Geographical typology as a window into the evolution of the Austronesian family

The 16th International Conference on Austronesian Linguistics (ICAL-16) - panel

Contents

1 Clitic positioning patterns in western Austronesian languages **3**

2 Voice variation and decay in western Austronesia **4**

3 On the rise of applicatives in West Nusantara languages **5**

4 Distribution of lexical innovations in the Philippines **6**

5 Emergence of divergent phonotactics in Austronesian: a distributional typological approach **7**

A fixation on the stammbaum representation of language families has led to a family-wide, decades-long, "treasure hunt" for subgroup-defining innovations in the attempt to better understand the history of Austronesian languages and their speakers. As a result of this focus, far less attention has been paid to the full geographic distribution of linguistic features across Austronesian. Exceptionally, eastern Nusantara and Oceania have been prominent sites for areal studies that challenge traditional family tree models (e.g. Ross 1988, Klamer et al. 2008, François 2014, Donohue 2007, Schapper 2020, inter alia). The lopsided attention to areal effects leads to the impression that eastern Austronesian is made up of linkages while the western region, including the Philippines and Formosan languages, displays more tree-like diversification, yet this impression could very likely be an artifact of technique and researcher bias rather than reflecting a real difference between east and west. Simultaneously, a recent slew of studies employing computational phylogeny has produced results that are largely geographical in nature, but without offering any deeper insight into geographical patterns, as the output still consists of classical stammbaum (albeit with similarity-based rather than innovation-based subgroups).

This panel promotes the return to isogloss exploration, the foundation of dialectology, using new mapping tools, and seeks to further justify the utility of geographical typology for larger-scale diachronic analyses. It comprises five typologically oriented studies representing different areas of linguistics, including lexical, phonological, and morphosyntactic domains, and various geographical areas, from the entire family to the western Austronesian area to Nusantara and the Philippines. The presenters will take a critical approach to features that have been employed for subgrouping purposes in previous studies, such as phonotactics and sound change and the distribution of innovatory lexemes, as well as those that have not yet been explored from a subgrouping perspective, such as clitic patterns), applicatives and voice syncretism.

References

Aikhenvald, Alexandra and R. M. Dixon. 2001. *Areal diffusion and genetic inheritance: problems in comparative linguistics*. Oxford: OUP.

Donohue, Mark. 2007. Word order in Austronesian: From north to south and west to east. *Linguistic Typology* 11: 351–393.

François, Alexandre. 2014. Trees, Waves and Linkages: Models of Language Diversification. In C. Bowern, B. Evans (ed.), *The Routledge Handbook of Historical Linguistics*, 61–189. London: Routledge.

Klamer, Marian, Ger Reesink and Miriam van Staden. 2008. Eastern Indonesia as a Linguistic Area. In P. Muysken (ed.), *From Linguistic Areas to Areal Linguistics*, 95–149. Amsterdam: John Benjamins.

Ross, Malcolm. 1988. *Proto Oceanic and the Austronesian Languages of Western Melanesia*. Canberra: Pacific Linguistics.

Schapper, Antoinette. 2020. Linguistic Melanesia. In E. Adamou, & Y. Matras (eds.), *Routledge Handbook of Language Contact*, 480–502. London: Routledge.

1 Clitic positioning patterns in western Austronesian languages

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Western Austronesian languages provide an enormous laboratory for understanding the diachrony and typology of clitics. Proto-Austronesian most likely had several sets of pronominal and adverbial clitics (Ross 2002, 2006, 2013) but reconstructing the positioning of clitics and their combinatorial possibilities remains unclear due to a diversity of patterning across different regions and subgroups. In the Philippines, despite much internal variation, the predominant pattern places genitive, nominative and adverbial clitics together in the second-position of the clause (i.e. as Wackernagel clitics) (Reid & Liao 2004, Billings & Kaufman 2004, pace Lee & Billings 2005). Outside of the Philippines, it is far more difficult to generalize over clitic patterns in Formosan languages and Austronesian languages of eastern Nusantara. Overall, we see two recurring developments: genitive clitics become head-adjacent (Wolff 1996), either proclitic or enclitic on verbs but typically enclitic on nouns, while nominative clitics are replaced by free forms, resulting in an overall reduction of second-position effects.

To make progress in this still poorly understood areal typology, we present a first attempt at mapping clitic patterns across western Austronesian languages of Taiwan, the Philippines, and Indonesia, focusing primarily on the position of bound person markers and aspect markers within the clause and restricting ourselves to the properties of (i) second-position versus verb/aux-adjacent for (historically) genitive and nominative pronominals and (ii) aspectual clitics. We also map the ability of genitive and nominative clitics to double full NP arguments to better understand the development of canonical agreement from pronominal arguments. Our preliminary findings include:

1. Genitive pronominals always precede nominative ones in becoming head-adjacent.
2. Head-adjacent genitive pronominals are common across the western Indo-Malaysian archipelago while head-adjacent nominative pronominals are only found in eastern pockets.
3. There is a strong correlation between head-adjacency and doubling a full NP argument.

Clitic positioning patterns in western Austronesian Languages

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Overview

- Western Austronesian languages show an enormous range of typological variation in person marking (which we take here to encompass standard cases of agreement as well as the use of clitic and free pronominals).
- We attempt to map this variation across the Austronesian languages of Island Southeast Asia and Taiwan.
- We present areas of relative homogeneity and show how much of this variation is surprisingly presaged by independent developments in Formosan languages.
- Finally, we conclude with speculations about directions of change and contact effects on clitic/agreement patterns.

Caveat

- There are many subtle differences in the clitic and agreement systems throughout the Austronesian languages. Our presentation will necessarily gloss over many such interesting differences in favor of presenting the big picture.
- For instance, Philippine languages show immense variation in the relative ordering of pronominal clitics and adverbial clitics within the clitic cluster, as well as other specific interactions between elements, but they overwhelmingly place pronominal clitics in second-position.
- We are concerned here with these broader generalizations of where clitics are positioned *within the clause*.

Background

- There is a wide literature which tackles the development of agreement in Austronesian languages and it was a topic of great interest to Dutch linguists during the colonial period (Wils, Jonker, Van der Tuuk, *inter alia*), as well as more recent linguists (Wolff, Van den Berg, Himmelmann, Mead, Ross, Zobel, *inter alia*).
- Still the tip of the iceberg, considering the number of languages under consideration and the extreme complexity of the phenomena!
- Here we take a geographical-typological approach and speculate on the significance of certain recurring patterns. Unfortunately, we do not have time here to engage with previous proposals for how agreement develops in Austronesian languages.

Concepts

- Clitic position
  - **Second position**: Attachment to the end of the first eligible host in a particular syntactic domain, regardless of syntactic category.
  - **Head adjacent**: Attachment to either the beginning or end of a particular syntactic head (e.g. a verb).
  - **Clause-initial/final**: Attachment to the beginning or end of a clause regardless of the category of the following or preceding word.

Concepts

- Argument type and case:
  - **Pivot**: the obligatory (and syntactically prominent) argument of a typical Austronesian clause
  - **A**: The most agent-like argument of a transitive clause
  - **P**: The most patient-like argument of a transitive clause
  - **S**: The sole argument of an intransitive predicate
  - **G**: the case of possessors
- Voice/diathesis
  - **Actor Voice clause**: a clause with an Actor pivot and corresponding morphology on the predicate head.
  - **Non-Actor Voice/Undergoer clause**: a clause with an an undergoer pivot and corresponding morphology on the predicate head.

Concepts

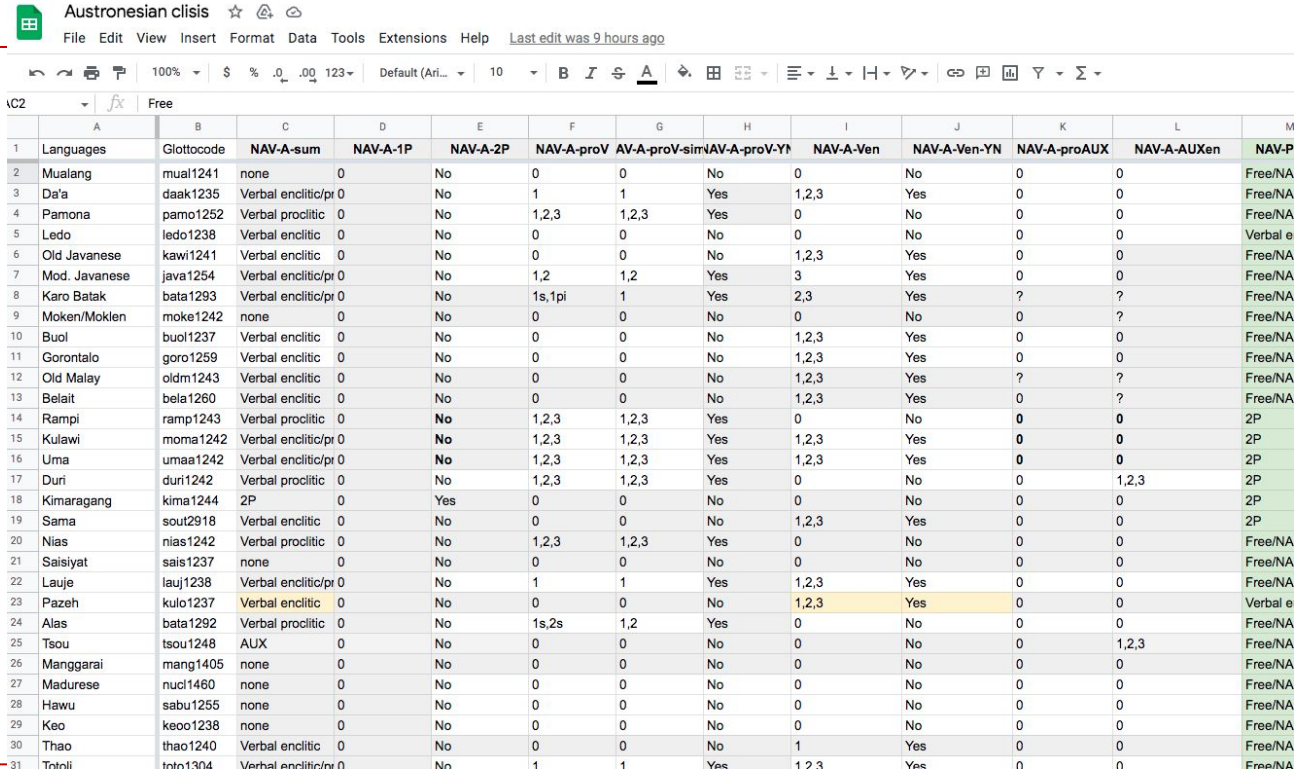
- Mood:
  - **Realis:** Referring to a factual (true, complete) proposition
  - **Irrealis:** Referring to a non-factual (false, incomplete, hypothetical, conditional, etc.) proposition.
- For our purposes, the realis/irrealis distinction will also serve as a cover term to include perfective/imperfective distinctions in some languages.

Language sample and coding

109 languages covering Austronesian languages of Southeast Asia.

Coded for clitic-type/position, argument-type, voice, mood and several other properties not in this presentation based primarily on descriptions but also field notes.

Mapped using the R package lingtypology with coordinates from Glottolog.



Austronesian clisis

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	Languages	Glottocode	NAV-A-sum	NAV-A-1P	NAV-A-2P	NAV-A-proV	AV-A-proV-sim	AV-A-proV-YN	NAV-A-Ven	NAV-A-Ven-YN	NAV-A-proAUX	NAV-A-AUXen	NAV-P
2	Mualang	mual1241	none	0	No	0	0	No	0	No	0	0	Free/NA
3	Da'a	daak1235	Verbal enclitic/pr	0	No	1	1	Yes	1,2,3	Yes	0	0	Free/NA
4	Pamona	pamo1252	Verbal proclitic	0	No	1,2,3	1,2,3	Yes	0	No	0	0	Free/NA
5	Ledo	ledo1238	Verbal enclitic	0	No	0	0	No	0	No	0	0	Verbal e
6	Old Javanese	kawi1241	Verbal enclitic	0	No	0	0	No	1,2,3	Yes	0	0	Free/NA
7	Mod. Javanese	java1254	Verbal enclitic/pr	0	No	1,2	1,2	Yes	3	Yes	0	0	Free/NA
8	Karo Batak	bata1293	Verbal enclitic/pr	0	No	1s,1pi	1	Yes	2,3	Yes	?	?	Free/NA
9	Moken/Moklen	moke1242	none	0	No	0	0	No	0	No	0	?	Free/NA
10	Buol	buol1237	Verbal enclitic	0	No	0	0	No	1,2,3	Yes	0	0	Free/NA
11	Gorontalo	goro1259	Verbal enclitic	0	No	0	0	No	1,2,3	Yes	0	0	Free/NA
12	Old Malay	oldm1243	Verbal enclitic	0	No	0	0	No	1,2,3	Yes	?	?	Free/NA
13	Belait	bela1260	Verbal enclitic	0	No	0	0	No	1,2,3	Yes	0	?	Free/NA
14	Rampi	ramp1243	Verbal proclitic	0	**No**	1,2,3	1,2,3	Yes	0	No	**0**	**0**	2P
15	Kulawi	moma1242	Verbal enclitic/pr	0	**No**	1,2,3	1,2,3	Yes	1,2,3	Yes	**0**	**0**	2P
16	Uma	umaa1242	Verbal enclitic/pr	0	**No**	1,2,3	1,2,3	Yes	1,2,3	Yes	**0**	**0**	2P
17	Duri	duri1242	Verbal proclitic	0	No	1,2,3	1,2,3	Yes	0	No	0	1,2,3	2P
18	Kimaragang	kima1244	2P	0	Yes	0	0	No	0	No	0	0	2P
19	Sama	sout2918	Verbal enclitic	0	No	0	0	No	1,2,3	Yes	0	0	2P
20	Nias	nias1242	Verbal proclitic	0	No	1,2,3	1,2,3	Yes	0	No	0	0	Free/NA
21	Saisiyat	sais1237	none	0	No	0	0	No	0	No	0	0	Free/NA
22	Lauje	lauj1238	Verbal enclitic/pr	0	No	1	1	Yes	1,2,3	Yes	0	0	Free/NA
23	Pazeh	kulo1237	Verbal enclitic	0	No	0	0	No	1,2,3	Yes	0	0	Verbal e
24	Alas	bata1292	Verbal proclitic	0	No	1s,2s	1,2	Yes	0	No	0	0	Free/NA
25	Tsou	tsou1248	AUX	0	No	0	0	No	0	No	0	1,2,3	Free/NA
26	Manggarai	mang1405	none	0	No	0	0	No	0	No	0	0	Free/NA
27	Madurese	nucl1460	none	0	No	0	0	No	0	No	0	0	Free/NA
28	Hawu	sabu1255	none	0	No	0	0	No	0	No	0	0	Free/NA
29	Keo	keoo1238	none	0	No	0	0	No	0	No	0	0	Free/NA
30	Thao	thao1240	Verbal enclitic	0	No	0	0	No	1	Yes	0	0	Free/NA
31	Totoli	toto1304	Verbal enclitic/pr	0	No	1	1	Yes	1,2,3	Yes	0	0	Free/NA

Typological Patterns

Philippine prototype (Tagalog)

G/A set: 2P (little to no distinction between possessors and non-AV agents)

PIVOT set: 2P

PRED=G/A=PIV
b<in>antay-an=mo=sila — ‘You guarded them.’
<PRF>guard-LV=2s.GEN=3p.PIV

NEG=G/A=PIV PRED
hindi=mo=sila b<in>antay-an — ‘You didn’t guard them.’
NEG=2s.GEN=3p.PIV <PRF>guard-LV

ADV=G/A=PIV PRED
madálang=mo=sila=ŋ b<in>antay-an — ‘You rarely guarded them.’
rarely=2s.GEN=3p.PIV=LNK <PRF>guard-LV

INTER=G/A=PIV NEG PRED
kailan=mo=sila hindî b<in>antay-an — ‘When did you guard them?’
when=2s.GEN=3p.PIV NEG <PRF>guard-LV

Philippine prototype (Tagalog)

G/A set: 2P (little to no distinction between possessors and non-AV agents)

PIVOT set: 2P

NEG=G/A=PIV PRED
Hindi=ko=siya nakita/makikita
NEG=1s=3s PRF:see/PROS:see
'I did/will not see him/her.'

