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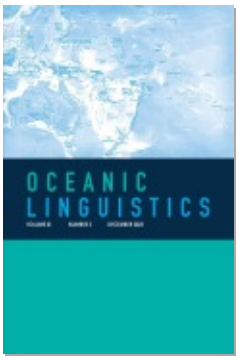

Oceanic Linguistics, Volume 61, Number 2, December 2022, pp. 721-756
(Article)

Published by University of Hawai'i Press
DOI: *https://doi.org/10.1353/ol.2022.0024*

Plural Words in Austronesian Languages: Typology and History

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This paper investigates the typology and history of plural words in the Austronesian family, by using a sample of 128 languages representing both genealogical and geographical diversity. I first consider the definition of plural words, which are grammatical words indicating nominal plurality at the phrasal level. I then present the distribution of plural words in the sample and examine their history. Several findings can be drawn from the data. First, plural words are the most common type of plural markers in the Austronesian family, attested in more than half of the sample languages. Second, languages with plural words exhibit an uneven distribution: they are typically found in the Philippines, eastern Indonesia, and across the Pacific islands, particularly in New Ireland and Vanuatu, but virtually absent in western Indonesia. This uneven geographical distribution also correlates with a skewed genealogical distribution. Third, as for the diachronic developments of plural words, the previously reconstructed proto plural word *maŋa is only reflected to a limited extent, almost exclusively in the Philippine languages. More commonly, plural words reflect the grammaticalization of third-person plural pronouns, a path found for nearly half of the plural words.

Keywords: Plural Words; Nominal Plurality; Typology; Distributional Pattern; Reconstruction; Grammaticalization

1. INTRODUCTION.[1] A plural word is a type of nominal plurality marking, described as "a morpheme whose meaning and function is similar to that of plural affixes in other languages, but which is a separate word that functions as a modifier of the noun" (Dryer 1989:865). An example of a plural word can be found in Tagalog, as illustrated in (1). Nouns in Tagalog are generally not marked for number, but the plurality of the noun phrases (NPs) can be marked by a separate word *mga*, which is a plural word.

1. I am grateful to Marian Klamer for her instruction and valuable inputs throughout the preparation of this paper. I would also like to thank the two anonymous reviewers for their comments on an earlier draft, and Owen Edwards for his guidance in the publication process. All remaining errors are mine. Abbreviations not included in the Leipzig Glossing Rules: ACT, actor; CONT, continuous; GRTR, greater (plural); INCH, inchoative; LIG, ligature; NM, noun marker; PREP, preposition; RDP, reduplication; SPEC, specific.

(1) TAGALOG
Mga abogado ang **mga** lalaki.
PL lawyer TOP PL man
'The men are lawyers.' (Schachter and Otanes 1972:111)

In this paper, I present a typological treatment of plural words like Tagalog *mga* in Austronesian (AN) languages, motivated by the apparent prominence of plural words in this family. According to Dryer's (2013a) chapter in *The World Atlas of Language Structure* (WALS), about 16% of the world's languages use plural words to code nominal plurality, but 58% (67/115) of the AN sample languages have plural words. The percentage further increases to 72% (51/71) in the Oceanic languages.[2] Outside the Oceanic subgroup, AN languages with plural words are mostly clustered in the Philippines and eastern Indonesia. It should be noted, however, that these observations must be taken as preliminary, for two reasons. First, there are a disproportionate number of Oceanic languages in the WALS sample, partially due to the wider availability of data (see Comrie et al. 2013). Second, upon closer scrutiny, the definition of plural words in previous studies requires reconsideration, which I will turn to in section 2. Another note on plural words in AN languages has been made along the diachronic line: a plural word *maŋa is reconstructed in Proto-Oceanic (POC) (Lynch, Ross, and Crowley 2011:90–91), which is in turn inherited from Proto-Malayo-Polynesian (PMP) *maŋa (Blust and Trussel 2020). Building on this background, this study addresses two questions by examining the coding of nominal plurality in a more extensive and balanced language sample: first, how AN languages with plural words are distributed geographically and genealogically, and second, to what extent these plural words reflect PMP *maŋa.

The remainder of this paper is organized as follows. Section 2 considers the criteria for defining plural words. As will be discussed, a narrower definition of plural words is adopted in this study. Section 3 explains the sampling method and presents the language sample, followed by a discussion on data coding. Sections 4 and 5 examine the distribution and history of plural words respectively. Section 6 concludes this paper.

2. DEFINING PLURAL WORDS: A RECONSIDERATION.

The definition of plural words in Dryer (1989, 2007, 2013a), as mentioned above, is essentially formulated based on a distinction made between nominal plurality marked on nouns on the one hand, and that marked at the phrasal level on the other hand. Plural words are distinct from plural affixes in that their positions in NPs are determined syntactically, and often they can be separated from

2. In addition, around 8% of the world's languages have plural clitics, which are probably best considered as a type of plural word (Dryer 2013a; see more discussion below). In Dryer's sample, nine AN languages have plural clitics, four of which are Oceanic. Altogether, 66% of all AN languages or 77% of Oceanic languages have plural words or plural clitics.

the nouns by other modifiers.[3] In practice, if a noun itself is not marked for number, and the word in question is the sole indicator of plurality in the NP, it is considered a plural word. Importantly, a plural word defined in this way may or may not code other notions such as definiteness, specificity, noun class, or gender. While plural words are described as similar to plural affixes in other languages, they are rather heterogeneous as regards their categorical properties. Some plural words form a small closed category on their own, whereas others belong to a broader grammatical category such as numerals or articles. In this study, however, I argue for a narrower definition and consider words which only code plurality as plural words, for the reasons that I will explain below.

To illustrate Dryer's definition of plural words, an example from French is given in (2). The number distinction between the nouns *pomme* 'apple' and *pommes* 'apples' is neutralized in the spoken language (both are pronounced as [pɔm]); therefore, the plurality of the NP in (2b) is only marked on the plural article *les*, which also codes definiteness.[4] By Dryer's criterion, *les* in this case is a plural word.

(2) FRENCH
a. la pomme
ART.FEM.SG apple
'the apple'
b. **les** pommes
ART.PL apple
'the apples' (Dryer 1989:873)

This broad definition covers the diverse methods of marking nominal plurality at the phrasal level, but it also creates problems. First, if the definition allows a plural definite article to be considered as a plural word, it appears that various other noun modifiers might be included as well. Dryer did not comment on plural demonstratives, but following his reasoning, if only the demonstrative in an NP is marked for plurality, it should be counted as a plural word. An example from Kokota (Oceanic) illustrates such a case, as shown in (3). In the NP *palu mane aro* 'these two men', only the demonstrative *aro* (touching, plural) codes plurality, and it would supposedly also fit Dryer's criterion of a plural word.

(3) KOKOTA
palu mane **aro** sala ge ruruboñi
two man DEM.PROX.PL Sala and Ruruboñi
'these two men Sala and Ruruboñi' (Palmer 2009:110)

3. One reviewer pointed out that plural words also differ from quantifiers such as English 'some' and 'several' in that they cannot stand on their own. This generalization may hold true for many languages, but it is not systematically tested. As will also be shown below, AN languages often have plural words which correspond to 3PL pronouns. In these cases, it might not be appropriate to make the statement that plural words do not occur independently.
4. In Dryer's analysis, articles are taken as parts of NPs instead of heads of determiner phrases. I follow this traditional NP analysis, which also includes other determiners as parts of the NPs.

Such a notion of plural words encompassing an array of words from different grammatical categories inevitably raises issues in crosslinguistic comparisons, as categorizing a plural article like *les* in French, a plural demonstrative *aro* in Kokota, and a plural word *mga* in Tagalog (which only codes plurality) or plural affixes in other languages in the same way does not yield a meaningful result.

Second, the criterion of a plural word being the sole indicator of plurality in an NP is not always consistently applied, and the criterion itself is somewhat problematic. Dryer (1989) cites Hawaiian as an example of a language with multiple plural words forming a minor grammatical category, some of which code plurality and definiteness at the same time, others only marking plurality. In example (4), both *nā* and *mau* are taken as plural words; however, the plurality of the NP is actually marked on two words, which seems to contradict Dryer's own criterion.

(4) HAWAIIAN
nā **mau** lio
PL.DEF PL horse
'the horses' (Elbert and Pukui 1979:157)

A similar situation is also found in Kokota. In addition to demonstratives which have a number distinction, Kokota has a set of articles (denoting specificity) marked for number. In Dryer (2013a), the value for the coding of nominal plurality in Kokota is "plural word," which appears to refer to the plural article. Yet in example (5), the plurality of the NP is coded on both the article *ira* and the demonstrative *aro*, and it is not clear how these two "plural words" should be treated.

