

**NOMINAL NUMBER IN
MESO-MELANESIAN**

Bill Palmer

University of Newcastle

Proceedings of the LFG12 Conference

Miriam Butt and Tracy Holloway King (Editors)

2012

CSLI Publications

<http://csli-publications.stanford.edu/>

Abstract

This paper, presented in the workshop on number marking, presents details of nominal and pronominal number marking in the Meso-Melanesian group of Austronesian languages. Languages of this group display a range of morphosyntactic and morphosemantic phenomena relating to number that require accounting for by any theory of grammar. These include hierarchies of number categories; the interaction of hierarchies of animacy with number; the role of number markers as syntactic heads; inversion in number marking; and patterns of indexing target for number in possessive constructions. This paper does not attempt to account for these phenomena from an LFG perspective, but presents details of the phenomena requiring accounting for.

1. Introduction

Meso-Melanesian (henceforth MM) is a second-order subgroup of the large Oceanic branch of Austronesian. Oceanic is regarded as having six first-order subgroups: Yapese; Admiralties; St Matthias; Temotu; Central Eastern Oceanic; and Western Oceanic. MM is a subgroup within Western Oceanic, the other Western Oceanic subgroups being North New Guinea and Papuan Tip, which are now thought to belong to a single sister group to MM. The 69 languages within MM are spoken in Island Melanesia to the east of mainland New Guinea: in New Britain, New Ireland, Bougainville, and the western Solomon Islands. Languages of the group are highly diverse in a range of lexical, phonological, morphological and syntactic ways, and in many cases are quite divergent from typical Oceanic structures. This diversity is assumed to have resulted from long periods of bilingualism with neighbouring Papuan languages.

This paper presents details of number marking in nominal constructions across MM, including number in pronominal systems, and number marking with nominal heads. In discussing pronominal number categories it discusses number in verb agreement. Verbal number phenomena such as pluractionality are, however, outside its scope and are not discussed.

2. Pronominal number

2.1 Independent pronouns

MM languages typically recognize more number categories than singular and plural in independent pronouns. However, a few do distinguish only those categories. As is typical for MM, Bannoni (Bannoni-Piva, Lincoln 1976; Lynch & Ross 2002) distinguishes four person categories, with the standard first person

exclusivity distinction in non-singular. However, unlike most of its near relatives, Bannoni independent pronouns distinguish only singular and plural, as in (1).

(1) Bannoni:

	1EXC	1INC	2	3
SG	<i>na</i>		<i>no</i>	<i>nna</i>
PL	<i>yamam</i>	<i>yata</i>	<i>yamu</i>	<i>nari</i>

More specific number categories are expressed by means of periphrasis in a possessive construction in which the enumerated entity is expressed as a possessor adjunct modifying a possessum number, as in (2a). This is not a specifically pronominal construction, but one of the language's strategies for enumerating nominals, as (2b) shows.

- (2) a. *yata ye-ra toom*
 weINC POSS-1INCPL.PSSR two
 'we two' (lit. 'our (inc.) two') (Bannoni)
- b. *bekeu ye-ri toom*
 dog POSS-3PL.PSSR two
 'two dogs' (lit. 'the dog's two') (Bannoni)

The syntax of the construction in (2) involves the numeral as head, with the possessor pronoun or noun as an adjunct. As is standard in NWS languages, the adjunct expressing the possessor may be omitted, as in (3).

- (3) *ye-ri yinima*
 POSS-1INC.PL.PSSR five
 'the five of them' (lit. 'their five') (Bannoni)

However, in Bannoni this possessive construction is unusual in that in non-enumerating phrases, it only occurs with pronominal possessors expressed only by agreement on the possessive particle *ye-*, although the interrogative pronoun may occur as the possessor, as in (4). A separate possessive construction is required if the possessor is an NP. NP possessors as in (2b) are only permitted in this construction if the head is a numeral and the function of the phrase is to enumerate the possessor.

- (4) *hee ye-na moono*
 who POSS-3SG.PSSR woman
 'whose wife?' (Bannoni)

In MM, more number distinctions than singular and plural are typically expressed in independent pronouns. Several distinguish dual in addition to plural, for example Babatana (Choiseul, Money 2002), as in (5):

(5) Babatana:

	1EXC	1INC	2	3
SG	<i>ra</i>		<i>re</i>	<i>gi</i>
DU	<i>raru</i>	<i>zituru</i>	<i>raburu</i>	<i>ziru</i>
PL	<i>rami</i>	<i>zita</i>	<i>ramu</i>	<i>zira</i>

Despite the regularity of the final syllable in the dual forms, in Babatana the dual pronouns are not synchronically morphologically complex and are non-transparent – the standard Babatana numeral ‘two’ is *kere*.

Many MM languages distinguish a fourth number category. This may be a trial as in Kubokota (New Georgia, Chambers 2009):

(6) Kubokota:

	1EXC	1INC	2	3
SG	<i>ara</i>		<i>ao</i>	<i>aza</i>
DU	<i>yami-kori</i>	<i>yita-kori</i>	<i>yamu-kori</i>	<i>ari-kori</i>
TR	<i>yami-kue</i>	<i>yita-kue</i>	<i>yamu-kue</i>	<i>ari-kue</i>
PL	<i>yami</i>	<i>yita</i>	<i>yamu</i>	<i>ria</i>