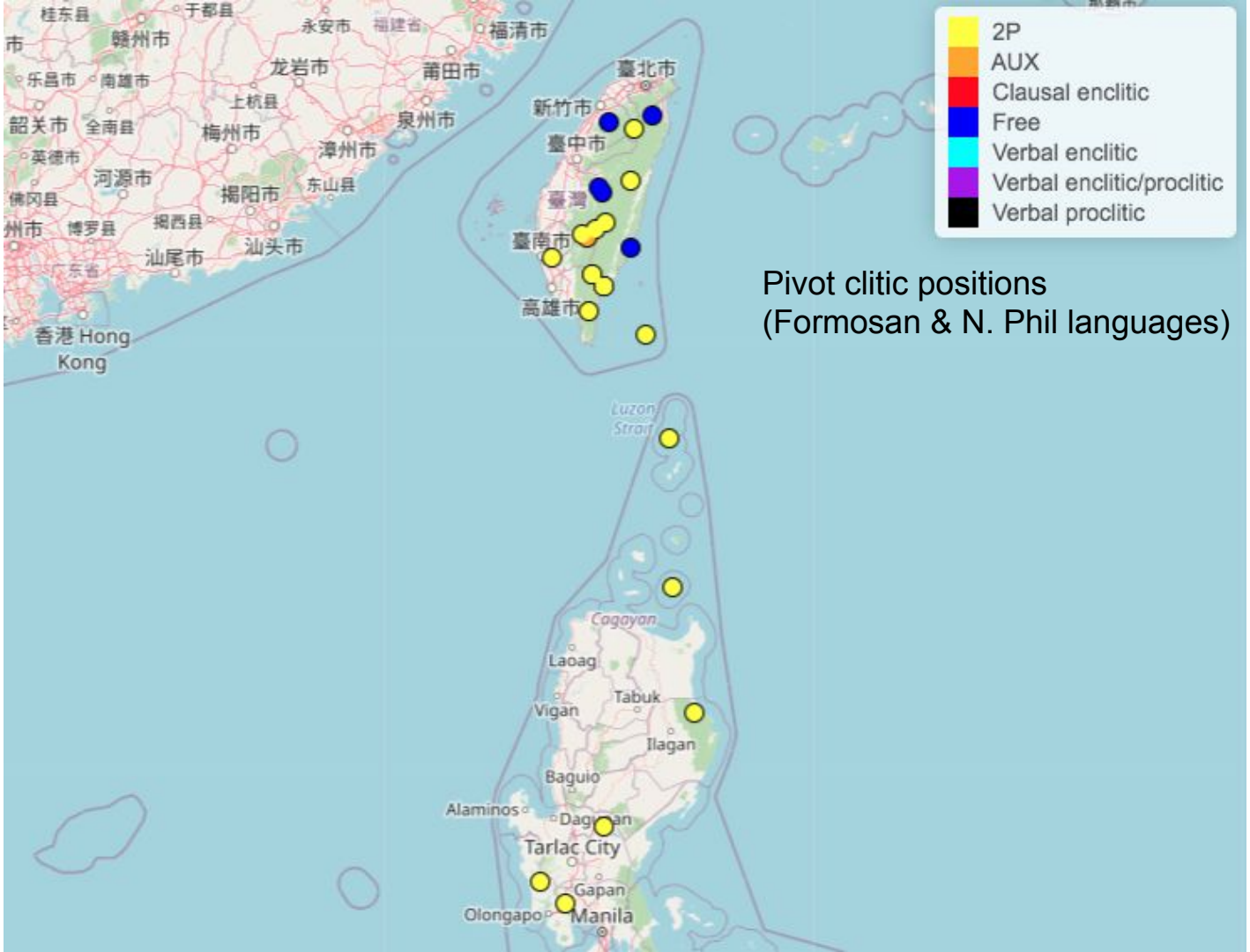
TAM categories generally have no effect on clitic placement.

NEG=G/A=PIV PRED
Hindi=ko=siya kaibigan
NEG=1s=3s friend
'S/he is not my friend.'

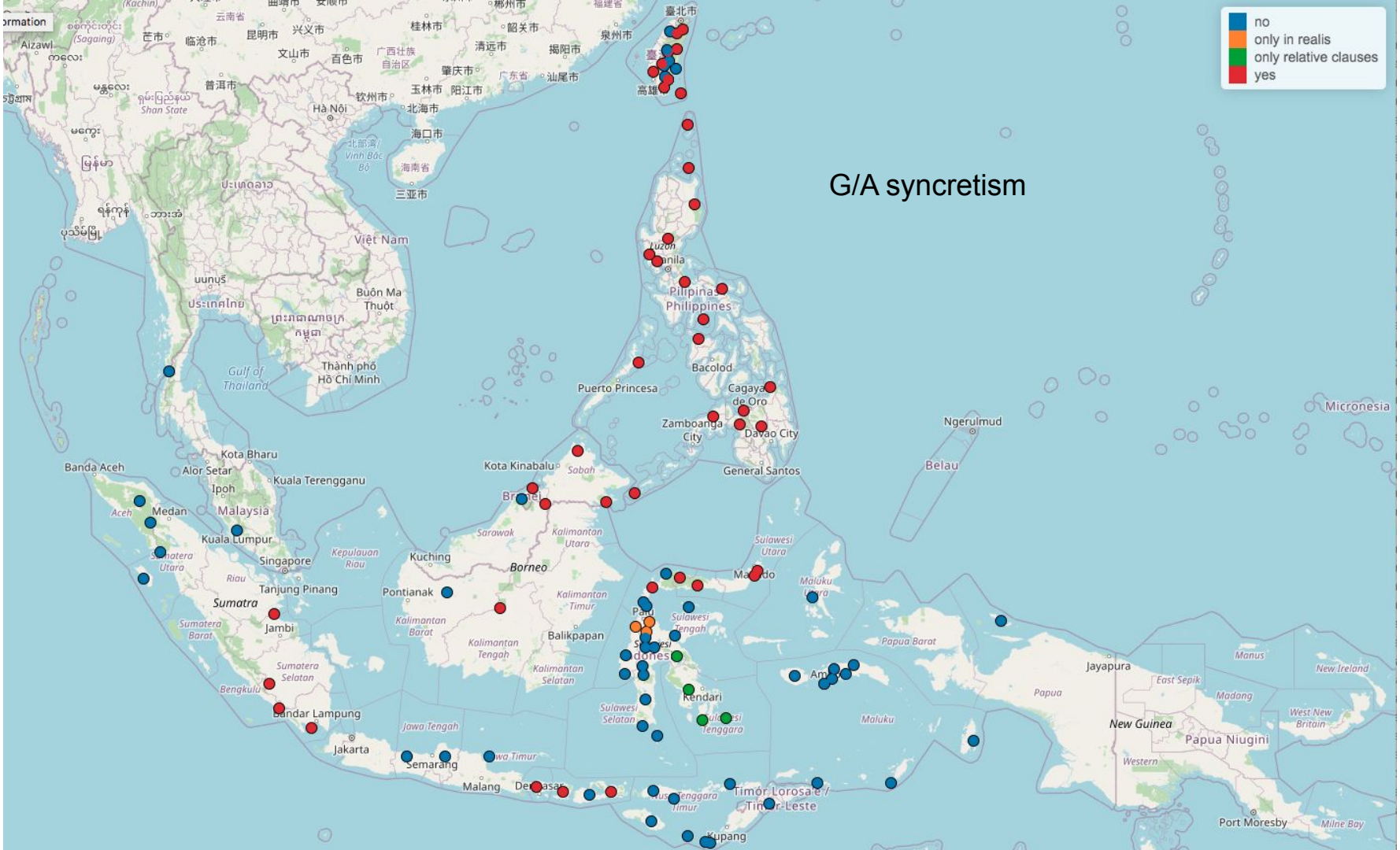
Lexical category of predicate generally has no effect on clitic placement

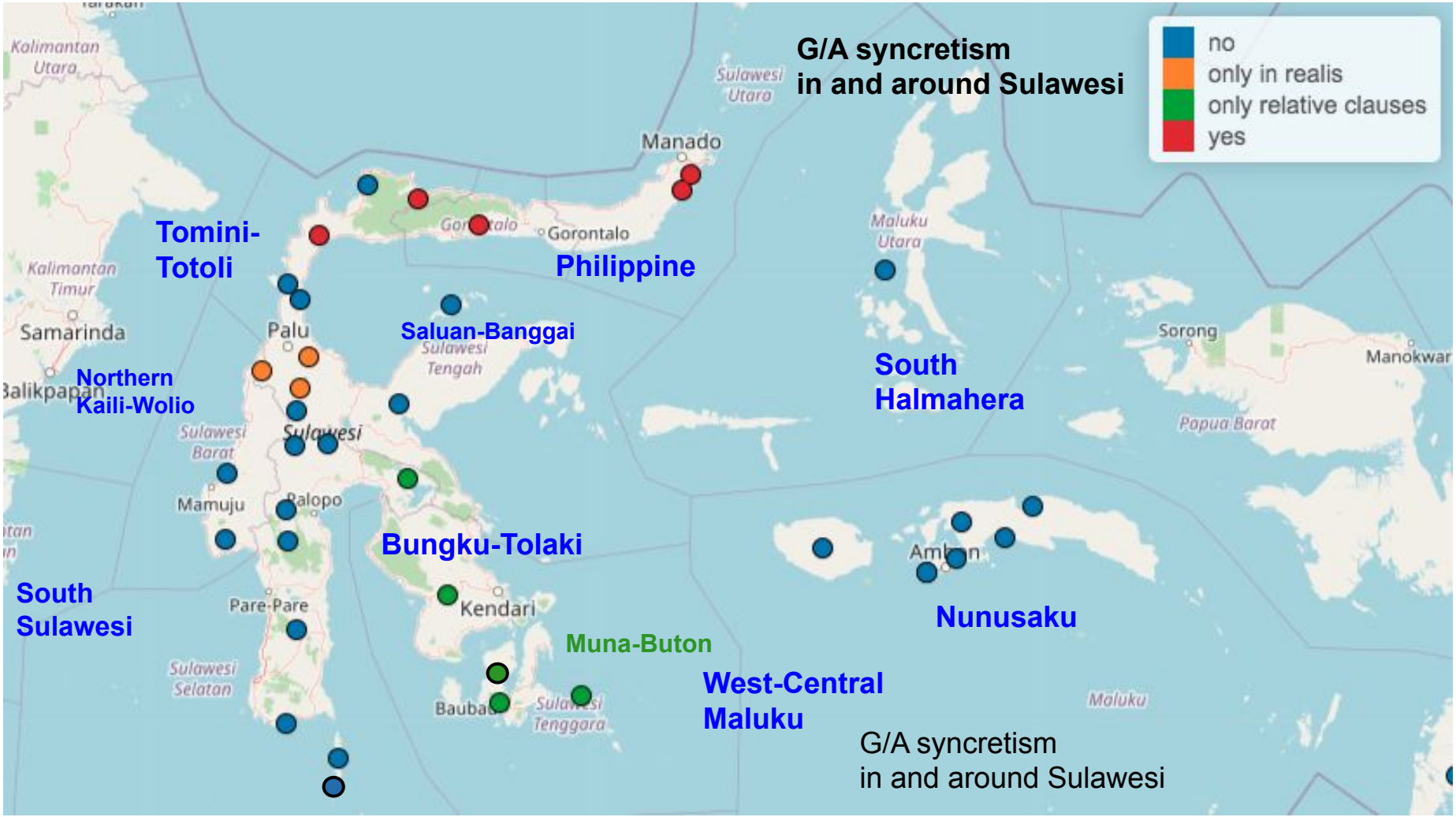
Pivot clitic positions

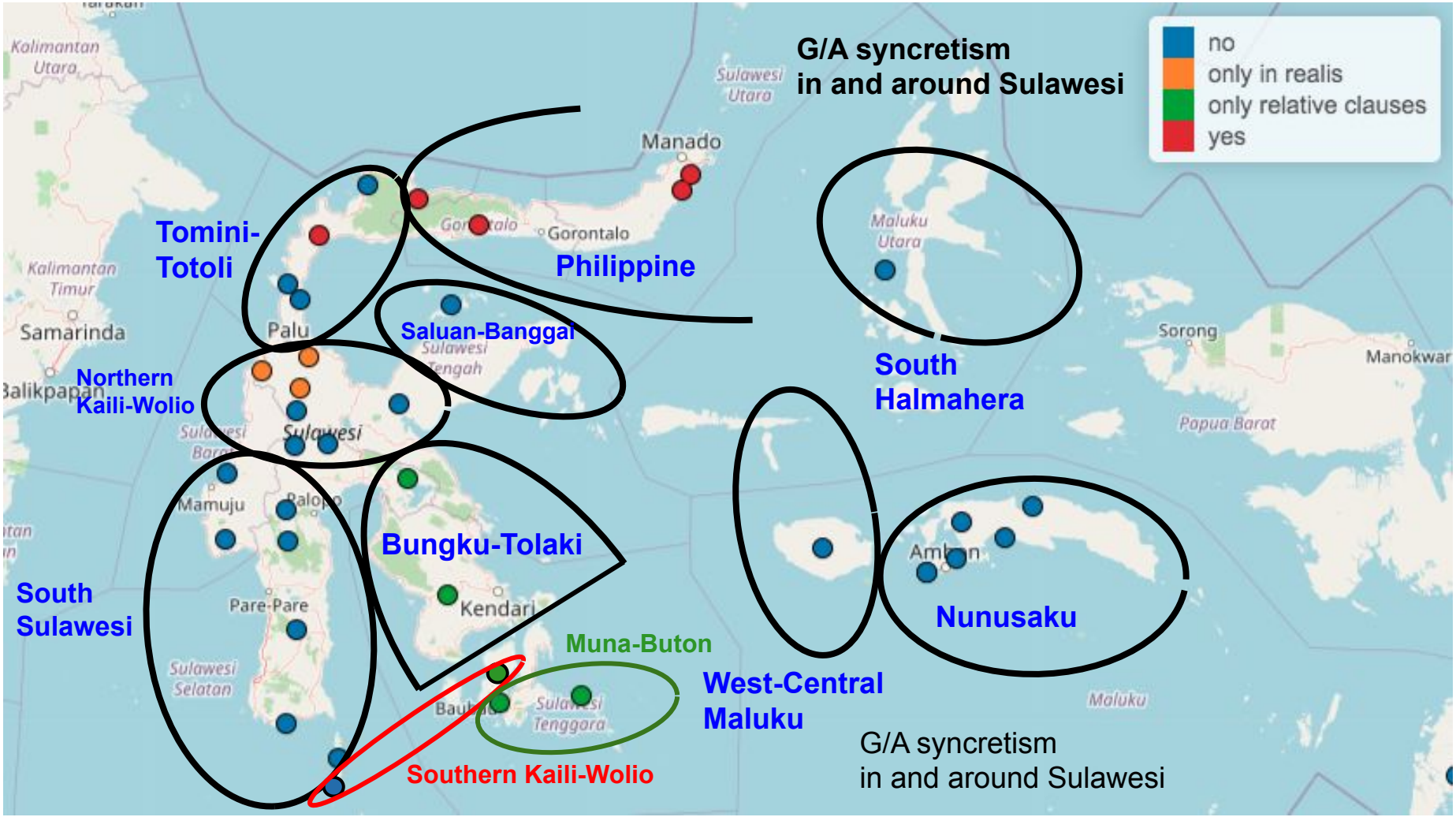

Pivot clitic positions
2P
AUX
Clausal enclitic
Free
Verbal enclitic
Verbal enclitic/proclitic
Verbal proclitic
Việt Nam
Thành phố Hồ Chí Minh
Gulf of Thailand
Kota Bharu
Alor Setar
Kuala Terengganu
Ipoh
Malaysia
Medan
Kuala Lumpur
Singapore
Tanjung Pinang
Sumatra
Jambi
Bandar Lampung
Jakarta
Semarang
Malang
Banda Aceh
Kota Kinabalu
Sabah
Kuching
Sarawak
Borneo
Pontianak
Balikpapan
Kendari
Manado
Puerto Princesa
Bacolod
Cagayan de Oro
Zamboanga City
Davao City
General Santos
Pilipinas
Philippines
Luzon
Ngerulmud
Belau
Micronesia
Jayapura
New Guinea
Papua Niugini
Port Moresby
Timor Lorosa'e / Timor-Leste
Kupang