(5) KOKOTA
ira naitu toke **aro** bo
ART.PL devil arrive DEM.PROX.PL CONT
'these arriving devils' (Palmer 2009:81)

In view of these problems, I consider it more appropriate to adopt a more restrictive definition of plural words. If a word codes plurality in conjunction with other notions, it is not counted as a plural word. For instance, *ira* ART.PL in Kokota simultaneously codes plurality and specificity, and *aro* DEM.PROX.PL has a deictic function, hence neither is a plural word. *Mau* in Hawaiian is a plural word but *nā* PL.DEF is not, as *nā* also codes definiteness. Plural words defined in this way are similar to what Dryer (1989, 2007) calls "pure plural words," but an important difference is that they need not to be the exclusive indication of number in the NPs. The Hawaiian example in (4) already shows that the plurality of the NP can be marked on other noun modifiers in addition to a plural word. In another example from Ibanag (Northern Luzon) in (6), the plural word *ira* marks the plurality of the NP alongside partial reduplication of the noun.

(6) IBANAG
i **ma**~manu **ira** ta likuk
DET RDP~chicken PL LOC back
'the chickens at the back' (Dita 2010:62)

In some languages the morphemes marking plurality in NPs are clitics, as shown by an example from Buru (Central Maluku) in (7). =*ro* and its allomorph =*o* have a fixed position in the NPs, namely in phrasal-final position, and they can be separated from the head nouns by other modifiers. Clitics, as such, are bound morphemes which lack an independent phonological status, but syntactically they are similar to free plural words, thus taken as a subtype of plural words. Altogether the concept of "words" in "plural words" should be interpreted as grammatical words, which include both free word forms and clitics.

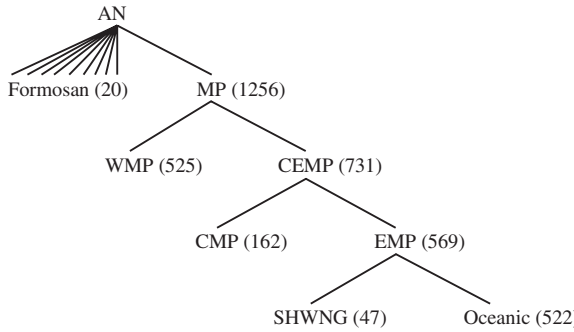
(7) BURU
a. fatu=**ro**
rock=PL
'rocks'
b. toho=n=**o**
descend=GEN=PL
'paths, trails' (Grimes 1991:147–48)

Some languages have dedicated words indicating other numbers such as dual, trial, or paucal number, and together with plural words, they should be best termed as "number words" (also see Corbett 2000:133–35). However, no language in the sample has other number words without a plural word; therefore, I continue to use "plural words" as a more general term.

3. LANGUAGE SAMPLE AND DATA CODING. The language sample collected in the study is a proportionally representative sample, meaning that the number of sample languages taken from each subgroup is proportional to the total number of languages (see Bell 1978). Figure 1 presents the AN family tree and its main branches (Blust 1977, 1999), together with the number of languages in each branch as retrieved from Glottolog 4.3 (Hammarström et al. 2021), which includes a total number of 1,276 AN languages. For lower-level subgroupings, I follow the up-to-date proposals on Glottolog.

I choose 10% of all AN languages, arriving at a sample with 128 languages. The number of sample languages taken from each branch is proportionally calculated, except that I only select two Formosan languages considering their relatively small number and disputed classification. Accordingly, there are 126 MP languages in the sample, 53 from the WMP branch and 73 from CEMP. The same sampling procedure applies to each lower-level branch. Samples are chosen from as many different branches as possible to maximize genetic distance. Adjustments are made when necessary, especially considering the availability of data and the quality of the source. A tree structure like figure 1 generally corresponds to the geographical expanse of AN languages, hence a sample obtained in this way is also geographically diverse. The full list of sample languages and the sources are provided in the appendix.

FIGURE 1. FAMILY TREE OF AN LANGUAGES WITH THE NUMBER OF LANGUAGES IN EACH BRANCH.[5]



The coding of nominal plurality in each sample language is examined. In assigning the values, I maintain the distinction between plurality marked on nouns by morphological means and that marked by another morpheme at the NP level. Morphological markings on nouns attested in AN languages include plural prefixes, suffixes, infixes, and reduplication. At the phrasal level, non-affixal morphemes indicating plural number are considered plural words. It is acknowledged that the identification of plural words might not be watertight, especially when it comes to determining the wordhood status of certain plural morphemes. If there are no clear examples suggesting an alternative analysis, I adhere to the grammar authors' judgment on the wordhood status of such morphemes, which is often reflected in the convention of orthography used in the grammar. In some cases, there is clear evidence for opting for a different interpretation. For example, the plural morpheme *ngo* in Tatana' (North Borneo) is termed as a prefix (Dillon 1994:24). But as shown in (8), when a classifier is present, *ngo*= attaches to the classifier preceding the noun, hence a proclitic.

(8) TATANA'
Aro duo **ngo**=bua' baloi.
there.is two PL=CLF house
'There are two houses.' (Dillon 1994:25)

When a language does not have plural marking on nouns or plural words, yet the plurality of NPs can be marked on other elements such as articles or

5. Abbreviations in the figure: CEMP, Central-Eastern Malayo-Polynesian; CMP, Central Malayo-Polynesian; EMP, Eastern Malayo-Polynesian; MP, Malayo-Polynesian; SHWNG, South Halmahera-West New Guinea; WMP, Western Malayo-Polynesian. A detailed discussion on the subgrouping of the AN language family is beyond the scope of the current study, and admittedly there are a number of issues with this tree representation. For example, the label WMP merely refers to all MP languages which do not belong to CEMP. Formosan languages are represented as occupying nine first-order branches, but this classification is not uncontroversial (see alternative proposals in Ross 2009, 2012). Also, some branches in the tree do not represent discrete subgroups in the strict sense, but rather dialect chains or so-called linkages (e.g., CMP, arguably also Formosan, EMP, and CEMP; see Ross 1995). Despite these issues, this tree model is used as a guideline for the representation of the genealogical relationships among AN languages, based on which sample languages are selected.

demonstratives, I assign the value "elsewhere in the NP" (as in the case of Kokota discussed above). If a language does not mark plurality anywhere in the NPs, it receives the value "not marked." "Not marked" only means that a language does not have any formal distinction for number; the semantics of plural NPs can still be overtly expressed by using numerals or other quantifiers. Three languages in the sample (Tukang Besi, Irarutu, and Biak) receive the value "not clear" because there are contradictory analyses which cannot be resolved at the moment. The typology of nominal plurality marking is schematized as follows:

(9) A typology of nominal plurality marking
- On the noun
  - Plural prefix
  - Plural suffix
  - Plural infix
  - Reduplication
- At the NP level
  - Plural word
  (within which the category of plural clitic is specified)
  - Elsewhere in the NP
- Not marked

Note that these values of nominal plurality marking are assigned for productive strategies. Special plural forms for certain lexemes, or plurality marked on a closed word class such as pronouns and kinship terms are excluded in the data coding. Plurality marking restricted to human referents or animate referents is nevertheless considered productive. Restricted plurality marking as such, known as plurality split in the Animacy Hierarchy, is common crosslinguistically (Smith-Stark 1974; Corbett 2000:55–66). A few languages in the sample have different plural markings for different word classes along the Animacy Hierarchy, in which cases I give two values. In Leti (Timoric A), for instance, the plurality of human nouns can be marked by a plural clitic *=ra* (10a, 10b), whereas the plurality of nonhuman nouns is marked by reduplication (10c, 10d). The values of nominal plurality marking for Leti are therefore "plural clitic" and "reduplication."

(10) LETI
a. püat-mu=**ra**
woman-2SG=PL
'your women'
b. isüon-ne=**ra**
witch-3SG=PL
'his witches'
c. **kuda**~kuda
RDP~horse
'horses'
d. **vatu**~vatu
RDP~stone
'stones' (van Engelenhoven 2004:116)

TABLE 1. SAMPLE LANGUAGES WITH PLURAL WORDS.

Karodih	Tatana'	Paluai	Nakanai
West Coast Bajau	Kimaragang	Loniu	Barok
Tboli	Ilocano	Rapa Nui	Mandara
Wolio	Ibanag	Nadrogâ	Kara-Lemakot
Pendau	Ibaloy	Southeast Ambrym (Vatlongos)	Siar
Chamorro	Dupangingan Agta	Unua	Mato
Tagalog	Toba Batak	Paamese	Mangap-Mbula
Bikol	Batuley	Abma	Lote
Mamanwa	Alorese	Abmae (Lolovoli)	Kairiru
Cebuano	Buru	Raga	Arop-Sissano
Manobo	Selaru	Vurës	Gumawana
Central Tagbanwa	Leti	Araki	Sinaugoro
Subanen	Tetum	Gela	Sudest
Javanese	Tugun	Wala	Yapese
Agutaynen	Southern Mambai	Dehu	
Matéq	Ambai	Mussau	
Tondano	Taba	Engdewu	

Finally, associative plurals meaning "X and their group" are treated as a separate category and not included in the data coding (see Corbett and Mithun 1996; Corbett 2000:101–11).

By applying the criteria for identifying plural words as discussed above, it is found that sixty-five sample languages have plural words, as listed in table 1. The complete results of data coding are included in the appendix.

4. DISTRIBUTION OF AN LANGUAGES WITH PLURAL WORDS.

AN languages with plural words constitute more than half of the total sample (65/125, excluding the three samples with unclear values). Map 1 presents the geographical distribution of all sample languages, contrasting languages with plural words (blue squares) and those using other means to code nominal plurality (yellow dots).