In Kubokota the dual and trial pronouns are morphologically complex and are semantically transparent – the standard Kubokota numerals are *kori* ‘two’ and *kue* ‘three’, and the dual and trial pronouns are transparently constructed on the plural forms as their base. Some other languages with a trial as well as dual have non-transparent forms in both number categories. In Vinitiri (Patpatar-Tolai, New Ireland, Van Der Mark 2007) the numerals are *uruə* ‘two’, *utulu* ‘three’, with the dual and trial pronouns not synchronically morphologically composed:

(7) Vinitiri:

	1EXC	1INC	2	3
SG	<i>iau</i>		<i>iəβəu</i>	<i>iə</i>
DU	<i>iamiru</i>	<i>iadori</i>	<i>iamuru</i>	<i>idiru</i>
TR	<i>iəmitalu</i>	<i>iədətalu</i>	<i>iəmutalu</i>	<i>iditalu</i>
PL	<i>iəməmami</i>	<i>iadə</i>	<i>iamui</i>	<i>idi</i>

Several MM languages with four number categories in their independent pronouns have a paucal rather than trial category, as Siar (Patpatar-Tolai, New Ireland, Frowein 2011) illustrates in (8). The Siar dual and paucal forms are again not morphologically transparent. As with the Vinitiri dual and trial they represent an irregular diachronic derivation from numerals. In the Siar case the dual is irregularly derived from the numeral *ru* ‘two’, and, predictably, the paucal is derived from *tol* ‘three’. Siar is interesting in that the plural forms are similarly derived diachronically from *at*, the numeral for ‘four’.

(8) Siar:

	1EXC	1INC	2	3
SG	<i>ya(u)</i>		<i>u</i>	<i>i</i>
DU	<i>mara(u)</i>	<i>dara(u)</i>	<i>amra(u)</i>	<i>dira(u)</i>
PC	<i>mato(l)</i>	<i>dato(l)</i>	<i>amto(l)</i>	<i>diat</i>
PL	<i>mèt</i>	<i>dat</i>	<i>amat</i>	<i>dit</i>

Sematically the Siar paucal is representative of MM paucals in which there is no specific upper bound to the number of items that may be included. The Siar paucal may refer to three or more items, up to several dozen depending on context (see Corbett 2000:22).

The additional number category quadral is attested in MM. Sursurunga (Patpatar-Tolai, New Ireland, Hutchisson 1975), for example, displays a quadral category:

(9) Sursurunga:

	1EXC	1INC	2	3
SG	<i>yau</i>		<i>u</i>	<i>a</i>
DU	<i>giur</i>	<i>gitar</i>	<i>gaur</i>	<i>diar</i>
TR	<i>gimtul</i>	<i>gitul</i>	<i>gamtul</i>	<i>ditul</i>
QD	<i>gimat</i>	<i>gitat</i>	<i>gamat</i>	<i>diat</i>
PL	<i>gim</i>	<i>git</i>	<i>gam</i>	<i>di</i>

These forms are semi-transparent – the standard Sursurunga numerals are *ru* ‘two’, *tul* ‘three’, *hat* ‘four’. A quadral similar to that in Sursurunga is presumably the origin of the Siar plural forms, suggesting that at an earlier stage Sursurunga had a quadral. Logically the loss of the quadral must have preceded a shift from trial to paucal in the Siar forms derived from the numeral for three. The Siar forms are therefore interesting for several reasons: the language originally had more number categories in independent pronouns than the modern language displays – one category has been lost; the semantic category quadral has been lost, but the formal category lost is the plural set - the function of the quadral has expanded to take over the semantic territory of the plural; and the trial shifted to a paucal function.

Corbett (2000:26-29) argues that usage demonstrates that the Sursurunga trial is actually a paucal, while the quadral is actually an extended paucal. However, the historical relationship between the forms given as trial and quadral in (9) and the numerals for three and four in Sursurunga demonstrates that the synchronic paucal had its origins in a construction meaning ‘they three’, and the extended paucal in a construction meaning ‘they four’, etc. The extended paucal function of the quadral in synchronic Sursurunga therefore represents a likely middle

point in the diachronic development of the Siar plural with its origin in the numeral for four.

2.2 Argument agreement

Verb agreement for subject and object occurs in many but not all MM languages. In most languages this agreement distinguishes number as well as person.

Many MM languages typically display what is referred to in the Oceanist literature as a “verb complex” – a sequence that includes serializable verbs, negation, a number of adverbial categories, and a preverbal particle or proclitic encoding subject agreement along with modality or tense and sometimes aspect, and a postverbal position occupied by “object agreement”, in fact often object clitic pronouns. NWS also display an unusual phenomenon in which possessive or former possessive morphology occurs postverbally agreeing with the subject as well as expressing aspectual categories (Palmer 2011). In addition to verb argument agreement, MM languages display possessor agreement in the NP.

Argument agreement in MM languages displays as many number distinctions as independent pronouns in that language, or fewer categories, but never more.

2.2.1 Preverbal subject agreement

Some MM languages have no preverbal subject agreement. In all cases this is a diachronic development in languages or subgroups that at an earlier stage displayed preverbal subject agreement. In Cheke Holo (Isabel, Palmer 2011:702), for example, preverbal former person and number indexing morphology has developed more fine-grained modal, aspect and tense functions and completely lost its subject agreement role.

In some MM languages preverbal subject agreement has lost its number agreement function, while retaining its person agreement function (in addition to modal functions). This is the case in Kokota (Isabel, Palmer 2009). The realis set is shown in (10).