2P
AUX
Clausal enclitic
Free
Verbal enclitic
Verbal enclitic/proclitic
Verbal proclitic
Pivot clitic positions
(Formosan & N. Phil languages)
桂东县
于都县
永安市
福建省
福清市
市
赣州市
龙岩市
莆田市
臺北市
乐昌市
南雄市
新竹市
韶关市
全南县
上杭县
梅州市
泉州市
臺中市
英德市
漳州市
河源市
臺湾
佛冈县
揭阳市
东山县
州市
博罗县
揭西县
臺南市
汕尾市
汕头市
广东省
高雄市
香港 Hong Kong
Luzon Strait
Cagayan
Laoag
Vigan
Tabuk
Ilagan
Baguio
Alaminos
Tarlac City
Gapan
Olongapo
Manila

G / A Syncretism


no
only in realis
only relative clauses
yes
G/A syncretism


G/A syncretism
in and around Sulawesi
no
only in realis
only relative clauses
yes
Tomini-
Totoli
Philippine
Saluan-Banggai
Northern
Kaili-Wolio
South
Halmahera
Bungku-Tolaki
South
Sulawesi
Muna-Buton
West-Central
Maluku
Nunusaku
Manado
Gorontalo
Palu
Samarinda
Sulawesi
Mamuju
Palopo
Pare-Pare
Kendari
Sorong
Manokwari
Kalimantan
Utara
Kalimantan
Timur
Sulawesi
Utara
Maluku
Utara
Sulawesi
Tengah
Sulawesi
Barat
Sulawesi
Selatan
Sulawesi
Tenggara
Papua Barat
Maluku
G/A syncretism
in and around Sulawesi


G/A syncretism
in and around Sulawesi
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only in realis
only relative clauses
yes
Tomini-
Totoli
Philippine
Saluan-Banggai
Northern
Kaili-Wolio
South
Halmahera
Bungku-Tolaki
South
Sulawesi
Muna-Buton
West-Central
Maluku
Nunusaku
Southern Kaili-Wolio
Manado
Gorontalo
Palu
Samarinda
Sorong
Manokwari
Mamuju
Pare-Pare
Kendari
Ambon
Kalimantan
Utara
Sulawesi
Utara
Maluku
Utara
Kalimantan
Timur
Sulawesi
Tengah
Papua Barat
Sulawesi
Selatan
Sulawesi
Tenggara
Maluku
G/A syncretism
in and around Sulawesi

Kaili-Wolio prototype (Kulawi)

A set: verbal proclitics (IRREALIS)

G/A set: head-adjacent enclitics

PIVOT set: 2P

VERB=G/A=PIV
i-hilo=ku=i
RL-see=1s=3s
'I saw him/her.'

NEG=PIV VERB=G/A
Moma=i i-hilo=ku
NEG=3s UV.RL-see=1s
'I didn't see him/her.'

NEG=PIV NOUN=G/A
Moma=i bangkele=ku
NEG=3s woman=1s
'She is not my wife.'

A=**VERB**=PIV
ku=hilo=i
1s=see=3s
'I will see him/her.'

NEG=PIV A=PRED
Moma=i ku=hilo
NEG=3s 1s=see
'I will not see him/her.'

*__NEG__=PIV A=NOUN
*Moma=i ku=bangkele
NEG=3s 1s=woman
(For, 'She will not be my wife.')

Pivot clitics pattern similarly to Philippine prototype (2P) but transitive agents become verb-adjacent

Only verbs host pronominal proclitics

South Sulawesi prototype (Mamasa)

A set: verbal proclitics

G set: nominal enclitics

PIVOT set: 2P

A=**VERB**=PIV

ku=pamaloi=ko

1s=help=2s

‘I help you.’

ambe=mu

father=2s

‘your father’

ADV=PIV A=VERB

Mangka=ko ku=pamoloi…

after=2s 1s=help

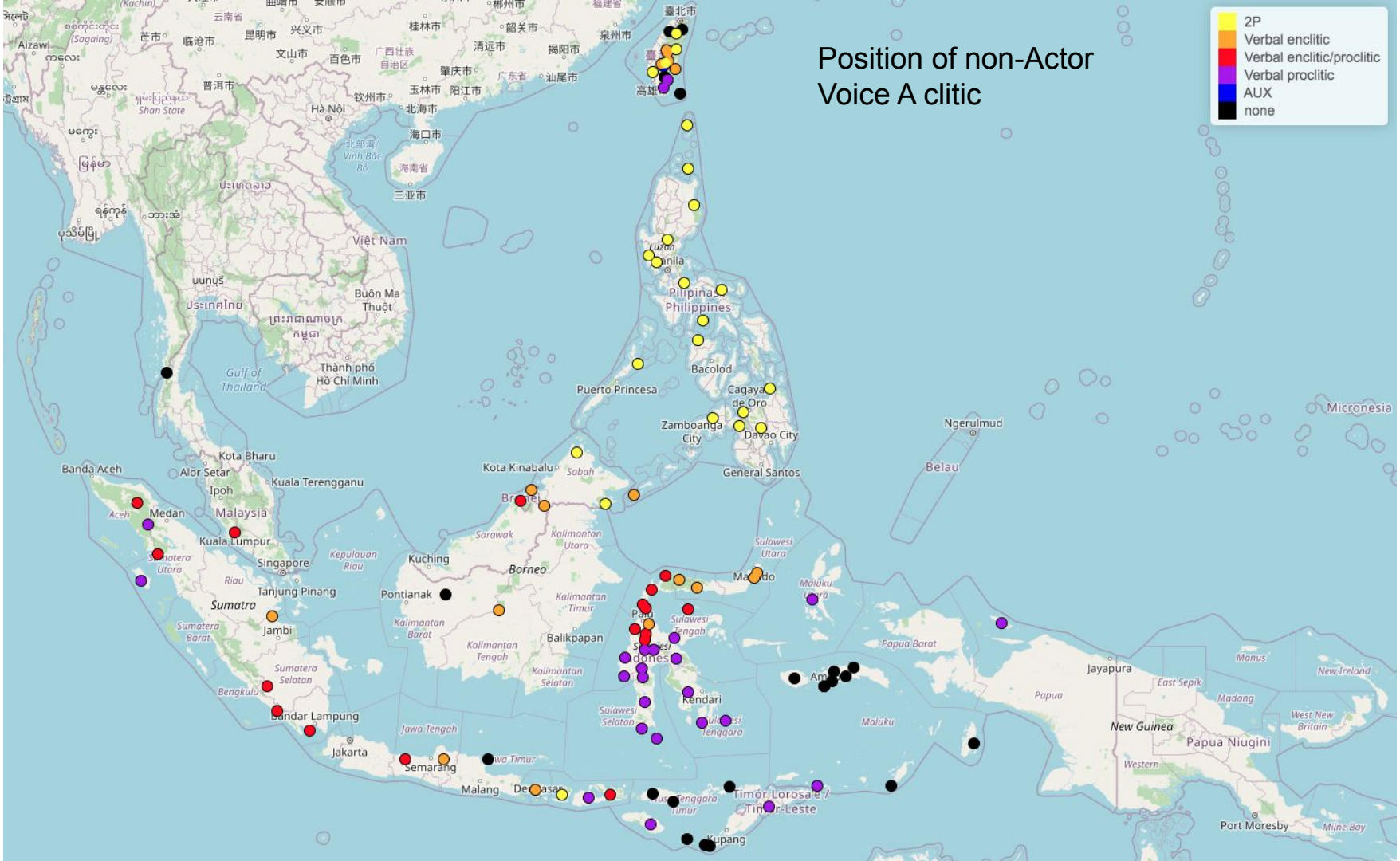
‘After I helped you…’ (Matti 1996)

INTER=PIV A=VERB

Pirang=ko la=ku=pamaloi?

when=2s IRR=1s=help

‘When will I help you?’


Position of non-Actor Voice A clitic
2P
Verbal enclitic
Verbal enclitic/proclitic
Verbal proclitic
AUX
none
Malaysia
Singapore
Sumatra
Borneo
Kalimantan Utara
Kalimantan Barat
Kalimantan Tengah
Kalimantan Timur
Kalimantan Selatan
Sulawesi Utara
Sulawesi Tengah
Sulawesi Selatan
Sulawesi Tenggara
Maluku
Papua Barat
Papua
New Guinea
Papua Niugini
Micronesia
Belau
Philippines
Pilipinas
Luzon
Manila
Việt Nam
Thành phố Hồ Chí Minh
Gulf of Thailand
Jakarta
Semarang
Malang
Bandar Lampung
Palembang
Pontianak
Kuching
Kota Kinabalu
Balikpapan
Kendari
Jayapura
Port Moresby
Timor Lorosa'e / Timor-Leste
Kupang
Bacolod
Puerto Princesa
Cagayan de Oro
Davao City
Zamboanga City
General Santos
Ngerulmud
Medan
Banda Aceh
Kuala Lumpur
Ipoh
Kuala Terengganu
Kota Bharu
Alor Setar
Tanjung Pinang
Jambi
Bengkulu
Pekanbaru
Brunei
Sabah
Sarawak
Kepulauan Riau
Riau
Aceh
Sumatera Utara
Sumatera Barat
Sumatera Selatan
Jawa Tengah
Jawa Timur
Nusa Tenggara Timur
Nusa Tenggara Barat
Maluku Utara
Manus
New Ireland
East Sepik
Madang
West New Britain
Western
Milne Bay
Buôn Ma Thuột
Hà Nội
Shan State
Aizawl
臺北市
高雄
泉州市
汕尾市
揭阳市
韶关市
桂林市
郴州市
昆明市
芒市
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文山市
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百色市
钦州市
北海市
海口市
三亚市
玉林市
阳江市
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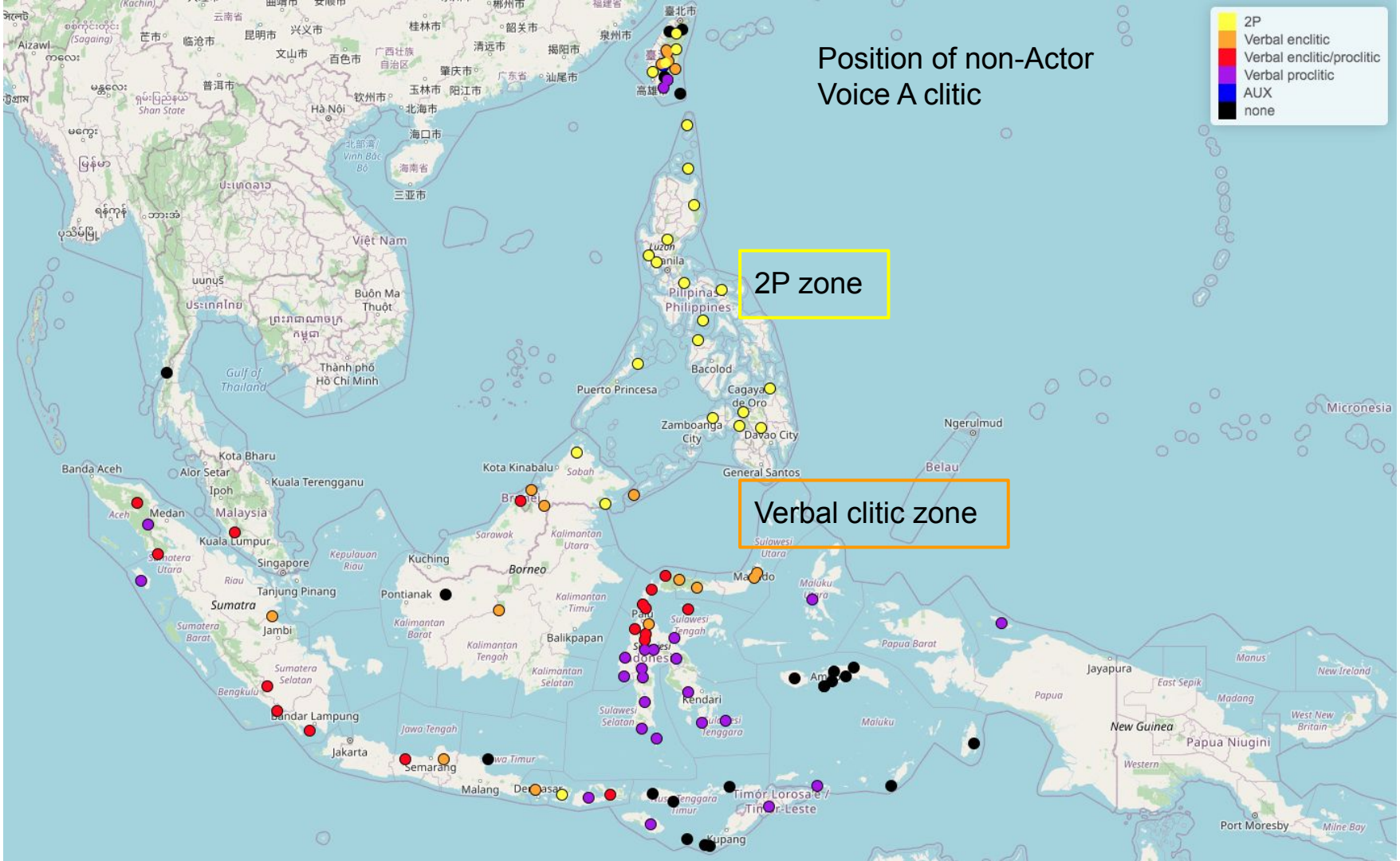
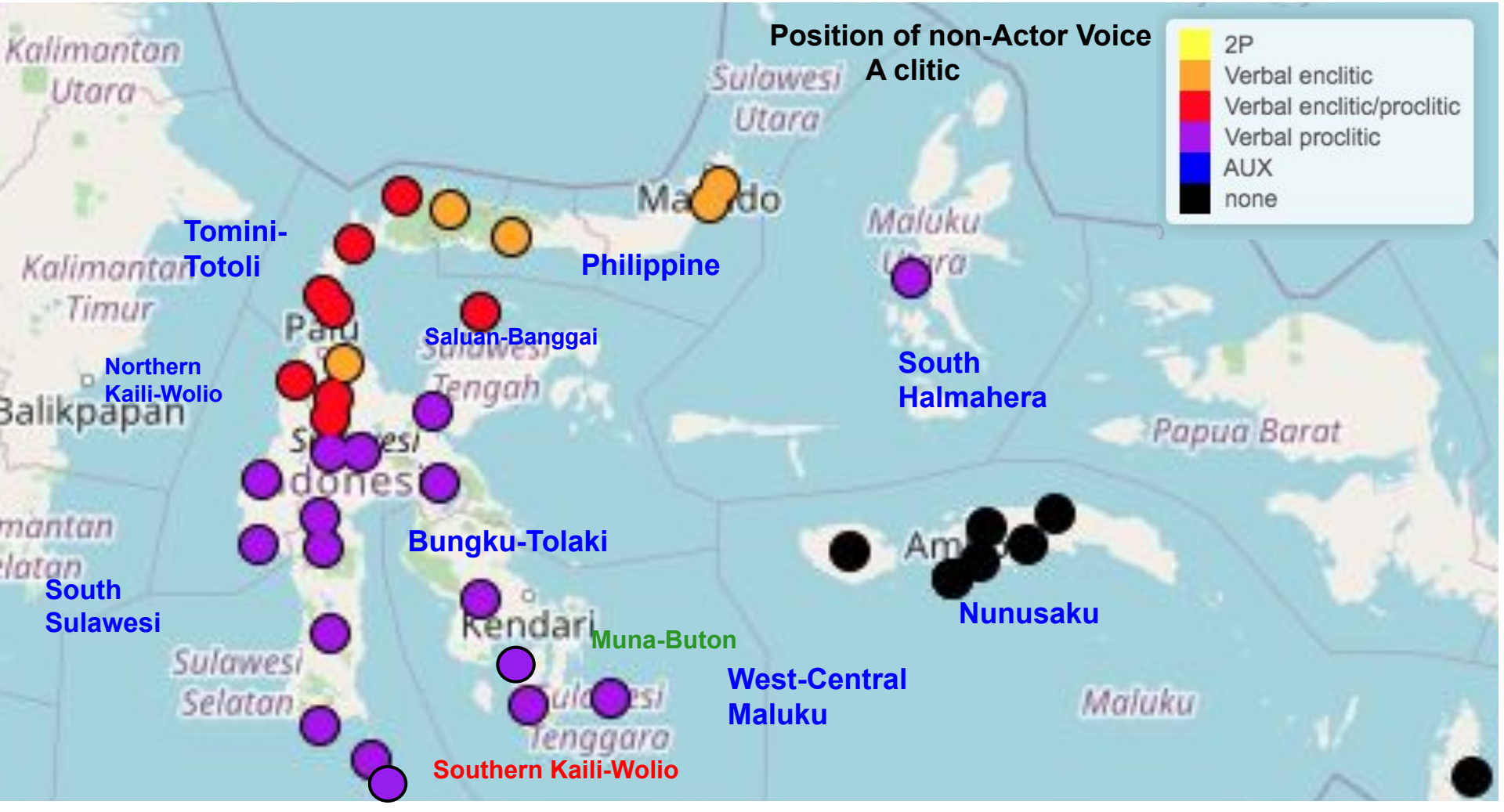

