nadea dapa woo!*
saaku yaku na-dea dapa woo!
 father.in.law two 1SG.I-FIN.see PRIOR INC
 ‘You two gentlemen! Have pity on me, come on!’ [Acts.3:3]

2.2 Ordinal numerals

Schapper and Klamer (2014:15) observe that in their sample the most frequent ordinal derivation contains a reflex of pAP **mi* ‘be in/on’. Abui and Sawila diverge from that pattern. In Abui, ordinal numerals are derived from the cardinal base with the third person prefix *he-*. For the numeral ‘first’ the suppletive base *teitu* is used. The numeral *teitu* ‘first’

combined with other person prefixes is interpreted as a possessive construction and interpreted to refer either to a person standing in front of the possessor or to possessor's paternal line ancestors, as in (6). It is never interpreted as 'I am the first', which should be expressed as (7), where the ordinal is the clausal predicate.

Abui

- (5) *he-teitu, he-ayoku, he-sua, he-buti, he-karnuku*
 ORD-first ORD-two ORD-three ORD-four ORD-ten
 'first, second, third, fourth, tenth'
- (6) *ne-teitu, e-teitu, pi-teitu, ri-teitu*
 1SG.AL-first 2SG.AL-first 1PL.INCL-first 2PL-first
 'my ancestor/person in front of me, your ancestor/person in front of you, our
 ancestors/people in front of us, your ancestor/person in front of you'
 [EBD.5]
- (7) *nedo he-teitu, edo he-teitu *nedo ne-teitu*
 1SG.FOC ORD-first 2SG.FOC ORD-first 1SG.FOC 1SG.AL-first
 'I am the first one, you are the first one' [EBD.6]

Abui numerals can combine with other person prefixes, but such combinations do not derive ordinal forms, as shown in (8). They rather have a possessive interpretation and are used in the context of placing bets on certain numbers or to refer to playing cards, as in (9).

Abui

- (8) *ne-nuku, e-ayoku, pi-sua, ri-buti*
 1SG.AL-one 2SG.AL-two 1PL.INCL-three 2PL-four
 'my [number] one, your [item number] two; our three, your four'
- (9) *ne-ayoku nu do-me!*
 1SG.AL-two SPC 3.REC-come
 'Give me back my number two.' [EBD.7]

Ordinal numerals either occur in the quantifier slot of the NP, or are linked with *ba*, a modifier linker, as in (10).

Abui

- (10) a. *e-ratala (ba) ayoku* b. *e-ratala (ba) he-ayoku*
 2SG.AL-grandchild LNK two 2SG.AL-grandchild LNK ORD-two
 'your two grandchildren' 'your second grandchild'

Sawila ordinal numerals are derived from the cardinal base with the prefix *wii-*. There are two forms for 'first': (i) the regularly derived *wii-suna*, and (ii) the suppletive *wida*, *wiidayi*, in which the base *dana* is shortened and fused with the prefix *wii-*. The form *wiidayi* has a wider use, covering meanings such as 'in the beginning'.⁷

⁷ The Sawila data will be presented in four lines, where the first line closely follows the pronunciation (reflecting various morphophonemic processes, for details see Kratochvíl 2014b); the next two lines list the underlying forms and their glosses.

Sawila

- (11) *wida, wiideayi, wiyeaku, wiitua, wearaasiiku, wiiyotine, weadaaku*
wida, wii-dayi, wii-yaku, wii-tua, wii-araasiiku, wii-yotine, wii-adaaku
 first ORD-one ORD-three ORD-three ORD-four ORD-FIN.five ORD-ten
 ‘first (or in the beginning), second, third, fourth, tenth’
- (12) a. *maanusi wiideyi* b. *pileaka weadaaku, giwateng wisuna*
maanusi wii-dayi *pileaka wii-adaaku gi-wateeng wii-suna*
 human ORD-one month ORD-ten 3.II-day ORD-FIN.one
 ‘the first man’ ‘the first day of the tenth month’

2.3 Distributive numerals

Distributive numerals are derived by reduplicating the right-most element of the cardinal numeral. The reduplication is regular in Sawila, but Abui displays a fair amount of irregularity in the form of the reduplicated base, as well as in the additional morphological material. Abui distributive numerals are derived through partial reduplication, where the reduplicated base combines with the light verb marked for aspect (Kratochvíl 2007; Klammer et al. 2014a).⁸

Table 3: Derivation of Abui distributives

	Cardinal	Distributive
1	<i>nuku</i>	<i>nuk~nuk-da</i>
2	<i>ayoku</i>	<i>ayok~ayok-da</i>
3	<i>sua</i>	<i>sui~sui-da</i>
4	<i>buti</i>	<i>buk~buk-na</i>
5	<i>yeting</i>	<i>yek~yek-na</i>
6	<i>talaama</i>	<i>talan~talan-ra</i>
7	<i>yetingayoku</i>	<i>yetingayok~ayok-da</i>
8	<i>yetingsua</i>	<i>yetingsui~sui-da</i>
9	<i>yetingbuti</i>	<i>yetingbuk~buk-na</i>
10	<i>kar-nuku</i>	<i>karnuk~nuk-da</i>

Abui distributive forms end in *-da*, *-ra*, and *-na*. These are verbal derivational morphemes with a wider use in the Abui grammar, deriving inchoative and causative verbs. In combination with numeral bases these morphemes yield predicative meanings such as ‘do/arrange/put in groups of x’. Distributive forms are used in mathematical operations such as division, as in (13). Distributives also occur with reference to traded goods sold in standard quantities. If betelnuts sell for a particular price in the Kalabahi market, one can get a larger amount (i.e. more than five pieces) outside of the capital (14).

Abui

- (13) *kar-nuku nu mi ba ayoku he-yeng maiye, yek~yek-na*
 ten-one SPC take SIM two 3.LOC-divide if five~DISTR-SEE.CONT
 ‘10 / 2 = 5, lit. if (you) take a ten and divide it by two, you get a group of five’
 [EASNum.6]

⁸ The segmental alternations of the reduplicated base are analogous to alternations in inflectional verbal classes (Kratochvíl 2007:82-85).

- (14) *ama oro Kalangfat anu mi-a fu balik ba yek~yek-na,*
 people DIST place market in-DUR betelnut sell SIM five~DISTR-SEE.CONT
haba pi abui mi-a maiye, talan~talan-ri=te haba
 but 1PL.INCL mountain in-DUR if six~DISTR-REACH.COMPL=INC but
he-bel la sama.
 3.AL-price MOD same
 ‘In the Kalabahi market, betelnuts are sold by five [nuts], but in the mountains,
 often by six [or more] for the same price’ [EBD.9]

The distributive *nuk-nukda~nuk-nukdi* covers a range of meanings: ‘list, i.e. name individually’, ‘do/arrange in one-by-one fashion’, or ‘each individually be X’. In (15), *nuk-nukdi* is the predicate of the first clause. The example comes from a traditional *tikak-fak* negotiation, during which the due payments of dowry and brideprice are arranged, whereas the fragment in (16), illustrates the use of *nuk-nukda* ‘each individually’. Example (17) is taken from an email, in which an Abui friend living in Jakarta jokes that the place is like a small version of the Takalelang village, so I will have to come along and visit each Abui next time.

Abui

- (15) *eng nuk~nuk-di=te hu, ko pi...*
 2SG.LOC-SEE one~DISTR-GET.COMPL=INC SPC.AD FUT 1PL.INCL.AGT
 ‘You could first just list them one by one, so that we...’ [MPTF.122]
- (16) *o tafuda hawataka nuk~nuk-da hare la sama to*
 MD all drum.type one~DISTR-GET.CONT so MOD same PRX.AD
 ‘Each of those [drums] belong to the category *hawa-taka*, so they are worth the same.’ [MPTF.416]
- (17) *...hare ran a Jakarta mia maiye, a kul fala*
 so next 2SG.AGT place in-DUR if 2SG.AGT must house
nuk~nuk-di ba too-tilei=se...
 one~DISTR-GET.COMPL SIM DISTR.GOAL-go.along=INC
 ‘...so when you come to Jakarta next time, you will have to visit each house individually...’ [Email.20]

Sawila distributive numerals are also derived by reduplication. The basic forms are listed in Table 4. There are two patterns: (i) full reduplication of the base in simple bases (1-5), (ii) partial reduplication of the base in morphologically complex forms (6 and above), targeting the final morpheme (e.g. 5+1 > 5[1~1], 5+2 > 5[2~2], 10x5 > 10[5~5] etc.).

Table 4: Derivation of Sawila distributives

	Cardinal	Distributive
1	<i>sundana, dana</i>	<i>(ma-)dang~dana</i>
2	<i>yaku</i>	<i>(ma-)raku~raku, yaku~yaku</i>
3	<i>tuo</i>	<i>tuo~tuo</i>
4	<i>araasiku</i>	<i>araasiku~araasiku</i>

5	<i>yootine</i>	<i>yooting~yootine</i>
6	<i>yootingsuno</i>	<i>yoot(in)suno~suno</i>
7	<i>yootingyaku</i>	<i>yootingyaku~yaku</i>
8	<i>yootingtuo</i>	<i>yootingtuo~tuo</i>
9	<i>yotaraasiku</i>	<i>yotaraasiku~araasiku</i>
10	<i>adaaku</i>	<i>adaaku~adaaku</i>
50	<i>adaaku mayootine</i>	<i>adaaku ma-yooting~yooting</i>
100	<i>asaka dana</i>	<i>asaka dang~dang</i>

The full reduplication of the simple base is illustrated in (18) with a fragment from the Gospel of Mark (6:7). The partial reduplication of the complex bases can be seen in (19)-(20). A fragment from Genesis (Gen 7:2 - Noah Entering the Ark) exemplifying the base *yootingyaku* '7' is shown in (19). Distributive forms for *asaka dana* '100' and *adaaku mayootine* '50' are illustrated in with a fragment from Mark 6:40 (The Feeding of the Five Thousand) in (20).

Sawila

- (18) *Girra gimura gana adaaku garising yakuto, Girra giwuitana, aning yaku-yaku gasu gawe...*
girra gi-murra gana adaaku ga-rising yaku=to girra
 3.AGT 3.II-servant 3.TOP ten 3.I-increase two=as.well 3.AGT
gi-wiita=na aning yaku~yaku ga-su ga-we
 3.II-call=PART NFIN.person DISTR~two 3.I-order 3.I-leave
 'Calling the Twelve to him, he began to send them out two by two and ordered them to go...' [Mk.6:7]
- (19) *...ang erra pasang yootingyaku-yaku mi eawe korakora gimirea magataani.*
ang erra pasang yootingyaku~yaku mi a-we korakora
 DIST 2SG.AGT pair seven~DISTR take 2SG.I-leave ark
gi-mirea ma-ga-taani.
 3.II-interior APPL-3.I-FIN.fall
 '(From all the kinds of animals which you are allowed to eat and bring to Me,) you are to bring seven pairs each into the ship.' [Gen.7:2-3]
- (20) *...gandu gawe tanawaana, tarisi aning asaka dang-dang gamiti, tarisi adaaku mayooting-yooting gamiti.*
gandu ga-we ta-na-waana tarisi aning asaka
 3PL 3.I-leave DISTR.I-INV-FIN.gather some NFIN.person hundred
dang~dang ga-miti, tarisi adaaku ma-yooting~yooting ga-miti.
 NFIN.one~DISTR 3.I-sit some ten APPL-NFIN.five~DISTR 3.I-sit
 '... they went and gathered, some were sitting in groups of hundred people, some in groups of fifty people.' [Mk.6:40]

Sawila distributive numerals are compatible with the prefix *ma-*. An example of the 'one-by-one, individual' construction using *ma-* is given in (21).

Sawila

- (21) *Naakara niwiina iningi teaku madang-dana wise ngana.*
naakara ni-wiina iningi taaku ma-dang~dana
 long.time.ago 1PL.EXCL-FIN.DEF.INVIS sand coconut.shell APPL-one~DISTR
wise ngana
carry.on.back DEF
 ‘In the past, we used to carry sand on our back in coconut shells [used as containers].’ [NB5.198]

To sum up, the Sawila distributive reduplication pattern is regular. Although I have not shown this here, the Sawila pattern is analogous to the distributive pattern of other AP languages, such as Adang and Teiwa (see Klamer et al. 2014a). In contrast, the Abui distributive pattern for numerals up to six is irregular; although the partial reduplication of numerals higher than six is analogous to related languages (Klamer et al. 2014a:8-12).

2.4 Relative reference of cardinal numerals

The reference of Abui *karnuku* ‘ten’ and Sawila *dana* ‘one’ may extend to *all* and *together* respectively in certain contexts. The Abui *karnuku* ‘ten’ denoting *all* is shown in (22). It contrasts with the form *ha-nuk-da* ‘scattered, broken up’, derived from the numeral *nuku* ‘one’. The extension to *all* could be based on the finger counting practice.

Abui

- (22) a. *ne-nala nuku* b. *ne-nala kar-nuku*
 1SG.AL-thing one 1SG.AL-thing ten-one
 ‘one of my things’ ‘all my things, my entire possession’
 c. *e-kaai di nala kar-nuku too-ha-loi=he!*
 2SG.AL-dog 3.AGT thing ten-one DISTR.GOAL-3.PAT-chase=PROH
 ‘do not let your dog chase everything (of chickens, or pigs)’

The Sawila numeral *dana* ‘one’ can indicate indefinite reference (23). *Dana* may also indicate a ‘unit, group’ and be used with the sense of *together*, as in (24), and co-occur with numerals. In constructions such as (10b), *dana* has to be interpreted as a quantifier.

Sawila

- (23) *Imyaala saaku dana suwi.*
imyaala saaku dana suwi
 [man old FIN.one]_{NP} arrive
 ‘A [grown-up] man arrived.’ [MPICW.001]
 (24) *Imyaalara yaku dana angana dooka biseara gako.*
imyaalara yaku dana angana dooka biseara ga-ko
 [FIN.man two_{NUM} FIN.one_{QUANT} DIST.DEF_{DEM}]_{NP} stand FIN.talk 3.I-stay
 ‘Two men together are talking.’ [MPI.TBTB]

2.5 Quantity questions

Both languages have an interrogative word to be used in questions about quantities, which occurs in the position of the targeted quantifier: the Abui *yeng* ‘how many, how

much' can be seen in (25), the Sawila *diini* in (27). Both question words can be also used as quantifiers, indicating an indefinite number.

Abui

- (25) Q: *Maama, e-fe yeng?* A: *Ne-fe buti.*
 father 2SG.AL-pig how.many 1SG.AL-pig four
 Q: 'How many pigs do you have, sir?' A: 'I have got four pigs.' [S.110-111]
- (26) *wan tung yeng war diyeyi*
 already year several sun burn
 'It has been very dry for several years.' [B7.15]

Sawila

- (27) Q: *Erra pi diini wusi?* A: *Nirra adaaku wusi!*
erra pi diini wusi? *nirra adaaku wusi!*
 2SG.AGT pig how.many shoot 1SG.AGT ten shoot
 Q: 'How many pigs have you shot?' A: 'I have shot ten!' [QVP.092-093]

3 Universal quantifiers

Universal quantifiers are expressions with meanings resembling those of English *every*, *each*, and *all* (Gil 2013a). The morphosyntactic make-up of these concepts in Abui and Sawila is heterogeneous and interacts with the semantic class and argument status of the quantified entity.

3.1 Every and each

In Abui, the equivalents of the English *each* and *every* are expressed by distributive forms (see also 2.3), and by the quantifier *kanakda* 'each, every'. Distributive forms and reduplicated numerals are used to quantify both animate (28)-(29) and inanimate referents (30).

Abui

- (28) *wan amakaang nuku~nuku pi-pintar ha-luol hu*
 already person one~DISTR 1PL.INCL-wit 3.PAT-follow SPC.AD
 'if we had to follow each our individual desire...' [MPTF.2]
- (29) *Fanata de-kaai nuk~nuk-di bol.*
 name 3.I.AL-dog one~DISTR-GET.COMPL hit
 'Fanata hit each of his dogs.' [EBD.78]
- (30) *...paaka nuku~nuku ba=ng sik-i ba sei...*
 fruit one~DISTR SIM=SEE pluck-PFV SIM come.down
 '... she plucked each fruit and took it down...' [MM.10]

The quantifier *kanakda* 'each' is used with inanimate nouns, and cannot occur with animate or human nouns. The form inflects for aspect, as shown in (33).

Abui

- (31) *di fala **kanakda** ba tadei lol-e*
 3.AGT [house every.CONT] SIM sleep.COMPL walk-IPFV
 ‘He goes around sleeping in every house.’ [NB9.120]
- (32) *war **kanakda** di sakola=ng yaa*
 day every.CONT 3.AGT school=SEE go
 ‘He goes to school every day.’ [EVY.128]
- (33) *tafuda tahaa **kanakdi** ba natet-di kaanri*
 all [house.post every.COMPL] SIM stand.up.COMPL-GET.COMP complete.COMPL
 ‘All of them stood around each of the [four] house columns.’ [BL.28]

In Sawila, the equivalents of the English *each* and *every* are expressed in three ways. Firstly, distributive pronouns are used to refer to entire sets (see section 5.2). Secondly, the quantifier *madang* ‘each’ can be used with P arguments, as in (34). *Madang* is a fossilized form consisting of the applicative prefix *ma-* and the numeral base *dana* ‘one’ and is also used with the meaning ‘once’ as a temporal adverbial.

