Typology and geography in eastern Indonesia

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Abstract

Himmelmann (2005) identifies two typological profiles amongst the non-Oceanic Austronesian languages. One of these (the 'symmetrical voice' type) is associated with the more westerly part of the Austronesian region in Asia, while the other (the 'preposed possessor' type) is found in eastern Indonesia, specifically in Timor, Maluku and West Papua, as well as in many Malay varieties. This second type is mainly restricted to a small geographic region, basically the Indonesian archipelago east of Sulawesi, while the first type occurs in a wider region including Taiwan, the Philippines, western Indonesia and Madagascar. Himmelmann lists eight features which characterise the preposed possessor type and this paper examines the geographic distribution of these eight features across languages of eastern Indonesia. The results show that some of the features are more reliable indicators of language type than others, and that there is more variation in the co-occurrence of features in the south of the area than in the north.

1. Language in Indonesia: The east-west divide[1]

According to *Ethnologue* (15th edition, Gordon 2005), Indonesia has 742 languages, that is, more than 10% of the world's languages. A large majority of these languages are from the Austronesian family, but non-Austronesian languages are spoken in Papua and in parts of eastern Indonesia. A division between the Austronesian languages in the east of the archipelago and those in the west was noted by Brandes (1884), based on the ordering of possessor and possessum in nominal possession. This division was also noted by other scholars in the past, including van Hoëvell (1877), who noted the feature for central Moluccan languages, and Capell (1944), who talks of the 'reversed genitive' construction in Timor.

More recent studies have also examined the characteristics of eastern Indonesian languages. Klamer (2002) attempts to identify features of Austronesian languages in eastern Indonesia which can be used as heuristics in cases of doubtful affiliation, while Himmelmann (2005) surveys the typology of Austronesian languages between

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[1] I am grateful to the audience at ALS 2007, especially Mark Donohue, for valuable comments, and to two anonymous reviewers whose suggestions assisted me to improve this paper. I am responsible for remaining errors.

Taiwan and Oceania. In that survey, Himmelmann identifies three types of language:

    a. Symmetrical voice languages
    b. Preposed possessor languages
    c. Transitional languages

Transitional languages are the 'elsewhere case' – languages which cannot clearly be assigned to either of the other types. The classification is based on a constellation of eight features which tend to co-occur. These are set out in Table 1.

Table 1: Eight features which differentiate Symmetrical Voice and Preposed Possessor languages
(after Himmelmann 2005)

Feature	Symmetrical Voice Language	Preposed Possessor Language
Voice system	Symmetrical	Asymmetrical or none
Order of N, Gen	N Gen	Gen N
Inalienable Possession	no	yes
Equational/Narrative clauses	no clear distinction	clear difference
Person marking	sporadic	S/A prefix/proclitics
Order of N, Num	Num N	N Num
Position of Negator	pre-predicate	clause-final
Basic word order	V-initial or SVX	V2 or V-final

Himmelmann specifies the geographical distribution of preposed possessor languages as follows:

> Preposed possessor languages in this sense are the non-Oceanic Austronesian languages of Timor, the Moluccas and West Papua, as well as the Pidgin-Derived Malay varieties. (2005: 113)

This formulation makes clear that such languages are largely confined to eastern Indonesia, and indeed the name he chose to use clearly refers back to the work of Brandes and other earlier scholars. The purpose of this paper is to examine the geographic distribution of Himmelmann's features in a sample of languages from eastern Indonesia and to assess 1) how reliably the features co-occur; and 2) whether the individual features have similar geographic ranges or not. The data examined here show that the features are more likely to co-occur in languages from the north-east part of eastern Indonesia, and that there is variation in the geographic range of the individual features. These results suggest that the Preposed Possessor Language type is most usefully viewed as a prototype, with some languages displaying all or most of the characteristic features and being good exemplars of the type, whilst other languages are less good exemplars and, given that none of them have symmetrical voice systems, look rather similar to transitional languages.

2.   The current sample

The current sample includes 23 Austronesian languages (or more accurately, 22 Austronesian languages and one Austronesian-based creole, Tetum Dili). Table 2 lists the languages along with their geographic location and the sub-group of Austronesian to which they belong. Tukang Besi is a member of Malayo-Polynesian group, and the sub-grouping for that language starts from below that node. All the other languages are members of the Central Eastern Malayo-Polynesian group, a first-order sub-group of Malayo-Polynesian, and classification for them therefore starts from below that node. Exhaustive classification is not given here; full details can be found in *Ethnologue* (Gordon 2005). The geographic locations of the languages are shown in Map 1, and the sources consulted for each language are listed in Appendix 2 to this paper.