Position of non-Actor Voice A clitic
2P
Verbal enclitic
Verbal enclitic/proclitic
Verbal proclitic
AUX
none
2P zone
Verbal clitic zone


Position of non-Actor Voice
A clitic
2P
Verbal enclitic
Verbal enclitic/proclitic
Verbal proclitic
AUX
none
Tomini-
Totoli
Philippine
Saluan-Banggai
Northern
Kaili-Wolio
South
Halmahera
Bungku-Tolaki
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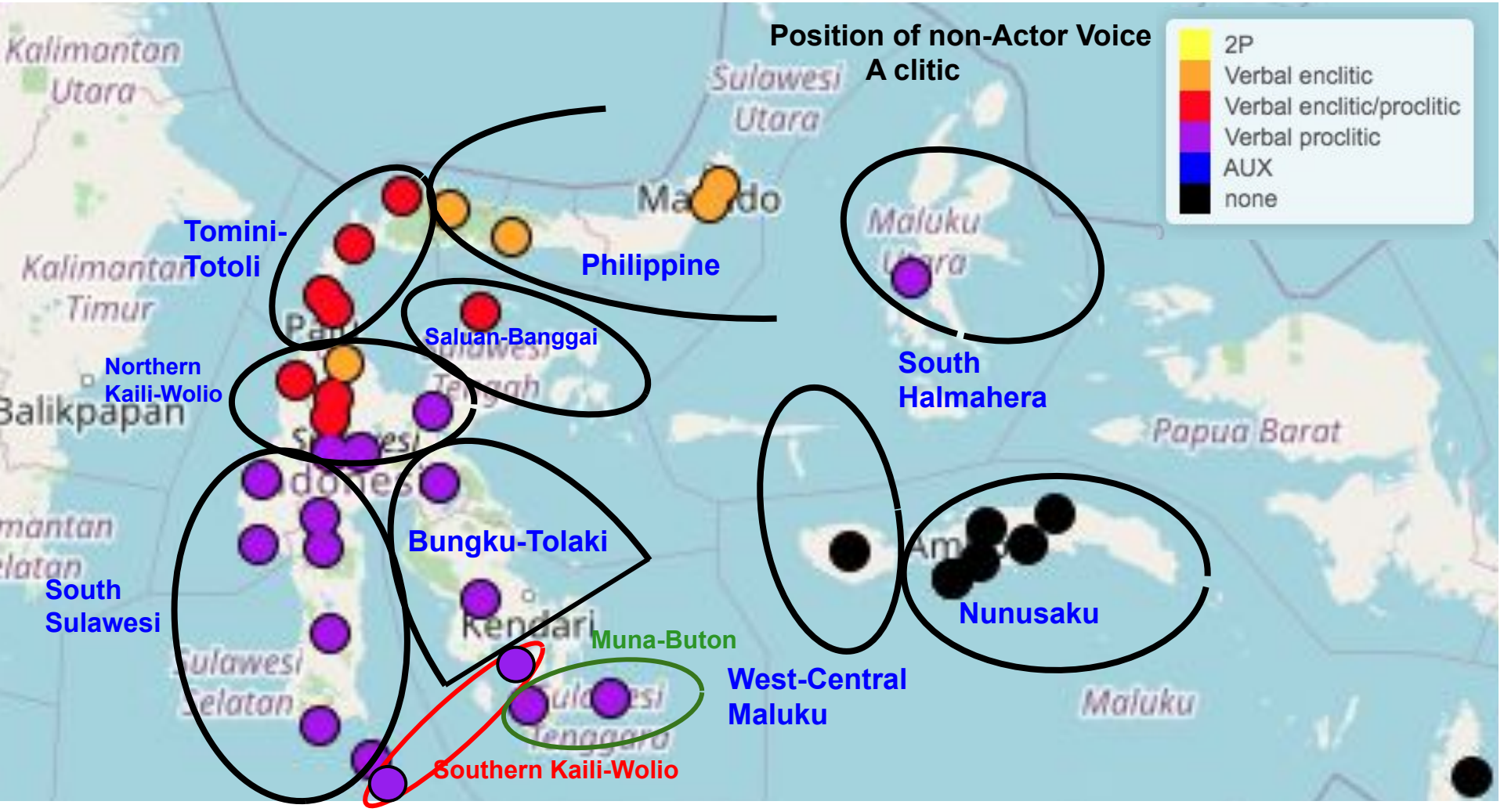
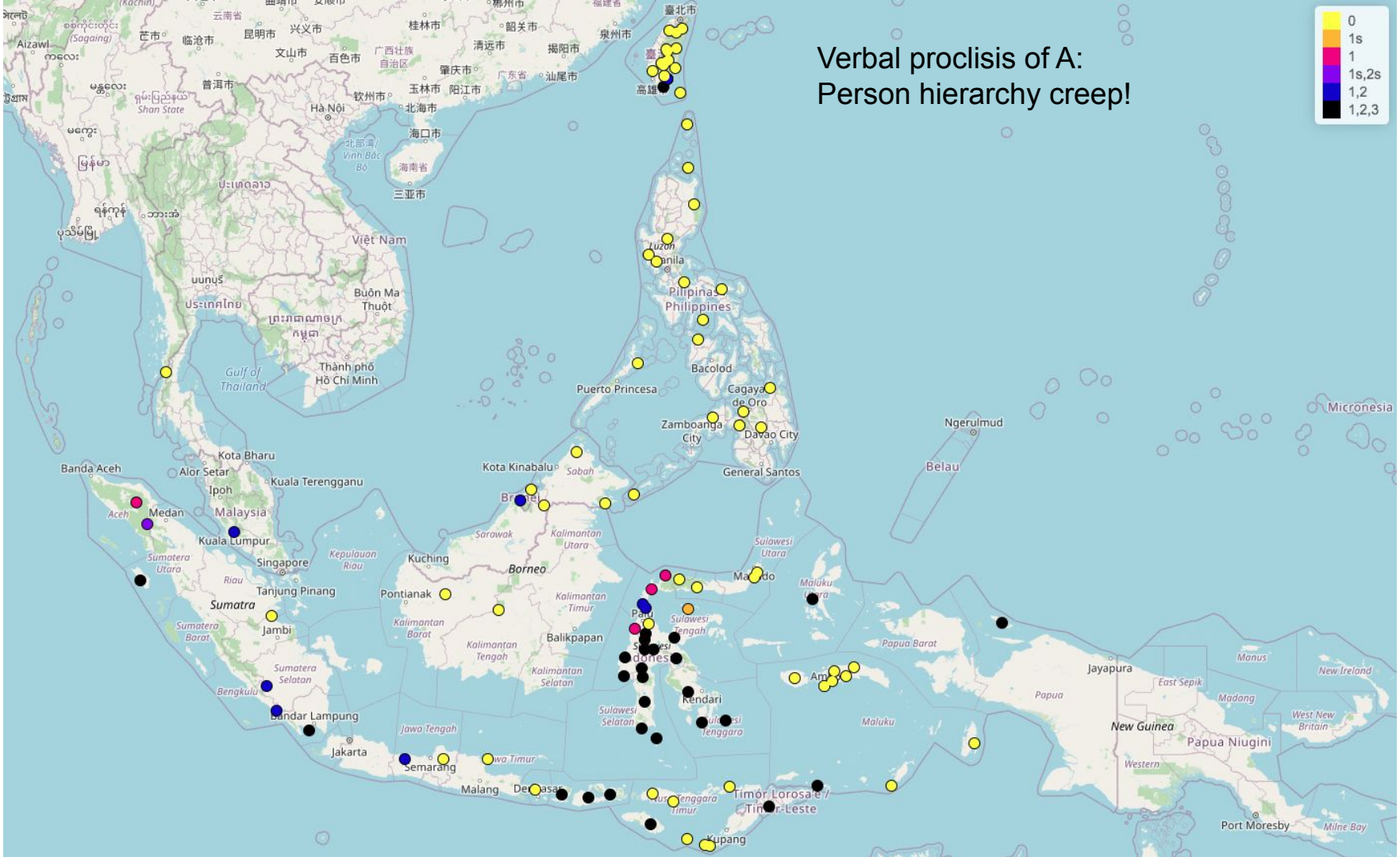
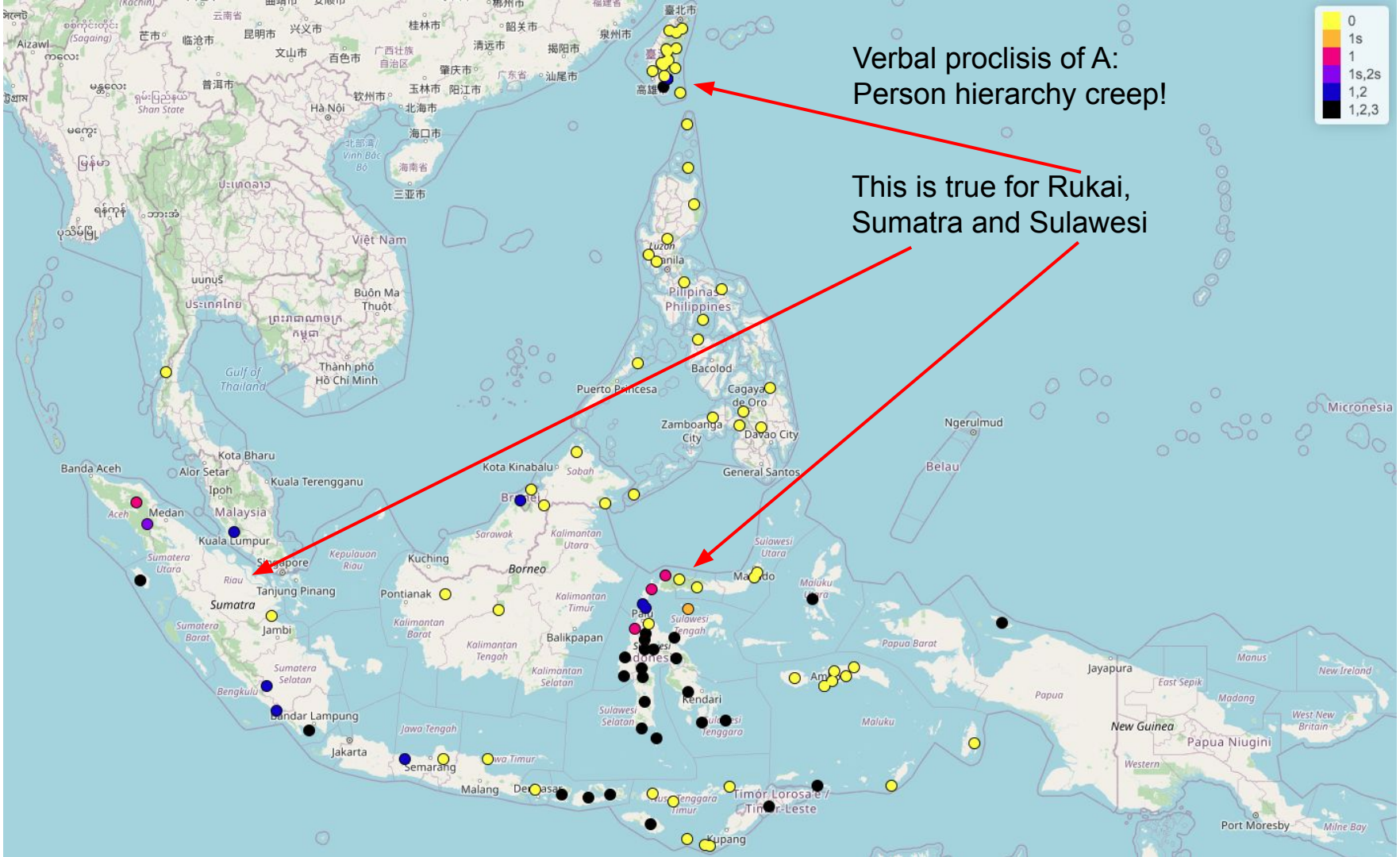
Tenggara
Maluku


Position of non-Actor Voice
A clitic
2P
Verbal enclitic
Verbal enclitic/proclitic
Verbal proclitic
AUX
none
Tomini-
Totoli
Philippine
Saluan-Banggai
Northern
Kaili-Wolio
South
Halmahera
Bungku-Tolaki
South
Sulawesi
Muna-Buton
West-Central
Maluku
Nunusaku
Southern Kaili-Wolio
Kalimantan
Utara
Sulawesi
Utara
Kalimantan
Timur
Balikpapan
Papua Barat
Maluku


Verbal proclisis of A:
Person hierarchy creep!
0
1s
1
1s,2s
1,2
1,2,3
Aizawl
Shan State
Việt Nam
Pilipinas
Philippines
Manila
Luzon
Bacolod
Puerto Princesa
Cagayan de Oro
Zamboanga City
Davao City
General Santos
Gulf of Thailand
Thành phố Hồ Chí Minh
Buôn Ma Thuột
Banda Aceh
Kota Bharu
Alor Setar
Kuala Terengganu
Ipoh
Medan
Malaysia
Kuala Lumpur
Singapore
Tanjung Pinang
Sumatra
Jambi
Bandar Lampung
Jakarta
Semarang
Malang
Kota Kinabalu
Sabah
Brunei
Sarawak
Kuching
Borneo
Pontianak
Kalimantan Utara
Kalimantan Timur
Kalimantan Barat
Kalimantan Tengah
Kalimantan Selatan
Balikpapan
Kendari
Sulawesi Utara
Sulawesi Tengah
Sulawesi Selatan
Sulawesi Tenggara
Maluku
Maluku Utara
Papua Barat
Papua
Jayapura
New Guinea
Papua Niugini
Manus
New Ireland
East Sepik
Madang
West New Britain
Western
Milne Bay
Port Moresby
Timor Lorosa'e / Timor-Leste
Kupang
Ngerulmud
Belau
Micronesia


0
1s
1
1s,2s
1,2
1,2,3
Verbal proclisis of A:
Person hierarchy creep!
This is true for Rukai,
Sumatra and Sulawesi

Central Sulawesi verb-adjacent clisis in patient voice
(Himmelmann 2020)

	UMA KAILI-PAMONA	DA'A KAILI-PAMONA	PENDAU TOMINI	LAUJE TOMINI
1S	ku-	ku-	'u-	'u-
2S	nu-	mu-	mu-	-
3S	na-	-	-	-
1P.IN	ta-	-	-	-
1P.EX	ki-	-	-	-
2P	ni-	-	-	-
3P	ra-	-	-	-