(10) Kokota:

	1EXC	1INC	2	3
SG	<i>na</i>		<i>no</i>	<i>ne</i>
PL		<i>da</i>		

Some languages with multiple number categories in independent pronouns distinguish the same categories in subject agreement. In Vinitiri, for example, the independent pronouns distinguish four number categories - singular, dual, trial and plural, as discussed above. Preverbal subject agreement in the language makes the same distinctions:

(11) Vinitiri:

	1EXC	1INC	2	3
SG	<i>iə</i>		<i>u</i>	<i>i</i>
DU	<i>miru</i>	<i>təru</i>	<i>muru</i>	<i>diru</i>
TR	<i>mitalu</i>	<i>tulu</i>	<i>mutulu</i>	<i>ditalu</i>
PL	<i>mi</i>	<i>də / təu</i>	<i>mui</i>	<i>di</i>

In some person and number categories the relationship between the Vinitiri subject agreement particles and independent pronouns is regular and transparent. In others it is not.

The Vinitiri situation where preverbal subject agreement displays the same number categories as independent pronouns is not typical. MM languages with multiple number categories in independent pronouns typically distinguish only singular versus plural in subject agreement. This is the case in Kubokota, for example, as in (12).

(12) Kubokota:

	1EXC	1INC	2	3
SG	<i>ga</i>		<i>gu / go</i>	<i>za / gi</i>
PL	<i>yami</i>	<i>tage</i>	<i>yamu</i>	<i>gari / ge</i>

In several languages, primarily of the North Bougainville subgroup, the third singular subject agreement particle, usually *e*, has been generalized to all person and number categories. Typically this involves what might be termed ‘creeping neutralisation’. Rather than the entire function of person and number agreement being neutralised, categorical distinctions are progressively formally neutralised. In Hanahan Halia (North Bougainville, Allen 1987), for example, past tense realis has neutralised number in first exclusive and second persons, with those person distinctions also being neutralised, and person distinctions between first inclusive plural and third plural also neutralised, as (13) shows. Only third singular has retained a dedicated combination of person and number. In nonpast realis all person and number categories have been neutralised, as in (14).

(13) Hanahan:

	1EXC	1INC	2	3
SG	<i>u</i>		<i>u</i>	<i>e</i>
PL	<i>u</i>	<i>i</i>	<i>u</i>	<i>i</i>

(14) Hanahan:

	1EXC	1INC	2	3
SG	<i>e</i>		<i>e</i>	<i>e</i>
PL	<i>e</i>	<i>e</i>	<i>e</i>	<i>e</i>

Other languages are less far or further along a path of category neutralisation. Torau (Mono-Torau, Palmer 2007), for example, has only neutralized number in second person.

2.2.2 Object, postverbal subject, and possessor agreement

In terms of number the same phenomenon is seen in object, postverbal subject and possessor agreement as in preverbal subject agreement. Some languages with multiple number categories in independent pronouns distinguish the same categories in one or more of these types of agreement, while others display fewer categories, typically only singular versus plural. No languages display more number distinctions in these types of agreement than in independent pronouns.

2.3 Number hierarchies and animacy hierarchies

Number hierarchies and animacy hierarchies (see Corbett 2000:90-94) play interacting roles in the expression of pronominal categories in several MM languages. This phenomenon is probably more widespread in the group than is known as it is not typically reported in grammatical descriptions.

Vinitiri provides a good example. When the referent is human, the distinction between singular and plural is obligatorily expressed. The dual and trial forms are optional – plural forms may be used instead, demonstrating that in this language dual and trial are subcategories of plural, rather than discrete number categories. However, the use of these two subcategories is not equivalent. Dual, while optional, is used more frequently when there are two referents than trial is when there are three. To put this the other way around, plural is more likely to be used instead of trial than instead of dual. This suggests a number hierarchy as follows, in terms of likelihood of expression: PL > DU > TR. This hierarchy is exemplified in (15), where the same group of three actors is expressed in the first clause using a plural form, and in the second clause using a trial form.

- (15) *Mi mutu βuse burəsi u-ra=ra pisa*
 1EXC.PL.SBJ chop throw.away fall to-DIR=ART ground
 ‘We chopped [it] away onto the ground.
- na-muru mitalu mutu-iau a uruə-na-pəkanə.*
 LOC-follow 1EXC.TR.SBJ chop-1SGOBJ ART two-LIG-piece
 ‘Then we three chopped me a piece.’ (Vinitiri)

The situation described above holds in relation to human referents. It also appears to hold with non-human animates, although the facts are not entirely clear. However, the situation is different with inanimate referents. In this situation plural marking in pronominal forms is not merely optional, it is

impossible. In (16), for example, the fact that multiple tunnels are involved is explicitly established in the first clause by marking the noun with a plural marker. However, the subsequent pronominal reference to these tunnels in the third clause involves an otherwise singular agreement form.

(16) *Supu di gə kəli ra=uməna tuŋu.*
 PURP 3PL.SBJ PST dig ART=PL tunnel
 ‘They were supposed to dig tunnels.’

βare mi gə kisi, mi gə launu ta-nə.
 PURP 1EXC.PL.SBJ PST stay 1EXC.PL.SBJ PST live LOC=3SG.PSSR
 So that we stayed, we lived in it [the tunnels].’ (Vinitiri)

Data from other languages in the group suggests that a similar interaction of hierarchies of number and animacy may be at work, but descriptions typically do not make this explicit.

3. Pluralizing nouns

3.1 Lexical plurals

In most MM languages a handful of referents are expressed with distinct forms for the singular and plural. These lexical plurals usually occur with important human terms. In some cases the singular and plural terms are formally similar but irregularly related. For example Halia plural *tohalio* ‘women’ is related to the singular *tahol* ‘woman’ by vowel metathesis and the addition of suffixed phonological material. More typically, the plural forms are suppletive, as the examples in (17) from Mono (Mono-Torau, Boch n.d.) illustrate.