From map 1, it is evident that languages with plural words exhibit a skewed geographical distribution. They have a salient presence in certain areas, such as the Philippines and eastern Indonesia. They also show up throughout the Pacific islands, but New Ireland and Vanuatu host an especially great number of languages with plural words. In contrast, plural words are much less attested in languages in western Indonesia, Sulawesi, and Maluku, as well as the southeast tip of New Guinea. They are also absent in Taiwan. Two languages in the Bird's Head of New Guinea (Irarutu and Biak) received the value of "not clear," but it is possible that they also employ plural words, making the Bird's Head another area where plural words are outstanding.[6]

6. In Irarutu, a plural marker *si* is mentioned and written as a separate word (Jackson 2014:142), but no example is given to illustrate its use, and the marker is not found elsewhere in the grammar. For Biak, van den Heuvel (2006:202–04) presents the following articles in clitic forms: nonspecific singular article =*o*, nonspecific non-singular article =*no*, specific animate plural

MAP 1. DISTRIBUTION OF SAMPLE LANGUAGES AND THE PRESENCE OF PLURAL WORDS.

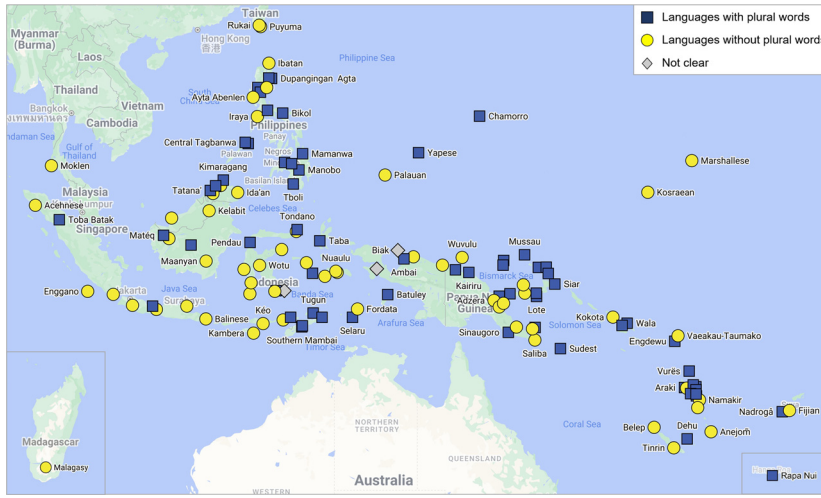


TABLE 2. PRESENCE OF LANGUAGES WITH PLURAL WORDS IN EACH MAJOR BRANCH.

Genealogical affiliation	Number of languages with plural words	Percentage of all samples	
Formosan	0	0%	(0/2)
WMP	24	46%	(24/52)
CMP	8	50%	(8/16)
SHWNG	2	67%	(2/3)
Oceanic	31	60%	(31/52)
	Total: 65		

As regards the genealogical distribution, table 2 presents an overview of the absolute number and the percentage of languages with plural words in each major branch.

Languages with plural words are commonly found in all extra-Formosan (MP) branches, with their percentage of occurrence ranging from 46% in WMP to 67% in SHWNG. The observation that two-thirds of the SHWNG languages have plural words is not particularly representative given the small number of total samples; yet if Irarutu and Biak are counted as having plural words, the share of SHWNG languages with plural words would be even greater.

article *=s-ya/=s-i*, specific inanimate plural article *=na*, none of which is qualified as a plural clitic by my criterion. However, all these articles appear to be complex, and two plural clitics may be analyzed, namely *=n* for inanimate referents and *=s* for animate referents (identical to the 3PL pronominal affixes). Accordingly *-o* marks non-specificity and *-ya/-i* marks specificity (but **=s-o* is not attested). The system may be comparable to that in Warembori (Donohue 1999a:11–12), but my suggestion remains tentative.

Within each of these branches, however, languages with plural words are not evenly distributed. They often appear in close-knit lower-level subgroups, as can be observed clearly in WMP and CMP, and to a lesser extent in Oceanic.

A quantitative breakdown of WMP languages with plural words, as displayed in table 3, shows that almost all languages sampled from the subgroups of Greater Central Philippines and Northern Luzon have plural words with only one exception, namely Arta. Altogether they make up about half of all WMP languages with plural words (11/24), and this genealogical distribution corresponds to the prominence of plural words in the Philippines as a geographical area. In stark contrast, plural words are entirely absent in Malayo-Sumbawan and South Sulawesi. Other WMP languages with plural words are scattered in various subgroups, including Basap-Greater Barito, Celebic and North Borneo.

Within CMP, all sample languages from the Timoric subgroups (Leti, Tetum, Tugun, and Southern Mambai) have plural words, and most languages with plural words (Timoric, together with Alorese and Selaru) are centered around the island of Timor, as shown in table 4 and map 2.

It is noteworthy that Alorese, spoken on the islands of Alor and Pantar, is the only Bima-Lembata language with a plural word, and its sister languages to the

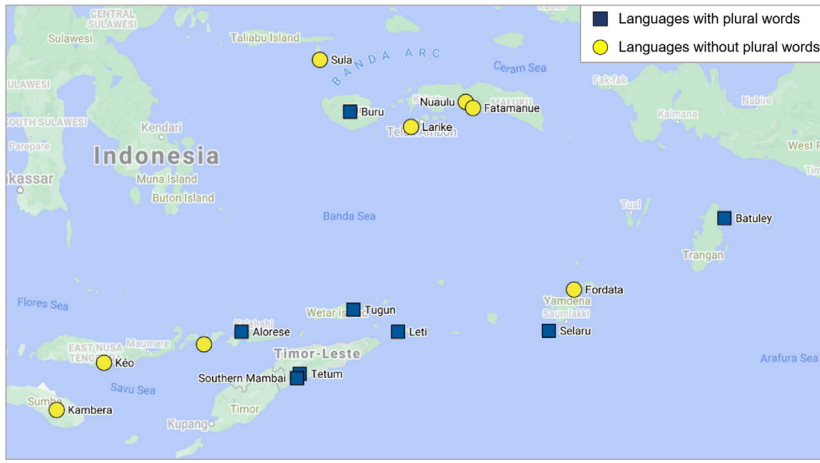
TABLE 3. QUANTITATIVE BREAKDOWN OF WMP LANGUAGES WITH PLURAL WORDS.

Genealogical affiliation	Number of languages with plural words	Percentage of all samples	
Greater Central Philippines	7	100%	(7/7)
Northern Luzon	4	80%	(4/5)
Malayo-Sumbawan	0	0%	(0/6)
South Sulawesi	0	0%	(0/3)
Basap-Greater Barito	2	50%	(2/4)
Celebic	2	40%	(2/5)
North Borneo	2	29%	(2/7)
Others	7	47%	(7/15)
	Total: 24		

TABLE 4. QUANTITATIVE BREAKDOWN OF CMP LANGUAGES WITH PLURAL WORDS.

Genealogical affiliation	Number of languages with plural words	Percentage of all samples	
Timoric A	3	100%	(3/3)
Timoric B	1	100%	(1/1)
Bima-Lembata	1	25%	(1/4)
Central Maluku	1	20%	(1/5)
Others	2	67%	(2/3)
	Total: 8		

MAP 2. DISTRIBUTION OF CMP SAMPLE LANGUAGES AND THE PRESENCE OF PLURAL WORDS.



west (Central Lembata, Kambera, and Kéo) typically have other means to mark plurality or lack plural marking. Similarly, while most Central Maluku languages have plural suffixes, Buru stands out with a plural clitic. In both cases, the plural word developed from a third-person plural pronoun following a common path of grammaticalization (see more discussions in section 5.2).

In Oceanic, languages with plural words are relatively more common in general. There are many subgroups where the majority of sample languages employ plural words (see table 5), such as North and Central Vanuatu, Meso Melanesian linkage and Southeast Solomonic, roughly corresponding to the geographical area of Vanuatu, New Ireland and New Britain, and Solomon Islands. Southern Melanesian and Micronesian languages, on the other hand, typically lack plural words.

TABLE 5. QUANTITATIVE BREAKDOWN OF OCEANIC LANGUAGES WITH PLURAL WORDS.

Genealogical affiliation	Number of languages with plural words	Percentage of all samples	
North and Central Vanuatu	8	73%	(8/11)
Meso Melanesian linkage	5	71%	(5/7)
Southeast Solomonic	2	100%	(2/2)
Admiralty Islands	2	67%	(2/3)
North New Guinea linkage	5	50%	(5/10)
Papuan Tip linkage	3	50%	(3/6)
Southern Melanesian	1	25%	(1/4)
Micronesian	0	0%	(0/2)
Others	5	71%	(5/7)
	Total: 31		

The geographical and genealogical distributions of AN languages with plural words, as I have summarized based on my sample, largely confirm previous observations made in Dryer (2013a). Some important remarks are worth reiterating. First, even though more WMP languages have been sampled, plural words are still predominantly found in the Philippine languages and lacking in most languages in western Indonesia. Second, CMP languages with plural words are primarily centered around the island of Timor in eastern Indonesia. Third, plural words are prevalent in Oceanic languages, but not omnipresent. The percentage of Oceanic languages with plural words is lower in my sample, partially owing to the narrower definition of plural words I have adopted. For instance, Dryer (2013a) considers the plural definite articles in Kokota (Meso Melanesian linkage) and Tinrin (Southern Melanesian) as plural words, but they are excluded by my criteria. Finally, genealogically closely related languages often collectively attest the presence or absence of plural words. Some plural words are transparently cognates, which might point to a shared history of plural words inherited from a common ancestor. I will now turn to the historical aspects of these plural words.