Sumatran verb-adjacent clisis in patient voice

	Old Malay	*Karo Batak*	*Gayo*	*Clas. Malay*	*Minangkabau*
1SG.	ni-V-**(ŋ)ku**	**ku**-V	**ku**-V	**ku**-V	**den**-V
2SG.	(ni-V-**māmu**)	i-V-**əŋkō**	i-V-**kō**	**kau**-V	**aŋ**-V
3SG.	ni-V-**ña**	i-V-**na**	i-V-**é**	di-V-**ña**	**iño**-V
1PL.EXCL	?	i-V-**kami**	**kami**-V	**kami**-V	**kami**-V
1PL.INCL	ni-V-**(n)ta**	**si**-V	**kitö**-V	**kita**-V	**kito**-V
2PL.	ni-V-**māmu**	i-V-**kam**	i-V-**kam**	**kamu**-V	**kau**-V
3PL.	ni-V-**(n)da**	i-V-**na**	i-V-**é**	di-V-**mereka**	**iño**-V

Philippine
G/A set: 2P
PIVOT set: 2P

Old Malay / Rejang
A set: verbal enclitic
G set: nominal enclitics
PIVOT set: Free pronouns

Batak / Gayo
A set: mixed verbal enc./proc.
G set: nominal enclitics
PIVOT set: Free pronouns

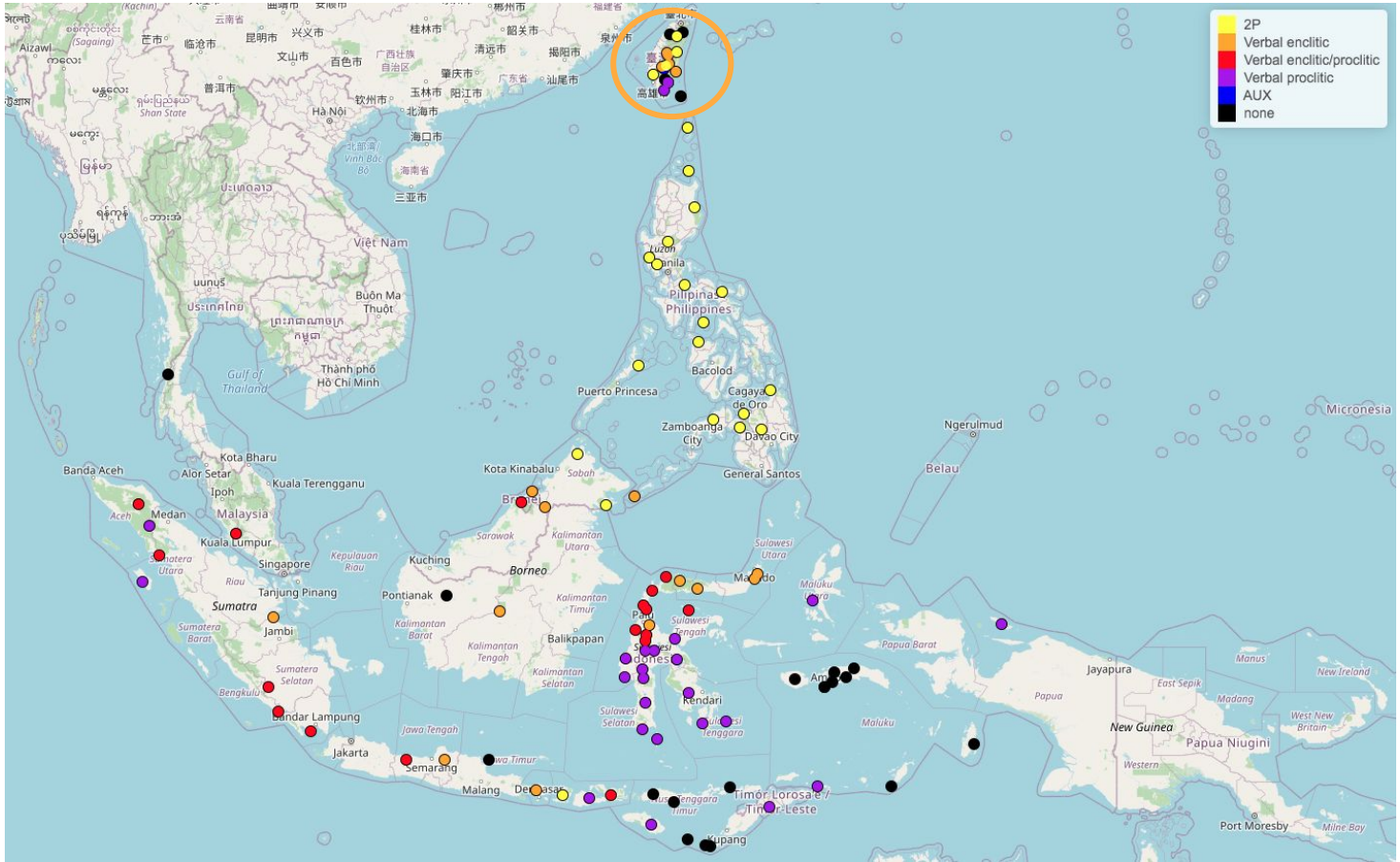
Minangkabau
A set: verbal proclitics
G set: nominal enclitics
PIVOT set: Free pronouns

Minahasan
A set: verbal enclitic
G set: nominal enclitics
PIVOT set: 2P

Pamona-Kaili
A set: mixed verbal enc./proc.
G set: nominal enclitics
PIVOT set: 2P

South Sulawesi
A set: verbal proclitics
G set: nominal enclitics
PIVOT set: 2P

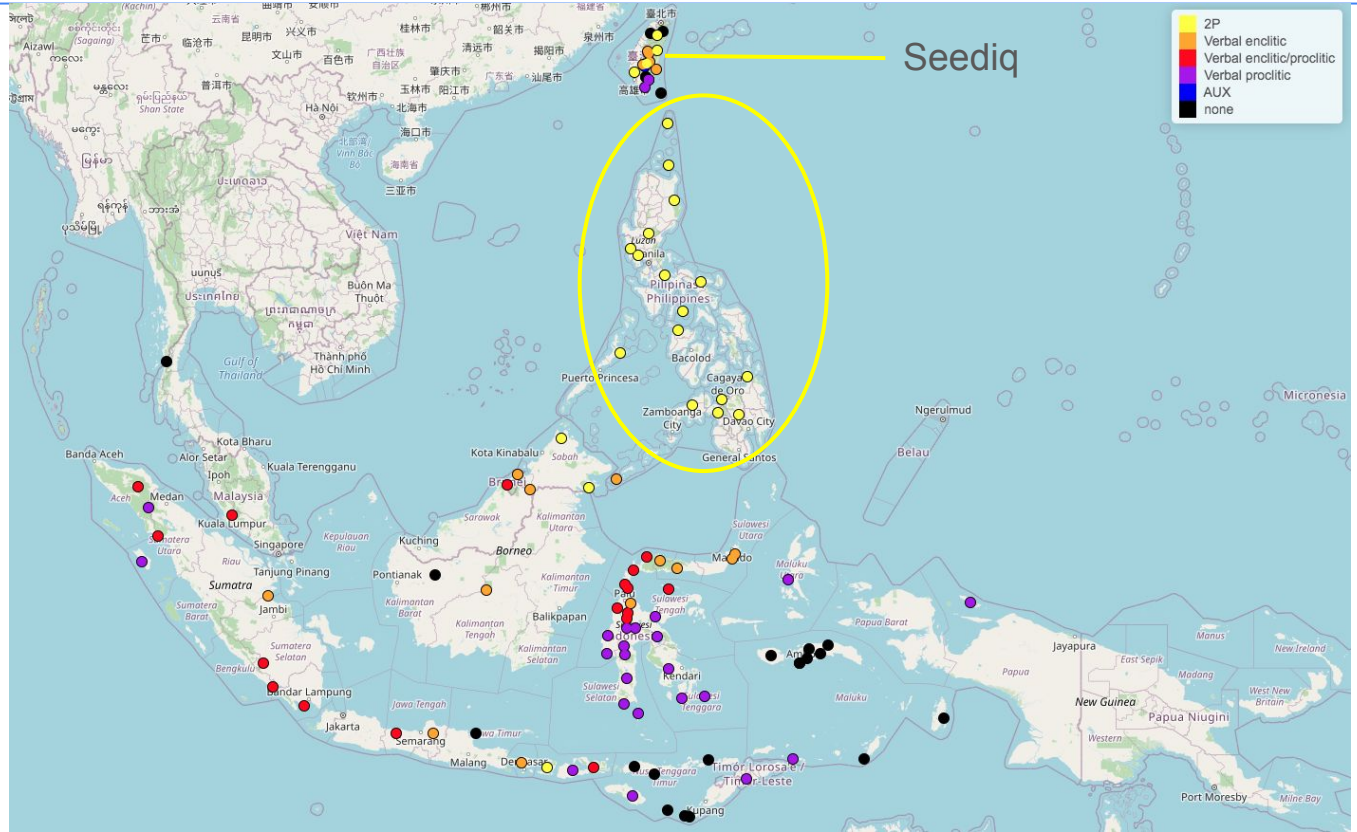
Prototypes reflected in Formosan



1 Tgdaya Seediq ≈ Philippine prototype

G/A set: 2P (no distinction between possessors and non-AV agents)

PIVOT set: 2P



Tgdaya Seediq ≈ Philippine prototype

G/A set: 2P (no distinction between possessors and non-AV agents)

PIVOT set: 2P (Holmer 1996)

PRED=PIV=G/A

q<n>ta-an=ku=namu — ‘You (Pl.) saw me.’

<PRF>see-LV=1s=2P

NEG=PIV=G/A PRED

ini=ku=na qta-un — ‘He didn’t see me.’

NEG=1s=3s see-PV

AUX=PIV=G/A PRED

wada=ku=na qta-un. — ‘He saw me.’

FEV=1s=3s see-PV (Holmer 1996:69)

INTER=PIV=G/A AUX PRED

netun=ku=na wada ini qtay-i . . . — ‘If he didn’t see me . . .’

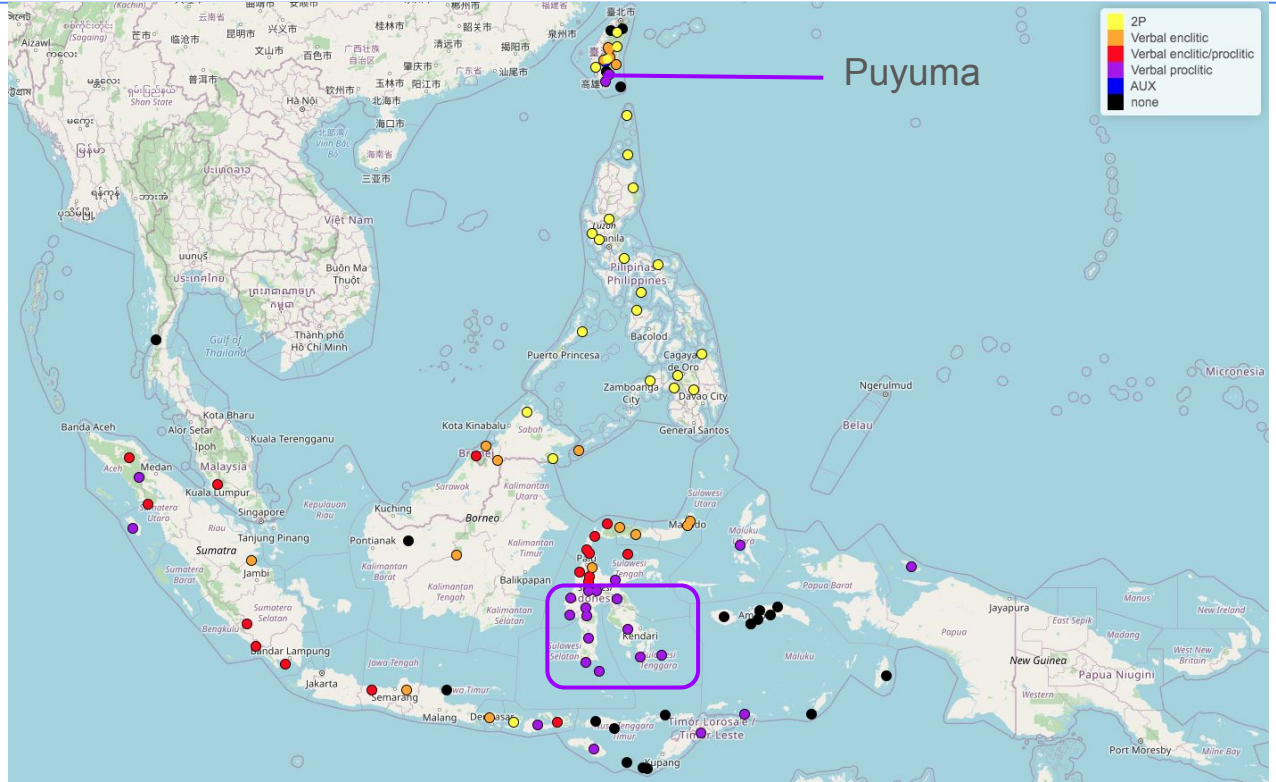
if=1s=3s PFV NEG see-PV.NEG (Holmer 1996:63)

2 Nanwang Puyuma ≈ South Sulawesi prototype (primary data; Teng 2008)

G/A set: head-adjacent proclitics

PIVOT set: 2P/verbal enclitic

(pivot clitic is blocked from 2P in the presence of an G/A proclitic)



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G/A set: head-adjacent proclitics

PIVOT set: 2P/verbal enclitic

(pivot clitic is blocked from 2P in the presence of an G/A proclitic)

G/A=**VERB**=PIV

ti=beray-ay=yu dra paysu.
1s=help=2s INDF.ACC money

'I will give you some money.'

G/A=**ADV**=PIV VERB

ti=trakatrakaw-ay=yu berey dra paysu.
1s=secretly-LV=2s give.AV INDF.ACC money

'I will secretly give you some money.'

NEG=PIV **AV.**VERB

Adri=ku berey kanu dra paysu.
NEG=1s give.AV 2S.ACC INDF.ACC money

'I did not give you money.'

NEG G/A=**NAV.**VERB=PIV

Adri ku=berey-ay=yu dra paysu.
NEG 1s=give-LV=2s INDF.ACC money

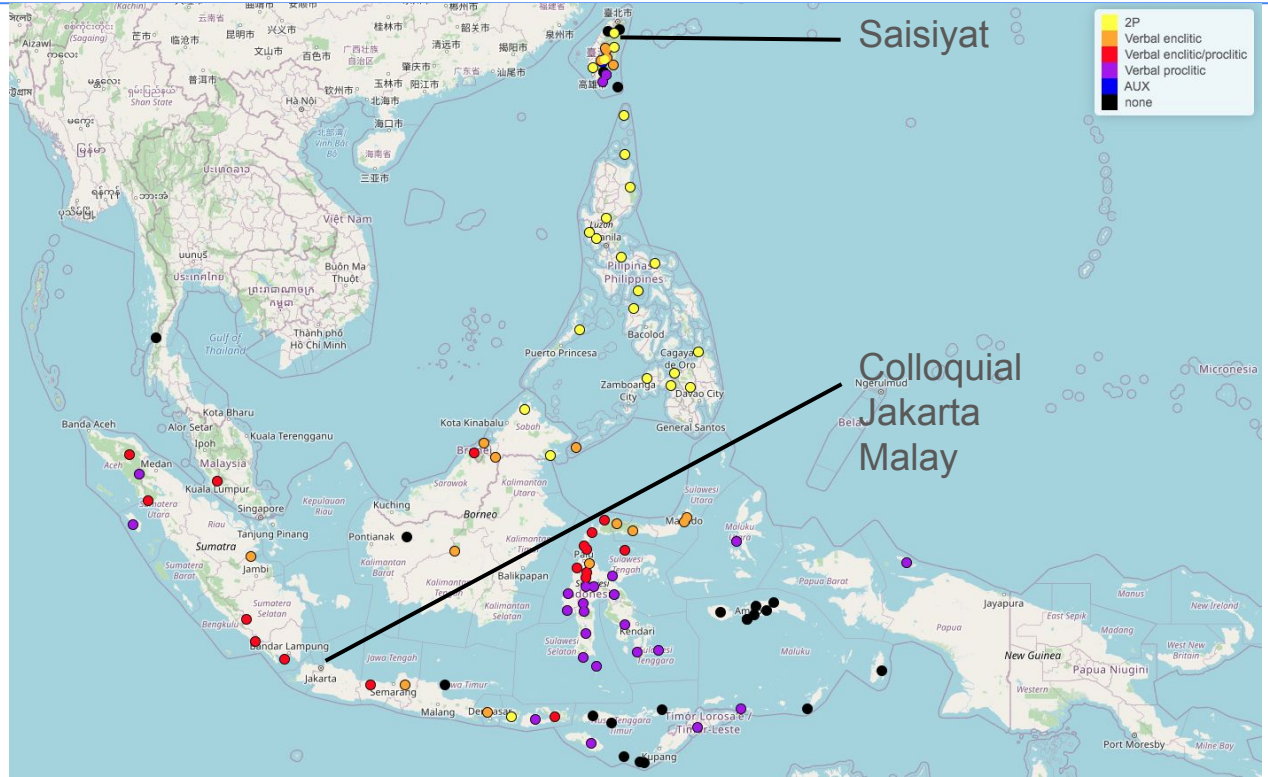
'I did not give you money.'