(17) Mono:
 a. *tioŋ* ‘man’ *hanua* ‘men’
 b. *batafa* ‘woman’ *talaiβa* ‘women’
 c. *tauii* ‘child’ *aanana* ‘children’

3.2 Pluralization

Many MM languages lack a dedicated plural marker to accompany nouns. However, plural is also not expressed by inflection on nouns in MM, with the exception of reduplication discussed below. Instead, MM languages employ a range of strategies for expressing plurality with nouns, including accompanying pronouns, articles, demonstratives, quantifiers, and numerals. In all cases these are optional. As a result, in the majority of noun phrases in any MM language number is formally ambiguous and must be recovered from context.

3.2.1 Pronominal heads

Languages without an overt plural marker typically pluralize noun phrases periphrastically by making the NP the complement of a third person plural pronoun. This gives the pronoun the superficial appearance of a plural article, and descriptions of some languages analyse forms such as these as both a pronoun and a polysemous (or homophonous) plural article. In some languages this occurs with no article, reinforcing the appearance of the pronoun as an article. In others, such as Kubokota, the pronoun co-occurs with an article in the embedded NP, making it clear that the pronoun is not, itself, an article, as Chambers (2009) recognizes. In (18) the embedded NP is bracketed.

- (18) *ria* [*na tinoni paleka=di*]
they ART person wound=3PL
'the wounded people' [lit. 'they the wounded people'] (Kubokota)

3.2.2 Articles

No number marking in articles common in MM languages. In Kubokota, for example, the common article *na* occurs with singular, as in (19a), and plural (19b) referents. Equally common are languages where the articles distinguish singular and plural, as in Kokota in (20).

- (19) a. *Ani na toa=na.* b. *Za kubo na seru.*
PROX.SG ART live=3SG.PSSR 3SG.SBJ.RL be.many ART star
'This is a live one.' 'There are lots of stars.' (lit. 'The stars are many.') (Kubokota)
- (20) a. *Ia puku ba, ia do ba, n-e kati=nau ara.*
ART.SG fly ALT ART.SG mosquito ALT RL-3SBJ bite=1SG.OBJ I
'A fly or a mosquito bit me.' (Kokota)
- b. *koꝛo ma=di ira loꝛoguai=na.*
pull come=3PL.OBJ ART.PL coil=3SG.PSSR
'...[he] pulled his coils towards him.' (Kokota)

Several languages of the North Bougainville subgroup employ a noun class system that interacts with number in interesting ways involving the phenomenon of inverse number marking (see Corbett 2000:163-165). In Teop (North Bougainville, Mosel & Thiesen 2007) this system also interacts with the animacy hierarchy in a system somewhat more complex than as discussed by Corbett (2000:164-165). Teop has three classes, referred to as the A-class, O-class and E-class. The E-class involves what is referred to in the Oceanist literature as a personal article. Many Oceanic languages have an article that is used with

personal names, and often also with pronouns. The exact extent of the coverage of the personal article varies from language to language. Typically the personal article does not distinguish number, but in a few MM languages, including Teop, it does. The inversion applies to the other two classes – the A-class and O-class. As (21) shows, the form that functions as the singular article in the A-class functions as the plural article in the O-class, and vice versa.

(21) Teop:

	E-class	A-class	O-class
SG	<i>e</i>	<i>a</i>	<i>o</i>
PL	<i>ere</i>	<i>o</i>	<i>a</i>

The basis of membership of the A-class and O-class has not been fully worked out for any MM language in which the phenomenon occurs. However, one of the factors at work appears to be an animacy hierarchy. For example in Teop, the A-class includes terms for humans, vertebrate animates, and invertebrate animates that have legs. The O-class, on the other hand, includes invertebrates without legs and plants. However, the A-class and O-class both include a number of items that do not conform to that system, as (22) shows.

- (22) A-class: humans, vertebrates, legged invertebrates, food (inc. fruit), non-plant utensils, landmarks, possessed parts.
 O-class: legless invertebrates, plants, plant parts (except fruit), plant material utensils, masses, etc.
 E-class: personal names, pronouns, kinship terms, important humans (e.g. ‘chief’, ‘friend’), domestic animals

One factor at play in class membership appears to be cultural importance. Another appears to be a distinction between count and mass nouns. The latter suggests that one overarching factor may be individuation – items that are normally or readily individuated belong to the A-class, while items that are not normally individuated (or are not individuatable) belong to the O-class. From this perspective, the function of the articles may be collapsed from a system where each expresses both singular and plural depending on the class, into a system where the two articles each have a single function: *a* expresses ‘expected number’ (singular with items normally individuated, plural with things not normally individuated), while *o* expresses ‘unexpected number’ (plural with items normally individuated, singular with things not normally individuated). This hypothesis has yet to be tested against the data in North Bougainville languages displaying this inversion.