5. HISTORY OF PLURAL WORDS IN AN LANGUAGES. As mentioned in section 1, a plural word *maŋa is reconstructed in PMP and POC (but not in Proto-AN). At first sight, the reconstruction seems to be supported by the widespread distribution of plural words in extra-Formosan languages. A closer examination nevertheless shows that plural words reflecting *maŋa are only attested to a very limited extent, and the evidence for reconstructing POC *maŋa is particularly thin. Plural words in AN languages are more commonly the results of grammaticalization of third-person plural pronouns. A few other languages have developed plural words independently from other sources. Each of these diachronic paths of plural words will be treated in turn.

5.1. PLURAL WORDS REFLECTING *maŋa. In discussing the reconstruction of POC and PMP *maŋa, Lynch, Ross, and Crowley (2011:90–91) note that the reflexes of *maŋa are not only found in Oceanic but also widely available in the Philippine languages as well as in Wolio (Celebic) spoken in South Sulawesi. The plural words in many Philippine languages in my sample are indeed transparently related and pointing to *maŋa. However, out of sixty-five languages with plural words, only eight clearly reflect *maŋa, six of which belong to the Greater Central Philippines (GCP) subgroup. Outside GCP, reflexes of *maŋa are only found in Agutaynen (Kalamian, also spoken in the Philippines) and Wolio, as listed in table 6.

The relatedness of the plural words in table 6 does not need much explanation. Except for Manobo *menge*, all other plural words are identical in forms despite the differences in orthographic representations. All these plural words are prenominal particles, as illustrated by the examples in (11).

TABLE 6. LANGUAGES WITH PLURAL WORDS REFLECTING *maŋa.

Language	Genealogical affiliation	Plural word	
Tagalog	Greater Central Philippines (GCP)	manga	/maŋa/
Bikol	GCP	mga	/maŋa/
Mamanwa	GCP	manga	/maŋa/
Cebuano	GCP	mga	/maŋa/
Manobo (West Bukidnon)	GCP	menge	/məŋə/
Central Tagbanwa	GCP	manga	/maŋa/
Agutaynen	Kalamian	mga	/maŋa/
Wolio	Celebic	maqa	/maŋa/

(11) Plural words reflecting *maŋa

a. TAGALOG
mga librong para sa bata
PL book for OBL child
'books for the child/children' (Schachter and Otanes 1972:111)

b. BIKOL
laláki 'boy' → **mga** laláki 'boys'
áyam 'dog' → **mga** áyam 'dogs' (Mintz 1971:99)

c. MAMANWA
Manga lodzoq na **manga** tao ini.
PL bolo.knife of PL person this
'These are the people's bolo-knives.' (Miller and Miller 1976:27)

d. CEBUANO
Mga ka-uban nako?, **mga** lalaki.
PL RECP-company 1SG.GEN PL male
'My companions, (they're) all male.' (Tanangkingsing 2009:157)

e. WESTERN BUKIDNON MANOBO
menge valey ni Huwan
PL house NON.TOP John
'John's houses' (Elkins 1970:6)

f. CENTRAL TAGBANWA
layan **mga** punti
DEM.NOM PL banana.plant
'those banana plants' (Scebold 2003:61)

g. AGUTAYNEN
Mam-<b>akal-o ta **mga** baldi.
ACT.FUT-buy-1SG NON.SPEC PL bucket
'I will buy some buckets.'
(Quakenbush, Hendrickson, and Edep 2010:11)

h. WOLIO
o **maqa** mia
ART PL people
'the people' (Anceaux 1988:36)

A few other languages have bound morphemes which are formally related to *maŋa and associated with the semantics of plurality. In Ratahan (Sangiric),

manga- is fossilized in the 3PL pronoun *mangasé* (cf. *(i)sé* 3SG) (Himmelmann and Wolff 1999:31). Mori (Celebic) and Tontemboan (Minahasan), which are not included in my sample, have a fossilized plural prefix *manga-*, as in Mori *manga-litau* 'youths' and Tontemboan *manga-tuama* 'men' (Adriani and Adriani-Gunning 1908:118; Esser and Mead 2011:455).[7] Note that GCP, Kalamian, Sangiric, and Minahasan languages arguably descend from a common ancestor Proto-Philippines (Blust 1991, 2019), thus the reflexes of *maŋa are essentially attested in two WMP subgroups, Philippine and Celebic.

In non-WMP samples, only one plural word possibly reflects *maŋa, namely *maana* in Kara-Lemakot (Oceanic). Lynch, Ross, and Crowley (2011:90–91) cite Kara *mana* as a reflex of PMP *maŋa alongside Tigak *mamana*, Tolai *umana*, Halia *maman*, and Nguna *maaŋa*, based on which POC *maŋa is proposed. However, the cognacy between these plural words is questionable, as the sound correspondence between the intervocalic nasals in this putative cognate set, Kara *-n-* : Tigak *-n-* : Tolai *-n-* : Halia *-m-* : Nguna *-ŋ-*, is rather irregular (see Ross 1994).[8] It appears that only Nguna *maaŋa* might be a continuation of PMP *maŋa, and the relatedness of other plural words to WMP *maŋa* is dubious. Furthermore, Kara, Tigak, Tolai, and Halia are genealogically and geographically close to each other; all four languages belong to the New Ireland-Northwest Solomonic linkage (NINSL).[9] In any case, the cognate set presented above does not provide much evidence to reconstruct a plural word *maŋa in POC.

Maana in Kara-Lemakot also differs from WMP *maŋa* in some other respects. It is analyzed as a greater plural word, only used when the number of referents is greater than just a few (Dryer 2013b:70). In addition to *maana*, Kara-Lemakot has other number words *mu* PL, *ro* DU, and *nu* PAUC, among which *mu* is the most common one. Somewhat surprisingly, the greater plural word *maana* can co-occur with the plural word *mu* or the paucal number word *nu*, as exemplified in (12).

7. Adriani and Adriani-Gunning (1908:118–19) suggest that *maŋa-* in Tontemboan is polymorphemic, composing of an intransitive/durative prefix *ma-* and a collective prefix *nga-*. They also mention several cognates of *manga*, as can be found in Mongondow, Tomini (as *mongo*), Toraja, Maori, and Samoan. It is an interesting suggestion, but I am unable to offer an evaluation at this stage.
8. Compare with the following cognate set which demonstrates a more regular correspondence: Kara-Lemakot *laŋai* : Tigak *loŋok* : Tolai *loŋor-oi* : Halia *heŋo* : Nguna *roŋo* 'to hear', all reflecting POC *roŋoR (Halia data cited from Allen and Allen 1965; Nguna data from Schütz 1969; others from Blust and Trussel 2020).
9. Even within NINSL, attested plural words are more often unrelated to *maŋa. My sample includes five languages from NINSL, namely Barok, Mandara, Kara-Lemakot, Siar, and Kokota. Barok has a general plural word *bo*, as well as *buŋ* for human referents (Du 2010:113). Mandara has a plural word *bu* (Hong and Hong 2003:19). Siar has a number of plural words differentiating human/nonhuman and animate/inanimate referents: *bar* for human referents, *kai/kabai* for nonhuman animate referents and *tó* for inanimate referents (Frowein 2011:120–24). Kokota lacks a plural word.

(12) KARA-LEMAKOT

a. . . . re fe-xuus a maana rabuna xaves la
. . . 3DU INCH-tell ART GRTR.PL people many LOC
maana mu bina xapiak pa-na.
GRTR.PL PL place all PREP-3SG
'. . . they told people throughout that entire region about him.'
(Dryer 2013b:70)

b. Na Yesus e mu fefeng si-na ri falet xe
ART Jesus and PL disciple POSS-3SG 3PL go to
la **maana nu** bina faasilak se Sesaria Filipai.
LOC GRTR.PL PAUC place near PREP Caesarea Philippi
'Then Jesus and his disciples went to the villages of Caesarea Philippi.'
(Dryer 2013b:71)

Plural markers related to *maana* are found in two more Oceanic languages. Mato (North New Guinea linkage) has a vocative collective marker *mana*, which is used to address a group (Stober 2013:42), and South Efate (Central Vanuatu) has an associative plural marker *mana* (Thieberger 2006:95). These plural markers seem to better reflect *mana, which might not be at all related to the plural words found in WMP languages.

To sum up, the total number of plural words reflecting PMP *maŋa is small, and the reflexes have a limited distribution. They are attested in Philippine and Celebic languages, but nearly absent in all other MP branches including Oceanic. The reconstruction of POC *maŋa is therefore poorly supported. It is also notable that not all plural words in Philippine languages reflect *maŋa: Northern Luzon languages, for example, have developed plural words from 3PL pronouns, as will be discussed below.