Table 2: The languages in the current sample
(Abbreviations: CMP – Central Malayo-Polynesian, SHWNG – South Halmahera-West New Guinea, EMP – Eastern Malayo-Polynesian)

Language	Location	Sub-group
Allang	Ambon Island, Central Maluku	CMP > Central Maluku
Alune	Seram Island, Central Maluku	CMP > Central Maluku
Ambai	Ambai Island, West Papua	EMP > SHWNG > West New Guinea
Biak	Schouten Islands, West Papua	EMP > SHWNG > West New Guinea
Buru	Buru Island, Central Maluku	CMP > Central Maluku
Galoli	Timor and Wetar Island	CMP > Timor
Kambera	Sumba	CMP > Bima-Sumba
Kéo	Flores	CMP > Bima-Sumba
Kisar	Kisar Island	CMP > Timor
Kola	Aru Islands, South Maluku	CMP > Aru
Leti	Leti Island, South Maluku	CMP > Timor
Luang	Babar Islands, South Maluku	CMP > Timor
Nuaulu	Seram Island, Central Maluku	CMP > Central Maluku
Palu'e	Palu Island	CMP > Bima-Sumba
Paulohi	Seram Island, Central Maluku	CMP > Central Maluku
Sou Amana Teru	Ambon Island, Central Maluku	CMP > Central Maluku
Selaru	Tanimbar, Selaru, Yamdena Islands, South Maluku	CMP > South East Maluku
Southern Mambai	Timor	CMP > Timor
Taba	Makian Island, North Maluku	EMP > SHWNG > South Halmahera
Tetum Dili	Timor	(creole)
Tetun Fehan	Timor	CMP > Timor
Tukang Besi	Tukang Besi Archipelago, South Sulawesi	Sulawesi > Muna-Buton
Tugun	Wetar Island, Southwest Maluku	CMP > Timor

3. The features and their geographic distribution

3.1 Equational and narrative clauses

Himmelmann claims that, in symmetrical voice languages, it is hard to distinguish verbal and equational clause types, and it is hard to separate core and peripheral arguments. In preposed possessor languages, on the other hand, there is a clear distinction between verbal and equational clause types. I have not attempted to assess this feature in the present study for two reasons. Firstly, Himmelmann's statements leave considerable room for interpretation, making the parameter hard to apply or to evaluate. Secondly, the data available for several languages is not detailed enough to allow for any attempted evaluation.

3.2 Voice

Himmelmann distinguishes between symmetrical voice languages, those which have more than one basic transitive clause construction and it is not clear that one of these should be taken as basic, and two other possibilities: asymmetric voice systems (like English) or no voice system. In the current sample, lack of a voice system is distinctive. Interpretation is difficult in some cases in the south west of the area where some languages have been analysed as having a voice system although lacking voice morphology (Arka 2008, Arka & Kosmas 2005). Thus, the word order alternation seen in example (1) from Lio (an Austronesian language spoken on the island of Flores and closely related to Kéo) is analysed by Arka as a voice alternation. The evidence for this analysis is that in each case it is only the clause-initial NP which is accessible to syntactic processes such as relativisation and control.[2]

Lio (Arka 2008, ex. 8)

(1a) *Kai   ghea   tebo   aji*
3SG   that   hit   younger.sibling
'S/he hit the little brother/sister.'

(1b) *Aji   kai   ghea   tebo*
younger.sibling   3SG   that   hit
'The little brother/sister, s/he hit.'

The alternation in example (1) is exactly the same as that seen in example (2) from Kéo.

Kéo

(2a) *'Imu   bhobha   kepa*
3SG   hit   mosquito
'He hit a mosquito.'

(2b) *Négha   ké   tana   kami   waju*
already   that   soil   1PL.EXCL   pound
'Then we pounded the soil.'

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[2] Abbreviations used in glossing examples are listed in Appendix 1.

It is therefore possible that Kéo is also a language with voice alternations which are not marked morphologically. Baird (2002) claims that Kéo has no voice alternations, but also notes that a clause type which she describes as 'object fronting' (seen in example (2b)) is very common. Kéo is therefore coded as **Unknown** as the available data is not sufficient to assign a definite value.

Tukang Besi is coded as a symmetrical voice language. Donohue (1999: 163) argues that it has a symmetrical voice system, but he also presents evidence for a passive voice in the language (1999: 274-81). For Himmelmann, what is criterial is that a language has "at least two voice alternations marked on the verb, neither of which is clearly the basic form" (2005: 112). This criterion does not rule out the possibility that a language might have passive voice in addition to symmetrical voices. The example given by Himmelmann immediately following the quoted passage is from Malay, and an analysis such as that just mentioned has been proposed by various scholars for Indonesian, which is a standardized variant of Malay (Arka & Manning 2008, Musgrave 2001). On the basis of Donohue's analysis, Tukang Besi is a similar case.

Map 2 shows the values for Himmelmann's voice feature found in the sample. Values characteristic of Preposed Possessor languages are coded as blue dots, values characteristic of Symmetrical Voice languages are coded as red dots. Languages for which insufficient data is available (in this case Kéo) are represented as purple dots. This colour coding is used in all the maps showing single features for the sample; where other colours occur in a particular map, the coding will be explained at the relevant place. In Map 2, the blue dots indicate lack of a voice system, and it is clear that this is the dominant type in the sample. Only two languages with a symmetrical voice system appear, and these are at the western edge of the area.

3.3 Word order in possession

As noted previously, many scholars since Brandes have agreed that word order in possessive constructions is a criterial feature for languages in eastern Indonesia. One scholar has dissented from this view, with Klamer stating:

> Instead of referring to the position of the possessor noun/NP, it is therefore more appropriate to formulate a generalization about the position of the affix/clitic marking the possessor: if a language has a possessor morpheme, it is generally a suffix/enclitic, not a prefix/proclitic. (Klamer 2002: 372)

I suggest that there are several reasons to prefer the traditional position. Firstly, marking of possession with a suffix or enclitic is a feature which is shared westward, as seen in example (3) for Indonesian, Sasak and Balinese.