Sawila

- (34) *Luuli aruka kaana ngana, kiira madang taang...*
*luuli aruka kaana ngana, kiira **madang** taang*
 peppers dry FIN.COMPL DEF basket each NFIN.pound
 ‘As soon as the peppers dried, she pounds each basket...’ [MS.46]

Thirdly, the quantifier *barana* ‘each’ is compatible with both animate and inanimate nouns and can be used predicatively (36), as in Mark 6:14 (Death of John the Baptist).

Sawila

- (35) *...wateeng barana gasuwi ninemaduro.*
*wateeng **barana** ga-suwi ni-na-maduro*
 [day each]_{NP} 3.I-arrive 1SG.II-INV-check
 ‘... he comes every day to check on me’ [QVP.68]
- (36) *Gana angkide ali nooli-nooli to aning Yesus gadea barana.*
gana angkide ali noo=li~noo=li to aning Yesus
 3.TOP that.time there where=be.DIST~DISTR as.well [NFIN.person name
*ga-dea **barana***
 3.I-FIN.know]_{RC} [FIN.each]_{predicate}
 ‘In those days, in any place, everyone knew Jesus.’ [Mk.6:14]

3.2 All

Abui and Sawila universal quantifiers follow the quantified noun. In both languages, universal quantifiers may be indexed for person and the indexing is sensitive to the referential status of the quantified entity. The Abui universal quantifier *tafuda* ‘all’ may be indexed with a REC series person prefix. The indexing is required for first and second person plural referents (37)-(39), optional for third person humans (40)-(41), but never attested with non-humans (42)-(43).

Abui

- (37) *nu-**tafuda** hen me pe*
 1PL.EXCL.REC-all there come near
 ‘All of us are about to come there.’ [EBD.6917]
- (38) *me **pu-**tafuda** yai-paneng!***
 come 1PL.INCL.REC-all song-make
 ‘Come, let’s all sing!’ [EBD.6153]
- (39) ***ro-**tafuda** ri melang do hobaleei ba mit-i***
 2PL.REC-all 2PL.AGT village PROX 3.REC-surround SIM sit-PFV
 ‘All of you surround the village and keep [it] under guard!’ [KK.37]
- (40) *he-wiil **do-**tafuda** tifi do he-roa***
 [3.AL-child 3.I.REC-all]_{NP} tv PROX 3.LOC-watch.CNT
 ‘all his children would watch tv...’ [EWM.B371]
- (41) *Mayol loku **tafuda** dieng maal kaang.*
 [woman PL all]_{NP} pot cook good
 ‘All women are good cooks.’ [EBD.6312]
- (42) *Fanata de-kaai **tafuda** bol.*
 name [3.I.AL-dog all]_{NP} hit
 ‘Fanata hit all his dogs.’ [EBD.79]
- (43) *Kumal **tafuda** war-tama mi-a mong-e.*
 [mosquito all]_{NP} dry.season in-DUR die-IPFV
 ‘In the dry season all mosquitoes die.’ [EBD.6102]

Sawila has two universal quantifiers *nanna* ‘all’ (44) and *-ninale* ‘all’ (45).⁹ The universal quantifier *nanna* ‘all’ is only compatible with humans. However, instances with inanimates are also attested, although these come from young speakers and are challenged by older speakers. The quantified referent is never indexed, as shown in (44). The quantifier *-ninale* ‘all’ requires a set I person prefix to index the quantified entity, but unlike *nanna* ‘all’, *-ninale* is not sensitive to animacy, as can be seen in (45).

Sawila

- (44) a. *gamaddu nanna* b. *amaddu nanna* c. **ekatu / yu nanna*
*ga-maddu **nanna** a-maddu (*ga)-nanna e-katu / yu **nanna***
 [3.I-child all]_{NP} 2SG.I-child 3.I-all [2SG.II-dog granary all]_{NP}
 ‘all his children’ ‘all your children’ intended: ‘all dogs, granaries’
- (45) a. *Yaninale.* b. *Araasing mana ganinale.*
*ya-**ninale** araasing mana ga-**ninale***
 [2PL.I-all]_{PRO} [house DIST 3.I-all]_{NP}
 ‘All of you.’ [BDPK.007] ‘All the houses over there.’ [L015]

⁹ The Sawila universal quantifier *nanna* may be a reflex of the proto-Alor-Pantar plural word **non* reconstructed by Klammer et al. (2014b).

There is a small difference between *-ninale* ‘all’ and *nanna* ‘all’ in terms of homogeneity of the quantified entity. As shown in (46)-(47), *nanna* is preferred with homogenous referents (such as one’s children) and blocked with heterogeneous sets (such as village inhabitants); *-ninale* is compatible with heterogeneous sets.

Sawila

- (46) *Manaama aningkaang ganinale (*nanna) gisi kumu.*
*manaa=ma aningkaang ga-ninale (*nanna) gi-si kumu*
 village=be.PROX person 3.I-all all 3.II-body rounded
 ‘All people in the village are fat.’ [QNP.18-19]
- (47) *Patama mi gamaddu nanna (*ganinale) timaarana tapama.*
*patama mi ga-maddu nanna (*ga-ninale) ti-maarana ta-pama*
 food take 3.I-child all 3.I-all DISTR.II-FIN.together DISTR.I-eat
 ‘He brought food for all his children to eat together.’ [QNP.12]

The person indexing of universal quantifiers is found in other Alor-Pantar languages as well.¹⁰ In Abui and Sawila, the indexing is productive while in Western Pantar the universal quantifier *gaterannang* ‘all’ contains a fossilized third-person prefix *ga-* (Holton, this volume). Holton (this volume) notes that the universal quantification construction resembles an adnominal possessive construction and the same can be said about Sawila. Abui quantifiers display more verb-like properties: *tafuda* combines with person prefixes that never mark possessors and in some cases admits two person prefixes – a morphosyntactic characteristic of verbs; *kanakda* inflects for aspect. Despite their verb-like morphology, both quantifiers occur in the quantifier slot of the NP.

4 Number in nouns

Plural words (Dryer 1989, 2013) mark number in nouns: *loku* in Abui and *du* in Sawila.¹¹ In both languages, plural is marked primarily for ‘count’ nouns (cf. Haspelmath 2013). Using plural words, both languages display the same pattern as other AP languages (Klamer et al. 2014b; Holton, this volume). Both languages have dedicated associative markers (section 4.2). Abui allows the associative marker to co-occur with the plural marker, but there are no such instances in Sawila. In Abui, the use of the plural word *loku* is more restricted compared to Sawila, where *du* may occur with any count noun. Abui *loku* allows ‘recategorization’ of mass nouns into count nouns, implying a container or a customary unit.

¹⁰ Universal quantifiers displaying person agreement or carrying noun class markers have been reported for Bantu languages such as Kinyarwanda (Jerro and Wechsler, to appear), Swahili (Wilson 1970), Zulu (Doke 1963), or Tswana (Denis Creissels p.c.), American languages such as Nivacle (Matacoan, Argentina – Alain Fabre p.c) or Northern Otomi (Oto-Manguen family, Mexico - Palancar 2009:477-§888), as well as for languages of West New Guinea, such as Roon (Austronesian, Cenderawasih Bay - David Gil p.c.).

¹¹ The origin of the Abui word may be in the noun *loku* ‘person, puppet’, which is used to refer to small wooden puppets used in magic rituals. The origin of the Sawila *du* is unclear, but it is cognate with Kula *du* (Klamer et al. 2014b), Wersing *deing* (Schapper and Hendery 2014) and Kamang *adu* ‘many’ (Schapper and Klamer 2011). Holton (this volume) suggests that given its diversity analytical plural marking may be a recent innovation in the Alor-Pantar languages.

4.1 Plural words

Abui plural word *loku* is compatible with individuated referents but is sensitive to their size: small animals and insects occurring in swarms cannot be marked with *loku* and are probably conceptualized as mass concepts.

Abui

- (48)
- | | | | | | | | | |
|----|-----------------------|--------------------|----|-----------------------|-----------------------|----|-------------------|-----------------------|
| a. | <i>ne-feela</i> | <i>loku</i> | b. | <i>moku</i> | <i>loku</i> | c. | <i>kaai</i> | <i>loku</i> |
| | 1SG.AL-friend | PL | | kid | PL | | dog | PL |
| | ‘my friends’ | | | ‘kids’ | | | ‘dogs’ | |
| d. | <i>melang</i> | <i>loku</i> | e. | <i>buku</i> | <i>loku</i> | f. | <i>ata</i> | <i>loku</i> |
| | village | PL | | earth | PL | | leaf | PL |
| | ‘villages, countries’ | | | ‘(all) places, areas’ | | | ‘leaves, foliage’ | |
| g. | <i>namang</i> | <i>loku</i> | h. | <i>fikai</i> | <i>(*loku)</i> | i. | <i>mutang</i> | <i>(*loku)</i> |
| | clothes | PL | | ant | PL | | bee | PL |
| | ‘clothes’ | | | ‘ants’ | | | ‘bees’ | |

The plural marker *loku* is sometimes used to stress the diversity of the referent:

Abui

- (49)
- | | | | | | |
|--|-----------|---------------|--------------------|--------------------|--------------|
| <i>afeida</i> | <i>na</i> | <i>kantor</i> | <i>loku</i> | <i>to-tilei</i> | <i>lol-e</i> |
| yesterday | 1SG.AGT | office | PL | DISTR.REC-go.along | walk-IPFV |
| ‘I was going along various offices yesterday.’ [EDL.189] | | | | | |

The syntax of the Abui plural word *loku* is described in detail in Klamer et al. (2014b), and is only briefly repeated here. In the Noun Phrase, *loku* always follows the head noun and attributive modifiers and is generally incompatible with numerals, but may be followed by the universal quantifier *tafuda* ‘all’, as in (50).

Abui

- (50)
- | | | | | | |
|--|---------------|--------------------|----------------------|----------------|-----------|
| <i>ama</i> | <i>ne-mea</i> | <i>loku</i> | <i>tafuda</i> | <i>takaafi</i> | <i>do</i> |
| person | [1SG.AL-mango | PL | all] _{NP} | steal.COMPL | PROX |
| <i>no-mi=he-ukda</i> | | | | | |
| 1SG.REC-in=3.LOC-shocked.CONT | | | | | |
| ‘I am shocked that all my mangoes got stolen.’ [EVY.236] | | | | | |

Abui *loku* can be used in vocatives, but cannot stand alone without the head noun, even if the reference is obvious from the context. In complex NPs, *loku* may precede or follow the modifier clause, with no difference in meaning, although the pre-modifier clause position is preferred (Klamer et al. 2014b). An example taken from brideprice negotiations, containing the numeral *sua* in the modifier clause, can be seen in (51).

Abui

- (51) *hen ee, pi seng tahai=si beeka=ba, kalau pi*
 then before 1PL.INCL.AGT money search=PHSL cannot=REPORT if 1PL.INCL.AGT
tafaa ba ee sua loku do nuku di poo-pa=mi-a
 [drum LNK [beforethree] PL PROX]_{NP} one 3.AGT 1PL.INCL.REC-TOUCH=in-DUR
 ‘earlier on, [they said] that if we cannot find enough money, when it comes to these
 three moko drums [that are needed], we do have one’ [MPTF.467]

The plural word *loku* combined with place names derives ethnonyms for inhabitants of the named areas, as in (52). The ethnonym construction frame with *loku* can be turned into a question by replacing the questioned place/tribe name with *te* ‘where, which’, as in (53). Note that the plural word cannot be omitted there.

Abui

- (52) *Kafola loku kabala tinei.*
 [area PL]_{ethnonym} cloth weave
 ‘Kabola people weave cloth.’ [EBD.6311]
- (53) *Edo te loku, naana?*
 2SG.FOC [where PL]_{ethnonym} older.sibling
 ‘Where are you from? (informal)’ [NB.81]

Finally, *loku* nominalizes adjectives and verbs. It derives names for individuals characterized by the property or action described by the nominalized word, as in (54).

Abui

- (54) a. *kafering loku* b. *lielra re walra loku*
 evil PL crazy.CONT or drink.CONT PL
 ‘soldiers’ ‘alcoholics, drunkards’
- c. *afenga loku* d. *pe loku* e. *afu-tahai loku*
 other PL near PL fish-search PL
 ‘strangers, other people’ ‘neighbors’ ‘fishermen’

The Sawila plural word *du* combines with any countable noun. It may also combine with placenames to refer to their inhabitants, and with list compounds.

Sawila

- (55) a. *imealara mura du* b. *adala du* c. *iru du* d. *gatang du*
imyaalara mura du *adala du* *iru du* *ga-tang du*
 man child PL bird PL bee PL 3.I-NFIN.arm PL
 ‘boys’ ‘birds’ ‘bees’ ‘his arms’
- d. *gikarupo du* e. *alaata du* f. *daadu du* g. *Seerang du*
gi-karupo du *alaata du* *daadu du* *Seerang du*
 3II-wound PL taro PL card PL NFIN.Timor PL
 ‘their wounds’ ‘taros’ ‘playing cards’ ‘the Timorese’

The plural word *du* may even be used with nouns denoting professions such as *polisi du* ‘the police, policemen’ to refer to multiple individual policemen, as in (56).

Sawila

- (56) *Polisi duba made niliweaka lamana.*
polisi du=ba# made ni-li-waaka lamana
 [police PL]_{NP=TOP} come.up 1PL.EXCL-APPL-watch FIN.immediately
 ‘The policemen, they immediately came up to guard us.’ [SOS2.011]

The Sawila plural word *du* is attested with other quantifiers (both numeral and non-numeral) in the corpus. An example from Mark 9:5 (The Transfiguration) is shown in (57).

Sawila

- (57) *Amanda makaang girra ngana, nirre araasing pike du tuwa gapi...*
amanda ma-kaang girra ngana, nirre araasing pike du tuwa ga-pi
 be.so APPL-right 3.GEN DEF 1PL.EXCL.AGT NFIN.house small PL three 3.I-make
 ‘Let us make three tents...’ [Mk.9:5]

4.2 Associative plural markers

Abui and Sawila have a dedicated associative plural marker. A noun (proper name, kin term, or a relational noun) marked with the associative marker is interpreted as ‘X and other people associated with X’ (Daniel and Moravcsik 2013). In Abui, the associative plural *we* is attested with proper names and with the following kinship terms and relational nouns: *maama* ‘father’, *-ya* ‘mother’, *-wiil* ‘child’, *-ura* ‘sibling of opposite gender’, *-muknehi* ‘sibling of same gender’, *naana* ‘older sibling’, *-kuta* ‘grandparent’, *-ratala* ‘grandchild’, *raata* ‘in-law’, and *feela* ‘friend’. It is ungrammatical with non-kin and non-relational nouns such as *kaai* ‘dog’, *ru* ‘rat’, or *bataa* ‘tree’. Their use with both the associative marker *we*, as well as the plural word *loku* can be seen in (58).

Abui

- (58) *Afe pi-kalieta we loku di afui ata henu maar=ba nee.*
 before 1PL.AL-old.person ASSOC PL 3.AGT tree.sp leaf that cook.COMPL=SIM eat
 ‘Our ancestors used to cook and eat the leaves of the *afui* tree.’ [D.Afui]
- (59) *yang ko e-feela afenga we loku, yang ko kaang ya, edo...,*
 maybe FUT 2SG.AL-friend other ASSOC PL maybe FUT good SEQ 2SG.FOC
 ‘maybe your other friends, maybe they will do better [in archery], but you...’
 [AE.82]

The Sawila plural word *du* is not attested together with the associative marker *nanna~nang* (ASSOC). The marker probably originates in the universal quantifier *nanna* ‘all’ and is compatible with proper names, kinship terms and relational nouns such as *ga-yo* ‘his wife’, as shown in (60)-(61).

Sawila

- (60) a. *niya nanna.*
 ni-ya nanna
 1SG.I-mother ASSOC
 ‘my mother and her sisters’
- b. *gayo nanna gamaddu*
 ga-yo nanna ga-maddu
 3.I-wife ASSOC 3.I-child
 ‘his wife and children’
- (61) *Simon nang noolida suwi onu?*
 Simon nang noo=li=da suwi onu
 [name ASSOC]_{NP} where=be.DIST=REAL arrive PART
 ‘Where did Simon with his friends come from?’ [D.Nang]

The associative marker is used extensively in the Scripture translations with reference to the Apostles: *Petrus nang* ‘Peter and his associates’, and other figures: *Abram nang* ‘Abraham and his forces’ (Gen 14:15).

4.3 Plural words and coercion

Plural words and numerals have the ability to force a shift from a mass to a count interpretation. Such function is known as coercion, ‘universal packager’ (Jackendoff 1991) or ‘recategorization’ (Corbett 2000). When applied to mass nouns they create count interpretations (i.e. the inverse process of the ‘universal grinder’), implying a container or a usual unit. When Abui numerals or the plural word *loku* are applied to a mass noun such as *fat* ‘corn’, its reference shifts to individual corncobs, as in (62). The noun *ara* ‘fire, firewood’ undergoes a similar shift to ‘sticks/pieces of firewood’ (63). In both cases, the plural noun phrase refers to all items available in the given context (all corncobs to be stowed and all pieces of wood prepared for cooking). In (64), the plural word forces the interpretation of ‘rice and corn supplies’, and ‘rice crops’ in (65).