The animacy hierarchy clearly does come into play with the E-class in Teop. Interestingly, membership of the E-class differs in singular and plural, or to put it

another way, the boundary between the singular personal *e* and human/animate *a* is at a different point in the animacy hierarchy compared to that of the plural personal *ere* and human/animate *o*:

(23)	Teop:	SG	PL
	personal names	<i>e</i>	<i>ere</i>
	kin terms	<i>e</i>	<i>ere</i>
	important humans	<i>e</i>	<i>o</i>
	domestic animals	<i>e</i>	<i>o</i>
	other humans	<i>a</i>	<i>o</i>
	wild vertebrates	<i>a</i>	<i>o</i>
	legged invertebrates	<i>a</i>	<i>o</i>
	legless invertebrates	<i>o</i>	<i>a</i>
	plants	<i>o</i>	<i>a</i>

The data in (23) shows the role of the animacy hierarchy in Teop class membership, and the differential boundary between E-class and A-class for singular and plural. As discussed above, other factors such as cultural salience come into play with membership of the A-class and O-class. Examples in (24)-(25) illustrate the articles in use:

- | | | | | | | | | | | | |
|---------|----------|-------------|------------|-------------|--------------|----------|-------------|-----------|--------------------|------------|----------------------|
| (24) a. | <i>a</i> | <i>moon</i> | ART woman | 'the woman' | b. | <i>o</i> | <i>moon</i> | ART woman | 'the women' (Teop) | | |
| | c. | <i>o</i> | <i>hoi</i> | ART basket | 'the basket' | | d. | <i>a</i> | <i>hoi</i> | ART basket | 'the baskets' (Teop) |
-
- | | | | | | | | | | | | | | | |
|---------|----------|------------------|-------------------------------|-----------------------|------------|------------|------------------|-------------------------------|-------------------------------|--------------|---------------|------------|-------|---------------------|
| (25) a. | <i>e</i> | <i>subu-na=e</i> | ART grandparent-POSS-3SG.PSSR | 'his/her grandparent' | b. | <i>ere</i> | <i>subu-na=e</i> | ART grandparent-POSS-3SG.PSSR | 'his/her grandparents' (Teop) | | | | | |
| | c. | <i>e</i> | <i>magee</i> | <i>te=naa</i> | ART friend | LOC=I | 'my friend' | d. | <i>o</i> | <i>magee</i> | <i>te=naa</i> | ART friend | LOC=I | 'my friends' (Teop) |

3.2.3 Plural marking lexeme

Many MM languages have one or more independent lexeme that accompanies nouns to express plural. Vinitiri has one plural marker *umənə*. As is the case with most MM languages with a plural marker, *umənə* is optional - most NPs with plural referents have no overt plural marking. However, when *umənə* does occur,

it must be accompanied by an article, as in (26). Syntactically *umə̀nə* appears to be a noun, as it functions as head of the NP in which it occurs, as in (27).

(26) *a=umə̀nə ɲətɪɲəti*
ART=PL mosquito
'mosquitos' (Vinitiri)

(27) *a=umə̀nə*
ART=PL
'some [of something]' (Vinitiri)

While *umə̀nə* indicates only plurality, the term is a member of a closed lexical class of four quantifiers:

(28) a. *umə̀nə* 'plural' b. *kəβuanə* 'plenty/lots'
c. *sələβuru* 'various' d. *paupau* 'few' (Vinitiri)

Several MM languages have more than one plural marking lexeme. Teop has two: *maa*, a general plural, and *ba*, a plural used with kin terms:

(29) a. *a=maa hoi ohita* b. *a=ba keara te=naa*
ART=GEN.PL basket galip.nut ART=KIN.PL brother LOC=I
'galip nut baskets' 'my brothers' (Teop)

Again the Teop plural markers must occur with an article. However, as the article is the head of a DP and the plural marker occurs within the NP, with conjoined NPs like those in (30) the article has scope over both NPs, meaning the plural marker in the second NP superficially appears to occur without an article.

(30) *a=[[maa bebeahu] bara [maa sun hiaβa sana]]*
ART=GEN.PL be.long and GEN.PL stand up very
'long and very high ones' (Teop)

Bannoni has three distinct plural markers recognising distinctions of animacy: human *na*, animate *ne*, and inanimate *kare*. In (31c-d) the same lexical form has animate and inanimate meanings indicated solely by the articles.

(31) a. *na taβana* b. *o boroyo*
HUM.PL person ANIM.PL pig
'people' 'pigs' (Bannoni)
c. *kare pipito* d. *o pipito*
INANIM.PL star ANIM.PL firefly
'stars' 'fireflies' (Bannoni)

As with the varying optionality of number marking determined by animacy in

pronominal forms discussed in §2.3, Bannoni plural markers vary in optionality and likelihood of use depending on animacy. Unlike the plural markers in Vinitiri and Teop, in Bannoni the human plural marker *na*, shown in (31a), is obligatory with plural referents, while the animate plural in (31b) is optional. The inanimate plural *kare*, as in (31c), is rarely used, and is absent from some dialects.

3.2.4 Plural by reduplication

The one morphological strategy MM employs to mark plural on nouns involves reduplication. In Teop, for example, nouns may reduplicate to indicate plurality. However, with the exception of pluralization of some human terms in a handful of MM languages (see §4.1 below), this is optional. When reduplication does occur, the noun must be accompanied by an article, which itself indicates number, as in (32a). Reduplicated nouns may also optionally be accompanied by one of the plural marking lexemes discussed above, adding further marking for plurality, as in (32b). A noun in Teop may therefore carry as little as no overt marking for number, or as much as three forms – reduplication, a plural article, and a plural marking lexeme.

- (32) a. *o kari~kariβana te=βe o beera...*
 ART PL~scale LOC=3SG ART be.big
 ‘[This fish,] its scales are big...’ (Teop)
- b. *a=maa nahu~nahu guu, a=maa meha nahu muu*
 ART=PL PL~pot pig ART=PL other pot taro
 ‘pots with pork, other pots with taro’ (Teop)

As in Teop, in Vinitiri the reduplicative plural is optional, must occur with an article, and may or not occur with a plural marker. However, the Vinitiri reduplicative plural gives a distributive reading, as in (33b).