(3a)   Indonesian
         ibu-ku
         mother-1SG
         'my mother'

(3b)   Sasak
     kakaq-k
     older.sibling-1SG
     'my big brother/sister'

(3c)   Balinese
     teban-ne
     backyard-3
     'his/her backyard'

This consideration was perhaps less relevant to Klamer's argument as her paper is an attempt to find a set of features which can be used as a heuristic to separate Austronesian and non-Austronesian languages in eastern Indonesia. But for current purposes, when distinctions between languages from eastern and western Indonesia are at issue, evidence such as that in example (3) is significant.

A second reason to question Klamer's position is that a number of languages from Central Maluku have both prefixal and suffixal marking of possession corresponding to the distinction between alienable and inalienable possession. This is illustrated in example (4) with data from Sou Amana Teru (Ambon Island).[3]

(4)   *Au*   *a'a-u*   *malona-e* *tula* *i-mahina-e*   *isi* *wa-'ene*
     1SG   elder.sibling-1SG   male-*e*   with   3SG-female-*e*   3PL LOC-DIST
     marinu-e
     garden-*e*
     'My big brother and his wife were there at the garden.'

In example (4), the kin term *a'a* 'elder sibling' is inalienably possessed and the relationship is therefore marked by a suffix. On the other hand, the other kin term, *mahina* 'woman (wife)' is alienably possessed, and the relationship is therefore marked with a prefix. It is not clear how Klamer would treat such languages, but the fact that the more restrictive relationship is the one marked with a suffix in this group of languages suggests that they constitute an important set of counter-examples to Klamer's claim. A third reason to reject Klamer's distinction is the general preference for suffixes across the languages of the world (Dryer 2008). Klamer's position only has any force if it refers to a tendency toward suffixal-marking of possession beyond the general preference, and no attempt is made to quantify this.

Map 3 shows the distribution of possessive suffixes in the sample. Blue dots code the presence of any suffix marking possession in a language, red dots code the complete absence of possessive suffixes in a language. The map shows that, in addition to the arguments presented above, the presence or absence of possessive suffixes is relatively uninformative as a typological feature for this sample.

Map 4 shows the geographic distribution of languages with preposed possessors. There is a definite east-west divide for this feature, with the only languages which

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[3] The suffix *–e* commonly attaches to nouns in Sou Amana Teru; its function is not clear and it is left unglossed here. The apostrophe represents a glottal stop in this example.

definitely have postposed possessors occurring on the western edge of the area. The yellow dots represent three languages from Timor for which it is reported that both possibilities occur (i.e. preposed and postposed possessors) without specifying whether one possibility is the unmarked construction.

3.4   Inalienable possession

Blust (1993) treats the presence of a distinction between alienable and inalienable possession as a morphosyntactic innovation in Central Eastern Malayo-Polynesian. Although many languages of eastern Indonesia do have the distinction, there are languages which do not (e.g. Taba) although in some cases it is possible to see the traces of a distinction which existed at an earlier stage of the language, as in Allang (Ewing 2005).

There are several languages in the current sample for which it is not clear whether the distinction is present or not. Firstly, Buru is reported to have two possessive constructions, but in many cases the same nouns can occur in both constructions. This is a different situation from that seen in a language such as Sou Amana Teru (see example (4)), where there is a small class of nouns which obligatorily take inalienable possession and a large (open) class of nouns which never appear in that construction. Buru is coded as **Unknown** in Map 5. The situation for Tetun Fehan is similar, although it is reported that there are statistical tendencies for some nouns to favour one construction rather than another. There are also two languages from Timor (Galoli and Southern Mambai) which are reported to have two possession constructions, but the available information is insufficient to decide whether a distinction between alienable and inalienable possession is present.

Map 5 shows the geographic distribution of languages with inalienable possession. The map shows that this feature is not present consistently across the area. The region including Central and South-Western Maluku is the only part of the area where the feature does occur reliably, except for Allang.

3.5   Person marking

Himmelmann (2005) suggests that person marking is very characteristic of Preposed Possessor languages. This marking takes the form of obligatory prefixes or proclitics which reference the sole argument of an intransitive verb and the more agent-like argument of a transitive verb, that is the arguments conventionally abbreviated as S and A. The marker can be doubled by a free noun phrase, or it can serve as the sole exponent of the argument. The markers also occur in many positions which are often left empty in other languages, in what are sometimes referred to as 'pivot constructions' (cf. Ross 2004 for similar comments on the Oceanic languages). Example (5) from Sou Amana Teru illustrates these points. In the main clause, the person marking prefix *i-* doubles a free noun phrase, *bombonu,* while in the purpose clause, the person marker is obligatory also.

(5)   *Bombonu   i-lawa   lo'o   hare   wair-e   ena   i-pahoi-ni*
     monkey   3SG-run   to   DIR   water-*e*   for   3SG-wash-3SG
     'Monkey ran to the river to wash himself.'

Himmelmann notes that the occurrence of this feature is 'sporadic' in symmetrical voice languages. Outside of eastern Indonesia, it occurs in Sulawesi and also in a few places in West and North Sumatra.

Map 6 shows the distribution of languages with person marking in the sample. This feature is very consistent in the north of the area, but less so in the south. In the north, Buru is coded as lacking the feature. This language does possess pronominal proclitics but the available description suggests that they are not obligatory.