Abui

- (62) *fat loku mi ba buot he-rei*
 [*corn* PL]_{NP} take SIM back.basket 3.LOC-stow
 ‘Stow the corncobs in the basket.’ [EDL.583]
- (63) *ara loku mi ara-pe=ng i-a*
 [*firewood* PL]_{NP} take fire-near=SEE put-DUR
 ‘Pick up the pieces of firewood and put them in the kitchen.’ [EDL.791]
- (64) *wan ee sieng-fat loku yo di tafuda nee-i...*
 already before [rice-corn PL MD.AD]_{NP} 3.AGT all eat-PFV
 ‘all their rice and corn supplies were already eaten...’ [RBYA.43]
- (65) *sieng loku ba ut mi-a nu sik-bakon-i mi melang sei*
 rice PL LNK garden in-DUR SPC pluck-rip.off.COMPL-PFV take village come.down
 ‘the rice crops in the field (have to be) harvested and brought home’ [EVY.705]

There are cases where the coercion does not occur, but where *loku* indicates the maximal reference of the mass noun in the given context. This is well illustrated in example (66), where the noun phrase *anei loku* does not refer to different types of soil, or a collection of soils, but rather the soil everywhere where the earthquake occurred.

Abui

- (66) *tayoka di miyei anei loku he-ta-rarakdi*
 earthquake 3.AGT come.COMPL [soil PL]_{NP} 3.LOC-DISTR.PAT-shake.COMPL
sakdi.
 loosen.COMPL
 ‘The earthquake hit and shook up the soil everywhere.’ [D.Sakdi]

In Sawila, the coercion effect of the plural marker *du* is not observed; it seems that *du* cannot recategorize mass nouns into count nouns.

5 Number in pronouns and person prefixes

In pronouns and person prefixes, the number distinction is not made in third person, however in both languages a single third person pronoun can be combined with the plural word to indicate plural reference. In first and second person, the number distinction is marked by vowel grading. Such mismatch in pluralization between the third person on one hand and the first and second person on the other is common cross-linguistically (Daniel 2013). Both languages combine pronominal forms with the root *-ning* and a numeral root to achieve precise enumeration of the participants. Distributive forms encode reciprocal as well as distributive nature of an event.

5.1 Free pronouns and person prefixes in Abui

Abui has three paradigms of free pronouns. There are no distributive pronouns, unlike in Sawila (section 5.2) and other Alor-Pantar languages.¹²

Table 5: Abui free pronouns

PERSON	AGENTIVE	FOCUS	TOPIC
1SG	<i>na</i>	<i>nedo</i>	<i>nel</i>
2SG	<i>a</i>	<i>edo</i>	<i>el</i>
3	<i>di</i>	<i>hedo</i>	<i>hel</i>
1PL.EXCL	<i>ni</i>	<i>nido</i>	<i>nil</i>
1PL.INCL	<i>pi</i>	<i>pido</i>	<i>pil</i>
2PL	<i>ri</i>	<i>rido</i>	<i>ril</i>
3PL			<i>hel loku</i>

The Abui plural word *loku* can combine with the pronoun *hel* to indicate plurality. The argument status of the participant expressed with *hel loku* is not restricted, as can be seen in (67)-(69).

¹² The third person agentive form *di* is an innovation, with no cognates in other Alor-Pantar languages. The topic and focus forms are historically derived from the CV shaped pronominal root by fusion with a light verb root (Kratochvíl 2014a).

Abui

- (67) *hel loku he-sepatu he-ta-wida*
 [3.TOP PL]_{POSS} 3.AL-shoe 3.LOC-DISTR.PAT-like.MD.CONT
 ‘Their shoes are the same.’ [EWL.7463]
- (68) *hel loku to-fahat ba laak*
 [3.TOP PL]_N DISTR.REC-embrace.COMPL SIM leave.for
 ‘They walk keeping their hands around each other’s shoulders.’ [EVY.536]
- (69) *a hel loku he-tak ba di yai-paneng=he, na fa kariang.*
 2SG.AGT [3.TOP PL]_U 3.LOC-stop SIM 3.AGT sing=PROH 1SG.AGT MOD work
 ‘Stop them from singing, I am trying to work here.’ [EBD.6158]

Abui agentive forms can enter the [PRO_{AGT}=*ning*=NUM/QUANT] and [PRO_{AGT}=*fal*] construction. These constructions are used to enumerate the (typically human) A arguments. Although the below examples show the third person forms only, all plural agentive pronouns are compatible with both constructions. In principle any number can occur in the [PRO_{AGT}=*ning*=NUM] construction, as well as the quantifier *faring* ‘many’. Note also, that the quantifier *fal* may scope over an entire NP, as in (71).

Abui

- (70) *ama luuk do, di=ning=ayoku de-meeting takai*
 person dance PROX [3.AGT=in.number=two]_A 3.I.AL-betel.vine chew.COMPL
 ‘while people were dancing, the two of them chewed their betel nut’
 [FLM.35]
- (71) *afeida he-feela di=fal miyei*
 yesterday [3.AL-friend 3.AGT=together]_A come.COMPL
 ‘both his friend and he came yesterday’ [D.Fal]

Abui person prefixes are listed in Table 6. Number is distinguished in the first and second person only. Distributive forms have both distributive and reciprocal reading.¹³

Table 6: Abui person prefixes

Person	I	II	III	IV	V
1SG	<i>na-</i>	<i>no-</i>	<i>ne-</i>	<i>noo-</i>	<i>nee-</i>
2SG	<i>a-</i>	<i>o-</i>	<i>e-</i>	<i>oo-</i>	<i>ee-</i>
1PL.EXCL	<i>ni-</i>	<i>nu-</i>	<i>ni-</i>	<i>nuu-</i>	<i>nii-</i>
1PL.INCL	<i>pi-</i>	<i>pu-/po-</i>	<i>pi-</i>	<i>puu-/poo-</i>	<i>pii-</i>
2PL	<i>ri-</i>	<i>ru-/ro-</i>	<i>ri-</i>	<i>ruu-/roo-</i>	<i>rii-</i>
3	<i>ha-</i>	<i>ho-</i>	<i>de-</i>	<i>doo-</i>	<i>dee-</i>
3.I	<i>da-</i>	<i>do-</i>	<i>he-</i>	<i>hoo-</i>	<i>hee-</i>
DISTR	<i>ta-</i>	<i>to-</i>	<i>te-</i>	<i>too-</i>	<i>tee-</i>
gloss	PAT	REC	LOC	GOAL	BEN

¹³ The third person is split between the *d-* series prefixes (indexing the A argument), and the *h-* series (non-A argument). For more details about their use, see Kratochvíl (2011, 2014a).

5.2 Free pronouns and person prefixes in Sawila

The Sawila free pronoun inventory can be seen in Table 7.¹⁴ Third person plural forms are absent except for *gandu*, a fusional form consisting of the singular *gannu* and the plural word *du*. The distribution of the Sawila free pronouns is discussed in detail in Kratochvíl (2014b).

Table 7: Sawila free pronouns

PERSON	AGENTIVE	POTENTIVE	PLAIN
1SG	<i>nirra</i>	<i>nite/neta</i>	<i>nannu</i>
2SG	<i>erra</i>	<i>ete/eta</i>	<i>annu</i>
3	<i>girra</i>	<i>gite/geta</i>	<i>gannu</i>
DISTR	<i>tirra</i>	<i>tite/tita</i>	<i>tannu</i>
1PL.EXCL	<i>niira</i>	<i>nite/niita</i>	<i>ninnu</i>
1PL.INCL	<i>irra</i>	<i>ite/ita</i>	<i>innu</i>
2PL	<i>yirra</i>	<i>yite/yita</i>	<i>yannu</i>
3PL			<i>gandu</i>

In (72), *gandu* expresses the promoted argument of the applicative verb *li-karu* ‘greet with hurray, salute’ and the S argument of *suwi* ‘arrive’.

Sawila

- (72) a. *Tirra gandu likaru.* b. *Gandu suwi wuna.*
tirra gandu li-karu ***gandu*** *suwi wuna*
 DISTR.AGT 3PL APPL-make.sound 3PL_S arrive FIN.DUR
 ‘All of us greet them with hurray.’ [D.Karu] ‘They (all) are coming.’ [D.Du]

Sawila person prefixes attach to nouns to mark possessors, and to verbs to index core arguments.¹⁵ While singular and plural are principally distinguished, the distinction is not maintained in the third person. Possessive paradigms are listed in Table 8. The *a*- and *ang*-sets are obligatory and mark inalienable possession.¹⁶

¹⁴ As in Abui, there is a systematic distinction between singular and plural forms distinguished historically by the vowel in the first syllable (non-high for singular vs. high vowel for plural). This distinction is only partially preserved.

¹⁵ The number is indicated by vowel grading (non-high vowel for singular, high front vowel for plural), although the system shows signs of erosion compared to other Alor-Pantar languages, such as Abui, Western Pantar, or Teiwa.

¹⁶ The *ang-* forms occur with /k/-initial roots and can be considered allomorphs of the former. The class of inalienably possessed nouns contains most body parts, and several kinship terms. The *e-* set marks inherently possessed relational nouns such as ‘father’; the *i-* set is used in the remaining cases.

Table 8: Sawila possessive prefixes

PERSON	<i>a</i> -SET	<i>ang</i> -SET	<i>i</i> -SET	<i>e</i> -SET
1SG	<i>na-</i>	<i>nang-</i>	<i>ni-</i>	<i>ne-</i>
2SG	<i>a-</i>	<i>ang-</i>		<i>e-</i>
DISTR	<i>ta-</i>	<i>tang-</i>	<i>ti-</i>	<i>te-</i>
3	<i>ga-</i>	<i>gang-</i>	<i>gi-</i>	<i>ge-</i>
1PL.EXCL	<i>ni-/niy-</i>	<i>ning-</i>		<i>ni-/niy-</i>
1PL.INCL	<i>i-</i>	<i>ing-</i>		<i>i-</i>
2PL	<i>yi-</i>	<i>ying-</i>		<i>yi-</i>
POSSESSOR	INALIENABLE		ALIENABLE	

Verbal person prefixes, largely homophonous to possessive prefixes are listed in Table 9. Their distribution with verbs is discussed in Kratochvíl (2014b).

Table 9: Sawila person prefixes

PERSON	SET I	SET II
1SG	<i>na-</i>	<i>ni-</i>
2SG	<i>a-</i>	<i>e-</i>
DISTR	<i>ta-</i>	<i>ti-</i>
3	<i>ga-</i>	<i>gi-</i>
1PL.EXCL	<i>ni-/niy-</i>	<i>ni-/niy-</i>
1PL.INCL	<i>i-</i>	<i>i-</i>
2PL	<i>yi-</i>	<i>yi-</i>

Sawila has two quantifiers that require a SET I person prefix, exemplified in (73). The root *-ning/ni/na-* ‘together’ requires an additional numeral (two or higher).¹⁷ To indicate a single participant, the root *-noosa* ‘alone’ is used.

Sawila

- (73) a. *Gimale ganaku.*
gi-male ga-na=ku
 3.II-servant [3.I-together=two]_{QuantP}
 ‘[The king] with his servant.’ [KAS.008]
- b. *Nanoosa kide.*
na-noosa kide
 [1SG.I-alone]_{QuantP} only
 ‘Just me alone.’ [Q.045]

5.3 Distributive pronouns and person prefixes

Free distributive forms are attested only in Sawila. They have a collective (*each of us*, *all of us*) reading, as shown in (74)-(75).

¹⁷ The Sawila root *ning/ni/na* perhaps derives from the noun *aning* ‘person’ through a nominal predicate construction [**PRO_S aning NUM*] ‘S are NUM (people)’, just as the Abui [*PRO=ning NUM*] construction discussed in 5.1.

Sawila

- (74) *Tannu Koolang ganina.*
tannu Koolang gi-anina
 DISTR village.name 3.II-FIN.person
 ‘All of us are Kolana people.’ [D.Baakati]

- (75) *Tannu pa tawaa.*
tannu pa tawaa
 DISTR [father both.same]_{predicate}
 ‘We all have a common father.’ [D.Tawaa]

Distributive prefixes have a collective (76), reciprocal (77) or distributive (78) reference, depending on the clause type.

Sawila

- (76) *Tannu maarang tawe.*
tannu maarang ta-we
 DISTR NFIN.together DISTR.I-leave
 ‘All of us will leave together.’ [D.Maarana]
- (77) *Nidena yaku tapunni tana’alaata-tanasaku.*
 ni-dana yaku ta-punni ta-na-’alaata-ta-na-saku
 1SG.II-friend two DISTR.I-hit DISTR.I-INV-make.fall-DISTR.I-INV-hit.ground
 ‘My two friends are fighting and throwing each other on the ground.’
 [D.Saku]
- (78) *...aning yaku-yaku girra talitasu nea...*
 aning yaku~yaku girra ta-li-ta-su na
 person two~DISTR 3.AGT DISTR.I-APPL-DISTR.I-order EVID
 ‘...people in pairs were ordered...’ [SOS3.49]

Abui person prefixes show the same pattern. The reciprocal use can be seen in (79), the distributive in (80).

Abui

- (79) *Moku loku wan te-l=bol kaanri=te di miyei*
 kid PL already [DISTR.LOC-give]_U=hit finish.COMPL=INC 3.AGT come.COMPL
 ‘the children have finished fighting each other before he arrived’ [EBD.88]
- (80) *... nido el ama ta-tahang-o*
 1PL.INCL.FOC before person DISTR.PAT-ask-PUNCT
 ‘...we had to ask each of the people [who witnessed the attack]...’ [WM.42]

6 Numeral classifiers

Numeral classifiers are additional words that have to co-occur with a noun when it is enumerated and reveal the semantic classification of nouns in a particular language (Gil 2013b). Abui and Sawila seem to be developing classifier systems; if classifiers occur, they are always optional. Table 10 lists the classifier inventories, the semantic classification they impose, and their source words.

Table 10: Abui and Sawila classifiers and their sources

usage	Abui	source	Sawila	source
humans, non-humans	<i>upi</i>	‘fruit, whole’	<i>aning</i>	‘person’
non-humans	<i>upi</i>	‘fruit, whole’		
human products	<i>kasing</i>	‘part’		
small objects	<i>bika</i>	‘seed’	<i>kiki</i>	‘seed’

6.1 Abui numeral classifiers

The ambiguous status of the Abui form *upi* is illustrated in (81). The noun *upi* ‘fruit’ is still able to form compounds to refer to fruits, and in can be modified. As a classifier, *upi* occurs after the modifier and before the numeral. In other contexts, the noun reading ‘fruit’ is no longer available and *upi* has to be interpreted as a classifier. To develop into a classifier, it underwent a syntactic reanalysis described in Klamer (this volume).

Abui

- (81) a. *mea upi foka* b. *mea foka upi ayoku* c. *wortel upi yeting*
 [mango fruit]_N big_{MOD} mango_N big_{MOD} CL two carot CL five
 ‘a large mango fruit’ ‘two mangos’ ‘five carrots’
- c. *ama upi kar-ayoku* d. *afu upi nuku* e. *yakora upi ayoku*
 person CL ten-two fish CL one frog CL two
 ‘twenty people’ ‘one fish’ ‘two frogs’

When the head noun is topical, it can be omitted leaving the classifier accompanied by the numeral. Abui classifiers still retain some light noun properties, because they can head a quantifier phrase (QuantP) that follows the NP.

Abui

- (82) a. *Ø upi sua* b. *fu do upi ayoku*
 (child) CL three [betelnut_N PROX_{DET}]_{NP} [CL two]_{QuantP}
 ‘three children’ lit. ‘the betelnuts, two (fruits)’

The classifier *kasing* combines with human-made objects, as can be seen in (83). *Kasing* still retains its literal meaning of ‘part, piece’ and used also as a mensural numeral classifier ‘piece of’, as shown in (84). The same holds for *bika* ‘seed, grain’ used to count small items such as teeth, seeds, small fruits, or children.

Abui

- (83) a. *faala kasing talaama* b. *kabala kasing nuku*
 tray CL six cloth CL one
 ‘six house post trays’ ‘a sheet of cloth, a blanket’
- (84) a. *mea kasing foka* b. *mea kasing ayoku* c. *afu kasing nuku*
 [mango part]_N big_{MOD} mango_N part_{CL} two fish_N part_{CL} one
 ‘a large piece of mango’ ‘two pieces of mango’ ‘half of a fish’

6.2 Sawila numeral classifiers

The status of numeral classifiers in Sawila is uncertain. The corpus contains only a handful of examples of two forms. The first one is *aning* ‘person’. In enumeration

(85) *Juraagana aning sundana, murra ngana (aning) yootingsuno.*
juraagana aning sundana, murra ngana (aning) yootingsuno
 [FIN.captain]_{NP} [NFIN.person FIN.one]_{QP} [servant DEF]_{NP} [NFIN.person FIN.six]_{QP}
 ‘[we were issued our travel permits:] one captain, the crew six [men]’ [HM.084]

7 Verbal number

Verbal number records multiple occurrences of an event. Veselinova (2013) distinguishes two sybtypes: (i) distributives (parallel occurrence involving multiple participants) and (ii) iteratives (repeated occurrence).¹⁸ Abui and Sawila use their distributive indexicals (pronouns and person prefixes) to record the first type. The number of occurrences can be specified with forms derived from numeral bases. Both languages have a special marker to indicate events carried out by many participants in multiple locations.