5.2. PLURAL WORDS ORIGINATING FROM 3PL PRONOUNS. The development from 3PL pronouns to plural markers is a crosslinguistically common grammaticalization process, noted as a typical case of desemanticization (Heine and Kuteva 2002:237–38); that is, the pronominal function of pronouns is bleached out. More specifically, 3PL pronouns being the origins of plural words has also been reported by Dryer (1989:885). This grammaticalization process is prevalent in AN languages, as can be observed in twenty-two languages in my sample which have a plural word identical in form to a 3PL pronoun—a correspondence that can by no means be explained by chance development. In yet a few other languages, the plural words presumably developed from 3PL pronouns at an earlier stage, although at present there is a mismatch between the two forms due to divergent phonological development or later innovation of new 3PL pronouns.

Example (13) demonstrates the correspondence of the plural word and the 3PL pronoun *hira* in Tugun (Timoric A). In (13a), *hira* functions as a post-nominal plural word modifying *ni-kawair* 'his friend', while in (13b) *hira* is the pronominal subject of the sentence.

(13) TUGUN

a. Hala hopan ni-kawair **hira.**
then order 3SG-friend PL
'Then (he) ordered his friends.' (Hinton 1991:50)

b. **Hira** r-a e, am toa naha.
3PL 3PL-eat COM 1PL NEG yet
'They have eaten, but we haven't yet.' (Hinton 1991:93)

Cognates to Tugun *hira* can be found in Alorese and Southern Mambai as *hire* and *sêr*, which are also plural words. All three forms descend from PMP *si-ida 3PL, but synchronically the plural words in Alorese and Southern Mambai do not correspond to the 3PL pronouns (*we* and *rom* respectively). It is likely that Alorese *hire* and Southern Mambai *sêr* (or their earlier forms) were once also 3PL pronouns, from which the plural words have grammaticalized. At a later stage, these two languages innovated a new 3PL pronoun, leading to the mismatch between the plural word and the current 3PL pronoun (see Moro 2018, for a more detailed discussion on the history of the plural word *hire* in Alorese).

In the Oceanic language Raga (Northern Vanuatu), the plural word *ira* and the 3PL pronoun *kera* are formally similar but not identical, as illustrated in (14).

(14) RAGA

a. **Ira** vavine ra-m bavatu.
PL woman 3PL-CONT weave
'The women are weaving.' (Vari-Bogiri 2011:82)

b. **Kera** ira nitu-na.
3PL PL child-3SG.POSS
'They are his/her children.' (Vari-Bogiri 2011:177)

Both *ira* and *kera* can be traced back to POC *[k]ira 3PL. Lynch, Ross, and Crowley (2011:68) note that the original form of the 3PL pronoun in POC was probably *ira, and the optional *k- resulted from the analogy with other nonsingular pronouns (cf. *kita 1PL.INCL, *ka[mi]/*kamami 1PL.EXCL, *ka[mu]/*kamiu 2PL). In all likelihood the plural word *ira* in Raga has developed from POC *ira, and *k-* in *kera* 3PL might also be explained by analogical addition.

Altogether at least twenty-five languages in my sample exemplify the grammaticalization of a 3PL pronoun to a plural word. These languages and their plural words are listed in table 7, where I have also taken note of the grammatical properties of the pronouns corresponding to plural words. The correspondence is established based on formal alikeness. Admittedly a pronoun identical in form might not be the direct source of the plural word, but I assume that it is the most likely source.

Several observations can be made about these languages with plural words originating from 3PL pronouns. First, while it is not possible to determine the precise mechanism of change in each language, there is certainly no uniform path following which the grammaticalization took place. The pronominal systems differ considerably across these languages: some have different sets of free

TABLE 7. LANGUAGES WITH PLURAL WORDS ORIGINATING FROM 3PL PRONOUNS.

Language	Plural word	Corresponding 3PL pronoun
Chamorro	siha	Free, no case distinction
Ibanag	ira	Free, absolutive
Ibaloy	ira	Free, nominative
Dupangingan Agta	hidi	Free, nominative
Alorese	hire	(< PMP *si-ida)
Buru	=ro	Bound, object (undergoer) enclitic
Leti	=ra	Bound, subject prefix
Tetum	sira	Free, no case distinction
Tugun	hira	Free, no case distinction
Southern Mambai	sêr	(< PMP *si-ida)
Taba	=si	Free, no case distinction
Paluai	ip	Free, no case distinction. Also bound, subject proclitic or animate object enclitic
Loniu	sɛh	Free, no case distinction
Nadrogâ	kura	Free, topic
Southeast Ambrym	xil	Free, no case distinction
Paamese	kaile	Free, no case distinction
Abma	nii	Free, object or topic (bound when following prepositions)
Raga	ira	(< POC *ira < PMP *si-ida)
Nakanai	egite	Free, no case distinction
Mato	=di	Bound, subject prefix or object suffix
Mangap-Mbula	zin	Free/bound, no case distinction
Kairiru	rri	Free, no case distinction
Arop-Sissano	re	Free, no case distinction
Sinaugoro	=ri	Bound, object or possessive suffix
Sudest	=nggi	Bound, object enclitic

pronouns and bound pronouns while others do not make such a distinction, and some mark grammatical cases or thematic relations while others do not. Not surprisingly, the pronoun serving as the source of a plural word may vary.

In Nakanai (Meso Melanesian linkage), the free 3PL pronoun *egite* can function as both subject and object pronoun, as illustrated in (15a) and (15b). The same pronoun can also be used as a plural word, as in (15c) and (15d).

(15) NAKANAI

a. **Egite** tovo lalai la viliti.
3PL try ADV NM fishing
'They tried fishing.' (Johnston 1980:134)

b. Amite (ge) pou vikapopo **egite**.
1PL.EXCL IRR sit together 3PL
'We will sit with them.' (Johnston 1980:198)

c. **egite** la malu
PL NM bird
'(they) the birds.' (Johnston 1980:175)

d. Eau tola vikapopo **egite** la valalua.
1SG call together PL NM men
'I called together the people.' (Johnston 1980:235)

Since Nakanai lacks copulas, (15c) can be interpreted as an NP apposition, that is, 'they, the birds' (also see Johnston 1980:184). The grammaticalization of *egite* from a 3PL pronoun to a plural word presumably reflects the reanalysis of such appositive NP constructions, whereby the original pronominal form was reinterpreted as a plural marker, also illustrated in (15d).

In comparison, Sudest (Papuan Tip linkage) distinguishes 3PL subject proclitic *thï=* from 3PL object enclitic *=nggi*, and it is the object enclitic that can function as a plural marker, as shown in (16). In (16c), the plural clitic *=nggi* co-occurs with the prefix *o-* and the reduplication of the stem, which mark the plurality of kinship terms.

(16) SUDEST

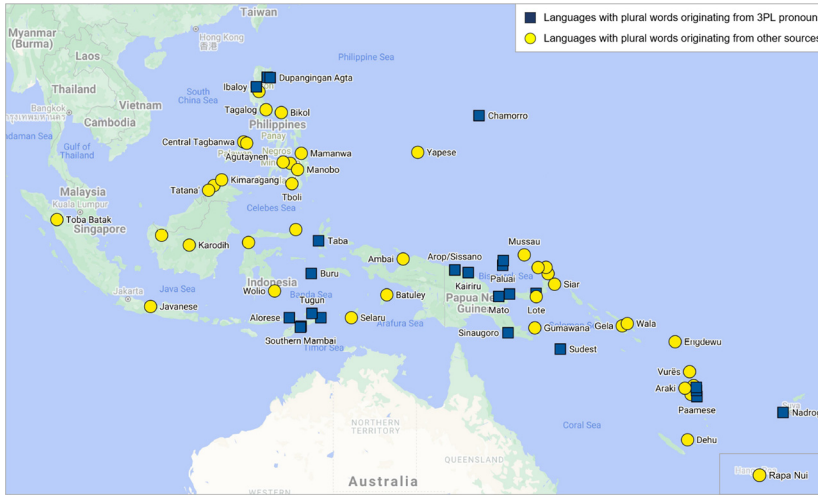
a. Evole gamagai **thï=**kaiwo.
tomorrow children 3PL.SBJ=work
'Tomorrow the children will work.' (Anderson and Ross 2011:324)

b. Ya=thuwe-wagiyawe**=nggi** gamagai.
1SG.SBJ=see-be.good=3PL.OBJ children
'I saw the children well.' (Anderson and Ross 2011:335)

c. o=tïna~tïna-nggu**=nggi**
PL=RDP~mother-1SG.POSS=PL
'my mothers' (Anderson and Ross 2011:327)

Second, plural words corresponding to 3PL pronouns are often attested in adjacent languages, as can be seen from map 3. These plural words are mostly found in the north of the Philippines, eastern Indonesia, east of Papua as well as Vanuatu.

MAP 3. DISTRIBUTION OF LANGUAGES WITH PLURAL WORDS ORIGINATING FROM 3PL PRONOUNS.