3.6 Noun and numeral

In languages from western Indonesia, numerals typically precede the head noun, while in eastern Indonesia the order is typically opposite. This is illustrated in example (6) with data from Indonesian and Sou Amana Teru.

		Indonesian				Sou Amana Teru		
(6)	a.	*dua*	*ekor*	*anjing*	b.	*asu*	*inai*	*rua*
		two	CLF	dog		dog	CLF	two
		'two dogs'				'two dogs'		

Classifiers are common in both areas, and have no value as a discriminator.

Map 7 shows the distribution of languages with numerals following head nouns in the sample. This feature is very consistent throughout the sample, with only the westernmost language, Kambera, having the order typical of Symmetrical Voice languages.

3.7 Negation

Clause-final (post-predicate) negation has been identified as an areal feature in eastern Indonesia by others besides Himmelmann (Reesink 2002, Klamer 2002). Florey (to appear) shows that the feature is not common in Central Maluku, and also shows that Himmelmann's distinction is too simple. Several languages in the sample position the negator before the predicate in their basic negation strategy, but also have complex negation strategies which include a post-predicate element. This is illustrated in example (7) from Paulohi (Seram Island).

Paulohi (Seram)
(7) *Au* *tae* *u-riae* *herie* *u-pipina* *tama*.
1SG NEG 1SG-go away 1SG-wife NEG
'I will not leave my wife.'

Such languages are coded as a distinct type in Map 8, represented by yellow dots. In this sample, post-predicate negation is restricted to the northern part of the area, and even there it does not occur consistently.

3.8 Basic word order

Himmelmann (2005) makes a distinction between his two language types as regards basic word order in clauses, noting that verb initial word order occurs in Symmetrical Voice languages but not in Preposed Possessor languages, while verb

final word order is distributed in opposite fashion. But there is only a small group of Austronesian languages which have SOV order and all of these are located on or close to New Guinea. Their atypical word order is generally accepted as an example of contact-induced change (Ross 1996). Therefore Himmelmann's claim effectively reduces to the fact that verb-initial order exists in symmetrical voice languages but not in preposed possessor languages. This is not a strongly discriminating feature, as verb-medial order is very common across both western and eastern Indonesia.

Map 9 shows that verb-medial occurs very consistently in the sample. The only exceptions are Tukang Besi, on the western edge of the area, and Kéo, which is coded as **Unknown** for reasons discussed in section 3.2 above.

4.   Geography and typology

4.1   Overall summary

In order to gain an overall impression of how closely each language surveyed matches the profile for Preposed Possessor languages as identified by Himmelmann, I have constructed a simple index. A language scores 1 point for each feature value which corresponds with the profile, 0 for a non-match and 0.5 for an **Unknown**

Table 3: Index of correspondence to Himmelmann's Preposed Possessor Language type

Language	Score
Biak	8
Alune	8
Nuaulu	8
Ambai	7.5
Sou Amana Teru	7
Taba	7
Tetun	7
Paulohi	7
Kola	7
Buru	6.5
Leti	6
Selaru	6
Tugun	6
Allang	6
Luang	6
Kisar	5.5
Southern Mambai	5
Galoli	5
Tetum Dili	4.5
Kambera	3.5
Kéo	3.5
Palu'e	3
Tukang Besi	2.5

value. This scoring applied in all case except for the position of negation (see section 3.7), where 2 points were given to languages with unequivocal post-predicate negation, 1 point to languages with split negation, 0 to languages with only pre-predicate negation, and 0.5 for **Unknown** values. The presence of suffixal possession was omitted from the calculation, as the feature is not part of Himmelmann's profile. The resulting values of the index are shown in Table 3, listed from the highest score to the lowest.

This data is also represented in Map 10. The dots representing languages have various shades of red, with a deeper red indicating a higher score on the index. This map shows that the languages which conform best to Himmelmann's profile are located in the north of the region and tend to be more to the east.

4.2   Geographic orientation

Languages with full array of preposed possessor features are in the north of the area and in Seram, Central Maluku. At least two of the features examined here show a strong north-south divide; these are the presence of inalienable possession and post-predicate negation (cf. Donohue 2007 for north-south divides in Austronesian generally). Preposed Possessor languages are mainly restricted to eastern Indonesia, and the features which characterise this language type are generally shared with non-Austronesian languages to the east. This second fact is illustrated by Map 11 which shows word order in possessive constructions, and Map 12 which shows the order of noun and numeral, both in a wider region. These maps show data from *The World Atlas of Language Structures* (Haspelmath, Dryer, Gil & Comrie 2005). Therefore the presence of a division between the properties of languages in western Indonesia and eastern Indonesia might plausibly be explained as the result of contact-induced change and areal convergence. This explanation seems at least as plausible as that provided by language-internal innovation (cf. Blust 1993 on inalienable possession).