- (33) a. *a=umənə dəβə~dəβəi*
 ART=PL PL.DSTR~plant
 ‘the plants’ (Vinitiri)
- b. *pətai a pisə i gə βanə parukə ta=ra kani~kaniəni*
 NEG ART ground 3SG.SBJPST go all LOC=ARTPL.DSTR~home
 ‘No earth [from the volcano] fell on any of the homes.’ (Vinitiri)

3.2.5 Demonstratives

While demonstratives are employed to mark number in many MM languages, many others do not distinguish number in the demonstrative system. In Sisiqa (Choiseul, Ross 2002), for example, three spatial categories corresponding to person categories are recognized, but no number distinctions made, as in (34).

Kubokota, on the other hand, distinguishes singular and plural in its demonstratives (that in spatial terms are distance based, not person-based), as in (35). No MM language distinguishes more number categories than singular versus plural in its demonstratives.

(34) Sisiqa:

	Speaker proximal	Hearer proximal	Distal
SG/PL	<i>gəti</i>	<i>ta</i>	<i>gei</i>

(35) Kubokota:

	Proximal	Medial	Distal
SG	<i>ani</i>	<i>zana</i>	<i>nari</i>
PL	<i>ari</i>	<i>zara</i>	<i>rari</i>

In Kubokota distinct demonstrative forms express each number category. In Bannoni, on the other hand, plural demonstratives are constructed using demonstrative base forms, followed by a form identical to the inanimate plural article *kare*. However, in this context *kare* is not an article and follows the demonstrative rather than precedes it in two of the categories.

(36) Bannoni:

	Proximal	Medial	Distal
SG	<i>ie</i>	<i>nana</i>	<i>io</i>
PL	<i>ie kare</i>	<i>nana kare</i>	<i>kare io</i>

In MM languages the demonstratives are not determiners so do not occur in DET and freely co-occur with articles. In some languages, such as Bannoni in (37a) and Kubokota in (37b), demonstratives distinguishing number occur with number-invariant articles. Note that in some languages (e.g. Bannoni), the demonstrative is prenominal, while in others (e.g. Kubokota), it is postnominal.

(37) a. *tama-na*[=*i* *ie* *megara*
 father-3SG.PSSR=ART PROX.SG child
 ‘this child’s father’ (Bannoni)

b. *na tina*=*gu* *ara ani*
 ART mother=1SG.PSSR I PROX.SG
 ‘this mother of mine’ (Kubokota)

In other MM languages, such as Kokota in (38), number-distinguishing demonstratives occur with number-distinguishing articles.

- (38) *ira naitu toke aro*
 ART.PL devil arrive PROX.PL
 ‘these arriving devils’ (Kokota)

4. Indexing target – number in possession

The typological dimension of indexing target has recently begun to attract attention (Evans & Fenwick 2010). This section examines the indexing of possessor number in relation to both marking locus and indexing target. ‘Marking’ is the location in a construction where a dependency is expressed – on the head, the dependent, neither or both. This is independent of ‘indexing’ of grammatical or lexical properties (Nichols 1986:58). Comparable to (but independent of) marking, the morphology may index features of the head, dependent, neither, or both. The locus of the marking may or may not be the same as the target of the indexing.

In MM all dependencies discussed so far in the present paper involve head-marking. This is typical for MM, and for Oceanic in general. For example, the dependency between a verb and its core arguments is expressed by marking the head verb with particles or clitics (i.e. by agreement), and not by marking the dependent argument (i.e. not by case).¹ However, while the head is the locus of the marking, it is features (person and number) of the dependent that are indexed. This is agreement. The notion of agreement may be most parsimoniously defined as morphology that is head-marking and dependent-indexing, while case may be defined as dependent-marking and dependent-indexing.

In MM the possessive dependency within NPs is also typically head-marking and dependent-indexing (i.e. it involves possessor agreement, not genitive case). Here the head possessum noun is marked with morphology indexing the number and person of the dependent possessor. This may be exemplified with Mono (Mono-Torau, Evans & Palmer 2011). Mono’s relative Uruava (Evans & Palmer 2011) exemplifies an atypical situation for MM where the possessive dependency is marked on the head, but number of both the head and dependent are indexed.

4.1 Number in possession in Mono – head-marking:dependent-indexing

Typically for MM languages, and Oceanic in general, Mono has two possessive constructions – a ‘direct’ construction and an ‘indirect’ construction. In the direct

¹ This is the standard analysis. In fact in some MM languages apparent object agreement actually involves weak accusative pronouns. In some languages subject agreement may actually involve nominative pronouns. In these cases the morphology is the argument, not agreement. Discussion of this is beyond the scope of the present paper. Outside MM some Oceanic languages do have case marking particles, clitics or affixes (e.g. Polynesian). However, head-marking is typical.

construction, typically associated with inalienable possession, an affix attaches directly to the head possessum noun to index the number and person of the dependent possessor, as in (39).

- (39) *batafa ifa-na*
 woman sis.in.law-3SG.PSSR
 ‘the woman’s sister(s)-in-law’ (Mono)

Note that the number of the possessum is ambiguous – (39) may refer to one sister-in-law, or multiple sisters-in-law. The morphology therefore indexes the number (and person) only of the dependent possessor, and not of the head possessum. However, the morphology is located on the noun expressing the head possessum, while the dependent possessor noun is unmarked. This morphology is therefore head-marking and dependent-indexing, and thus agreement.