In some cases, the adjacent languages form a close-knit subgroup, and the plural words/3PL pronouns are apparent cognates. The three Northern Luzon languages in the north of the Philippines illustrate such an instance: Ibanag *ira*, Ibaloy *ira*, and Dupangingan Agta *hidi* are all reflexes of PMP *si-ida 3PL. This observation allows for two different interpretations. On the one hand, the shared history of their plural words might be attributed to a common development; that is, the grammaticalization from a 3PL pronoun to a plural word might have taken place in an ancestral language, from which the daughter languages inherited the correspondence. On the other hand, it is also possible that each of these languages innovated the plural word from a corresponding 3PL pronoun independently after the split. In fact, the plural words in all WMP and CMP languages in table 7 are related to PMP *si-ida 3PL, but given the different grammatical properties of the pronominal sources, the grammaticalization must be taken as an independent development in at least some languages. In Oceanic languages, while some plural words can be traced back to POC *ira 3PL, many others such as Paluai *ip*, Lonius *sɛh*, Mangap-Mbula *zin*, and Nadrogâ *kura* appear to have an unrelated origin. The grammaticalization from 3PL pronouns to plural words in these languages is most likely a recent event.

Language contact may also play a role in the evolution of these plural words. As noted earlier, Alorese is the only Bima-Lembata sample language with a plural word, which is situated close to the Timoric languages in eastern Indonesia. Moro (2018) seeks contact-induced change as an explanation for the origin of the plural word *hire* in Alorese, as many neighboring non-AN (Alor-Pantar) languages have a plural word that can be reconstructed to Proto-Alor-Pantar (Schapper and Klamer 2011; Klamer, Schapper, and Corbett 2014). In other regions, the grammaticalization of 3PL pronouns might also be facilitated by language contact with non-AN languages or among adjacent AN languages, but each case would require closer scrutiny.

Finally, it is worth mentioning that 3PL pronouns in some languages did not evolve into plural words but other sorts of plural markers. In Kove (North New Guinea linkage), the 3PL object pronoun can be used as a plural suffix which attaches to adjectival modifiers, as shown in (17). Since this suffix *-ri* can only be attached to adjectives in NPs, the value for the coding of nominal plurality in Kove is given as "elsewhere in the NP."

(17) KOVE

niu	moho-**ri**
coconut	old-3PL.OBJ

'old coconuts' (Sato 2013:135)

Example (17) may be alternatively analyzed as a clause with an adjectival predicate taking an object suffix, that is, 'coconuts are old'. It is not entirely

clear whether *-ri* 3PL.OBJ can appear in unambiguous NPs, but its usage as a plural suffix presumably developed from the reanalysis of object suffixes in adjectival predicates.

3PL pronouns are also often used as associative plural markers when modifying proper nouns, as shown by the examples from Tboli (Bilic) and Buru (Central Maluku) in (18) and (19), respectively.

(18) TBOLI
Wen **le** Yê.
there.is 3PL Mother
'There is Mother and the rest of the family.' (Forsberg 1992:11)

(19) BURU
Msa Mual **sira** oli haik?[10]
son-in-law (clan) 3PL return PRF
'Have Msa Mual (and his family) come back yet?' (Grimes 1991:161)

To briefly recap, 3PL pronouns are crosslinguistically common sources of plural words (and plural markers in general), and this grammaticalization process is well attested in almost 40% (25/65) of the AN languages with plural words. Many of these plural words ultimately reflect PMP *si-ida or POC *ira 3PL, but the exact paths of 3PL pronouns > plural words exhibit much variation, and the grammaticalization presumably took place independently in many languages.

5.3. PLURAL WORDS WITH OTHER ORIGINS. In addition to PMP *maŋa and 3PL pronouns, some distinctive sources of plural words can be noted in a few other languages.

Toba Batak (Northwest Sumatra/Barrier Islands) has a unique plural word *akka* that does not seem to be related to plural markers in other languages, as in *akka jabu* 'PL house' (Nababan 1981:87). Van der Tuuk (1971:116) suggests that it was originally used as a kinship term referring to same-sex elder siblings (cf. *angka* in the Mandailing dialect of Batak), which gradually lost its lexical meaning and became a plural marker. However, the exact reasoning behind his suggestion and the precise development from a kinship term for respect to a plural marker remain unclear.

The plural word *etoa* (with a variant *atoa*) in Mussau (St. Matthias, Oceanic) is most likely related to the quantifier *katoa* 'some, a few'. Synchronically these two words have different syntactic behaviors: the plural word follows the head noun, whereas the quantifier *katoa* precedes the head noun with a ligature, as shown in (20).

10. *Sira* is the free 3PL pronoun. The common plural clitic *=ro* in Buru corresponds to a 3PL object (undergoer) enclitic; see Grimes (1991:156).

(20) MUSSAU
a. nau **etoa**
day PL
'days' (Brownie and Brownie 2007:64)
b. **katoa** ng-aliki
some LIG-child
'some children' (Brownie and Brownie 2007:63)

The origins of plural words in many languages are yet to be identified, but some are related to plural affixes in other languages. The plural words *tongo* in Kimaragang (North Borneo) and *ongo* in Pendau (Celebic) are apparently related to the plural infix *-ongo-* in Bundu Dusun (North Borneo). Whether the direction of change is from a plural infix to a plural word or the other way around requires further research, but this suggests that plural words are not an isolated category in the coding of nominal plurality.

6. CONCLUSION. Since Dryer's (1989) preliminary treatment of plural words, little attention has been paid to this particular type of nominal plurality marking. This paper presents a systematic study focusing on the distribution and the history of plural words in the AN family. Beyond that, it discusses and refines the criteria of identifying plural words, and offers a detailed examination of the coding of nominal plurality in a large AN language sample.

Overall, plural words are rather common in the AN family, found in more than half of the sample languages. They exhibit a skewed distribution with a heavy presence in Philippine languages, CMP languages in eastern Indonesia, as well as Oceanic languages in New Ireland and Vanuatu. Reflexes of PMP *maŋa are attested to a limited extent in WMP languages in the Philippine and Celebic subgroups. While this proto form is also reconstructed for POC, there is very thin supporting evidence, as none of the Oceanic sample languages has a clear reflex. Instead, many plural words originated from 3PL pronouns. This grammaticalization process is nevertheless not uniform, and it presumably took place independently as a recent event in many languages.

This study limits its scope to the distribution and general diachronic paths of plural words in AN languages, and the conclusions are drawn from a typological perspective. Many issues are left for further study, such as the variation in the grammatical properties of plural words (e.g., whether they can co-occur with other noun modifiers), the position of plural words with respect to nouns in NPs (and how it relates to the basic word order), the variation in the grammaticalization processes from 3PL pronouns to plural markers, as well as the exact development of plural words in individual languages. It is hoped that the results of this study can serve as a foundation, upon which further investigation into plural words in AN languages can be conducted.

APPENDIX: SAMPLE LANGUAGES AND THEIR CODING OF NOMINAL PLURALITY

No.	Name	ISO code	Primary classification	Coding of nominal plurality	Source	Notes
1	Rukai	[dru]	Formosan	Plural prefix	Zeitoun (2007:115–21)	*a-* for human referents; *la-* for kinship terms, household names, insults, etc. Common nonhuman nouns are not marked.
2	Puyuma	[pyu]	Formosan	Plural suffix, reduplication	Teng (2007:142)	*-an*, may co-occur with reduplication.
3	Karodih	[otd]	Basap-Greater Barito (BGB)	Plural word	Inagaki (2010:passim)	*dolang*
4	West Coast Bajau	[bdr]	BGB	Plural word	Miller (2007:112–13)	*banga(n)/bongon/bengen*, possibly dialectical variants.
5	Maanyan	[mhy]	BGB	Not marked	Gudai (1988)	
6	Malagasy	[plt]	BGB	Not marked	Rasoloson and Rubino (2005)	
7	Ibatan	[ivb]	Batanic	Elsewhere in the NP, reduplication	Maree (2007:32–41)	Personal pronouns, which also code person and case marking, can be used before case markers in the NP to mark plurality. Reduplication is optional.
8	Tboli	[tbl]	Bilic	Plural word	Porter (1977:52), Forsberg (1992:10)	*kem*
9	Balantak	[blz]	Celebic	Elsewhere in the NP	van den Berg and Busenitz (2012:46, 174)	Demonstratives can take a plural prefix *raa-*, which creates "either a plural referent or to refer to a wider or less definite area." There is also an associative plural marker *ari*.
10	Muna	[mnb]	Celebic	Plural suffix	van den Berg (1989:77, 287–88)	*-hi*
11	Tukang Besi	[khc]	Celebic	Not clear	Donohue (1999b:346–47)	Donohue analyzes *mai* as both an inalienable marker as well as a plural marker. It usually occurs in possessive constructions and marks the inalienability of the objects, but when modifying alienable nouns, it marks the plurality of the object.