3 Saisiyat ≈ Colloquial Jakarta Malay prototype

G/A set: free pronoun

P set: free pronoun

PIVOT set: free pronoun



Saisiyat (Yeh 2018)
G/A set: free pronoun
P set: free pronoun
PIVOT set: free pronoun

PIV	VERB	P
siya	S<om>bet	’iniya’om.
3	hit<AV>	1P

‘He hit us.’

PIV	VERB	G/A
siya	Sekla’-en	ma’an.
3s	know-PV	1S

‘I know him.’

Loss/absence of bound pronominal clitics (while maintaining case distinction)

Colloquial Jakarta Malay (Sneddon 2007)
caseless set: free pronoun

PIV	VERB	P
dia	mukul	kita.
3S	hit<AV>	1P

'He hit us.'

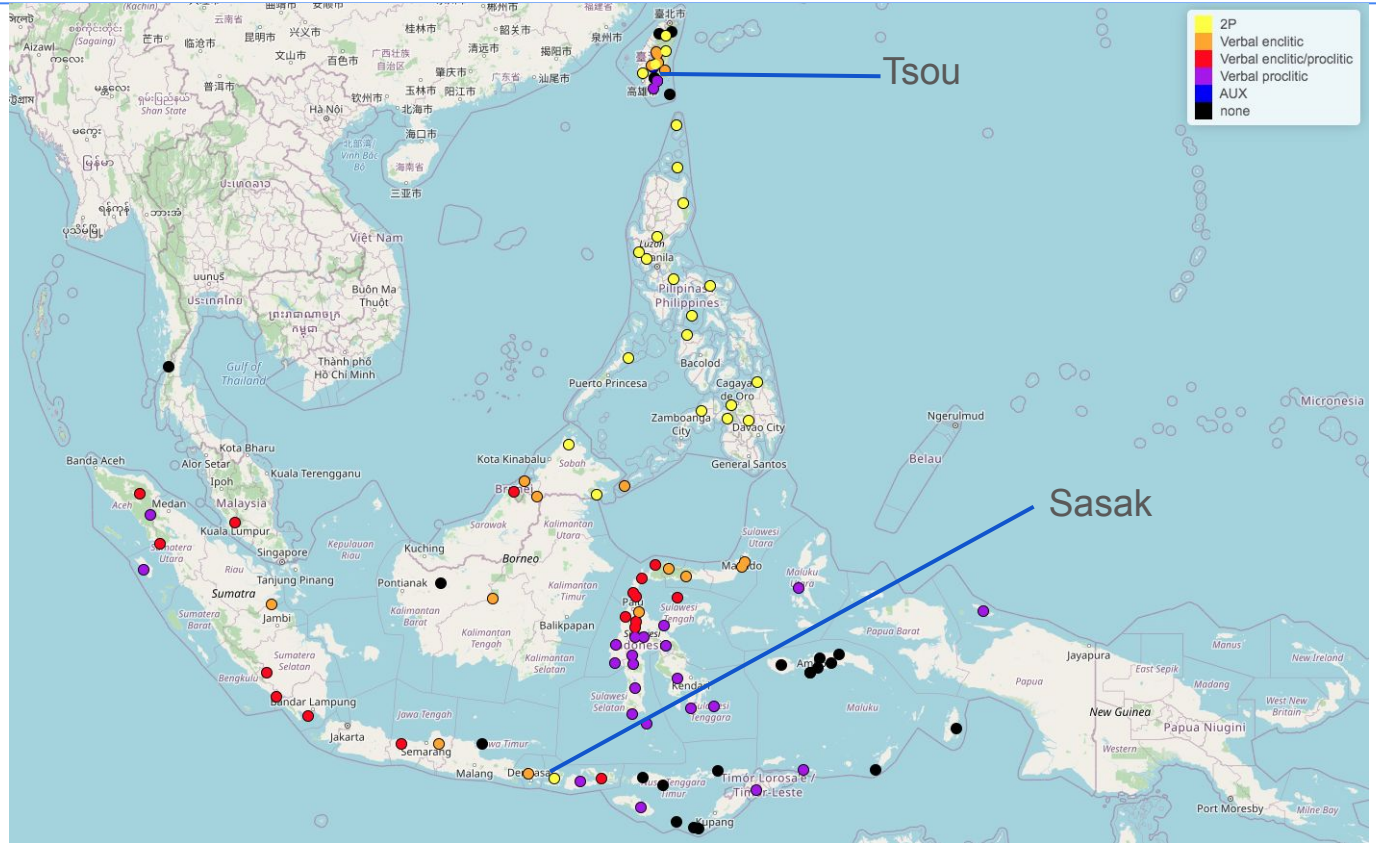
PIV	VERB		A
kita	di-pukul	sama	dia
3s	know-PV	PREP	3S

'He hit us.'

Loss/absence of bound pronominal clitics (while losing case distinctions)

4 Tsou prototype

A/S series: auxiliary enclitics



Tsou (Chang & Pan 2018)
A/S series: auxiliary enclitics (no possessors/genitive homophony)
GEN set: nominal enclitics

Development of a nominative-accusative agreement system that indexes the A/S argument

AUX=A/S	PRED				**NP**=GEN	
mo=’u	emʉm’ʉ	to	ucei	nehucma.	‘o	tposʉ=si
REAL.AV=1S	plant	ACC	taro	yesterday	PIV	book=3s

‘I planted taro yesterday.’

AUX=A/S	PRED	
mi=su	’ʉm’ʉmnʉ	maitan’e?
REAL.AV=2S	be.well	now

‘Are you doing well now?’

AUX=A/S	NEG	PRED	PIV	
i=ta	o’te	ʉmnʉ-a	na	a’o.
REAL.NAV=3s	NEG	good-PV	PIV	1

‘She doesn’t like me.’

Ampenan Sasak (Khairunnisa 2022)
A/S/G set: 2P, verbal proclitic
P set: verbal enclitic

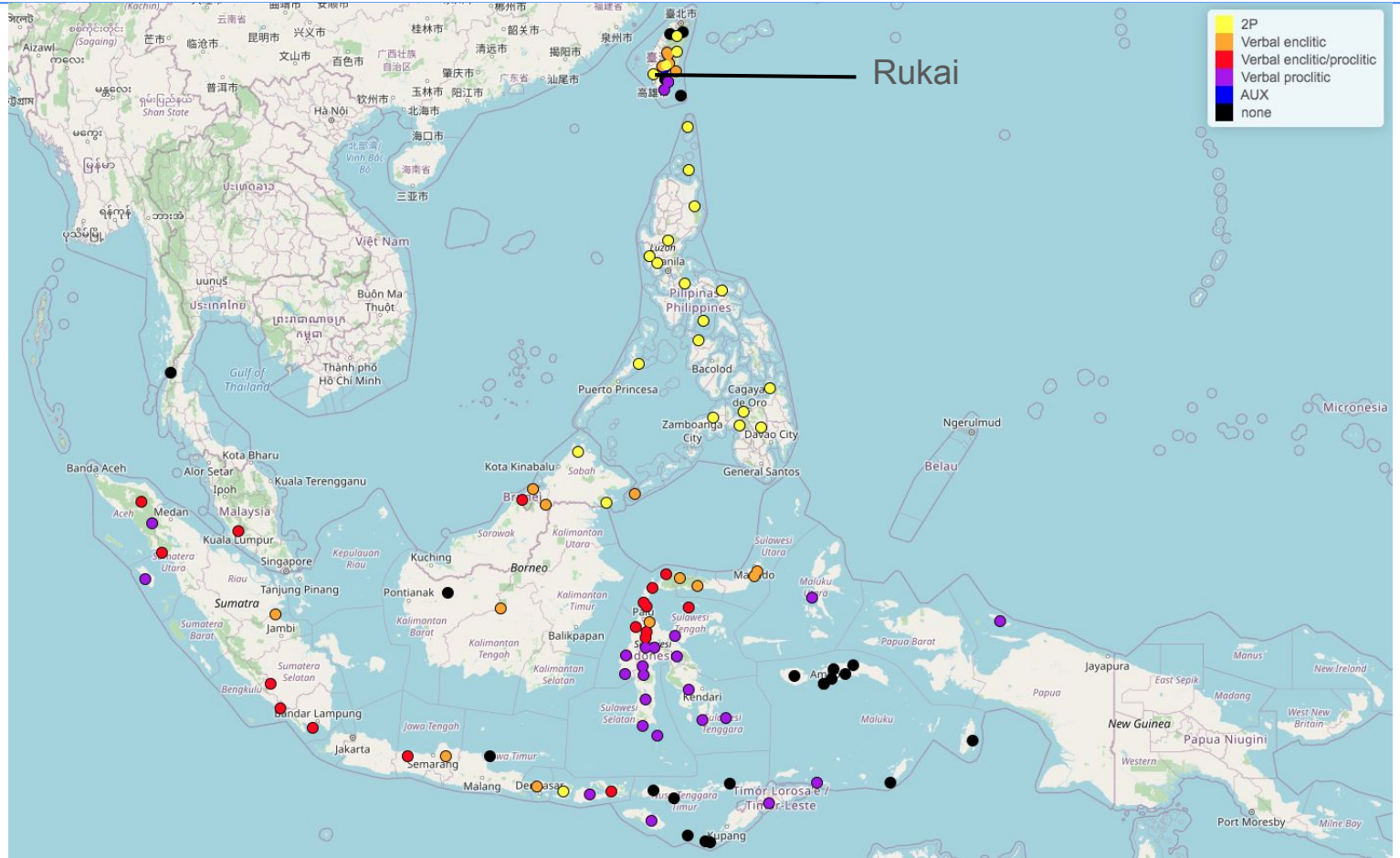
V=A/S
Aku empok=ne siq dengan no.
1S hit=3 AGT person that
'The person hit me.' (Patient Diathesis)

V=A/S=P
Empok=ne=ku siq Adi.
hit=3=1S AGT Adi
'Adi hit me.' (Patient Diathesis)

V=A/S P
Dengan no empok=ne aku.
person that hit=3 1S
'The person hit me.' (Actor Diathesis)

AUX=A/S V=P
Dengan no wah=ne empok=ku.
person that PFV=3 hit=1S
'The person hit me.' (Actor Diathesis)

5 Mantauran Rukai (Zeitoun 2005)



Mantauran Rukai (Zeitoun 2005)

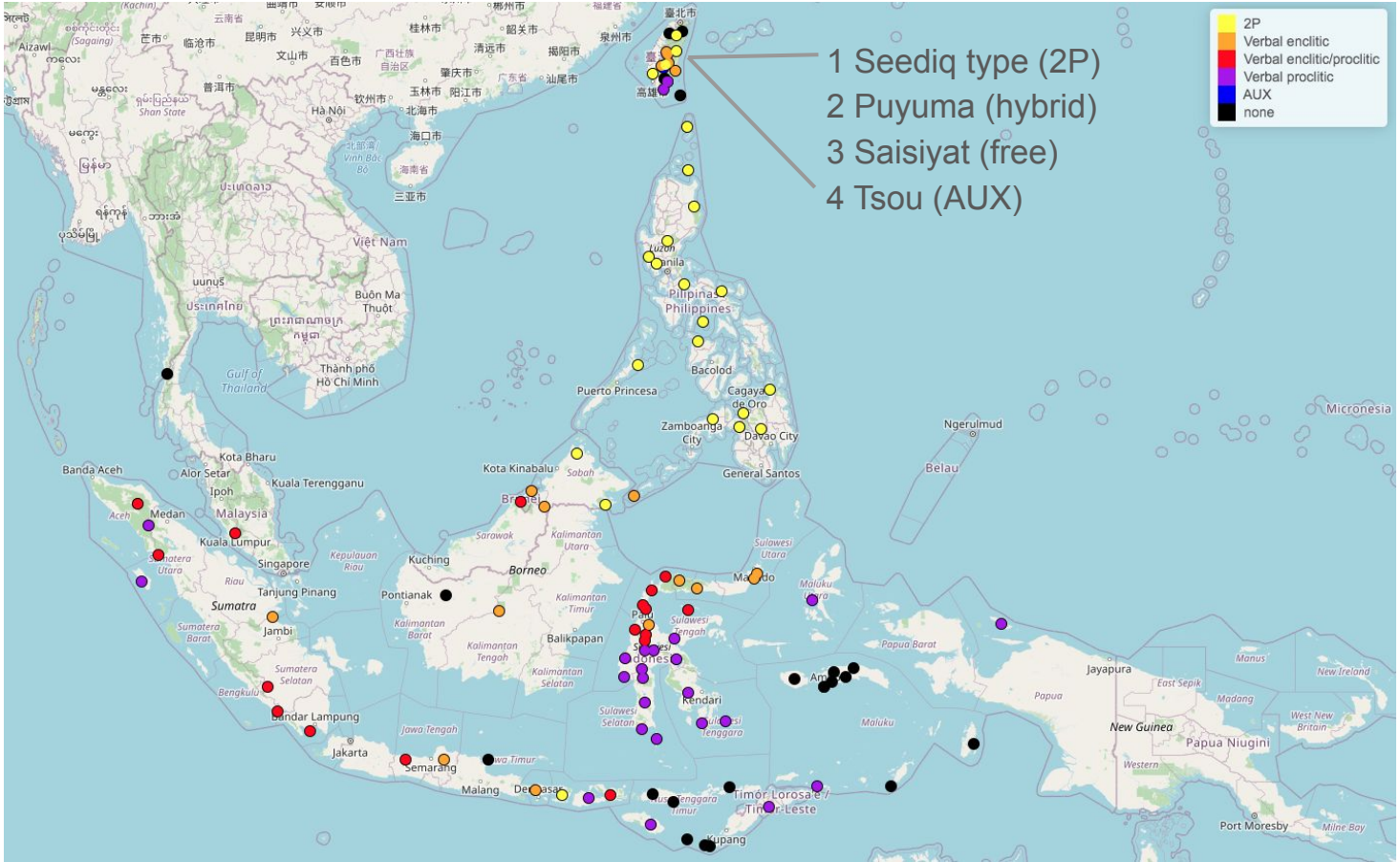
NOM > GEN shift under negation and other contexts
Extremely similar to patterns found in South Sulawesi

o-kelrakelrange**=lra**=imia'e.
DYN.FIN-beat=1S.NOM=2S.OBL
'I kick you.'

o-kelrakelrange=ka**=l**=imia'e.
DYN.FIN-beat=NEG=1S.GEN=2S.OBL
'I did not kick you.' (Zeitoun 2005:309)

ma-lrapa'a=mo'o la**=ko** 'o-kipingi.
STAT.FIN-hot=2S.NOM so_that=2S.GEN take_off-clothes
'You are hot and so you take off your clothes.' (Zeitoun 2005:304)

(at least) 4 common patterns attested in the homeland



Known cases of migration and shift

How stable are clitic patterns?

- Despite leakage, there still appears to be a large degree of homogeneity within subgroups.
- Could clitic positioning then be used to assess subgroup membership or is it too vulnerable to contact driven change?
- There exist two good test cases to answer this question.
    - Sama-Bajaw languages of the Philippines, which emerged from Borneo within the last 1,000 years but which have had heavy contact with Central Philippine languages over the last several centuries.
    - Greater Central Philippine languages that have expanded to North Sulawesi and have had intensive contact with neighboring (non-Philippine) languages and Malay

How stable are clitic patterns?

- Recall that Philippine languages are overwhelmingly uniform in employing 2P clitics for G/A and PIVOT arguments.
- The most common pattern for the G/A argument in North Sulawesi and Borneo is verbal enclitic.