As mentioned above, parallel occurrence of an event is expressed with distributives. In Abui, there is a specialized ‘effective agent’ construction [PAT-*ra* + main verb] used for this purpose (for more details see Kratochvíl 2014a:575). In other contexts, this construction is used when the control over the event is not solely associated with the agent. In case of the distributive use, the control is distributed over two or more agents. The default case is shown in (86). Example (87) shows that the [PAT-*ra*] part may be reduplicated to indicate that the multiple agents do not form a single group but that they are distributed in groups in space.

(86) *Fanmalei=ya Fanata la ta-ra de-kaai bol*
 [name=and name MOD [DISTR.PAT-REACH]_A 3.I.AL-dog hit
 ‘Fanmalei and Fanata (together) each beat their dog.’ [EBD.74]

¹⁸ The term *pluractionality* refers to the same phenomenon – i.e. multiplicity of actions (involving multiple participants, locations, or times); see Součková (2011) for a recent comprehensive overview.

- (87) *Fanmalei=ya Fanata ta-ra~ta-ra de-kaai bol*
 [name=and name [DISTR.PAT-REACH]~DISTR]_A 3.I.AL-dog hit
 ‘Fanmalei and Fanata (each on their own) beat their dog.’ [EBD.74]

Iteratives are expressed by derived numerals following the predicate. The numeral root is combined with a light verb and can be inflected for aspect, as shown in (88)-(89). The form of the derived numeral is the same as in the distributive numerals (see Table 3), except that the numeral base is not reduplicated.

Abui

- (88) *Ruwol wan kiek mi=ng=sui-da.*
 chicken already cackle IN=SEE=three-GET.CONT
 ‘Roosters are crowing for the third time.’ [D.Suida]
- (89) *Ruwol wan kiek mi=ng=sui-di.*
 chicken already cackle IN=SEE=three-GET.COMPL
 ‘Roosters have crowed three times.’ [D.Suidi]

The form *nukda~nukdi* derived from the numeral base *nuku* ‘one’ is used to describe parallel occurrence of an event, carried out by two different agents, as in (90).

Abui

- (90) *Musafir ya Armada la miyei nuk-di.*
 name and name MOD come.COMPL one-GET.COMPL
 ‘Musafir and Armada busses arrived at the same time.’ [EBD.69]

A vague verbal number is indicated by the form *yenra* ‘several times’ which is derived from *yeng* ‘how many, how much; several’.

Abui

- (91) *maama di Simon bol yen-ra*
 father 3.AGT name hit several-REACH.CONT
 ‘Father hit Simon several times.’ [EBD.81]

Finally, the verbal quantifier *nahang* indicates a maximal extent of the event, i.e. there are multiple participants involved in the same event in multiple locations.

Abui

- (92) *Hel=loku yo ya wó ut mara nahang.*
 3.TOP=PL MD.AD MOD DIST.UP garden go.up.CONT VERBAL.PL
 ‘everybody is going up to the fields all over the place’ [EVY.1688]
- (93) *Timoi beeka, hare tamal isi loku tafuda kidang-ra nahang.*
 wind bad so tamarind fruit PL all ONOM-REACH.CONT VERBAL.PL
 ‘There is a strong breeze, so tamarind pods are falling down all over the place.’
 [EVY.1691]

7.2 Verbal number in Sawila

In Sawila, verbal number is indicated in three ways. The plural word *du* placed after the predicate indicates an unspecified number of occurrences, usually carried out simultaneously (94)-(95) or sequentially (96) by multiple participants. The last example is taken from Mark 11:13 (Fig tree and the temple). The marker precedes other predicate modifying particles (see Kratochvíl 2014:418), as shown in (97).

Sawila

- (94) *Ganaku api liyeala galuri gakodu.*
ga-ning=yaku api li-yaala ga-luri ga-ko=du
 3.I-together=two fish appl-fish.with.net 3.I-drop 3.I-keep=VERBAL.PL
 ‘The two of them were both net-fishing.’ [D.Api]
- (95) *Araasing gabaarali mudaata gamiddedu.*
araasing gabaara=li mudaata ga-midde=du
 NFIN.house roof=be.DIST climb 3.I-go.up=VERBAL.PL
 ‘They (everyone by himself) climbed on the top of the roof.’ [D.Mudaata]
- (96) *Aning gana mu gili ngana gapeati gakodu.*
aning gana mu gi-li ngana ga-paati ga-ko=du
 NFIN.person 3.TOP tree 3.II-fruit DEF 3.I-eat 3.I-keep=VERBAL.PL
 ‘People used to eat the fruits of that tree.’ [Mk11:13]
- (97) *Kaluno sire-gamitidu wunamane, gisi-giweaka ba kaweeng-masiiru gawa lawang.*
kaluno sire-ga-miti=du wun=amane gi-si-gi-waka
 FIN.now NFIN.come.down-3.I-sit=VERBAL.PL NFIN.DUR=DIST.DEF 3.II-body
ba kaweeng-masiiru ga-wa lawang
 TOP mosquito-sandfly 3.I-tooth NFIN.place
 ‘Now they were [all] getting up with their bodies covered with insect bites.’ [B.14]

The precise number of occurrences can be specified with a form consisting of a numeral base and the applicative prefix *ma-*. An event that occurred once is marked with *ma-dang* ‘once’, as shown in (98), citing Genesis 18:32 (Abraham pleads for Sodom). In principle, any numeral base can be used in this construction. An example of the use of *yaku* ‘two’, taken from Mark 14:72 (Peter denies Jesus) can be seen in (99). To indicate that an event occurred *several times* numeral bases ‘2’ and ‘3’ are used, as in (100). The use of the applicative prefix *ma-* is parallel to the expression of verbal number in Western Pantar (Holton, this volume) and the Abui *mi=ng*, discussed in (88)-(89).

Sawila

- (98) *Nepa! Nirra waari tatuku madang girra, ampo nadea Asoorang tirea!*
ne-pa nirra waari tatuku ma-dang girra ampo na-dea
 1SG.II-father 1SG.AGT again tell APPL-one MOD but 1SG.I-FIN.see
a-soorang tirea
 2SGI-NFIN.angry PROH
 ‘Don’t be angry with me, my Lord, but let me speak just once more.’ [Gen18:32]

- (99) *Di se kiikara maraku naanu, ampo erra Naligawunni matuwa girra.*
di se kiikara ma-yaku naanu ampo erra na-li-ga-wunni
 still rooster FIN.crow APPL-two FIN.not but 2SG.AGT 1SG.I-APPL-3.I-hide
ma-tuo girra
 APPL-three MOD
 ‘Before the rooster crows twice, you will deny me three times.’ [Mk14:72]
- (100) *Amang gapi geko maraku-matua tana, liiri girra gari...*
amang ga-pi ga-ko ma-raku-ma-tua tana liiri girra ga-ri
 like.DIST 3.I-make 3.I-keep APPL-two-APPL-three same.time ruler 3.AGT 3.I-tell
 ‘He repeated that several times until the king told him...’ [KD.21]

Finally, the universal quantifier *nanna* ‘all’ in post-predicate position indicates multiple participants involved in an event of a maximal extent (i.e. all potential locations and undergoers are involved).¹⁹

Sawila

- (101) *Parra laata nanna.*
parra laata nanna
 field burn all
 ‘People are burning their fields all over the place.’ [NB2.43]

8 Discussion

Abui and Sawila belong to the Alor branch of the Alor-Pantar family and their relatively close genetic relationship is visible in their lexicons as well as their grammars. The category of number, the focus of this paper, is treated in very similar ways in both languages. However, a close scrutiny reveals interesting variation in several parts of the system.

Most notably, both languages differ in expression of number in nouns where Sawila is more sensitive to the count-mass distinction than Abui. Compared to other Alor-Pantar languages and other languages in the area, Abui and Sawila have only a small inventory of classifiers (Klamer, this volume; Holton, this volume). In all cases, the lexical source of the classifiers is transparent and the nominal use is also attested (Abui: *upi* ‘fruit’, *kasing* ‘part’, *bika* ‘seed’; Sawila: *aning* ‘person’, *kiki* ‘seed’). Abui distinguishes humans and naturally occurring objects (*upi*) from human made objects (*kasing*) and small objects (*bika*). Sawila distinguishes humans (*aning*) and possibly also small objects (*kiki*).

Abui and Sawila have inherited the quinary decimal number system from proto-Alor-Pantar, but Sawila has innovated some cardinal number forms. Both languages derive ordinal numerals by prefixation of the numeral base, but these prefixes are not cognate. Similarly, distributive numerals in all Alor-Pantar languages are derived by reduplication, but only in Abui is the shape of the numeral base modified.

Both Abui and Sawila have universal quantifiers that admit prefixes indexing the person and number of the quantified entity. Such behaviour is not common cross-linguistically: quantifiers displaying agreement have been reported from Bantu, Central American and New Guinean languages. In Sawila, the choice of the universal quantifier *all* reveals

¹⁹ The Sawila *nanna* and Abui *nahang* are probably cognates of the pAP plural word **non* (Klamer et al. 2014b).

whether the members of quantified set are homogeneous or not, while Abui is sensitive to animacy.

Number in nouns is expressed by plural words and both languages have dedicated associative markers, but only Abui can combine those with the plural words. In pronouns and person prefixes, the number distinction is not made in third person, however in both languages a single third person pronoun can be combined with the plural word to indicate plural reference. Both languages have distributive pronouns, which can be used to encode reciprocal as well as distributive nature of an event. Finally, both languages preserve reflexes of the pAP plural word **non* to express verbal number.

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9 *The relationship between aspect and universal quantification*

Evidence from three Papuan languages of Timor and Alor

JULIETTE HUBER AND ANTOINETTE SCHAPPER¹

1 Introduction

In Bunaq, Kamang and Makalero, three Papuan languages of the East Timorese and Indonesian islands of Timor and Alor, the expression of quantification and several aspectual notions show various degrees of overlap: one and the same morpheme expresses universal quantification on the one hand, and aspectual distinctions on the other. These aspectual notions roughly refer to the termination or completeness of an event or state and are commonly translated into the local Malay variant with *habis* ‘finished’. ‘Finish’ verbs are also prominent as lexical sources for these aspectual meanings in the Papuan languages. In Bunaq, the lexical verb *-aʔal* ‘finished’ used in a serial verb construction covers a range of aspectual meanings as well as quantification. In Makalero and Kamang, the semantic range of Bunaq *-aʔal* ‘finished’ is divided up between two distinct morphemes from separate sources. Kamang has two separate ‘finished’ verbs, *sika* and *lai*. In serialization, *sika* is a marker of universal quantification and the completeness of a situation. *Lai*, on the other hand, marks the termination of an event. In Makalero, finally, an aspect marker derived from the lexical verb *haiʔ* ‘finish’ selects an event’s boundary and the ensuing state. A separate item, *hau*, marks the termination of an event, the completeness of a state, as well as universal quantification.

Our main goal in this paper is to draw attention to the relation between universal quantification and aspect, and how this relation is manifested in Bunaq, Kamang and Makalero. The grammaticalisation of ‘finish’ verbs into markers of termination or completeness is well known from the grammaticalisation literature (e.g. Bybee et al. 1994, Heine and Kuteva 2002), but the relation between aspect and quantification receives no mention. While our data do not allow for conclusive statements about the grammaticalisation paths leading from one of those meanings to another, we present preliminary evidence suggesting it can originate from both the aspectual side of the continuum as well as the quantificational one.

This paper is organized as follows: In section 2, we provide some background on the languages examined in this paper. We proceed by presenting and defining the terminology that we are using in section 3. Section 4 discusses the data from Bunaq, Makalero, and

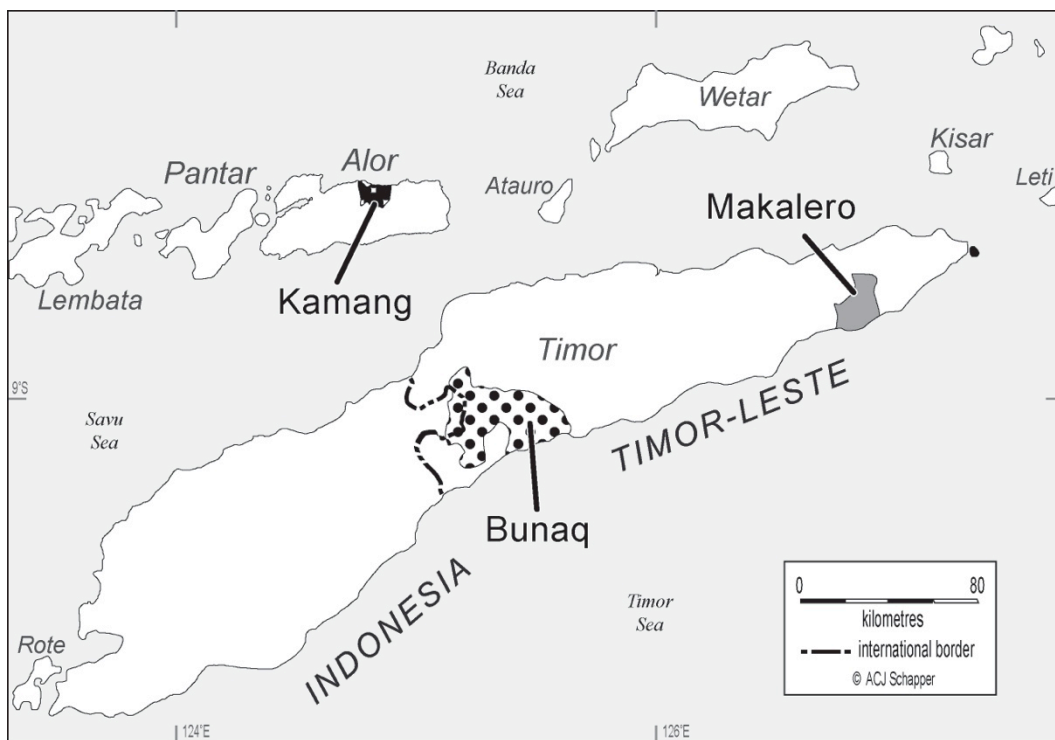
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Kamang. Section 5 summarises these individual studies, and section 6 provides a discussion of the results and suggestions for further research.

2 Linguistic background

Bunaq, Kamang and Makalero are members of the Timor-Alor-Pantar (TAP) family. This small group of approximately 30 Papuan languages is spoken on the East Timorese and Indonesian islands of the same names. In a region dominated by Austronesian languages, the TAP languages are the westernmost Papuan outliers.

Bunaq is spoken by about 80,000 people in the central mountainous region of the island of Timor, straddling the border between Indonesian West Timor and independent East Timor. Kamang (also known as Woisika) has around 6,000 speakers living in Central-East Alor. Makalero is spoken by some 7,000 speakers in eastern East Timor (Map 1).



Map 1: Bunaq, Kamang and Makalero

Until recently, the TAP family was poorly known; but the description of the TAP languages has made enormous progress in the last decade or so. For Bunaq and Makalero, we draw on the grammars by Schapper (2010) and Huber (2011), respectively.² The Kamang data come from Schapper's field notes. A sketch grammar of Kamang is due to appear in Schapper (forthcoming).

Bunaq, Makalero and Kamang share the basic AOV/SV word order characteristic of the TAP family. In terms of morphological type, the languages differ considerably. Kamang is the richest TAP language in this respect, with seven paradigms of agreement prefixes, two applicative prefixes, three aspectual suffixes and three dependency-marking suffixes.

² We slightly adapt the spelling used in these sources: Schapper (2010) uses the grapheme <q> to represent the glottal stop, and Huber (2011) the apostrophe <'>. To avoid confusion, we replace these graphemes by the IPA symbol <ʔ> in this paper.

Bunaq and Makalero, on the other hand, are largely isolating. Verbal modifiers, including aspect and negation tend to follow the predicate in Bunaq and Kamang, but are preverbal in Makalero. Likewise, in the serial verb constructions discussed in the following, the modifying verb follows the semantically main verb in Bunaq and Kamang, but precedes it in Makalero. Other aspects of grammar are explained where relevant in section 4.

3 Terminology

A comparison between Bunaq, Kamang and Makalero shows that ‘finish’ verbs are used to cover a continuum of interrelated senses spanning from aspectual notions to universal quantification. Each language cuts this continuum up in a different way, revealing four subtly different aspectual and quantificational categories. Before presenting the data from the individual languages, we therefore need to define these categories and introduce the terms we use to describe them.

For the purpose of this paper, we distinguish between two situation types, ‘events’ and ‘states’. Situations are oriented intervals made up of successive instants (Desclés and Guentchéva 2012:133). Events are dynamic situations; that is, they involve some sort of change over time. In the case of a state, on the other hand, every instant making up the situation is identical. These types of situations can be further distinguished by their inherent boundedness. A boundary is a punctual instant delimiting a situation (ibid.). A situation may have either an initial or a final boundary (or both). Events may have an inherent endpoint (e.g. ‘paint a picture’, ‘build a house’), or lack one (e.g. ‘run’, ‘work’). Similarly, states may be either permanent, i.e. unbounded (e.g. ‘His hair is black’), or effectively bounded (so-called contingent states, e.g. ‘His hands are dirty’).

The aspectual and quantificational categories which fall out from this comparative study are the following:

‘Initial boundary’ is an aspectual category which expresses an entry into a state or an entry into an event (Desclés and Guentchéva 2012:127). A state is entered into when the final boundary of an event is crossed, and an event is entered into when this event’s initial boundary is crossed. The initial boundary category is thus associated with dynamic situations. If used with a state verb, it has the effect of turning the state into a dynamic situation, and selects this situation’s initial boundary. For instance, a state verb ‘be tall’ is read as ‘start to become tall’ if combined with an initial boundary marker. With event verbs, initial boundary can mark both the entry into a state – i.e. the crossing of the event’s final boundary – or the entry into an event – i.e. the crossing of the event’s initial boundary, depending on the verb’s lexical semantics and the context. In other words, ‘initial boundary’ can be read as inchoative (e.g. ‘he starts singing’) or as a resultative, where the crossing of the final boundary marks the beginning of a new state (e.g. ‘he has entered’).