In the indirect construction, a particle precedes the head possessum noun, and it is this particle that carries the dependent possessor-indexing morphology. The particle marks the head noun as being in a possessive dependency, while the feature-indexing morphology again indexes the number (and person) of the dependent possessor, so again the construction involves head-marking and possessor-indexing. As is typical for Oceanic languages, more than one particle participates in the indirect construction, the particles encoding different possessive relationships. The distinctions they encode are not categories of possessum nouns, but categories of possessive relations (see Lichtenberk 1983). In Mono two such particles occur. One, *e-*, typically expresses a possessive relation in which the possessed item has been or is intended to be eaten, drunk, or consumed in some other way, as in (40a). The other, *sa-*, expresses general (i.e. non-consumed) alienable possession, as in (40b) and (41). Like a handful of other related languages but atypically for MM, in Mono certain human terms are obligatorily reduplicated when plural, as in (41b).

- (40) a. *e-gu* *niunu* b. *sa-na* *mauto*
 CONS.POSS-1SG.PSSR coconut GEN.POSS-3SG.PSSR basket
 ‘my coconut(s) [to eat]’ ‘his/her basket(s)’ (Mono)
- (41) a. *sa-gu* *kanega*
 GEN.POSS-1SG.PSSR husband
 ‘my husband’ (Mono)
- b. *mani sa-ma ka-kanega*
 weEXC.PL GEN.POSS-1EXC.PL.PSSR PL~husband
 ‘our husbands’ (Mono)

Note that in (40), as with the direct construction in (39), non-human possessums are ambiguous with respect to number, as the morphology indexes the number of the dependent possessor only. In a few MM languages such as Mono, the obligatory reduplication of certain human terms when plural means that examples like those in (41) are not ambiguous as to possessum number. However, this reduplication is entirely independent of the possessive construction and occurs whether a participating human term is possessed or not. The reduplication represents nominal number-marking. The number-indexing on the possessive particle represents head-marking and dependent-indexing for number within the possessive construction.

4.2 Number in possession in Uruava – head-marking:double indexing

Nominal possession outside of possessive constructions in Uruava displays the same kinds of phenomena seen in other MM languages. Terms with non-human referents are not marked for number by dedicated pluralizers or reduplication, and are typically ambiguous as to number. Number relating to such nouns is optionally expressed by forms such as demonstratives (which distinguish singular and plural) or numerals. With terms referring to humans plurality is marked. In the case of kin terms it is marked by reduplication, as in (42f), while with non-kin human terms a preposed pluralizer *buri* occurs, as in (42d).

In possessive constructions number is indexed in ways that in some respects are typical for MM and resemble that described for Mono above. However, in several important respects Uruava differs from other MM languages. As with Mono, Uruava employs a direct and an indirect possessive construction.

4.2.1 Number in Uruava indirect possession

In the indirect construction, the possessive dependency is expressed by a preposed particle that head-marks the possessum noun, as in (42). This particle carries morphology that indexes the number and person of the dependent possessor. As with Mono, two paradigms of preposed particle occur. However, unlike Mono, these two paradigms do not distinguish different categories of possession in the way that Mono *e-* and *sa-* do, and the categories of possessive relations have been neutralized. The two paradigms have been retained, but they have been co-opted to perform the function of indexing number of the head possessum. One paradigm occurs when the possessum is singular, as in (42a), (42c) and (42e), the other when it is plural, as in (42b), (42d) and (42f).

- | | | | | | | | | | |
|------|----|------------------|--|-------------|--|----|----------------------|--|-------------|
| (42) | a. | <i>e-gu</i> | | <i>soni</i> | | b. | <i>go-gi</i> | | <i>bere</i> |
| | | SG.PSSM-1SG.PSSR | | man | | | 1SG.PSSR-PL.PSSM | | spear |
| | | ‘my man’ | | | | | ‘my spears’ (Uruava) | | |

- | | | | | | |
|----|--|-----------------------------|----|---|------------------------------------|
| c. | <i>e-mau</i>
SG.PSSM-1EXC.PL.PSSR
'our man' | <i>soni</i>
man | d. | <i>mo-gi</i>
1EXC.PL.PSSR-PL.PSSM
'our men' (Uruava) | <i>buri soni</i>
PL man |
| e. | <i>e-gu</i>
SG.PSSM-1SG.PSSR
'my brother-in-law' | <i>aβutei</i>
bro.in.law | f. | <i>go-gi</i>
1SG.PSSR-PL.PSSM
'my brothers-in-law' (Uruava) | <i>aβu~aβutei</i>
PL~bro.in.law |

The Uruava indirect possessive particles as a whole therefore index number of both the dependent possessor and the head possessum. In this way they represent double indexing for the feature number. This represents real double indexing, rather than a co-occurrence of nominal number marking on the one hand and possessive dependent-marking for number on the other as seen with reduplicated human terms in Mono, as the Uruava number-indexing of the possessor and possessum are confined to and inseparable parts of a single construction, rather than separate types of number indexing that may independently turn up in the same phrase, as is the case with Mono reduplicated human terms. This double indexing for number in possession is highly atypical for MM, and for Oceanic in general. It appears to also be found in neighbouring Torau (Mono-Torau, Evans & Palmer 2011), and has been reported for Gabadi (Papuan Tip, Ross pers. comm.), but is not attested elsewhere in Oceanic, although it is reported in Austronesian outside Oceanic in Biak (Dalrymple, this volume). In Uruava and Torau development of double indexing for number in possession is a recent metatypic change under the influence of the neighbouring Papuan Naasioi language (Evans & Palmer 2011)

4.2.2 Number in Uruava direct possession

With a singular possessum, direct possession in Uruava resembles that seen in (39) for Mono. In (43) the head possessum noun carries a suffix indexing the number and person of the dependent possessor.