Sama-Bajaw languages (migrants from the verb enclitic zone to the 2P zone)
G/A set: head adjacent enclitics
PIVOT set: 2P

Bangingi (Sulu, S. Philippines)
baŋ=aku iŋgaʔi pa-billi=nu...
if=1S.PIV NEG CAU-buy=2S.G/A
'If you won't sell to me...' (Gault 1999:78)

Abaknon (Capul, Central Visayas)
Kon agla'om=kita si ga'i sakulawan=ta...
if hope=1P.IN.PIV OBL NEG see=1P.IN.G/A
'If we hope for what we can not see…' (Jacobsen n.d.) (https://www.trussel2.com/acd/acd-inab-a.htm)

Gorontalo (migrants from the 2P zone to the verb enclitic zone)
G/A set: head adjacent enclitics
PIVOT set: free pronouns

olaaŋo p<il>oh-i-kabaya=lio kabaya=lio u moidu
yesterday <BEG>TR-CV-blouse=3s.G/A blouse=3s.G/A RELT green
'Yesterday she "bloused" her green blouse.' (Badudu 1982:92)

(tio) t<um>eteqo (tio)
3s.PIV <AV>run 3s.PIV
'S/he will run'

Dia lipata=mu!
NEG forget=2s.G/A
'Don't forget!' (Joest 1883:45)

Brunei Malay

A set: verbal proclitics (1, 2) and enclitics (3)

PIVOT set: 2P (in S and A only) (Clynes 2001)

A=**PRED**

ani ku=kirim-kan arah si Bulan

DEM 1s=send-APPL to PN B.

'I'm sending this to Bulan.'

NEG=PIV PRED

inda=ku percaya

NEG=1s.PIV believe

'I don't believe (it).'

PRED=PIV

mam-bali=ku kain ampat mitar kan anak=ku

AV-buy=1s.PIV cloth four meter to child=1S.POSS

'I bought four metres of cloth for my child.'

Development of 2P clitics from free pronouns due to language shift from indigenous languages to Malay.

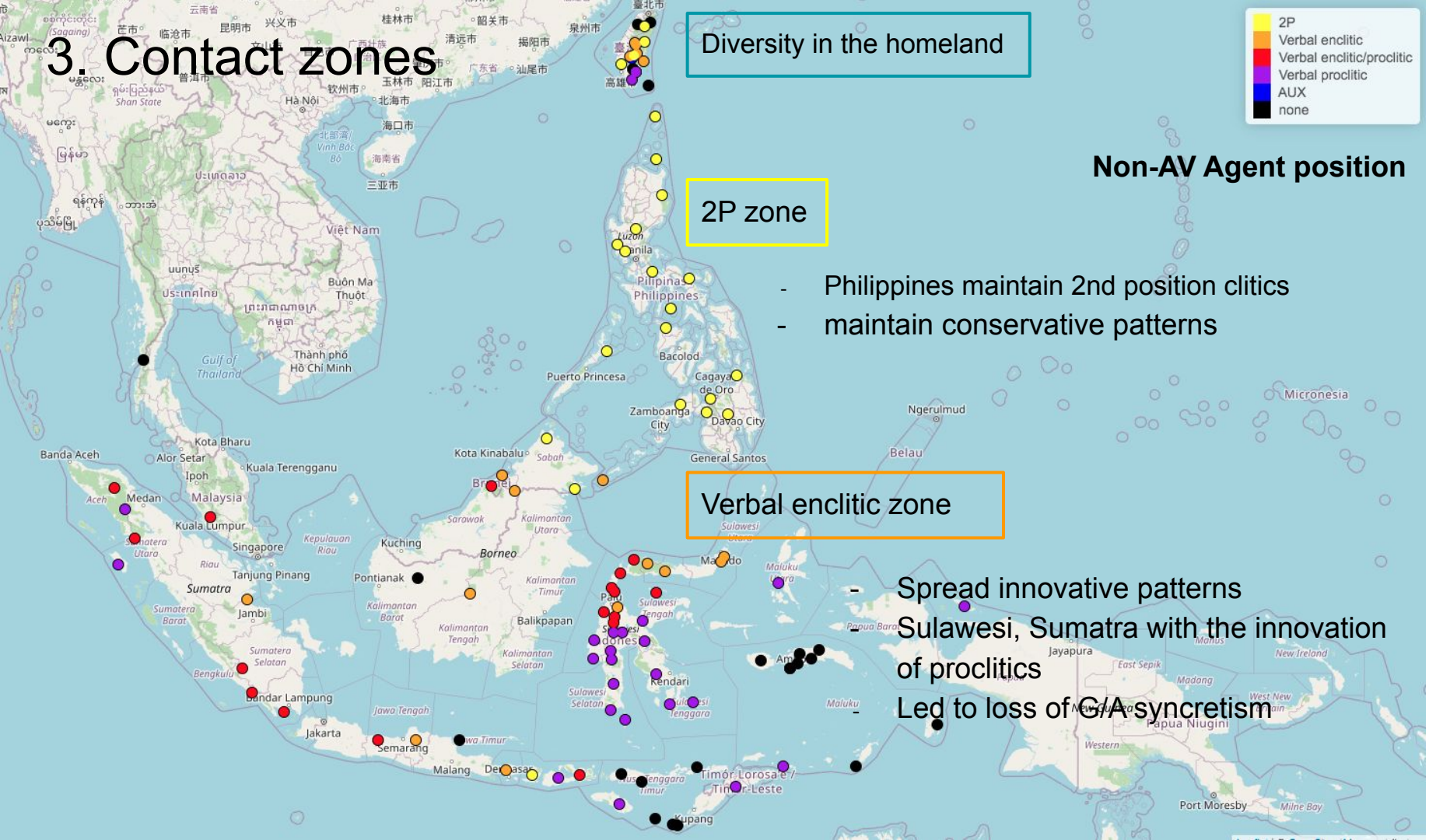
How stable are clitic patterns?

- This suggests that, when it comes to clitic position, language contact may hasten the journey of grammaticalization but does not reverse it:
- free pronoun → 2P clitic → verb adjacent clitic → verbal affix

How stable are clitic patterns?

- This suggests that, when it comes to clitic position, language contact may hasten the journey of grammaticalization but does not reverse it:
- free pronoun → 2P clitic → verb adjacent clitic → verbal affix
- We can also see how language contact has taken formerly free pronouns and turned them into second position clitics.

3. Contact zones



- Philippines maintain 2nd position clitics
- maintain conservative patterns

- Spread innovative patterns
- Sulawesi, Sumatra with the innovation of proclitics
- Led to loss of C/A syncretism

Conclusion

- The mapping of person marking, although still in its early stages, already yields interesting generalizations.
- We find that the relatively intense typological diversity in person marking patterns in Formosan languages mirrors their deep phylogenetic diversity.
- We also see strong areal patterns but closer investigation of the border areas suggests a limit on contact induced changes.

Examples

Ternate Chabacano (a Spanish-based creole of the Philippines)
PIVOT set: 2P

Dóndi=bo ta-kedá?
where=2S IPFV-stay
'Where do you live?' (Sippola 2011:129)

Akí=yo ta-kedá na Báhra.
here=1S IPFV-stay LOC Bahra
'I live here in Bahra.' (Sippola 2011:142)

No=pa, no=yo masyáw pe entendé.
NEG=yet NEG=1S much can understand
'Not yet, I can't understand much.' (Sippola:2011 161)

Development of 2P clitics from free pronouns due to language shift from indigenous languages to Spanish creole.

Ampenan Sasak

SUBJ set: 2P, verbal proclitic

NON-PIVOT set: verbal enclitic

(Khairunnisa 2022)

PIV **AUX**=S PRED

Jaje wah=ne kaken siq kanak no$_i$.

cake PFV=3s eat AGT child DEM

‘The child ate a cake.’

PIV **PRED=S**

Jaje kaken=ne$_i$ siq kanak no$_i$.

cake eat=3s AGT child DEM

‘The child ate a cake.’

PIV S=**PRED**

Jaje ne$_i$=kaken siq kanak no$_i$.

cake 3s=eat AGT child DEM

‘The child ate a cake.’

PIV **PRED**=S

Jaje$_i$ te-kaken=ne$_i$ siq kanak no.

cake PASS-eat=3s AGT child DEM

‘The cake was eaten by the child.’

(1) Dengan no empok=ne aku

Pamona-Kaili prototype (Uma)

A set: REALIS: verbal enclitics, IRREALIS: (partial) verbal proclitics

G set: nominal enclitics

PIVOT set: 2P

A=**VERB**=PIV

ku=po-kono=i

1s=VRB-like=3s

‘I like her.’

NEG=PIV		A=VERB
Uma=a=pa	mingki’	ni=po-doo
NEG=1s=INCM	necessary	2s=VRB-companion

‘You don’t have to accompany me any longer.’

Rukai (Zeitoun 2018; Chen 2008; Tang & Ke 2007)

PIVOT set: 1,2 (2P)

ACC set: 1,2,3 (2P)

VERB=PIV=ACC

o-lriho'o=lra=imia'e — 'I know you.' (Maga Rukai)

ACT-know=1S.PIV=2S.ACC

VERB=PIV

Wa-drel=aku ku kange i-kai ki baiyu. — 'I saw the fish in the lake' (Budai Rukai)

NFUT-see=1S.PIV ACC fish be=DEM OBL lake

NEG=PIV VERB

kai=naku wa-drele ku kange i-kai ki baiyu.

NEG=1S.PIV NFUT-see ACC fish be-DEM OBL lake — 'I didn't see the fish in the lake.'

ADV=PIV VERB

Tu=a=thadalra=naku dadavace.

frequently-NFUT-frequently=1S.PIV walk — 'I walk frequently.'

An outlier pattern: clausal clitics

Manggarai (Arka & Kosmas 2005)
PIVOT set: clause final enclitic

	PRED	**OBJ**=PIV	
Aku	cero	latung=k	‘I fry the corn.’
1s	fry	corn=1s	

PRED	**OBJ**=PIV	
Ongga	aku=i	‘(S)he hit me.’
hit	1s=3s	

	PRED	**[PP**	**]**=PIV	
Ise	lonto	musi mai	ami=s	‘They sat behind us.’
3s	sit	behind from	1PI=3P	

		PRED	**PP**=PIV	
Latung	hitu	cero	l-aku=i	‘The corn was fried by me.’
corn	that	PASS.fry	by-1s=3s	

Tondano (Brickell 2014)
G/A set: head adjacent enclitic
PIVOT set: clause initial

ko=rèy’ t<im>anem cinkè rè’èn
2S.PIV=NEG <AV.PST>cultivate clove PART
‘You haven’t planted cloves then? (Brickell 2014:209)

ko=tuama ya
2S.PIV=man AFF
‘You are a man, yes?’ (Brickell 2014:218)

ko=pa-we-wui-en=ku=mèè
2S.PIV=DYN-IRR-ask-PV=1S.G/A=DIR.MED
‘I will ask you…’ (Brickell 2014:394)

pa-loo’-en=ku=la sèa
DYN-see-PV=1S.G/A=DIR 3P.PIV
‘I see them’ (Brickell 2014:331)

Iraya
G/A set: clause initial
PIVOT set: clause initial +?

kumu=ʔani=tabuy-un sa naʔay ʔiya
2s.G/A=already=give-PV OBL 1s 3s.PIV
‘You give him to me.’ (Tweddell 1958, Reid 2017)

ʔaku=nagmunaʔan, ʔaku=tuwaʔ ʔag-pamataw
1s.PIV=before 1s.PIV=here AV-live
‘Before, I used to live here…’ (Tweddell 1958, Reid 2017)

Himmelmann, Nikolaus P. (2020). Grammaticisation processes and reanalyses in Sulawesi languages. In: Areal patterns of grammaticalization and cross-linguistic variation in grammaticalization scenarios, pp. 1043-1075. Berlin: de Gruyter. ISBN 9783110559378

2 Voice variation and decay in western Austronesia

Isaac Stead* and Victoria Chen*
Max Planck Institute for Evolutionary Anthropology, Victroia University of Wellington

Recent work has argued convincingly that the Malayo-Polynesian branch of Austronesian radiated rapidly from the northern Philippines across the Indonesian archipelago via successive migrations, splitting into at least nine distinct branches within a period of 500 years (Smith 2017). This proposal now shows that Malayo-Polynesian constitutes an ideal natural laboratory for examining the variation and change of the typologically unique voice system found in these languages, known in the literature as Austronesian-type voice. Through surveying the voice system of 60 languages under nine Malayo-Polynesian primary branches and all primary-level branches of Austronesian, we show that the decay of Austronesian-type voice systems patterns consistently with the degree of language contact between incoming Austronesian speakers and pre-Austronesian populations in each geographic region. This conclusion confirms and reinforces existing proposals that contact with non-Austronesian groups played a major role in the evolution of western Austronesian morphosyntax (Klamer 2019) suggesting future investigation of similar effects in other language families.

References

Klamer, M. (2019, April). The dispersal of Austronesian languages in Island South East Asia: Current findings and debates. *Language and Linguistics Compass* 13(4), e12325. doi:10.1111/lnc3.12325

Smith, A. D. (2017). The Western Malayo-Polynesian Problem. *Oceanic Linguistics* 56(2), 435–490.

Voice variation and decay in western Austronesia

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June 22, 2024

Overview

- Western Austronesian languages exhibit rich variations in
  - voice type
  - voice morphology
  - number of voice distinction

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  - voice type
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- We present proto-types for areas of relative homogeneity and show how much of this variation is (also) surprisingly anticipated by independent developments in Formosan languages.
- Finally, we conclude with speculations about directions of change and contact effects on voice syncretism.

Austronesian-type voice and its variation

- The Proto-Austronesian voice system

	Actor Voice	*Patient Voice*	*Locative Voice*	*Circumstantial Voice*
Indicative	*<um>	*-en	*-an	*Si-/Sa-
Optative, hortative	*-a	*-aw	*-ay	*-anay
Imperative, negative	-∅	*-u	*-i	*-an

(Blust & Chen 2017)

- Four-way voice distinction
- Voice morphology inflected for moods (Grades I—III)

(see Wolff 1973; Ross 2009, 2012; Blust & Chen 2017)

Austronesian-type voice and its variation

- The Proto-Malayo-Polynesian voice system

	Actor	Patient	Location	Circumstantial
INDICATIVE				
Neutral	**‹um›√**	**√-ən**	**√-an**	**i-√**
	**k‹um›áRaw*	**kaRáw-ən*	**kaRáw-an*	**i-káRaw*
	**k‹um›aRát*	**kaRat-ə́n*	**kaRat-án*	**i-kaRát*
Perfective	**‹umin›√**	**‹in›√**	**‹in›√-an**	**i-‹in›√**
	**k‹um›‹in›áRaw*	**k‹in›áRaw*	**k‹in›aRáw-an*	**i-k‹in›áRaw*
	**k‹um›‹in›aRát*	**k‹in›aRát*	**k‹in›aRat-án*	**i-k‹in›aRát*
Imperfective	**‹um›R-√**	**R-√-ən**	**R-√-an**	**i-R-√**
	**k‹um›a-káRaw*	**ka-kaRáw-ən*	**ka-kaRáw-an*	**i-ka-káRaw*
	**k‹um›a-kaRát*	**ka-kaRat-ə́n*	**ka-kaRat-án*	**i-ka-kaRát*
NON-INDICATIVE				
Atemporal	**√**	**√-a**	**√-i**	**√-án**
	**káRaw*	**kaRáw-a*	**kaRáw-i*	**káRaw-án*
	**kaRát*	**kaRat-á*	**kaRat-í*	**kaRát-án*
Projective	**√-a**	**(√-aw)**	**√-ay**	—
	**kaRáw-a*	*(*kaRáw-aw)*	**kaRáw-ay*	
	**kaRat-á*	*(*kaRat-áw)*	**kaRat-áy*	

(Ross 2002:49)

- Four-way voice distinction
- Similarly, voice morphology inflected for TAM categories

Austronesian-type voice and its variation

- The variation
  - 4-way voice distinction
  - 3-way voice distinction
  - 2-way voice distinction

Austronesian-type voice and its variation

- The variation
  - Philippine-type
  - Indonesian-type
  - Bornean-type
  - Reduced Philippine-type
  - Absence of symmetrical voice

Austronesian-type voice and its variation

- The variation
  - 4-way voice distinction
    - AV | PV | LV | CV
  - 3-way voice distinction
  - 2-way voice distinction

Austronesian-type voice and its variation

- The variation
  - 4-way voice distinction
    - AV | PV | LV | CV
  - 3-way voice distinction
    - AV | PV | LV
    - AV | PV | CV
    - AV | LV | CV
    - ~~PV | LV | CV~~
  - 2-way voice distinction

Austronesian-type voice and its variation

- The variation
  - 4-way voice distinction
    - AV | PV | LV | CV
  - 3-way voice distinction
    - AV | PV | LV
    - AV | PV | CV
    - AV | LV | CV
    - ~~PV | LV | CV~~
  - 2-way voice distinction
    - AV | PV
    - AV | LV AV | CV ~~PV | LV~~ ~~PV | CV~~

Austronesian-type voice and its variation

- The variation
  - 4-way voice distinction
    - AV | PV | LV | CV

    Philippine-type
  - 3-way voice distinction
    - AV | PV | LV
    - AV | PV | CV

    Reduced Philippine-type
    - AV | LV | CV
    - ~~PV | LV | CV~~
  - 2-way voice distinction

    Indonesian-type
    - AV | PV
    - AV | LV AV | CV ~~PV | LV~~ ~~PV | CV~~

Austronesian-type voice and its variation

- The variation
  - 4-way voice distinction
    - AV | PV | LV | CV
  - 3-way voice distinction
    - AV | PV | LV
    - AV | PV | CV
    - AV | LV | CV
    - ~~PV | LV | CV~~
  - 2-way voice distinction
    - AV | PV
    - AV | LV AV | CV ~~PV | LV~~ ~~PV | CV~~

Language sample and coding

118 languages covering Austronesian languages of Southeast Asia.