‘Final boundary’ is an aspectual category also associated with events. It selects an event’s final boundary, thus presenting it as terminated. If used with a state verb, a final boundary marker forces a reading of the state as a dynamic situation (e.g. ‘be ripe’ > ‘ripen’) and selects the final boundary of this situation.

In practice, the effects of the initial boundary category and the final boundary category are very similar in many cases: Both categories are associated with dynamic situations. The final boundary category selects an event’s final boundary, and the initial boundary category may do so as well. The crucial difference is that an initial boundary marker presents the crossing of an event’s final boundary as the entry into a new state, while a final boundary marker focuses solely on the termination of the event, with no regard to what follows from this. Both categories can be combined with state verbs and have the

effect of turning these erstwhile states into dynamic situations. However, in these contexts, their readings are clearly distinct: Where a final boundary marker adds and selects the final boundary, an initial boundary marker invariably selects the initial boundary.

‘Completeness’ is a category associated with states and refers to them as holding completely, exhaustively, or ‘all over’. It does not make reference to the crossing of a boundary and thus crucially differs from both the initial boundary and the final boundary categories. The stative completeness meaning can be seen as the logical consequence of the termination of a situation.

Universal quantification differs from the aspectual categories in that it is not a property of the event, but of a participant. In this paper, we are dealing only with floating verbal quantifiers. In other words, the quantifiers in question are not part of the NP whose referent they modify. The precise syntactic status of such floating quantifiers is discussed below for the individual languages.

4 Data

4.1 Bunaq

Bunaq *-aʔal*, glossed in its use as an independent predicate as ‘finished’, is an intransitive verb denoting that the subject is over, completed or at an end. Two senses of the verb fall out from this general meaning according to the animacy of the subject and the associated agreement on the verb. With the 3rd person inanimate prefix *h-*, the subject of this verb is an event or occasion that is completed, as in (1).³

- (1) *Pesta h-aʔal oa.*
 festival 3INAN-finished PFV
 ‘The festival was finished.’ (Schapper 2010:454)

With the 3rd person animate prefix *g-*, the subject is animate and the verb refers to the passing, i.e., death, of the referent. The verb has a defective agreement pattern; *g-* normally marks animate 3rd persons only (see Schapper 2010:64, 215), but is used with all persons and merely indicates animacy on *-aʔal*. As such, we see that *g-* occurs with the 3rd person animate *zap* ‘dog’ in (2) as well as the 1st person pronoun *neto* in (3).

- (2) *Zap g-aʔal oa.*
 dog 3AN-finished PFV
 ‘The dog was finished.’, i.e. ‘The dog was dead.’ (Schapper 2010:455)

³ The glosses are the following: 1 1st person; 2 2nd person; 3 3rd person; ACC accusative; ADV adverbial; ALL universal quantifier; AN animate; ARG argument; ASP aspect marker; ASSOC associative plural; AUX auxiliary; CAUS causative predicate; CLS clause; COMPLETE completed state marker; COND conditional conjunction; CONJ general conjunction; CONTR contrastive marker; DEF definiteness marker; DEM demonstrative; EX existential; EXCL exclusive; FINAL final boundary marker; GEN genitive; GIVEN given relator; GOAL goal postposition; HUM human; IN locative applicative; INAN inanimate; INCL inclusive; INITIAL initial boundary marker; INS instrumental postposition; IPFV imperfective marker; LOC locative; NEG negation; predicate; NONHUM non-human; PAST past; PAT patientive; PFV perfective marker; PL plural; POSS possessive; PRED predicate; RECP reciprocal; REDUCED reduced form; REDUP reduplication; REL relative marker; SEQ sequential conjunction; SG singular; SPEC specifier; STAT stative; UND undergoer.

- (3) *Neto g-aʔal oa.*
 1SG 3AN-finished PFV
 ‘I was finished.’, i.e. ‘I was dead.’ (ibid.)

Used as the final verb in serialisation, Bunaq *-aʔal* ‘finished’ covers all of the aspectual and quantificational meanings discussed in section 3, as summarised in Table 1. There is a distinction between the three aspectual uses of *-aʔal* and the quantificational one in terms of person agreement: In all aspectual readings, *-aʔal* invariably occurs with the inanimate agreement marker *h-* ‘3INAN’. As a quantifier, on the other hand, it can appear either with the inanimate or the animate agreement marker, as discussed below.

Table 1: The aspect-quantification continuum in Bunaq

EVENT		STATE	QUANTITY
initial boundary	final boundary	completeness	all
<i>-aʔal</i>	<i>-aʔal</i>	<i>-aʔal</i>	<i>-aʔal</i>

In serialisation with event verbs, *-aʔal* functions as a final boundary marker: It denotes that the event has been terminated, that is, that the event’s final boundary has been reached. This meaning is observed with event verbs of all valencies, monovalent verbs (4), bivalent verbs (5) and trivalent verbs (6).

- (4) *Baʔi seʔ h-aʔal.*
 DEM.AN call 3INAN-FINAL
 ‘He finished calling.’ (Schapper fieldnotes)
- (5) *Nei en baʔi g-olo h-aʔal.*
 1PL.EXCL person DEM.AN 3AN-bury 3INAN-FINAL
 ‘We finished burying the person.’ (Schapper fieldnotes)
- (6) *Halaqi t-ege sal h-aʔal oa.*
 3PL RECP-give bad 3INAN-FINAL PFV
 ‘They had stopped behaving badly to one another.’ (Schapper 2010:455)

The final boundary-marking use of *-aʔal* ‘finished’ is particularly prevalent in clause sequencing where it indicates that the event described in the following clause occurs after that to which it refers, as in (7) and (8).

- (7) *Nei iskola h-aʔal, neto botil dele Weluli mal.*
 1PL.EXCL go.to.school 3INAN-FINAL 1SG bottle INS W. go
 ‘(When) we finished school, I would go to Weluli with bottles.’
 (Schapper 2010:456)
- (8) *H-ini nigi h-aʔal, tebe pulas rebel.*
 3INAN-CAUS fine 3INAN-FINAL return twist descend
 ‘After (the yarn) has been made fine, then twist it downwards.’ (ibid.)

In serialisation with motion verbs, however, *-aʔal* functions as an initial boundary marker. That is, *-aʔal* in this instance does not indicate that the motion event is finished but

that it has begun. We see in (9) and (10) that *-aʔal* ‘finished’ refers to the fact that the S participant has already departed; it says nothing about the completion of the event of going as a whole.

- (9) *Gie moen himo ge-tekeʔ bu, gie moen*
 3.POSS friend DEM.AN 3AN-look.for GIVEN 3.POSS friend
Atambua roe mal h-aʔal.
 A. DEM.INAN go 3INAN-INITIAL
 ‘When (we) went to look for that friend of his, his friend had set off to Atambua.’
 (Schapper 2010:456)

- (10) *Nona Fulur a-ta liol h-aʔal.*
 miss F. 3INAN-GOAL continue 3INAN-INITIAL
 ‘Miss had gone on to Fulur.’ (ibid.)

Combined with stative verbs, *-aʔal* is a marker of completeness: It denotes not that the state is completed (i.e., ended), but that it has been entered into completely or to a high degree. In (11) *-aʔal* signals that the woman’s face is completely swollen and in (12) that the speaker’s hand is badly broken.

- (11) *G-ewen pe h-aʔal.*
 3AN-face swollen 3INAN-COMplete
 ‘Her face was completely swollen’ (Schapper 2010:456)
- (12) *N-on tol h-aʔal.*
 1EXCL-hand broken 3INAN-COMplete
 ‘My hand was completely broken.’ (Schapper 2010:457)

With certain stative verbs, *-aʔal* is ambiguous in its interpretation. For example, in (13) *-aʔal* in serialisation with *za* ‘ripe’ allows for two simultaneous readings: (i) a dynamic event, where the final boundary of a process of ripening has been passed. In this case, *-aʔal* turns the state expressed by the verb into an event with a final boundary, and functions as a final boundary marker; and (ii) a complete state reading in which *-aʔal* signals that the state has been completely entered into. The interrelationship of the two readings is obvious: The process of ripening would naturally come to completion when the mango has reached its maximum ripeness.

- (13) *Zo uen za h-aʔal.*
 mango one ripe 3INAN-FINAL/COMPLETE
 ‘One mango has finished ripening.’, or
 ‘One mango is completely ripe.’ (Schapper fieldnotes)

The final boundary reading with stative verbs appears to be available only where the associated dynamic situations are conceived of as having a duration. In the case of *pe* ‘swollen’ (11) and *tol* ‘broken’ (12), this is not possible because in Bunaq, the transition to the state of being swollen or being broken is regarded as punctual, rather than a gradual development as with *za* ‘ripe’.

Finally, *-aʔal* in serialisation can be read as a universal quantifier. Like the verb in its independent use, quantificational *-aʔal* inflects for animacy: *G-aʔal* ‘3_{AN}-finished’ is used when the quantified referent is animate and may be a 1st (14) 2nd (15) or 3rd person (16).⁴

- (14) *Nei mal g-aʔal.*
1_{PL}.EXCL go 3_{AN}-ALL
‘We all went.’ (Schapper 2010:458)

- (15) *Ei mal g-aʔal.*
2_{PL} go 3_{AN}-ALL
‘You all went.’ (Schapper fieldnotes)

- (16) *Halaʔi mal g-aʔal.*
3_{PL} go 3_{AN}-ALL
‘They all went.’ (Schapper fieldnotes)

If the quantified noun is inanimate, the reading of *-aʔal* is ambiguous between a quantificational and two aspectual ones. Consider the three different possible interpretations of *-aʔal* (glossed as ALL) with the verb *za* ‘be ripe’ in (17). In the first reading, *-aʔal* is interpreted as a final boundary marker. It effectively turns the state ‘be ripe’ into an event with a final boundary and marks the crossing of that boundary. In the second reading, *-aʔal* denotes the completeness of the state of being ripe, and in the third, quantificational one, the totality of the mangoes. The choice of reading depends entirely on the discourse context and simultaneous readings are possible.

- (17) *Zo baʔa za h-aʔal.*
mango DEM.INAN ripe 3_{INAN}-ALL
‘The mango(es) had finished ripening.’, or
‘The mango(es) was completely ripe.’, or
‘All the mangoes were ripe.’ (Schapper 2010:457)

With animate referents, on the other hand, the property of agreement sets the quantificational use of *-aʔal* apart from the aspectual ones: Animate-inflected *g-aʔal* is necessarily quantificational (18a), while inanimate-inflected *h-aʔal* is reserved for terminated events and complete state readings (18b).⁵

- (18)a. *Paqol baʔi za g-aʔal.*
corn DEM.AN ripe 3_{AN}-ALL
‘All the corn was ripe.’ (Schapper 2010:458)
- b. *Paqol baʔi za haʔal.*
corn DEM.AN ripe FINAL/COMPLETE
‘The corn had finished ripening.’, or
‘The corn was completely ripe.’ (ibid.)

⁴ Note that the gloss ALL stands in this paper for the universal quantifier, rather than the allative as it is used in the Leipzig Glossing Rules.

⁵ See Schapper (2010: 173f.) on Bunaq’s grammatical gender system.

4.2 Kamang

Kamang has two ‘finished’ verbs, *lai* and *sika*. Both verbs are intransitives and can stand as independent clausal predicates, as in (19) and (20). Note that the two verbs are differentiated with subscript numbers in the glosses of their independent predicative use, ‘finished₁’ for *lai* and ‘finished₂’ for *sika*.

- (19) *Kadii=a lai-ma.*
house=SPEC finished₁-PFV
‘The house is finished.’ (Schapper fieldnotes)

- (20) *Kadii=a sika-ma.*
house=SPEC finished₂-PFV
‘The house is finished.’ (Schapper fieldnotes)

In serialisation, the two verbs both occur following the semantically main verb of the clause. *Lai* marks both the initial boundary and the final boundary categories, while *sika* marks completeness and universal quantification, as seen in Table 2.

Table 2: The aspect-quantification continuum in Kamang

EVENT		STATE	QUANTITY
initial boundary	final boundary	completeness	all
<i>lai</i>	<i>lai</i>	<i>sika</i>	<i>sika</i>

In serialisation with verbs denoting events, *lai* indicates that the event expressed by the semantically main verb has reached its final boundary, as in (21) and (22).

- (21) *Lami saak ge-kere mi-fanee lai-ma.*
male old 3.GEN-clothes IN-put FINAL-PFV
‘The man finished putting his shirt on.’ (Schapper fieldnotes)

- (22) *Ga nuaanana baila lai-si.*
3 thing buy FINAL-IPFV
‘They were finishing buying things.’ (Schapper fieldnotes)

With verbs denoting normally unbounded situations, the use of *lai* adds a final boundary. In (23), the stative verb *luaa* ‘be withered’ is made dynamic (‘become withered’) by means of the auxiliary *-ra*. This unbounded event is then given a final boundary with *lai*, thus denoting that the withering process has ceased. Similarly, in (24) the verb *-tak* ‘see’, an unbounded event, is serialised with *lai* to indicate that the observing of the woman descending into the hole has come to an end.

- (23) *Arita pang gaima lila luaa-ra lai-ma.*
leaf DEM 3.all yellow withered-AUX FINAL-PFV
‘All the leaves have finished withering to yellow.’ (Schapper fieldnotes)

- (24) ... *sukuu dii=nte wo-oi silang=bee alma ga-tak lai-ma.*
hole lie=CONJ 3.LOC-towards descend=also human 3.PAT-see FINAL-PFV
‘... people had seen her going down into the hole that was there also.’

(Schapper fieldnotes)

The final boundary use of *lai* is particularly obvious in clause sequencing where it indicates that the event described in the following clause occurs after that to which it refers, as in the sequences of clauses in (25).

- (25)a. *Gal mi-ga-bel.*
 3 IN-3.PAT-say.spell
 ‘He says spells on (it).’ (Schapper fieldnotes)
- b. *Mi-ga-bel lai=ak, ide.*
 IN-3.PAT-say.spell FINAL=DEF roast
 ‘Having finished saying the spells, (he) roasts (it).’ (Schapper fieldnotes)
- c. *Ide lai-si=bo, tatlen ...*
 roast FINAL-IPFV=SEQ cut.up
 ‘Having finished roasting, (he) cuts (it),...’ (Schapper fieldnotes)

With motion verbs, *lai* indicates not that the motion event is terminated, but that it has begun. For example, in (26) and (27) *lai* denotes that the departure is completed; it says nothing about the conclusion of the motion. It thus functions as an initial boundary marker with this type of verb.

- (26) *Ge-nok-lee maa lai.*
 3.GEN-one-ASSOC walk INITIAL
 ‘Her friends had left.’ (Schapper fieldnotes)
- (27) *Ingekou ge-tak buk piaa-ra lai.*
 just.now 3.GEN-run mountain other-AUX INITIAL
 ‘(They) just ran off to another land.’ (Schapper fieldnotes)

The verb *sika* is used in serialisation with two functions: (i) indicating that the situation denoted by the verb with which it is serialised has been carried out completely; and (ii) quantifying universally over S or P, i.e., indicating that the events hold for the complete set of referents. *Sika* appears in serialisation with verbs of any lexical aspect (event or state) to denote that the situation denoted by the verb has reached completeness. For instance, in (28) with the event verb *katee* ‘eat’, *sika* signals that the eating has reached its natural conclusion whereby the bananas have been entirely consumed.

- (28) *Nal mooi=a katee sika-ma.*
 1SG banana=SPEC eat COMPLETE-PFV
 ‘I ate the bananas to completion.’
 ‘I ate all the bananas.’ (Schapper fieldnotes)

By contrast, the same event with *lai* signals simply that the eating event has stopped, regardless of the extent to which the bananas are consumed as in (29).

- (29) *Nal mooi=a katee lai-ma*
 1SG banana=SPEC eat FINAL-PFV
 ‘I finished eating the bananas.’ (Schapper fieldnotes)

The contrast between *lai* and *sika* is also apparent with motion verbs. Here *sika* signals universal quantification, that is, that all participants are engaged in the motion. Examples are given in (30) and (31). In contrast, *lai* marks the initial boundary of the motion, as we saw in (26) and (27).⁶

- (30) *Mi-ga-waal ye-iyaa sue sika-si.*
 IN-3.PAT-return 3.GEN-go.home come ALL-IPFV
 ‘(They) were now all on their way home.’ (Schapper fieldnotes)
- (31) *Busei~busei=bo Oongmang mi gaima tak sika.*
 strong~REDUP=REL Oongmang IN 3.all run ALL
 ‘All the strong (people) in Ongmang had run away.’ (Schapper fieldnotes)

Another feature that sets *sika* off from *lai* is its morphological behaviour. Whilst *lai* never occurs with an agreement prefix, *sika* can occur with a GENITIVE prefix, as in examples (32) and (33). The exact meaning of the genitive prefix in such contexts is unclear; however, the agreement pattern is consistent with that found on verbs of quantity or sufficiency in Kamang.⁷ Again in these examples we see that *sika* denotes that the situations denoted have been carried out completely and/or that all participants were involved in the situation.