The data reported here could be interpreted as giving some additional support to an hypothesis of areality. The languages which conform best to Himmelmann's preposed possessor type are in the part of the region which lies closest to New Guinea. The islands where these languages are spoken lie further east than the islands in the southern part of the region, and the Bird's Head peninsula of New Guinea is the most northerly part of that island. It is true that non-Austronesian languages are spoken on some of the southern islands such as Timor and Alor, which would suggest that opportunities for contact between Austronesian and non-Austronesian speakers might have occurred in that region also. But the non-Austronesian languages are not necessarily typologically similar to those in the north and the results of contact in that region could well be different to those proposed for the north. Also, the non-Austronesian languages in the south were more isolated than those in the north. The non-Austronesian communities in the south probably had less ongoing contact with other non-Austronesian groups after their migration from New Guinea and it might therefore have been more likely that their languages would adopt features from the surrounding Austronesian languages rather than vice versa.[4] In addition, there is no evidence that any non-Austronesian

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[4] McWilliam (2007) discusses the culture of a non-Austronesian group, the Fataluku people, in Timor, giving examples of extensive lexical and cultural borrowing.

group in the south attained influence over a wide area in the same way as Ternate and Tidore did in the north.

It should be noted that some features are very consistent across the area, such as word order in possessive constructions, relative order of numeral and noun, and basic word order. The last of these is perhaps of less interest, given that verb-medial order is common across all of Indonesia. The other two features are both concerned with aspects of noun phrase structure, but it is not clear to me whether this fact is significant (but see further discussion below). It is striking, however, that Brandes's original insight stands up to examination even with the addition of more recent data sources.

4.3   Stability over time

When considering morphosyntactic change, we have very little data which allows us to assess whether certain changes are more or less likely to happen, or, to put the question from the opposite point of view, which features are likely to be stable in a language or a group of languages. Recent work by Wichmann and Holman (2007) is an attempt to give quantifiable estimates of stability over time. Their technique involves examining the relationship between similarity measures for features in pair-wise comparisons within known genetic groupings and similar measures for unrelated languages. The extent to which the genetic grouping displays higher levels of similarity for a feature over the control comparisons is an indication of the stability of the feature within a genetic group. Wichmann and Holman have applied this technique to a subset of the features which are mapped in *The World Atlas of Langauge Structures* (Haspelmath et al. 2005), and some relevant results are presented in Table 4.

Table 4: Stability over time of some morphosyntactic features

Feature	Index	Stability
SOV order	69.5%	Very stable
Order N + genitive	65.3%	Very stable
Order N + numeral	54.9%	Very stable
SVO order	59.2%	Very stable
V-initial order	44.5%	Stable
Passive	28.3%	Unstable

The striking result here is that the features identified in this study as very consistent in the sample coincide with the features which Wichmann and Holman identify as very stable over time. In particular, Wichmann and Holman's stability figures for word order in noun phrases reflect the observed stability but also suggest that the original innovation, however it occurred, was a significant change and represents a major demarcation (or major demarcations) in the history of the language family. The figures for clausal word order contribute less to the interpretation of the results reported here, although they emphasise the unexpected nature of the change to SOV order in a small group of Austronesian languages discussed in section 3.8 although not included in the sample. Finally, Wichmann and Holman's result for passive voice as a feature of languages suggests that the observed absence of voice systems in the sample may be less useful as a discriminating feature.

Appendix 1: Abbreviations

The following abbreviations are used in glossing examples:

1	1st person	EXCL	exclusive
3	3rd person	LOC	locative
CLF	classifier	NEG	negator
DIR	directional	PL	plural
DIST	distal	SG	singular

Appendix 2: Sources

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Allang	M.Ewing (p.c.), (2005)
Alune	Florey (2001)
Ambai	Silzer (1982)
Biak	Heuvel (2006), Steinhauer (2005)
Buru	Grimes (1992)
Galoli	Hull (2003)
Kambera	Klamer (1998), (2005)
Kéo	Baird (2002)
Kisar	Blood (1992)
Kola	Takata (1992)
Leti	Engelenhoven & Williams-van Klinken (2005)
Luang	Taber & Taber (1995)
Nuaulu	Bolton (1990)
Palu'e	M.Donohue (p.c.)
Paulohi	Stresemann (1918)
Sou Amana Teru	Own fieldnotes
Selaru	Coward (1990)
Southern Mambai	Hull (2003)
Taba	Bowden (2001), (2005)
Tetum Dili	Hull (2002)
Tetun	Engelenhoven & Williams-van Klinken (2005)
Tukang Besi	Donohue (1999)
Tugun	Hinton (1991)