12	Wolio	[wlo]	Celebic	Plural word	Anceaux (1988:36)	*maqa*
13	Wotu	[wtw]	Celebic	Not marked	Mead (2013)	
14	Pendau	[ums]	Celebic	Plural word	Quick (2007:190)	*ongo*, only for human referents.
15	Ayta Abenlen	[abp]	Central Luzon	Reduplication	Nitsch (2009:10)	CV- reduplication
16	Chamorro	[cha]	Chamorro	Plural word, plural prefix	Topping (1973:234–35)	*siha*, identical to the 3PL pronoun. Plural human referents can be optionally marked by the prefix *man-*.
17	Enggano	[eno]	Enggano	Plural prefix	Crowley (n.d.)	*ka-* or *kahɔ-*, for human referents. General nouns take the same prefix *e-* in both singular and plural forms. All these are called articles, which bear no semantic functions except for "signaling the presence of a noun."
18	Tagalog	[tgl]	Greater Central Philippines (GCP)	Plural word	Schachter and Otanes (1972:111–13)	*manga*
19	Bikol	[bcl]	GCP	Plural word	Mintz (1971:99)	*mga*
20	Mamanwa	[mmn]	GCP	Plural word	Miller and Miller (1976:26–27)	*manga*
21	Cebuano	[ceb]	GCP	Plural word	Tanangkingsing (2009:55)	*mga*
22	Manobo	[mbt]	GCP	Plural word	Elkins (1970:6–7), Wang et al. (2006:49)	West Bukidnon Manobo *menge*. Also Matigsalug Manobo *me*, in most cases for human referents.
23	Central Tagbanwa	[tbw]	GCP	Plural word	Scebold (2003:60)	*manga*
24	Subanen	[stb]	GCP	Plural clitic	Daguman (2013:59, 85)	*=na*, appearing as *=a* following the case marker *ŋ=*.
25	Javanese	[jav]	Javanese	Plural word, reduplication	Ogloblin (2005:607), Suharno (1982:25)	*padha*
26	Agutaynen	[agn]	Kalamian	Plural word	Quakenbush, Hendrickson, and Edep (2010:11)	*mga*
27	Lampung	[ljp]	Lampung	Reduplication	Walker (1976:25)	
28	Matéq	[xem]	Land Dayak	Plural word	Connell (2013:73)	*balo*
29	Madurese	[mad]	Malayo-Sumbawan (MS)	Reduplication	Davies (2010:129–31)	

30	Acehnese	[ace]	MS	Not marked	Durie (1985:107)	Reduplication can be used as an expression of emphasis, but not common.
31	Balinese	[ban]	MS	Reduplication	Clynes (1995:203)	
32	Indonesian	[ind]	MS	Reduplication	Sneddon (2010:21)	
33	Mualang	[mtd]	MS	Reduplication	Tjia (2007:48)	
34	Sundanese	[sun]	MS	Plural infix, reduplication	van Syoc (1959:110–11, 123)	The plural infix *-ar-/-al-* might be considered fossilized; see Shiohara and Furihata (2011).
35	Tondano	[tdn]	Minahasan	Plural clitic, reduplication	Sneddon (1975), Brickell (2014:73, 345–47)	*se=*, for animate referents.
36	Moklen	[mkm]	Moken-Moklen	Not marked	Larish (2005)	
37	Ida'an	[dbj]	North Borneo (NB)	Reduplication	Goudswaard (2005:56)	There is a collectivity marker *iro* meaning "N and company," presumably related to the 3PL pronoun *(m)iro*.
38	Kelabit	[kzi]	NB	Reduplication	Hemmings (2016:147, 152)	
39	Melanau	[mel]	NB	Plural prefix	Clayre (1972:117)	*lou-*
40	Tatana'	[txx]	NB	Plural clitic	Dillon (1994:24)	*ngo=*, termed as a prefix, but when a classifier is present before the head noun, *ngo=* attaches to the classifier, thus a proclitic.
41	Timugon Murut	[tih]	NB	Not marked	Prentice (1971:118, 175–76)	Metrical nouns (including classifiers) take a *ŋaN-* prefix in numeral phrases.
42	Kimaragang	[kqr]	NB	Plural word	Kroeger (2005:411)	*tongo*
43	Bundu Dusun	[dtp]	NB	Plural infix	Price (2007:34)	*-ongo-*, used mainly with human referents.
44	Arta	[atz]	Northern Luzon (NL)	Elsewhere in the NP	Kimoto (2017:190)	Definite articles have number distinctions.
45	Ilocano	[ilo]	NL	Plural word, reduplication	Rubino (1997)	*dagiti*
46	Ibanag	[ibg]	NL	Plural word, reduplication	Dita (2010:61)	*ira*, can co-occur with reduplication. Identical to the 3PL absolutive pronoun.
47	Ibaloy	[ibl]	NL	Plural word, reduplication	Ruffolo (2004:84, 341–62)	*ira*, identical to the 3PL pronoun. Also CV-reduplication for human referents, CVC(V)-reduplication for nonhuman referents.
48	Dupangingan Agta	[duo]	NL	Plural word, reduplication	Robinson (2011:69–71)	*hidi*, identical to the 3PL nominative pronoun. Reduplication is possible.

49	Iraya	[iry]	North Mangya	Plural prefix	Tweddell (1958:84)	*man-/maŋ-*
50	Toba Batak	[bbc]	Northwest Sumatra/ Barrier Islands	Plural word	van der Tuuk (1971:115), Nababan (1981:87)	*akka*
51	Palauan	[pau]	Palauan	Plural prefix	Josephs (1975:42–43)	*rę-*, only for human referents.
52	Ratahan	[rth]	Sangiric	Not marked	Himmelmann and Wolff (1999)	There is an associative plural marker *ngi*.
53	Buginese	[bug]	South Sulawesi (SS)	Not marked	Valls (2014:22)	
54	Makassarese	[mak]	SS	Not marked	Jukes (2006)	
55	Pitu Ulunna Salu	[ptu]	SS	Not marked	Campbell (1989)	
56	Batuley	[bay]	Aru	Plural word	Daigle (2015:128)	*je*. Reduplication is possible, but not common.
57	Alorese	[aol]	Bima-Lembata (BL)	Plural word	Moro (2018:passim)	*hire*
58	Central Lembata	[lvu]	BL	Plural suffix	Fricke (2019:61)	*-ja*, only for alienable referents.
59	Kambera	[xbr]	BL	Elsewhere in the NP	Klamer (1998)	Definite articles have number distinctions.
60	Kéo	[xxk]	BL	Not marked	Baird (2002)	Reduplication is restrictive, which appears to be borrowed from Indonesian.
61	Nuaulu	[nxl]	Central Maluku (CM)	Plural suffix	Bolton (1990:51–52)	*-u* or *-na* for nouns from various word classes.
62	Larike	[alo]	CM	Plural suffix	Laidig and Laidig (1991:14, 36)	*-i* or *-u* for simple nouns, *-tu* or *-ri* for derived forms with final *-ta* or *-na*.
63	Fatamanue	[jal]	CM	Plural suffix	Sakiyama (1999:474–78)	Various forms including *-a, -ma, -la, -na*, and *-ta*, depending on word classes.
64	Sula	[szn]	CM	Reduplication	Bloyd (2020:326)	
65	Buru	[mhs]	CM	Plural clitic	Grimes (1991:147)	*=ro*, identical to the 3PL undergoer pronoun.
66	Fordata	[frd]	Kei-Tanimbar	Plural suffix	Drabbe (1926:8)	*-r*
67	Selaru	[slu]	South Tanimbar	Plural clitic	Coward (2005:39, 55)	*=Vre* and its allomorphs depending on the ending of preceding words.
68	Leti	[lti]	Timoric A	Plural clitic, reduplication	van Engelenhoven (2004:115–16)	*=ra*, for human referents. Nonhuman nouns can be pluralized by reduplication.

69	Tetum	[tet]	Timoric A	Plural word	Hull and Eccles (2004:16)	*sira*, identical to the 3PL pronoun.
70	Tugun	[tzn]	Timoric A	Plural word, reduplication	Hinton (1991:50–51)	*hira*, identical to the 3PL pronoun.
71	Southern Mambai	[mgm]	Timoric B	Plural word	Hull (2003:11)	*sêr*
72	Irarutu	[irh]	Nabi-Irarutu	Not clear	Jackson (2014:141–42)	See footnote 6.
73	Biak	[bhw]	South Halmahera-West New Guinea (SHWNG)	Not clear	van den Heuvel (2006:202–04)	See footnote 6.
74	Ambai	[amk]	SHWNG	Plural clitic	Silzer (1983:92–95)	=*sa*, termed as suffix, but best analyzed as a clitic which may follow articles, deictic roots, or possessive particles.
75	Taba	[mky]	SHWNG	Plural clitic	Bowden (2001:190)	=*si*, only for human referents, identical to the 3PL free pronoun.
76	Warembori	[wsa]	SHWNG	Plural suffix	Donohue (1999a:11–12)	*-na*; *-ti* for human referents. *-ti* is identical to the 3PL free pronoun. The system appears to be similar to that in Biak, but in Biak =*si* and =*na* are analyzed as clitics. Further research is needed to clarify the differences.
77	Paluai	[blq]	Admiralty Islands (AI)	Plural word, reduplication	Schokkin (2014:100–01, 190–91)	*ip*, also *u* for dual number, *irê* for paucal number. All these are identical to 3PL pronouns. Reduplication is possible.
78	Loniu	[los]	AI	Plural word, reduplication	Hamel (1994:82, 90)	*sɛh*, identical to the 3PL pronoun.
79	Wuvulu	[wuv]	AI	Elsewhere in the NP	Hafford (2015:66–67)	Demonstratives and articles have number distinctions.
80	Vaeakau-Taumako	[piv]	Central Pacific linkage (CPL)	Elsewhere in the NP	Næss and Hovdhaugen (2011:92, 145, 165)	Plural prefix *va-/ve-* is attested in a handful of kinship terms and two other nouns, and reduplication is attested in certain nouns. Neither is productive. Articles have number distinctions.
81	Rapa Nui	[rap]	CPL	Plural word	Kieviet (2017:249)	*ŋā*
82	Fijian	[fij]	CPL	Not marked	Schütz (1985:365)	
83	Nadrogâ	[wyy]	CPL	Plural word	Geraghty (2011:838)	*kura*, identical to 3PL independent pronoun. Also *kuru* for dual/paucal number.