- (32) *Isei maa tintei ge-sika.*
 meat edible melt 3.GEN-ALL
 ‘The meat has all melted away.’ (Schapper fieldnotes)
- (33) *Bakaa iton-ta bong mi=ak tadui ge-sika-ma.*
 betel ripe-STAT tree IN=DEF drop.off 3.GEN-ALL-PFV
 ‘The ripe betel on the tree all drop off.’ (Schapper fieldnotes)

4.3 Makalero

Makalero uses two markers, *hai* and *hau*, to cover the aspect-quantification continuum, as shown in Table 3.

Table 3: The aspect-quantification continuum in Makalero

EVENT		STATE	QUANTITY
initial boundary	final boundary	completeness	all
<i>hai</i>	<i>hau</i>	<i>hau</i>	<i>hau</i>

Hai is a grammaticalised form of *hai?* ‘end, finish’, which is illustrated in its use as an intransitive full verb in (34).

⁶ The NP element *gaima* in (31) is a pronoun. Its meaning is equivalent to that of *sika*, which is part of the predicative sequence, i.e. that all of the participants referred to are involved in the action.

⁷ This use of the genitive prefix has been observed with verbs such as *awila* ‘full’ and *baarang* ‘sufficient’. As on *sika*, the inclusion of a genitive prefix appears to have an intensifying function, indicating that the situation is fulfilled to completeness, i.e., absolutely empty, exactly sufficient etc.

- (34) ...*watu loloi kamu loloi hau hai?*...
 day two night two FINAL end
 ‘... after two days and two nights were over...’ (Huber 2011:166)

As an aspect marker, *hai* is fully grammaticalised; there is no evidence of any intermediate stages of its development from a full verb to an aspect marker. *Hai* precedes the verb and can be combined with both states and events. Used with state verbs and nominal predicates, *hai* provides the state with an initial boundary. The sentences in (35) and (36) thus refer to the entry into the state in question.

- (35) *Wainini mata ka?u hai pere*...
 thus child small INITIAL big:SG
 ‘So the small child has grown up...’ (lit. has become big) (Huber 2011:362)

- (36) ... *nana were (...) hai teni muni amulafu*...
 snake DEM INITIAL again return person
 ‘... the snake (...) became human again...’ (ibid.)

With events, *hai* may select either the initial or the final boundary. In isolated sentences with unbounded events, as in (37) and (38), *hai* selects the initial boundary. Like with states, the crossing of this boundary is presented as the onset of a new situation. The situation following the crossing of the initial boundary is the event itself, which is read as ongoing in the examples below.

- (37) *Kiloo hai sirvisu*.
 3SG INITIAL work
 ‘He starts to work.’ (Huber 2011:361)

- (38) *Kiloo hai kanta*.
 3SG INITIAL sing
 ‘He started to sing.’ (Huber 2011:362)

In the case of events with an inherent endpoint, *hai* selects the final boundary and presents this boundary as the onset of a new state. The resultative reading of (39), where the event of someone having entered the house results in the state of that person being inside the house, shows this clearly.

- (39) ... *amulafu ho?o=ni hai ma?u=ni lopu mutu-ma’u*...
 person some=CONTR INITIAL come=CONJ house be.inside:REDUCED-come
 ‘... somebody had come and entered the house (and was now in the house...)’
 (Huber 2011:363)

The initial boundary marker *hai* is the marker used in the narration of a series of events, as seen in (40). The events in this series are not presented as separate, unrelated events; instead, the termination of each event is seen as setting the stage for the next event to happen.⁸

⁸ Huber (2011) labels *hai* ‘new situation’, adopting this terminology from Jenny (2001) and Ebert (2001), who define it as a category which “indicates that any boundary has been passed and focuses on the

- (40) ... *kiloo* **hai** *dur=ini* **hai** *we-poko=ni* *dila*
 3SG INITIAL wake.up=CONJ INITIAL be.there:REDUCED-crouch=CONJ frog

hai *haka-puna.*

INITIAL search-see

‘... he wakes up and crouches there and looks for the frog.’ (Huber 2011:363)

The second marker, *hau*, covers the remainder of aspectual and quantificational meanings examined in this paper, i.e. the aspectual functions of final boundary and completeness of a state, as well as universal quantification.

With event verbs, *hau* functions as a final boundary marker; the event in question is read as being terminated, as in (41). In this function, *hau* is particularly frequent in the description of a succession of actions in procedural texts, as in the example in (42).

- (41) ... *asi-upa* **hau** *taru=ni* *naʔu* *tepa* *Matebian-isi?...*
 1SG.POSS-father FINAL place=CONJ just constant M.-be.at
 ‘... after my father was buried, (we) were at Mount Matebian all the time...’
 (Huber 2011:370)

- (42)a. ... *hael-naʔuk=ee* **hau** *hular=ini* *hai* **hau** *naʔan=afta*
 cotton-cotton=DEF FINAL spin=CONJ INITIAL FINAL NEG.EX=COND

fi *ena.*

1PL.INCL look

‘... (if) the cotton is finished being spun, and there is none left, we have a look.’

- b. *Ena=ni* *fi* **hau** *omu.*
 look=CONJ 1PL.INCL FINAL ball

‘Having had a look, we ball it up.’ (Huber 2011:371)

As a final boundary marker, *hau* is quite similar to the use of the initial boundary marker *hai* in the narration of a series of events. However, whereas events marked with *hau* are understood to be separate events, each of which is terminated, *hai* presents the crossing of each event’s final boundary as setting the scene for a following event. In other words, an event marked by *hai* is expected to be followed by another event. There is no such implication when an event is marked with *hau*.

With state verbs, *hau* expresses the notion of the state holding completely, all over, or to a high degree. Examples are given in (43) and (44) with the adjectival verbs *pere* ‘big’ and *roual* ‘many (nonhuman)’, respectively.

- (43) *Uruwatu* *ere* *tafi* **hau** *pere...*
 God DEM true COMPLETE big:SG
 ‘The lord is really very powerful (lit. large)...’ (Huber 2011:370)

- (44) *Sirivisu* **hau** *roual...*
 work COMPLETE many.NONHUM

ensuing state” (Jenny 2001:131). According to Ebert (2001:156), lexical verbs meaning ‘finish’ or ‘attain’ are common lexical sources for this type of marker.

‘(There is) very much work.’ (ibid.)

While the functions of *hau* are very similar to those of *hai*, the two markers differ in their syntactic status as illustrated in the clause scheme in (45). *Hai* stands in the position labelled ASP (aspect), but *hau* stands in the adverbial position (ADV).

(45) SUBJ OBJ ASP [ADV NEG] PRED

The square brackets around the adverbial and negation positions indicate that the relative order of these positions with respect to one another can be varied, according to the intended scope. *Hau* can thus either precede or follow the negation. In (46), its high degree reading has scope over both the negation *nomo* and the verb *tutu* ‘like’. The resulting translation is ‘dislike very much, dislike most’. In (47), on the other hand, the negation *nomo* has scope over the phrase *hau pere* ‘very big’.

(46) ... *ani=wa* *asi-isa=ee* *hau* *nomo* *tutu* *were?*...
 1SG=REL 1SG.POSS-condition=DEF COMPLETE NEG like be.that
 ‘[What] I didn’t like most was this...’ (Huber 2011:373)

(47) *Ki-mata* *nomo hau* *pere*.
 3.POSS-child NEG COMPLETE big:SG
 ‘Her child isn’t very big.’ (Huber fieldnotes)

In contrast, *hai* is always outside of the scope of the negation. Therefore, marking a negated situation with *hai* refers to the onset of the absence of this situation, as in (48).⁹

(48) ... *ki-sefar* *hai* *nomo e?*
 3.POSS-dog INITIAL NEG be.here
 ‘... his dog is no longer here.’ (Huber 2011:396)

Finally, *hau* also functions as a universal quantifier, as illustrated in (49) and (50). The fact that it follows the demonstrative *ere*, which marks the right edge of the NP (49), shows that *hau* is a floating quantifier, which stands outside of the NP it modifies.

(49) ... *ei=ni* (...) *teli* *ere* *hau* *mei* *tefu-dasa*...
 2SG=CONTR corn DEM ALL take orthogonal-throw
 ‘... it was you who (...) broke all the corn plants...’ (Huber 2011:369)

(50) ... *ki-ira* *hau* *kalin*...
 3.POSS-water ALL pour
 ‘... (we) pour out all of the water...’ (ibid.)

As a quantifier, *hau* is most frequently combined with other quantificational elements, such as *haka* ‘all’ and *kafu* ‘all (at once, in one go)’ in (51) and (52). It is likely that these quantifier combinations are used in order to force an unambiguously quantificational reading of *hau*.

⁹ *Hai* can only be negated through the use of the clausal negation *nomohaka*, as shown below:

Timor *ki-renu* *nomohaka* *hai* *rial*.

Timor 3.POSS-population CLS.NEG INITIAL many:HUM

‘It is not the case that the population of Timor is (already) large.’ (Huber 2011:397)

- (51) ... *werlaa ala? mutu? (...) haka-hau hai maʔu.*
 3PL forest be.inside ALL-ALL initial come
 ‘... they who were in the forest (...) have all come (back) already.’
 (Huber 2011:377)

- (52) *Kiloo atehasa ere kafu-hau mosal.*
 3SG medicine DEM ALL:REDUCED-ALL swallow
 ‘He swallowed all of the pills at once.’ (ibid.)

Syntactically, the universal quantifier *hau*, both on its own and as part of a quantifier combination, can appear in two distinct constructions, either as an adverbial or as a V1 in a serial verb construction. As an adverbial, *hau* follows an undergoer object and the aspect marker *hai* (ASP in the clause scheme in (45)), as seen in (53) and (54).

- (53) *Kilooraa ate-isu=ee hai haka-hau mei.*
 3PL tree-fruit=DEF INITIAL ALL-ALL take
 ‘They took all the fruit.’ (Huber 2011:378)

- (54) ... *ki-atumatar hai haka-hau taru...*
 3.POSS-intestines INITIAL ALL-ALL bury
 ‘... (they) buried all its intestines...’ (Huber fieldnotes)

As a V1 in a serial verb construction, on the other hand, it precedes the semantically main verb’s undergoer object, as in (55), as well as the aspect marker *hai*, as in (56).

- (55) *Mata-niki-laa haka-hau ropesadu so’ot.*
 child-PL-PL ALL-ALL candy want
 ‘All children like sweets.’ (Huber fieldnotes)

- (56) *Kilooraa haka-hau hai k-ou-titar.*
 3PL ALL-ALL INITIAL 3.UND-towards-run:PL
 ‘They all start running towards it.’ (Huber fieldnotes)

The predicative status of *hau*, or quantifier combinations with *hau*, in serial verb constructions is shown by the fact that it may be marked with *hai* itself, as illustrated in (57). *Hai* is the leftmost verbal modifier, and the fact that it occurs twice in (57) shows that this sentence contains two predicates, as indicated by the bracketing. However, *hau* is never found as a predicate on its own, and its analysis as a predicative element is based on examples such as (55) through (57).

- (57) *Kilooraa hai haka-hau hai ma’u.*
 3PL [INITIAL ALL-ALL] [INITIAL come]
 ‘(Already) all of them have come.’ (Huber fieldnotes)

The two constructions of *hau*, as an adverbial and in serialisation, are associated with differential readings: In a serial verb construction, *hau* quantifies the subject, as in (55), while as an adverbial, it quantifies the object, as in (53).

Huber (2011:378f.) argues that these different constructions account for the two readings of the sentence in (58), where the collocation *felu-hau* can be understood either as modifying the A argument or the (non-overt) O argument.

- (58) *Ii hai felu-hau nua?*
 2PL INITIAL ALL-ALL eat
 ‘Have you all eaten already?’, or
 ‘Have you eaten up all already?’ (Huber 2011:378)

In the first case, translated as ‘have you all eaten already?’, *hau* is analysed as a V_1 in a SVC; the pronominal subject is common to both verbs. On the other hand, the second reading, ‘have you eaten up all already?’, arises if *felu-hau* is analysed as an adverbial. (59) and (60) give the proper bracketing of the two alternative syntactic analyses.

- (59) *Ii hai felu-hau nua?*
 2PL [INITIAL ALL-ALL]_{PRED} [eat]_{PRED}
 ‘Have you all eaten already?’ (Huber 2011:379)

- (60) *Ii hai felu-hau nua?*
 2PL [INITIAL [ALL-ALL]_{ADVERBIAL} eat]_{PRED}
 ‘Have you eaten up already?’ (ibid.)

In summary, quantificational *hau* can be constructed in two distinct ways and exhibits predicative characteristics. On this basis, Huber (2011:369f.) argues that universal quantification is the original meaning of *hau*, and that its aspectual uses, which are syntactically more restricted, are derived from this. Its grammaticalisation as a final boundary marker most likely originated from contexts where it stands in the adverbial position and quantifies over the object. The semantic motivation of this grammaticalisation is intuitive: An action carried out to the point where the entirety of the undergoer is affected basically equals a completed action. In fact, whenever an object can be construed as a plurality, *hau* is semantically ambiguous; examples are (49) and (50), used above to illustrate the quantificational function of *hau*. In an appropriate context, *hau* could in these sentences equally well be interpreted as a final boundary marker. Aspectual *hau* furthermore agrees with the object quantifier through its position in the adverbial slot.

5 Summary

The tree TAP languages discussed in the preceding sections exhibit a semantic and grammatical continuum linking a variety of aspectual notions and universal quantification. Table 4 summarizes the aspect-quantification continuum and its realization in Bunaq, Kamang and Makalero.

Table 4: The aspect-quantification continuum in Bunaq, Kamang and Makalero

	EVENT		STATE	QUANTITY
	initial boundary	final boundary	completeness	all
Bunaq	<i>-aʔal</i>	<i>-aʔal</i>	<i>-aʔal</i>	<i>-aʔal</i>
Kamang	<i>lai</i>	<i>lai</i>	<i>sika</i>	<i>sika</i>
Makalero	<i>hai</i>	<i>hau</i>	<i>hau</i>	<i>hau</i>

The interrelation between universal quantification and the aspectual notions of initial boundary, final boundary and completed state is particularly obvious in Bunaq, which uses the same lexical item, *-aʔal* ‘be finished’, to cover all four senses. In Kamang and Makalero, this continuum is divided up between two separate morphemes. In Kamang, the full verb *lai* ‘be finished₁’ used as the final verb in serialisation covers the aspectual meanings of initial and final boundary. A second verb, *sika* ‘be finished₂’, covers the complete situation meaning and universal quantification if used as in serialisation. The two verbs are semantically very similar, with the exception that *lai* is associated with completedness, but *sika* with completeness. In Makalero, finally, the marker *hai*, which is derived from the full verb *haiʔ* ‘finish, end’, functions as an initial boundary marker. The aspectual notions of termination and completeness of a state, and universal quantification, are covered by *hau*, which we assume to originally be a universal quantifier.

While the semantic and grammatical relations between aspect and quantification that we have seen in the three languages are parallel, the diversity between them is nonetheless remarkable: Although ‘finished’ verbs are consistently used as lexical sources, the actual lexemes used in the three languages are not obviously related. Also, the syntactic status of these aspect-marking devices and quantifiers differ. Bunaq and Kamang rely on verb serialization, while the syntactic status of the Makalero equivalents include grammaticalised aspect markers, adverbials and serial verb constructions.

6 Discussion

The relation between verbs meaning ‘finish’ or ‘be finished’, aspectual notions to do with completion or completeness, and universal quantification as discussed for Bunaq, Kamang and Makalero is semantically intuitive. ‘Finish’ is a cross-linguistically common lexical source for a completive marker (Bybee et al. 1994, Heine and Kuteva 2002:134f.), much like we see in Bunaq and Kamang. Likewise, the intimate connection between verbal aspect and quantification is well known: Telicity is associated with the higher affectedness of the undergoer, i.e. an undergoer affected in its entirety (Hopper and Thompson 1980). For instance, in Slavic languages, it is the aspect-marked verbal form which carries quantificational information; the O argument itself is overtly unmarked. An example from Russian is shown in (61).

- (61)a. *ja yel gruši.*
 1SG eat:PAST pears:ACC
 ‘I was eating (some) pears.’

- b. *ja s-yel gruši.*
 1SG PFV-eat:PAST pears:ACC
 'I ate (all) the pears.' (Sciullo & Slabakova 2005: 64)

To our knowledge, however, a link between the aspectual notions we have discussed and universal quantification is not mentioned in the grammaticalisation literature. In this paper, we largely refrain from speculating on the exact form of the grammaticalisation path connecting these categories with their lexical sources. However, we have suggested that in Makalero, the quantification reading of *hau* is primary, and the aspectual readings derived from it. In this language, the relationship between aspect and quantification thus appears to be the reverse of that found in Slavic as shown above, where the quantification of the undergoer follows from the aspectual marking of the verb. A parallel development is attested from English, where the quantifier 'all' is used as a 'completive' adverb with state verbs (Buchstaller and Traugott 2006). The interrelation between aspect and quantification is thus a cross-linguistically attested phenomenon, and our evidence suggests that the grammaticalisation of this interrelation can originate from both the aspectual side of the continuum as well as the quantificational one. Yet our statements are based on a very limited data set, and we would welcome further cross-linguistic studies on the details of the relation between aspect and quantification, and in particular on possible grammaticalisation paths leading from one to the other.