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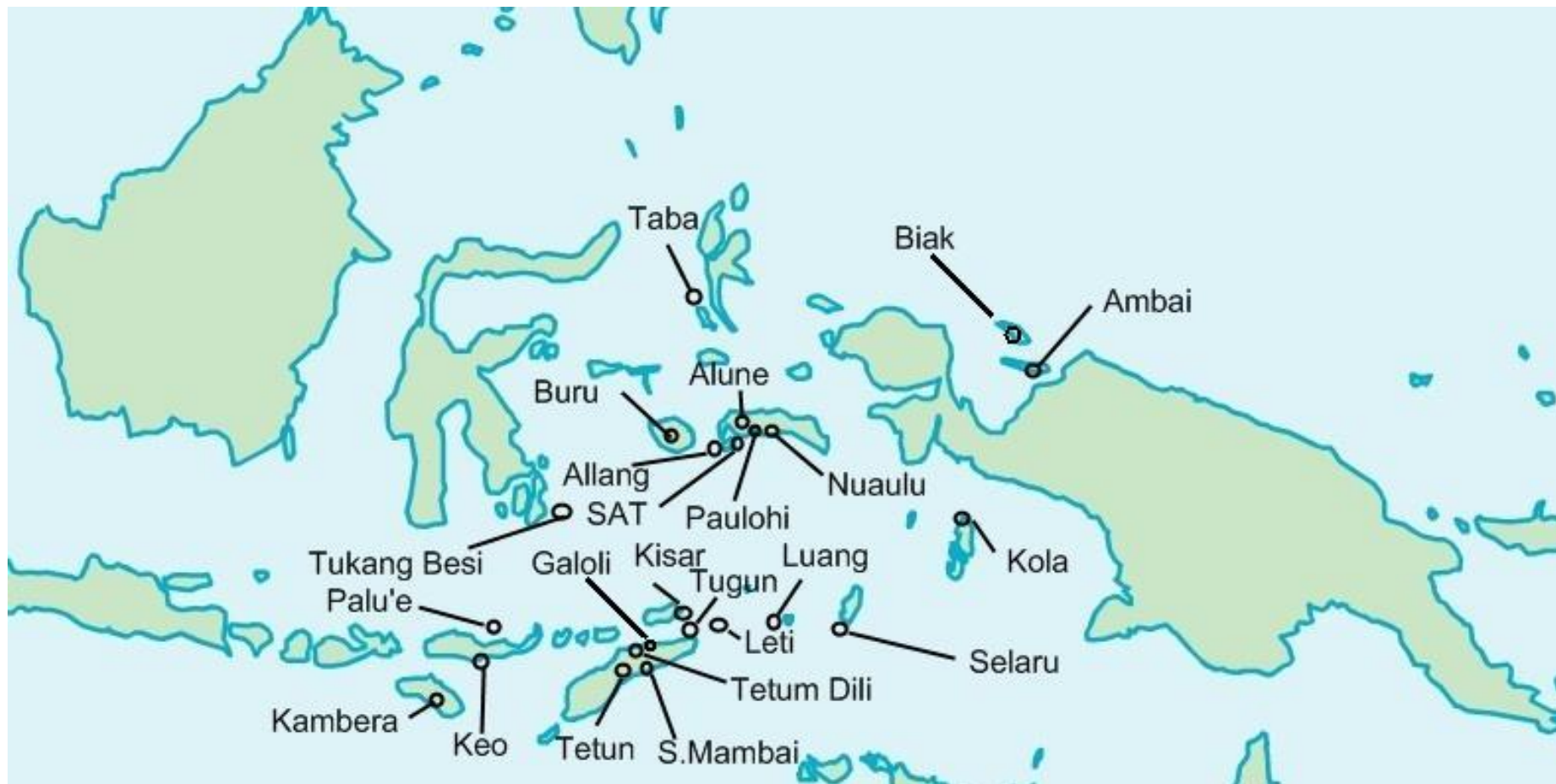
Map 1: Geographic location of the languages in the sample

Map 2: Voice systems

● No voice system
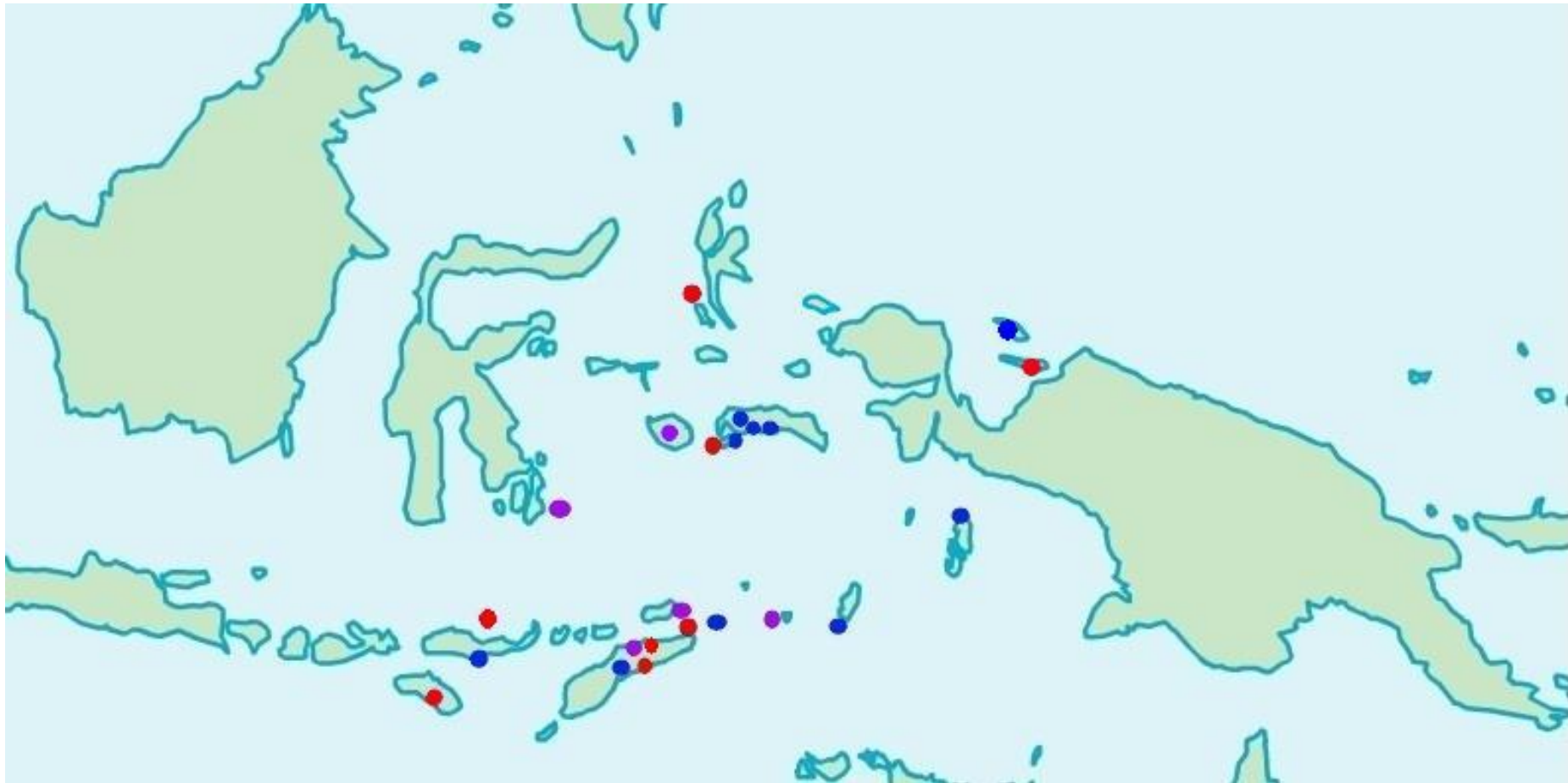● Symmetrical voice system
● Unknown