- (43) *aro* *patu-mu*
youSG head-2SG.PSSR
'your head' (Uruava)

However, the crucial difference between Uruava and other MM (and Oceanic) languages is that (43) is not ambiguous for number – it can only have a singular reading. As with the indirect construction, Uruava directly possessed phrases must index the number of the head possessum as well as that of the dependent possessor. In (43) no overt morphology is present indexing the head as singular. However, (43) is singular because it lacks morphology indexing it as plural.

With kin terms, the number of the possessor is expressed by reduplication, as in (44). No dedicated possessive morphology is needed to index head number.

- (44) a. *tama-gu*
 father-1SG.PSSR
 ‘my father’
- b. *tama~tama-gu*
 PL~father-1SG.PSSR
 ‘my fathers’ (Uruava)

However, when a noun with a non-human referent is directly possessed, no such strategy is available to indicate that the head is plural, as Uruava has no pluralizing morphology for non-humans, as discussed above. Uruava resolves this by employing the particle from the indirect construction, as in (45).

- (45) a. *kabe-gu*
 hand-1SG.PSSR
 ‘my hand’
- b. *go-gi* *kabe-gu*
 1SG.PSSR-PL.PSSM hand-1SG.PSSR
 ‘my hands’ (Uruava)

This extraordinary strategy, apparently unique in Austronesian languages that have direct and indirect possessive constructions, results in multiple marking and indexing. Directly possessed non-human nouns in the plural are marked for the possessive dependency twice: once by the direct suffix and once by the indirect particle. The number (and person) of the dependent possessor is indexed twice: once by the suffix on the head noun itself and once by the prefix on the particle. The pressure to index the number of the head in possessive constructions, absent elsewhere in Oceanic, is so great in Uruava it causes the introduction of the particle from the indirect construction, with its resulting multiple marking and indexing of other categories.

5. Future Research

This paper has examined a range of phenomena of wider typological significance that require accounting for by theories of grammar. Some may be straightforward to account for within LFG. Others will pose greater challenges. In many cases, more work is needed to give a detailed enough understanding of the phenomena to allow theoretical modelling. Several issues discussed above in particular invite more detailed investigation. In each case, the phenomenon has been described to only a very limited extent, and in only a very few of the relevant languages. One such issue is the interaction of hierarchies of animacy and number discussed in §2.3. It is likely this plays a role in many or all MM languages, but is under-reported or unreported throughout the group. Similarly, while inversion in MM (§3.2.2) has been described to some extent, its interaction with animacy hierarchies and noun class systems warrant considerably more detailed investigation. A further issue relates to the possible syntactic status of quantifiers and number markers as nouns (touched on in §3.2.3), in turn relating to the

pervasive problem of lexical category membership in Oceanic languages. Finally, alignments of marking-locus and indexing-target for the feature number in possession (§4) remains under-investigated. It is hoped that this paper will encourage further investigation of these issues in this theoretically and typologically significant group of languages.

References

- Allen, J. 1987. *Halia grammar*. Ukarumpa: SIL.
- Boch, A. n.d. *Short Alu grammar*. Typescript.
- Chambers, M.R. 2009. *Which way is up? Motion verbs and paths of motion in Kubokota, an Austronesian language of the Solomon Islands*. PhD thesis: SOAS.
- Corbett, G. 2000. *Number*. Cambridge: Cambridge University Press.
- Evans, B. & B. Palmer. 2011. Contact-induced change in southern Bougainville. *Oceanic Linguistics* 50/2:483-524.
- Evans, N. & E. Fenwick. 2010. *Marking vs indexing: revisiting the Nichols marking-locus typology*. Paper presented at ANU.
- Frowein, F.M. 2011. *A grammar of Siar, an Oceanic language of New Ireland Province, Papua New Guinea*. PhD thesis: La Trobe University.
- Hutchisson, D. 1975. *Sursurunga grammar essentials*. ms <www.sil.org/pacific/png/show_work.asp?id=928474543876>
- Lichtenberk, F. 1983. Relational classifiers. *Lingua* 60:147-76
- Lincoln, P.C. 1976. *Describing Banoni, an Austronesian language of southwest Bougainville*. PhD thesis: University of Hawai'i.
- Lynch, J. & M.D. Ross. 2002. Banoni. In Lynch et al. 440-455.
- Lynch, J., M.D. Ross & T. Crowley. 2002. *The Oceanic languages*. London: Routledge.
- Money, L. 2002. *Babatana language lessons*. ms
- Mosel, U. & Y. Thiesen. 2007. *The Teop sketch grammar*. ms. <www.linguistik.uni-kiel.de/Teop_Sketch_Grammar_May07.pdf>
- Nichols, J. 1986. Head-marking and dependent-marking grammar. *Language* 62/1:56-119
- Palmer, B. 2007. Imperfective aspect and the interplay of aspect, tense and modality in Torau. *Oceanic Linguistics* 46/2:499-519.
- 2009. *Kokota grammar*. Honolulu: University of Hawai'i Press.
- 2011. Subject-indexing and possessive morphology in Northwest Solomonian. *Linguistics* 49/4. 685-747.
- Ross, M.D. 2002. Sisiqa. In Lynch et al. 456-466.
- Van Der Mark, S.C. 2007. *A Grammar of Vinitiri. An Austronesian Language of Papua New Guinea*. PhD thesis: La Trobe University.