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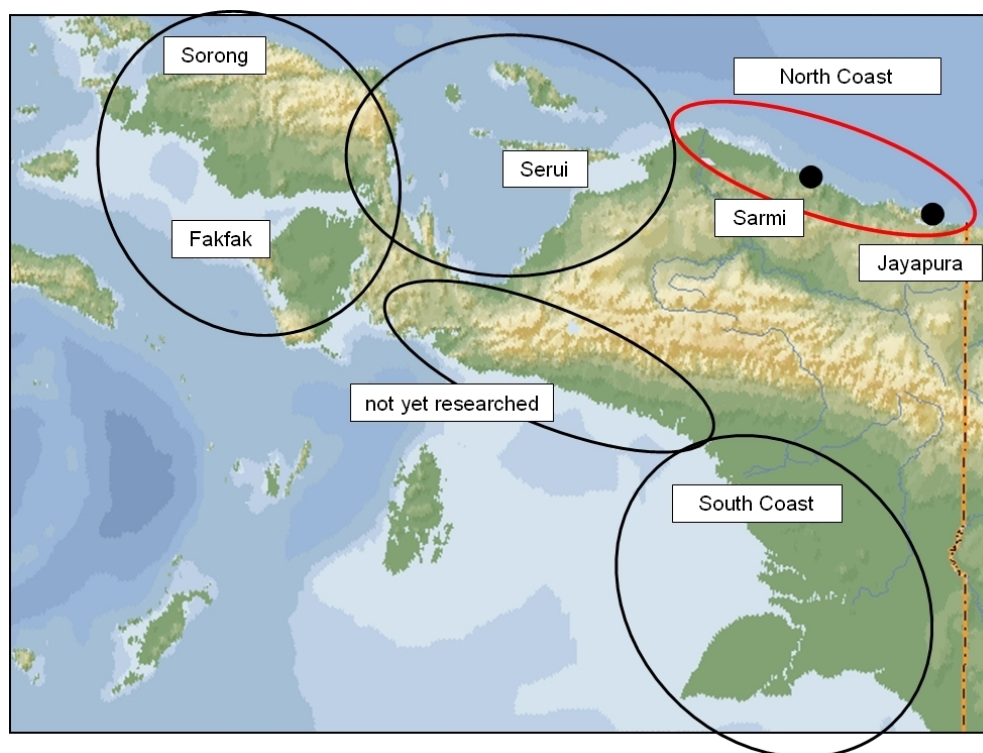
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10 *Additive and associative plurality in Papuan Malay*

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This paper discusses additive and associative plurality in Papuan Malay as spoken along West Papua's north-east coast, on the island of New Guinea. Included is a brief overview of the noun phrase syntax, the numeral system, universal quantifiers, and numeral classifiers.²

“Papuan Malay” refers to the Malay varieties spoken in coastal West Papua. So far five varieties of Papuan Malay have been identified. The description of plurality in Papuan Malay is based on recordings of narratives and spontaneous conversations between Papuan Malay speakers in the Sarmi area which is located about 300 km west of Jayapura, both of which are located on the north-east coast of West Papua.



Map 1: Papuan Malay varieties (based on Donohue to be published and Kim et al. 2007)

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In Papuan Malay, the notions of additive and associative plurality are expressed in noun phrases in which a bare nominal head is modified with a post-head plural pronoun. When the head is a common noun that is interpreted as indefinite when occurring alone, this construction receives an additive plural interpretation with the meaning of ‘the Xs’. That is, an additive plural is a ‘normal’ plural signaling ‘more than one X’. With a nominal (typically a kin term or a proper noun) which is interpreted as definite when occurring alone, this construction receives an associative plural interpretation with the basic meaning of ‘X and X’s associates’.

Before examining plurality in Papuan Malay in detail, §1 gives an overview of the Papuan Malay noun phrase syntax, the numeral system, universal quantifiers, and numeral classifiers. The notions of additive and associative plurality are discussed in §2, followed by a brief review of associative plurality in other regional Malay varieties in §3.

1 Overview: Noun phrase syntax, numerals, quantifiers and numeral classifiers

This section gives a brief overview of the Papuan Malay noun phrase template (§1.1), the numeral system (§1.2), universal quantifiers (§1.3), and numeral classifiers (§1.4).

1.1 Noun phrase syntax

Papuan Malay nouns are unmarked for any grammatical category such as number, gender, or case. Common strategies to express plurality are modification with a plural pronoun (see §2), and/or modification with a numeral or quantifier (see §1.2 and §1.3). A third strategy, not discussed in this paper, is reduplication.

In the Papuan Malay noun phrase, adnominal modifiers typically occur in post-head position, as shown in Table 1. Depending on the semantics of the head nominal, numerals and quantifiers can also precede their head. All adnominal modifiers are optional. Adnominal pronouns follow their head nominals. If an adnominal static verb or noun co-occurs, then it precedes the pronoun. Adnominal numerals or quantifiers follow these modifiers. That is, while numerals or quantifiers do not occur concurrently, they do co-occur with adnominal pronouns. Adnominal demonstratives always occur at the right periphery of the noun phrase.

Papuan Malay noun phrase template (simplified)

- (1) (NUM)/(QT) HEAD (N)/(stV) (PRO) (NUM)/(QT) (DEM)

The example in (2) illustrates the canonical HEAD-MODIFIER word order within the noun phrase: the head nominal is modified by three constituents, namely a proper noun, the distal locative, and the distal demonstrative. The example in (3) demonstrates the MODIFIER-HEAD word order; the modifier is a universal quantifier.

- (2) HEAD N LOC DEM
pisang Sorong sana tu, iii, besar~besar manis
 [][[banana] Sorong] L.DIST] D.PROX] oh! RDP~be.big sweet
 ‘those bananas (from) Sorong over there, ooh, (they) are all big (and) sweet’

- QT HEAD
 (3) *smua buku bisa basa*
 all book be.able be.wet
 ‘all books could get wet’

1.2 Numerals

The Papuan Malay cardinal numerals are listed in §1.2.1, together with a brief description of their attributive uses and basic mathematical functions. The derivation of ordinal and distributive numbers is described in §1.2.2 and §1.2.3, respectively. In §1.2.4 an additional non-enumerating function of the numeral *satu* ‘one’ is presented.

1.2.1 Cardinal numerals

Papuan Malay has a decimal numeral system with the numerals having absolute reference. The basic cardinal numerals are presented in Table 1. Complex numerals are formed by indicating the number of units of the highest power of ten, followed by the number of units of the next lower power down to the simple units or DIGITS of one to ten. The individual components of complex numbers are combined by juxtaposition. The numeral *juta* ‘million’ is borrowed from Sanskrit and *milyar* ‘billion’ from French, via Dutch (Jones 2007).

Table 1: Basic Papuan Malay cardinal numerals

1	<i>satu</i>	100	<i>sratus</i> one:hundred
2	<i>dua</i>	102	<i>sratus dua</i> one:hundred two
3	<i>tiga</i>	200	<i>dua ratus</i> two hundred
4	<i>empat</i>	234	<i>dua ratus tiga pulu empat</i> two hundred three tens four
5	<i>lima</i>	1.000	<i>sribu</i> one:thousand
6	<i>enam</i>	1.004	<i>sribu empat</i> one:thousand four
7	<i>tuju</i>	2.000	<i>dua ribu</i> two thousand
8	<i>dlapang</i>	2.013	<i>dua ribu tiga blas</i> two thousand three teens
9	<i>sembilang</i>	10.000	<i>spulu ribu</i> one:tens thousand
10	<i>spulu</i> one:tens	32.000	<i>tiga pulu dua ribu</i> three tens two thousand
11	<i>seblas</i> one:teens	980.000	<i>sembilang ratus dlapang pulu ribu</i> nine hundreds eight tens thousand
12	<i>dua blas</i> two teens	1.000.000	<i>satu juta</i> one million

20	<i>dua pulu</i> two tens	1.000.000.000	<i>satu milyar</i> one billion
21	<i>dua pulu satu</i> two tens one	zero	<i>kosong</i> be empty
30	<i>tiga pulu</i> three tens		

Cardinal numerals are most often used attributively to enumerate entities. In this function they may either precede or follow their head nominal. With a preposed numeral, the noun phrase indicates the absolute number of items denoted by the head nominal as in *tiga orang* ‘three people’ (4) or in *dua jam* ‘two hours’ (5). Noun phrases with a post-head numeral express exhaustivity of a definite referent as in *pace dua ini* ‘both of these men’ (6), or denote a unique position within a series as in *jam dua* ‘two o’clock’ (7).

Attributively used numerals³

- (4) *kitorang tiga orang*
1PL three person
‘[on that trip] we (were) three people’
- (5) *saya jaga dua jam, yo kurang lebi dua jam ...*
1SG guard two hour yes lack more two hour
‘I kept watch (for) two hours, yes, more or less (for) two hours ...’
- (6) *pace dua ini dong dua dari pedalamang*
man two D.DIST 3PL two from interior
‘both these men, the two of them are from the interior’
- (7) *jam dua, tong keluar dari sini jam satu*
hour two 1PL leave from L.PROX hour one
‘(we arrived at) two o’clock, we left from here at one o’clock’

When the identity of the referent was established earlier or can be deduced from the context, the head nominal can be omitted, as in (8).

Numerals with omitted head nominal

- (8) *Ika biasa angkat itu dlapang pulu sembilang*
Ika be.usual pick-up D.DIST eight tens nine
‘Ika usually lifts what’s-its-name eighty-nine (kilogram)’

The examples in (4) to (8) also illustrate that numerals can be used with animate or inanimate countable nouns.

The basic mathematical functions of the cardinal numerals are presented in Table 2.

Table 2: Mathematical functions

Item	Sign	Gloss
<i>tamba</i> add	+	‘plus’

³ All examples in this chapter come from stories/natural discourse unless mentioned otherwise.

Item	Sign	Gloss
<i>kurang</i> lack	–	‘minus’
<i>kali</i> time	x	‘times’
<i>bagi</i> divide	/	‘divide’

In natural conversations, however, calculations occur only very rarely. Therefore, the following examples are elicited: the function of addition is presented in (9), subtraction in (10), multiplication in (11), and division in (12).

Addition

- (9) *dua babi tamba tiga babi sama dengang lima babi*
two pig add three pig be.same with five pig
‘two pigs plus three pigs are five pigs’ [Elicited]

Subtraction

- (10) *lima babi kurang tiga babi sama dengang dua babi*
five pig lack three pig be.same with two pig
‘five pigs minus three pigs are two pigs’ [Elicited]

Multiplication

- (11) *dua babi kali tiga sama dengang enam babi*
two pig time three be.same with six pig
‘two pigs times three are six pigs’ [Elicited]

Division

- (12) *enam babi bagi tiga sama dengang dua babi*
five pig divide three be.same with two pig
‘six pigs divided by three are two pigs’ [Elicited]

1.2.2 Ordinal numerals

Papuan Malay employs two strategies to express the notion of ordinal numerals. For kinship terms the concept of ordinal numerals is encoded with a ‘NNum’ noun phrase headed by the noun *nomor* ‘number’, as in (13) and (14). This noun phrase ‘*nomor* Num’ gives the ordinal reading ‘Num-th’ such as *yang nomor tiga* ‘third’ in (13) or *nomor empat* ‘fourth’ in the elicited example in (14).

- (13) *saya tida bole kasi sama bapa punya sodara*
1SG NEG be.permitted give to father POSS sibling

ana prempuang yang sa bilang nomor tiga
child woman REL 1SG say number three
[About bride-price children:] ‘I shouldn’t have given to father’s sibling the daughter that, as I said, was (my) third (child)’ (Lit. ‘number three’)

- (14) *Aleks ini sa pu tete pu ade nomor empat*
 Aleks D.PROX 1SG POSS grandfather POSS ySb number four
 ‘Aleks here is my grandfather’s fourth youngest sibling’ (Lit. ‘number four’)
 [Elicited]

Following one consultant, the strategy presented in (13) and (14) used to be employed not only for kinship terms but for countable nouns in general. With the increasing influence of Standard Indonesian, however, Papuan Malay speakers have started employing ordinal numbers of Indonesian origins more frequently, such as *kedua* ‘second’ in (15) or *ketiga* ‘third’ in the elicited example in (16).

- (15) *distrik kedua di mana?*
 district second at where
 ‘where is the second district?’
- (16) *ini bibit nangka yang ketiga yang sa bli*
 D.PROX 1SG POSS REL third REL 1SG buy
 ‘this is the third jackfruit seedling that I bought’ [Elicited]

1.2.3 Distributive numerals

Distributive numerals in the sense of ‘one by one’ or ‘two by two’ are derived by reduplication of the numeral. This is illustrated with *satu~satu* ‘one by one’ in (17), and with *dua~dua* ‘two by two’ in (18).

- (17) *tong tiga cari jalang satu~satu*
 1PL three search street DISTR~one
 ‘the three of us looked for a path (through the river) one-by-one’
- (18) *tong minum dua~dua glas ato tiga~tiga glas*
 1PL drink DISTR~two glass or DISTR~three glass
 [About the lack of water during a retreat:] ‘we drank two glasses each or three glasses each (per day)’ (Lit. ‘two by two or three by three’)

1.2.4 Additional function of *satu* ‘one’

In addition to its enumerating function in postposed position, attributively used *satu* ‘one’ is employed to encode “specific indefiniteness” (Crystal 2008:444). That is, in NNum-NPs adnominal *satu* ‘one’ denotes specific but nonidentifiable referents, giving the specific indefinite reading ‘N *satu*’ ‘a certain N’. The specific indefinite referent may be animate human or inanimate, as illustrated in (19) and (20) respectively.⁴

- (19) *ada ade satu di situ*
 exist ySb one at L.MED
 ‘(there) is a certain younger sibling there’

⁴ The referent of *ojek satu* in (20) can be interpreted as the animate referent ‘motorbike taxi driver’, or as the inanimate referent ‘motorbike taxi’.

- (20) *sa pas jalang kaki sampe di kampung satu Wareng*
 1SG be.exact walk foot reach at village one Wareng
- ada ojek satu turun*
 exist motorbike.taxi one descend
 ‘right at the moment when I was walking on foot as far as a certain village (named) Wareng, there was a certain motorbike taxi (driver who) came down (the road)’

1.3 Universal quantifiers

The Papuan Malay universal quantifiers are listed in Table 3.

Table 3: Papuan Malay universal quantifiers

Item	Gloss
<i>smua</i>	‘all’
<i>segala</i>	‘all’
<i>masing-masing</i>	‘each’
<i>(se)tiap</i>	‘every’
<i>sembarang</i>	‘any’

Quantifiers have syntactic properties similar to those of numerals. Most often, they are used attributively to indicate non-numeric quantities, as shown in (21) to (25). All five quantifiers occur in pre-head position, where they modify count nouns. Two of them also occur in post-head position where they modify count nouns; in addition, one of them also modifies mass nouns.

In preposed position, the five quantifiers convey a sense of individuality whereby they express the composite nature of their referents, such as *smua masala* ‘all problems’ in (21a) or *setiap lagu* ‘each song’ in (23). In addition, *smua* ‘all’, and *masing-masing* ‘each’ can occur in post-head position. In this position, *smua* ‘all’ modifies count nouns as in (21a) or mass nouns as in (21b), while *masing-masing* ‘each’ modifies count nouns only, as in (22). Postposed quantifiers signal exhaustivity of their countable or uncountable referents, such as *pemuda masing-masing* ‘each of the teenagers’ in (22) or *gula smua* ‘all (of the) sugar’ (21b).

As shown in (21) and (22), respectively, *smua* ‘all’, and *masing-masing* ‘each’ can be used with animate or inanimate referents. By contrast, the remaining three quantifiers do not freely modify animate and inanimate objects. While *(se)tiap* ‘every’ is typically used with inanimate referents as in (23), *sembarang* ‘any’ modifies animate referents only as in (24) (to express the notion of ‘every person’, speakers prefer quantification with *masing-masing* ‘each’). The quantifier *segala* ‘all’ is always used in combination with the noun *macam* ‘variety’. As shown in (25), the noun phrase *segala macam* ‘everything, whatever (kind)’ denotes all the things under discussion without listing them separately. Thereby, *segala* ‘all’ contrasts with *smua* ‘all’ which modifies countable and uncountable nouns, animate and inanimate referents, and occurs in preposed and in postposed position.

Attributively used universal quantifiers: Modifying count and mass nouns

- | | | PRE-HEAD POSITION | | POST-HEAD POSITION |
|------|------------|---|--|---|
| (21) | a. Count N | <i>smua</i> <i>masala</i> | | <i>pemuda</i> <i>smua</i> |
| | | all problem | | youth all |
| | | ‘all problems’ | | ‘all (of the) teenagers’ |
| | b. Mass N | | | <i>gula</i> <i>smua</i> |
| | | | | sugar all |
| | | | | ‘all (of the) sugar’ |
| (22) | Count N | <i>masing-masing</i> <i>trek</i> | | <i>pemuda</i> <i>masing-masing</i> |
| | | each truck | | youth each |
| | | ‘each truck’ | | ‘each (of the) teenagers’ |
| (23) | Count N | <i>setiap</i> <i>lagu</i> | | |
| | | every song | | |
| | | ‘every song’ | | |
| (24) | Count N | <i>sembarang</i> <i>orang</i> | | |
| | | any person | | |
| | | ‘any person, anybody’ | | |
| (25) | Count N | <i>segala</i> <i>macam</i> | | |
| | | all variety | | |
| | | ‘everything, whatever’ | | |

When the identity of the referent was established earlier or can be deduced from the context, the head nominal can be omitted, as illustrated with *smua* ‘all’ in (26).