Map 3: Possessive suffixes
- ● Some possessive suffixes
- ● No possessive suffixes
- ● Unknown

Map 4: Word order in possessive construction

- 🔵 Preposed possessor
- 🔴 Postposed possessor
- 🟡 Both orders possible
- 🟣 Unknown

Map 5: Inalienable possession
- ● Distinction between alienable and inalienable possession
- ● No distinction between alienable and inalienable possession
- ● Unknown

Map 6: Person Marking
- ● S/A marking by prefix or proclitic
- ● No S/A marking by prefix or proclitic
- ● Unknown

Map 7: Order of noun and numeral
- 🔵 S/A marking by prefix or proclitic
- 🔴 No S/A marking by prefix or proclitic
- 🟣 Unknown

Map 8: Position of negator
- Post-predicate position
- Pre-predicate position
- Split negation
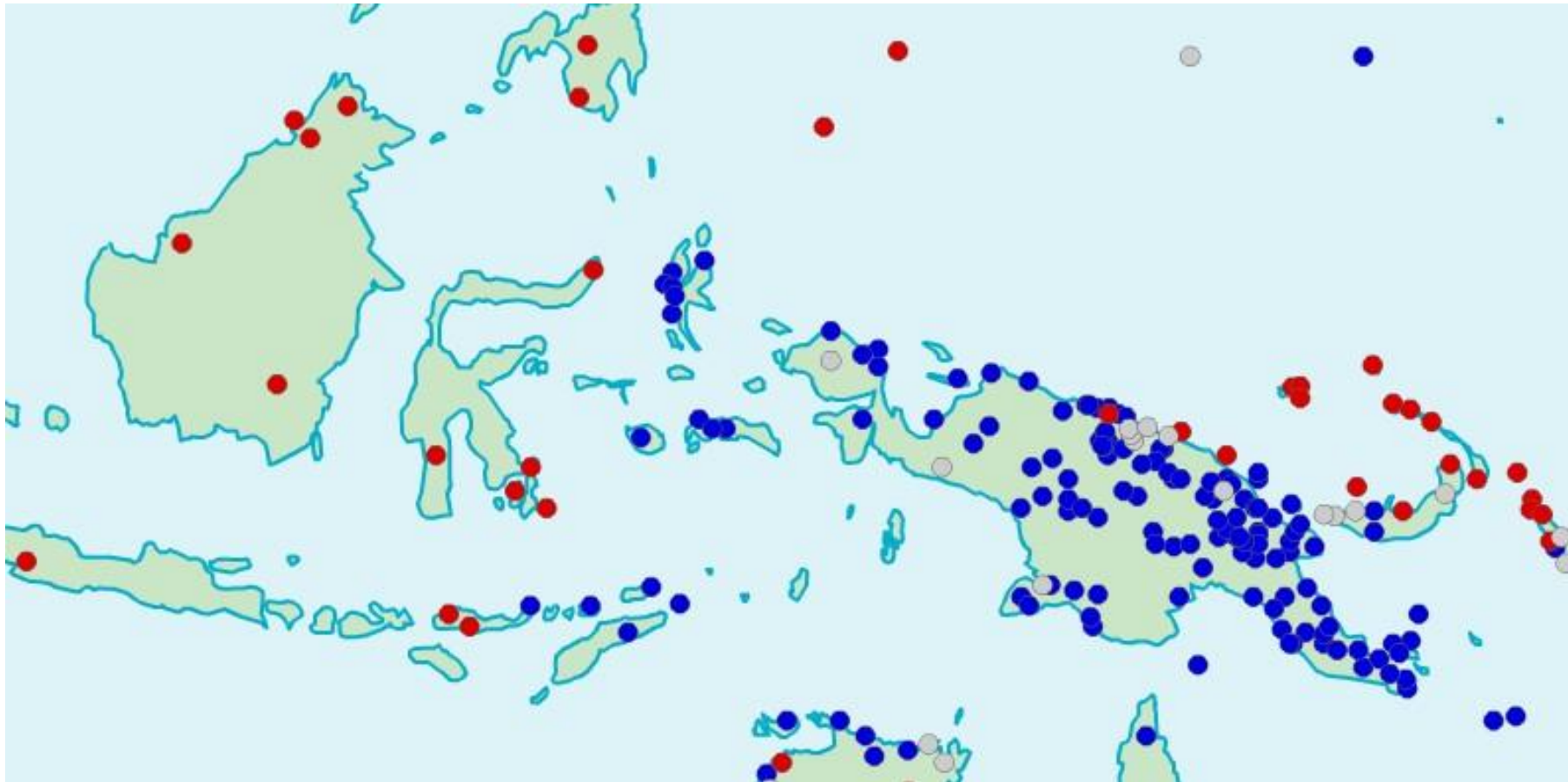- Unknown