84	Kosraean	[kos]	Micronesian	Not marked	Lee (1975)	
85	Marshallese	[mah]	Micronesian	Elsewhere in the NP	Bender, Capelle, and Pagotto (2016:179, 185)	Definite articles and demonstratives have number distinctions.
86	Southeast Ambrym	[tvk]	North and Central Vanuatu (NCV)	Plural word	Ridge (2019:127, 199)	*xil*, identical to 3PL independent pronoun.
87	South Efate	[erk]	NCV	Not marked	Thieberger (2006:107)	Number is expressed by pronominal markers on the verb. There is an associative plural *mana*.
88	Unua	[onu]	NCV	Plural word	Pearce (2015:188)	*rin*
89	Namakir	[nmk]	NCV	Plural suffix	Sperlich (1991:138)	*-emaŋ* and *-aban*, the latter is often glossed as 'all'.
90	Paamese	[pma]	NCV	Plural word	Crowley (1982:95)	*kaile*, also *kailue* DU, *kaitelu* PAUC. Identical to the third-person non-singular pronouns. They are termed as (definite) determiners, but they could also have a generic reading.
91	Abma	[app]	NCV	Plural word, reduplication	Schneider (2010:65, 139)	*nii*, identical to the 3PL object/independent pronoun. Reduplication is possible.
92	Abmae	[omb]	NCV	Plural word	Hyslop (2001:119–20)	*re*, for human referents. Preceding the head nouns. Similar to the 3PL subject clitic *ra=*.
93	Raga	[lml]	NCV	Plural word, reduplication	Vari-Bogiri (2011:81–82)	*ira*, presumably related to the 3PL independent pronoun *kera*. Reduplication is possible.
94	Vurës	[msn]	NCV	Plural word	Malau (2016:254)	*terē*
95	Tamambo	[mla]	NCV	Plural prefix	Jauncey (2011:113–14, 152)	*va-/vai-/ra-* for human referents; *na-* for kinship terms, terms for trees are marked by prefixing *lo-*. Only *lo-* seems to be productive. Reduplication is possible but not productive.
96	Araki	[akr]	NCV	Plural word, reduplication	François (2002:37, 54)	*dai*. Reduplication is possible.
97	Gela	[nlg]	Southeast Solomonic	Plural word	Crowley (2011:528–29)	*lei*, for animate referents.
98	Wala	[lgl]	Southeast Solomonic	Plural word	Lovegren, Mitchell, and Nakagawa (2015:115)	*gi*
99	Dehu	[dhv]	Southern Melanesian (SM)	Plural word	Tryon (1968:60–61)	*ite*, analyzed as an indefinite plural article. But compare the definite plural article *la ite*, in which *la* is the definite article and *ite* only marks plurality.

100	Belep	[yly]	SM	Not marked	McCracken (2001:246–47)	There is an associative plural suffix *-ma.*
101	Tinrin	[cir]	SM	Plural prefix	Osumi (1995:101)	*mê-*, only for human referents.
102	Anejom̃	[aty]	SM	Plural prefix	Lynch (2000:50)	*eplu-/ilpu*, for animate referents.
103	Mussau	[emi]	St. Matthias	Plural word	Brownie and Brownie (2007:53)	*atoa/etoa*
104	Engdewu	[ngr]	Temotu	Plural clitic	Vaa (2013:171–72)	*=yo*
105	Vitu	[wiv]	Western Oceanic linkage (WOL)—Meso Melanesian linkage (MML)	Reduplication	van den Berg and Bachet (2006:32)	
106	Nakanai	[nak]	WOL—MML	Plural word, reduplication	Johnston (1980:175)	*egite*, identical to the 3PL pronoun.
107	Barok	[bjk]	WOL—MML—New Ireland-Northwest Solomonic linkage (NINSL)	Plural word	Du (2010:113)	*bo*, also *buŋ* for human referents, as well as *na* and *toon* which are rarely used.
108	Mandara	[tbf]	WOL—MML—NINSL	Plural word	Hong and Hong (2003:19)	*bu*, also *ba* PAUC.
109	Kara-Lemakot	[leu]	WOL—MML—NINSL	Plural word	Dryer (2013b:70)	*maana*, greater plural. There are other number words, *mu* PL, *ro* DU, and *nu* PAUC. *maana* can co-occur with *mu* or *nu*.
110	Siar	[sjr]	WOL—MML—NINSL	Plural word, reduplication	Frowein (2011:120–24)	*bar* for human referents; *kai/kabai* for nonhuman animate referents; *tó* for inanimate referents.
111	Kokota	[kkk]	WOL—MML—NINSL	Elsewhere in the NP	Palmer (2009:84)	Number can be marked on articles and demonstratives.
112	Bukawa	[buk]	WOL—North New Guinea linkage (NNGL)	Not marked	Eckermann (2007:27–29)	Kinship terms take the clitic *-i*. Also compounding is possible.
113	Hote	[hot]	WOL—NNGL	Not marked	Muzzey (1979:10)	
114	Adzera	[adz]	WOL—NNGL	Not marked	Holzknecht (1986:104–05)	Plurality can also be marked by reduplication of modifiers in NPs, but this is rare.
115	Kove	[kvc]	WOL—NNGL	Elsewhere in the NP	Sato (2013:134–35)	Object suffix *-ri* on adjectives, or reduplication of the adjectives.

116	Mato	[met]	WOL—NNGL	Plural clitic	Stober (2013:42)	*=di*, identical to the 3PL object suffix. There is also a collective marker *mana*.
117	Mangap-Mbula	[mna]	WOL—NNGL	Plural word	Bugenhagen (1995:201–03)	*zin*, identical to the 3PL nominative/accusative pronoun. Also *bizin* for marking the plurality of possessed items.
118	Lote	[uvl]	WOL—NNGL	Plural word	Pearson and van den Berg (2008:33–34)	*mur*, also an associative marker at the same time.
119	Tobati	[tti]	WOL—NNGL	Not marked	Donohue (2011:192)	
120	Kairiru	[kxa]	WOL—NNGL	Plural word	Wivell (1981:passim)	*rri*, identical to the 3PL pronoun. Also *rru* DU.
121	Arop-Sissano	[aps]	WOL—NNGL	Plural word, plural suffix	Whitacre (1986:25–26)	*re*, identical to the 3PL pronoun. Also *ro* DU. *-re* and *-ro* on inalienably marked nouns in possessive constructions.
122	Maisin	[mbq]	WOL—Papuan Tip linkage (PTL)	Plural suffix, reduplication	Frampton (2014:68–69)	Both the suffix *-e* and reduplication are only for human referents. General nouns usually do not have plural marking; reduplication is noted but rare.
123	Koluwawa	[klx]	WOL—PTL	Plural suffix	Guderian and Guderian (2002:18)	*-vo*, for animate referents.
124	Gumawana	[gvs]	WOL—PTL	Plural clitic	Olson (1992:267–68, 306)	*=iao*, termed as a suffix, but it can be separated from the head noun by a possessive pronoun, hence a clitic.
125	Saliba	[sbe]	WOL—PTL	Plural suffix, reduplication	Margetts (1999:20)	*-o*, only for human referents and certain domestic animals. Reduplication is obligatory for some nouns when suffixed with the plural marker.
126	Sinaugoro	[snc]	WOL—PTL	Plural clitic	Tauberschmidt (1999:62–63)	*=ri*, identical to the 3PL object suffix. It is described as a suffix attached to qualitative adjectives, but it appears that it can also attach to other quantifiers in the NP, e.g., *ḡuiato mabara-ri* 'girl all-3PL'. Also see Kolia (1975).
127	Sudest	[tgo]	WOL—PTL	Plural clitic, reduplication	Anderson and Ross (2011:327)	*=nggi*, for human referents, identical to the 3PL object pronoun. Reduplication of nonhuman referents appears to be possible. Kinship terms have a plural proclitic *o=*.
128	Yapese	[yap]	Yapesic	Plural word	Jensen (1977:152–55)	*pi* PL and *gäl* DU, used in NPs without classifiers. Also *yuu* PL, used before classifiers.

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