Universal quantifiers with omitted head nominal

- (26) ... *mobil blakos*, ***smua*** *naik di blakang*
 car pick-up.truck all climb at backside
 ‘[we took] a pick-up truck, all (passengers) got onto its loading space’

1.4 Numeral classifiers

Papuan Malay has a very reduced inventory of numeral classifiers, unlike many other western Austronesian languages (Himmelman 2005:173). Attested is only one classifier, the common noun *ekor* ‘tail’. Following a post-head numeral, *ekor* ‘tail’ is used to count animals, as shown in (27).

Enumeration of animals

- (27) *dong dua dapat ikang ini tiga ekor*,
 3PL two get fish D.PROX three tail

dapat ikang tiga ekor dong dua ...
 get fish three tail 3PL two
 ‘the two of them got these fish, three (of them), having gotten three fish, the two of them...’ (Lit. ‘three tails’)

Enumeration of people and objects, by contrast, is done without a numeral classifier as illustrated in (28) and (29), respectively.

Enumeration of people and objects

- (28) *jadi saya empat ana*
 so 1SG four child
 ‘so I (have) four children’

- (29) ... *orang Sarmi harus siap untuk orang Sorong*
 person Sarmi have.to provide for person Sorong

spulu kaing itu kaing adat itu
 ten cloth D.DIST cloth tradition D.DIST
 ‘[as bride-price] a Sarmi person has to provide a Sorong person with those ten
 cloths, those traditional cloths’

2 Additive and associative plurality

Papuan Malay expresses plurality as deemed necessary, as is typical of Malay varieties in general. Depending on the context, the lexical item *ana* ‘child’, for instance, could also be read as ‘children’. One common strategy to signal plurality is modification with a plural pronoun (other strategies are modification with a numeral or quantifier, mentioned in §1.2 and §1.3, or reduplication, not discussed here).

In their adnominal uses, pronouns occur in post-head position, such that ‘N PRO’. Before discussing their functions in more detail, the Papuan Malay pronouns with their long and short forms are presented in Table 4.

Table 4: Papuan Malay pronoun system

Person	Singular		Plural	
	Long	Short	Long	Short
1	<i>saya</i>	<i>sa</i>	<i>kitong / kitorang</i>	<i>tong / torang</i>
2	<i>ko</i>	---	<i>kamu</i>	<i>kam</i>
3	<i>dia</i>	<i>de</i>	<i>dorang</i>	<i>dong</i>

Adnominal pronouns function as “personal determiners”, following Lyons’s (1999:141) terminology. That is, given the lack of inflectional person-number marking on nouns and verbs, it is the adnominally used pronouns that allow the unambiguous identification of the referents as speakers, addressees, or individuals or entities being talked about. More specifically, the pronouns “combine with nouns to produce expressions whose reference is thereby determined in terms of the identity of the referent” (1999:141). Thereby, the pronouns signal that – based on the situation or shared knowledge or the linguistic context – the participants in a speech act are in a position to identify the referent (see also Bhat 2007:11 and Lyons 1999:26-32).

In their determiner function, the Papuan Malay pronouns are available for all person-number values, with the exception of the first person singular, as demonstrated in Table 5 (the long and short pronoun forms are used interchangeably without discernible distinctions in meaning and use). Other languages, by contrast, are subject to constraints

concerning their person-number values, as Lyons (1999:27) points out. In English, for instance, only ‘we’ and ‘you(PL)’ occur freely as determiners, while ‘you(SG)’ occurs in exclamations only; the remaining personal pronouns do not have any determiner uses.⁵ Yet other languages, such as Warlpiri (Hale 1973, in Lyons 1999:142), are “completely unconstrained in this respect” (Lyons 1999:142). Due to the constraints concerning the person-number values of adnominal pronouns, some of the examples in Table 5 do not readily translate into English. To illustrate the adnominal uses of the pronouns more clearly, however, the English translations of the ‘NP PRO’ expressions in this paper are literal rather than idiomatic. When this results in ungrammatical English expressions, the translations are marked with an asterisk mark “*”.

Table 5: Adnominal pronouns as determiners

HEAD	MOD	Example	Translation
N	PRO-2SG	<i>mama-ade ko</i> aunt 2SG	‘*you aunt’
N	PRO-3SG	<i>ana de</i> child 3SG	‘*s/he child’ or ‘the child’
N	PRO-1PL	<i>nene kitorang</i> grandmother 1PL	‘we grandmothers’
N	PRO-2PL	<i>bangsat kamu</i> rascal 2PL	‘you rascals’
N	PRO-3PL	<i>anjing dong</i> dog 3PL	‘*they dogs’ or ‘the dogs’

The focus of the current discussion is noun phrases with adnominal plural pronouns. Two examples of such ‘N PRO-PL’ expressions are presented in (30) and (31).

- (30) *pemuda dong snang skali*
youth 3PL feel.happy(.about) very
‘*they young people feel very happy’ (Lit. ‘youth they’)

- (31) *Ise dong su datang*
Ise 3PL already come
‘Ise and her companions including herself already came’ (Lit. ‘Ise they’)

The examples in (30) and (31) illustrate that ‘N PRO-PL’ noun phrases have two readings. With indefinite referents, such as *pemuda* ‘youth’ in (30), ‘N PRO-PL’ expressions have an additive plural reading. With definite referents, such as *Ise* in (31), ‘N PRO-PL’ noun phrases receive an associative inclusory plural reading. This makes Papuan Malay belong to the large group of languages in Asia where the “associative plural marker ... is also used to express additive plurals” (Daniel and Moravcsik 2011:5-6).

The additive plural interpretation of ‘N PRO-PL’ noun phrases is discussed in §2.1 and the associative inclusory plural reading in §2.2.

⁵ English examples are ‘we teachers’, ‘you students’, or ‘you idiot’ Lyons (1999: 451).

2.1 Additive plural interpretation

In ‘N PRO-PL’ noun phrases with indefinite referents, the adnominal plural pronouns have two functions. They indicate the definiteness of their referents and signal an additive plural reading of the respective noun phrases with the basic meaning of ‘the Xs’.

The additive interpretation implies referential homogeneity of the group. That is, “every referent of the plural form is also a referent of the stem” (Daniel and Moravcsik 2011:1). In (32), for example, *kitorang* ‘1PL’ denotes the plurality of its bare head nominal *nene* ‘grandmother’, while in (33) *kamu* ‘2PL’ signals the plurality of *bangsat* ‘rascal’, and in (34) *dong* ‘3PL’ indicates the plurality of *anjing* ‘dog’. These examples illustrate that the referent is always animate. It can be human as in (32) and (33), or nonhuman as in (34); inanimate referents are unattested.

Additive plural interpretation with bare head nominal

- (32) *jadi nene kitorang ini masak*
 so grandmother 1PL D.PROX cook
 ‘so we grandmothers here cook’

- (33) *bangsat kamu tu tinggal lari ke sana ke mari*
 rascal 2PL D.DIST stay run to L.DIST to L.PROX
 ‘you rascals there keep running back and forth’

- (34) ... *di mana anjing dong gonggong*
 at where dog 3PL bark
 ‘*[I just ran closing in on the pig] where they dogs were barking’

In (32) to (34) the number of referents is left unspecified. When this number is limited to two, speakers very often use a dual construction, such that ‘bare N PRO-PL *dua*’, as in (35) and (36).

Additive dual interpretation

- (35) *laki-laki kam dua sapu*
 man 2PL two sweep
 ‘you two boys sweep’

- (36) *pace dorang dua ini ke atas*
 man 3PL two D.PROX to top
 ‘*they two men here (went) up (there)’

2.2 Associative inclusory plural interpretation

‘N PRO-PL’ noun phrases with a definite referent and an adnominal plural pronoun receive an associative inclusory plural reading. The reading is “associative” in that it has the basic meaning of “‘X and X’s associate(s)’, where all members are individuals, X is the focal referent, and the associate(s) form a group centering around X” (Moravcsik 2003:471). In Papuan Malay, the “focal referent” is always encoded with a noun or noun phrase heading the phrasal construction, while the “associates” are encoded with a post-head plural pronoun. In (37) and (38), for instance, *Lodia* and *Pawlus* are the focal referents while the pronouns *torang* ‘1PL’ and *dorang* ‘3PL’ denote the associates, respectively.

The reading of ‘N PRO-PL’ noun phrases is not only associative, but also “inclusory” in that “all members of the plural set are summarily referred to by a pronoun” (Moravcsik 2003:479). That is, the reference of the pronoun includes the reference of the focal referent, such that ‘PRO including X’ (see also Gil 2009 and Haspelmath 2004:25). In (37), for instance, the pronoun *torang* ‘1PL’ includes not only the companions and the speaker, but all members of the plural set, “including Lodia”. That is, the ‘N PRO-PL’ noun phrase *Lodia torang* does not signal an additive relation in the sense of ‘*Lodia plus we companions’. Likewise in (38), the reference of *dorang* ‘3PL’ includes not only the associates of the focal referent *Pawlus*, but all members of the plural set, “including Pawlus”.

- (37) *itu yang Lodia torang bilang begini, ...*
 D.DIST REL Lodia 1PL say like.this
 ‘*that’s why Lodia and we companions including her said like this, ...’ (Lit. ‘Lodia we’)
- (38) *tanta ada mara Pawlus dorang*
 aunt exist be.angry Pawlus 3PL
 ‘*aunt is being angry with Pawlus and his companions including Pawlus’ (Lit. ‘Pawlus they’)

In the following, the semantic properties of associative inclusory expressions are examined. Also discussed are the lexical classes used in these expressions and the types of relationships expressed within the associated groups.

Associative inclusory expressions imply two distinct semantic properties, namely “referential heterogeneity”, and “reference to groups” (Daniel and Moravcsik 2011: 1–3). The notion of “referential heterogeneity” implies that “the associative plural designates a heterogeneous set” (2011: 1). This is shown in (39) to (41). In (39), *bapa Iskia dong* ‘father Iskia and them’ does not denote several people called *Iskia*; neither does *bapa desa dorang* ‘father mayor and them’ designate more than one mayor. The same applies to the examples in (40) and (41) (in this context *dokter* ‘doctor’ has a definite reading as the local hospital has only one doctor). In each case, the plural pronoun encodes a heterogeneous set of associates “centering around X”, the focal referent. Moreover, the pronouns include the focal referents in their reference.

Associative inclusory plural interpretation: Third person plural pronoun

- (39) *bapa Iskia dong bunu babi, bapa desa dorang*
 father Iskia 3PL kill pig father village 3PL

dong bunu babi
 3PL kill pig
 ‘*father Iskia and his companions including Iskia killed a pig, father mayor and his companions including the mayor, they killed a pig’
- (40) *Ise ko tinggal di sini suda deng mama-tua dorang*
 Ise 2SG stay at L.PROX just with aunt 3PL
 ‘*you Ise just stay here with aunt and her companions including aunt’

- (41) *dokter dorang bilang begini, ...*
 doctor 3PL say like.this
 ‘*the doctor and his companions including the doctor said like this, ...’

The semantic property of “reference to groups” refers to a high degree of internal cohesion within the plural construction. That is, the focal referent and the associates form “a spatially or conceptually coherent group” (Moravcsik 2003: 471). In (39) and (40), for instance, the ‘N PRO’ noun phrases denote coherent groups of inherently associated individuals, namely *bapa Iskia dong* ‘father Iskia and them’, *bapa desa dorang* ‘father mayor and them’, and *mama-tua dorang* ‘aunt and them’, respectively. Moreover, the groups referred to are “asymmetric, or ranked” (2003: 471). That is, the associative plural names its pragmatically most salient or highest ranking member, the focal referent, such as *bapa Iskia* ‘father Iskia’ and *bapa desa* ‘father mayor’ in (39), or *mama-tua* ‘aunt’ in (40). The remaining members of the plural set, by contrast, are not fully enumerated but subsumed under the plural pronoun *dong / dorang* ‘3PL’.

Typically, the associates are encoded with the third person plural pronoun. Less frequently, the associates are encoded with the first person plural pronoun, as in (37), repeated as (42), or with the second person plural pronoun as in (43) and (44). In associative inclusory expressions formed with the second person plural pronoun, the focal referent is typically the addressee as in (43). Alternatively, although much less often, one of the associates can be the addressee as in (44) (the focal referent *Lodia* was not present during this conversation).

Associative inclusory plural interpretation: First and second person plural pronouns

- (42) *itu yang Lodia torang bilang begini, ...*
 D.DIST REL Lodia 1PL say like.this
 ‘*that’s why Lodia and her companions including me said like this, ...’
- (43) *tanta Oktofina kam pulang jam brapa*
 aunt Oktofina 2PL go.home hour how.many
 ‘*what time did you aunt Oktofina and your companions including you (Oktofina) come home?’
- (44) *Lodia kam pake trek ke sana baru sa ...*
 Lodia 2PL use truck to L.DIST and.then 1SG
 ‘*Lodia and her companions including you (addressee) took the truck to (go) over there, and then I ...’

In (37) to (44), the number of referents is not specified. When only two participants are involved, however, that is, the focal referent plus one associate, Papuan Malay speakers very often use a dual construction, such that ‘bare N PRO-PL *dua*’, as in (45). Like dual constructions with an additive reading (§2.1), the associate is not explicitly mentioned but subsumed under the numeral *dua* ‘two’.

Associative inclusory dual interpretation

- (45) *om kitong dua keluar mo pergi cari pinang*
 uncle 1PL two go.out want go search betel.nut
 ‘uncle and I went out and wanted to look for betel nuts’

In terms of the lexical classes employed in associative plural expressions, Daniel and Moravcsik (2011:3) observe “a clear preference for associative plurals formed from proper names over kin terms over non-kin human common nouns over non-human nouns.” This also applies to Papuan Malay, in that the focal referents in associative inclusory expressions are formed from human nouns while non-human animate focal referents are unattested. Among human nouns, however, kin terms as in (40) are more common than proper names as in (37). This has to do with the fact that culturally people prefer not to use proper names, if they have another option, especially if the person is older and/or present. In addition, although not very often, associative plural expressions are formed from non-kin terms such as the title noun expression *bapa desa* ‘father mayor’ in (39), or the common noun *dokter* ‘doctor’ in (41). (See also Moravcsik 2003:471-473.)

Concerning the relationship between the focal referent X and the associates, Daniel and Moravcsik (2011:3) note that “the group may be: (i) X’s family, (ii) X’s friends, or familiar associates, or (iii) an occasional group that X is a member of” with “kin forming the most commonly understood associates”. Papuan Malay also conforms to this cross-linguistic finding in that the associates are most often X’s family as in (40). Less commonly, X’s associates are friends or companions in a shared activity as in (41). Associative plurals denoting occasional groups or, following Moravcsik (2003:473), “incidental association”, are unattested.

3 Associative plural in other regional Malay varieties

The associative plural interpretation for noun phrases with adnominal plural pronoun is also quite common for other regional Malay varieties, such as Ambon, Bali Berkuak, Dobo, Kupang, Manado, or Sri Lanka Malay. In Ternate Malay, however, pronouns do not have adnominal functions (Litamahuputty 2012:141). The associative plural reading of noun phrases with adnominal plural pronoun found in regional Malay varieties is illustrated in the examples in (46) to (51).

In Ambon Malay, Dobo Malay, Kupang Malay, and Sri Lanka Malay, the adnominal pronoun is postposed as in Papuan Malay, as demonstrated in (46) to (49), respectively. By contrast, in Balai Berkuak Malay or Manado Malay the pronoun is in pre-head position, as shown in (50) and (51), respectively.

In each case, the pronoun is the third person plural pronoun. In most varieties only the short pronoun form is used as in Ambon Malay or Dobo Malay, as shown in (46) and (47), respectively. Only in Manado Malay the short and the long forms are used, as illustrated in (51). Contrasting with Papuan Malay, these regional Malay varieties do not employ the first and second person plural pronouns to express associative plurality.

Ambon Malay (van Minde 1997:169)

- (46) *mama dong*
 mother 3PL
 ‘mother and the others’

Dobo Malay (Nivens, p.c. 2013)

- (47) *pa Kace dong*
 man Kace 3PL
 ‘Mr. Kace and his associates’

Kupang Malay (Grimes and Jacob 2008)

- (48) *Yan dong*
 Yan 3PL
 ‘Yan and his family / mates’

Sri Lanka Malay (Slomanson 2013)

- (49) *Miflal derang*
 Miflal 3PL
 ‘Miflal and his friends’

Balai Berkuak Malay (Tadmor 2002:7)

- (50) *sidaq Katalq*
 3PL Katalq
 ‘Katalq and her gang’

Manado Malay (Stoel 2005:30)

- (51) *dong / dorang Yoram*
 3PL Yoram
 ‘Yoram and his family’

In short, among the eastern Malay varieties Papuan Malay is unique in that associative plural expressions are formed with all three plural persons, including the long and the short pronoun forms.

4 Summary

In Papuan Malay noun phrases in which a plural pronoun modifies a bare head nominal denote additive or associative plurality. With an indefinite referent the construction has an additive reading with the basic meaning of ‘Xs’ as in *pemuda dong* ‘*they young people’. This group reading implies referential homogeneity. With a definite referent the same construction has an associative reading with the basic meaning ‘X and X’s associates’ as in *Pawlus dorang* ‘Pawlus and his associates’. This group reading implies referential heterogeneity and reference to groups.

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