Map 9: Basic word order
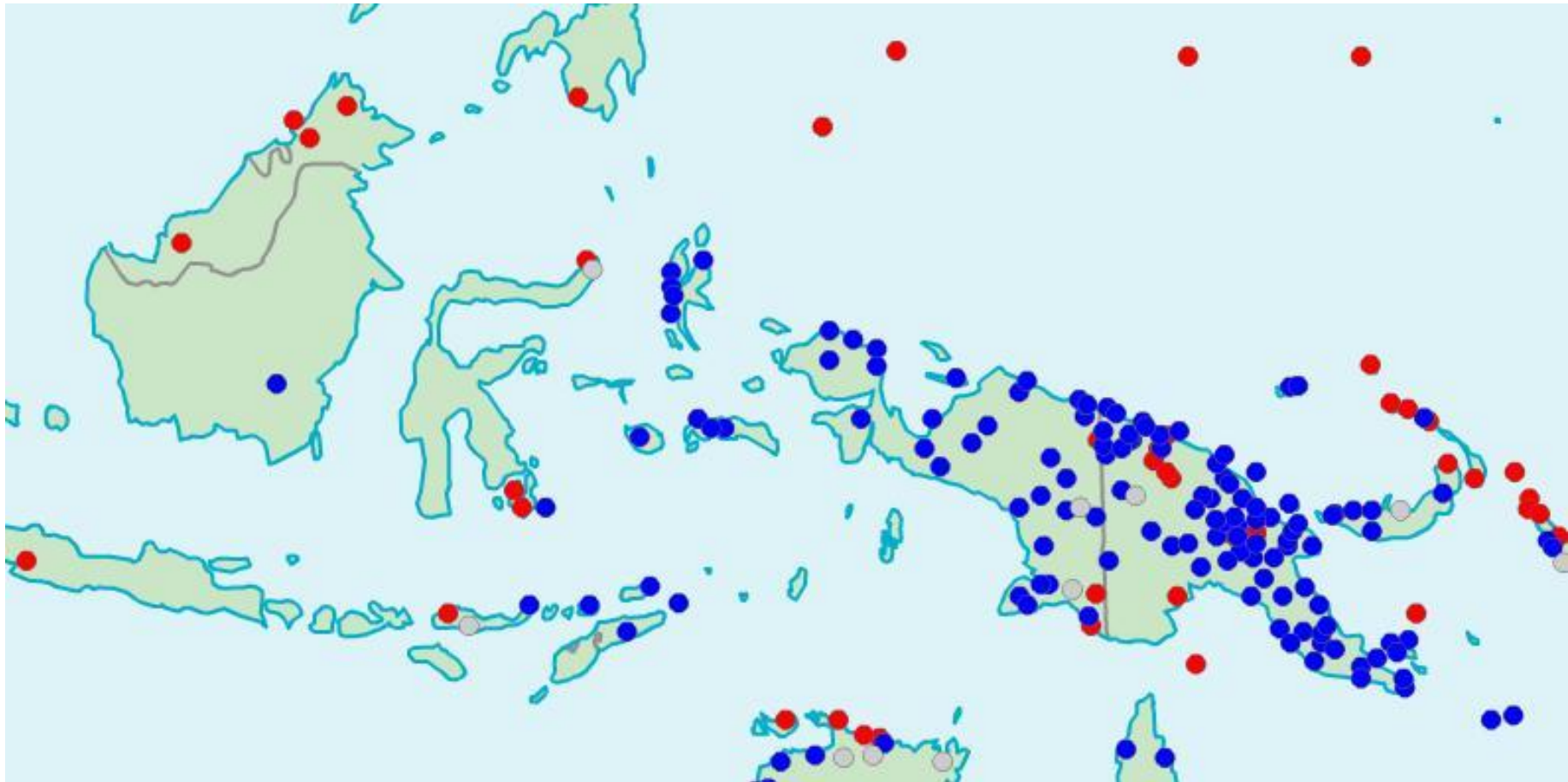- 🔵 SVO
- 🔴 V-initial
- 🟣 Unknown

Map 10: Correspondence to Preposed Possessor type

● Closest to type ← → Furthest from type ○

Map 11: Word order in possessive construction – data from WALS
● Preposed possessor
● Postposed possessor
○ No dominant order

Map 12: Order of numeral and noun – data from WALS
● Noun – numeral
● Numeral - noun
○ No dominant order