Coded for voice type, voice form and number of voice distinction based primarily on descriptions.

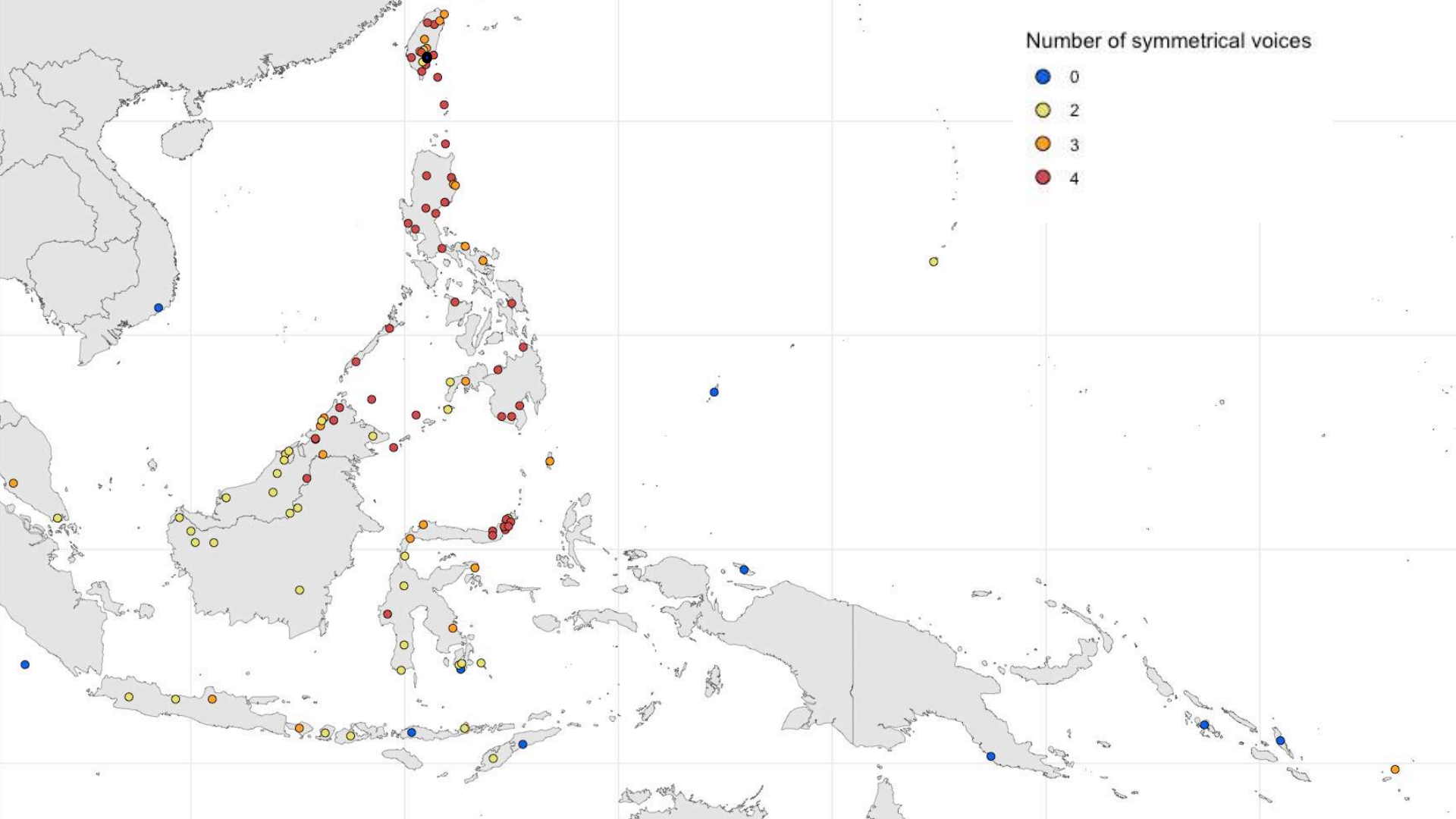
Mapped using the R package lingtypology with coordinates from Glottolog.

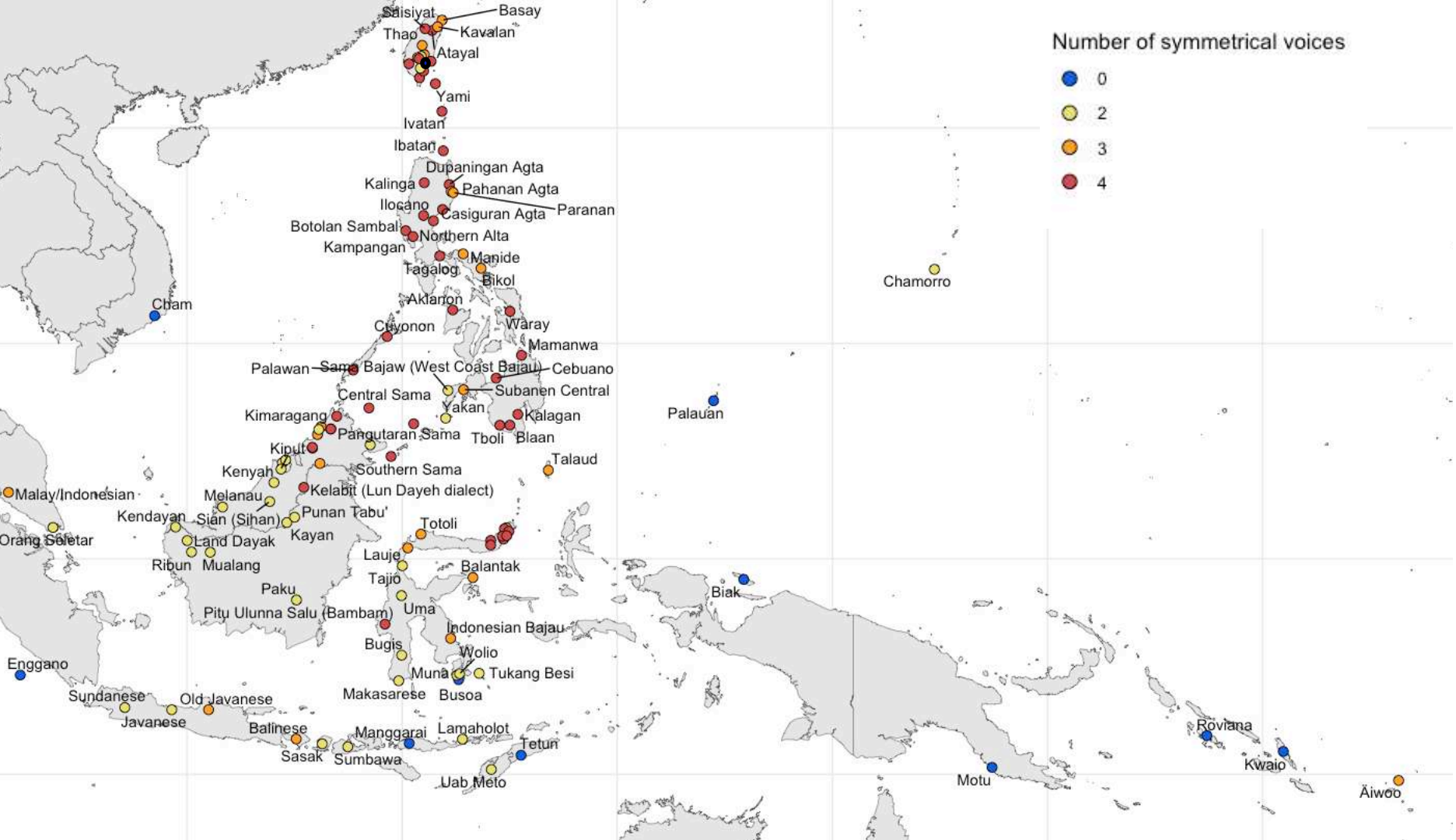
1	Language	Glottocode	Actor voice	Patient voice	Locative voice	Circumstantial vo	Numb
46	Saisiyat	sais1237	<om>, m-, mo-, m/m	-en	-an	shi-	4
47	Paiwan	paiw1248	, ∅ , ma-	<in>, -in	-an	si-	4
48	Atayal	atay1247	m-, <um>, ma-, ∅	-un	-an	si-	4
49	Casiguran Agta	casi1235	<um>	-an	-an	i-	4
50	Cebuano	cebu1242	mi-, ni-, ning-	gi-	-an	gi-	4
51	Dupaningan Agta	dupa1235	<um>, mag-	-an	-an	i-	4
52	Ilocano	ilok1237	ag-, -um-, mang-	-en	-an	i-, -an, pag-, pang-	4
53	Pahanan Agta	agta1234	<um>, mag-	-an	-an	i-	4
54	Paranan	para1306	<um>, mag-	-an	-an	i-	4
55	Yami	yami1254	-om-, ni-om-	-en, ni-, ma-, ni-ma	-an, ni-...-an, ka-	i-, ni-...-i, i-ka-, ni-i-	4
56	Balantak	bala1315	nVng-, mVng-, pVng	-on, ni-/PRO	mVng-...-an, nVng-...-an, pVng-...-a		3
57	Bantik	bant1286	-um-/-im-, ma-/na-, m	ni-			2
58	Biak	biak1248	not marked				2
59	Bikol	biko1240	-um-, mag-	-on, i-, -an			2
60	Botolan Sambal	boto1242	-om-, ma-, mag-, ma	-an	pag-...-an, pang-	pag-, ipang-/pang-	4
61	Bugis	bugi1244	not marked				2
62	Ibatan	ibat1238	<om>X, maN-X, may	X-en	X-an	i-X	4
63	Ida'an (Begak)	idaa1241	gə-, bəg-, məng-	∅, b-, p-			2
64	Kalinga	kali1311	man-, nan-, maN-, na	-on, -in-	-an, -in-an	i----an, in----an	
65	Kampangan	pamp1243	mag-, magpa-, magk	an-, -i, Ning	-an, -i	i-, pan-, pag-	4
66	Karo Batak	bata1293	n-				2
67	Kelabit (Lun Dayeh diale	kela1258	N-, ne-N-	-en, -in-/-i-, -u	∅, ∅, -aʔ, -i	piN-, ne-piN-, ∅	4
68	Lamaholot	lama1277	not marked				2
69	Mamanwa	mama1275	an-, m-, #-	-en, -#	-an	i-, #-	4
70	Manggarai	mang1405	not marked				2
71	Mentawai	ment1249	maN-/masi-/mu-, a-	ay-, i-			2
72	Tonsawang	tons1239	-um-	-en	-an	-i	4

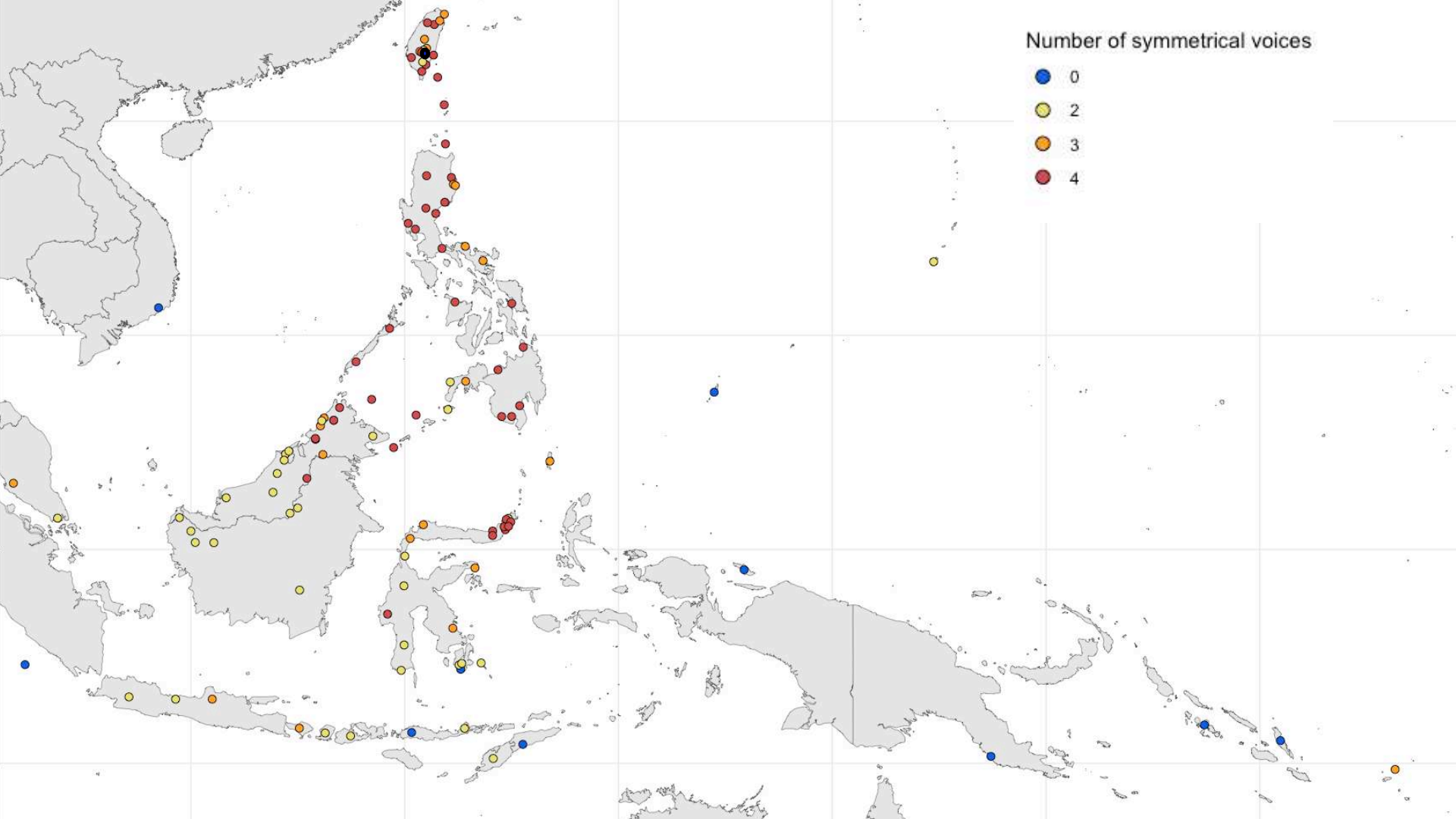
Goal of the study

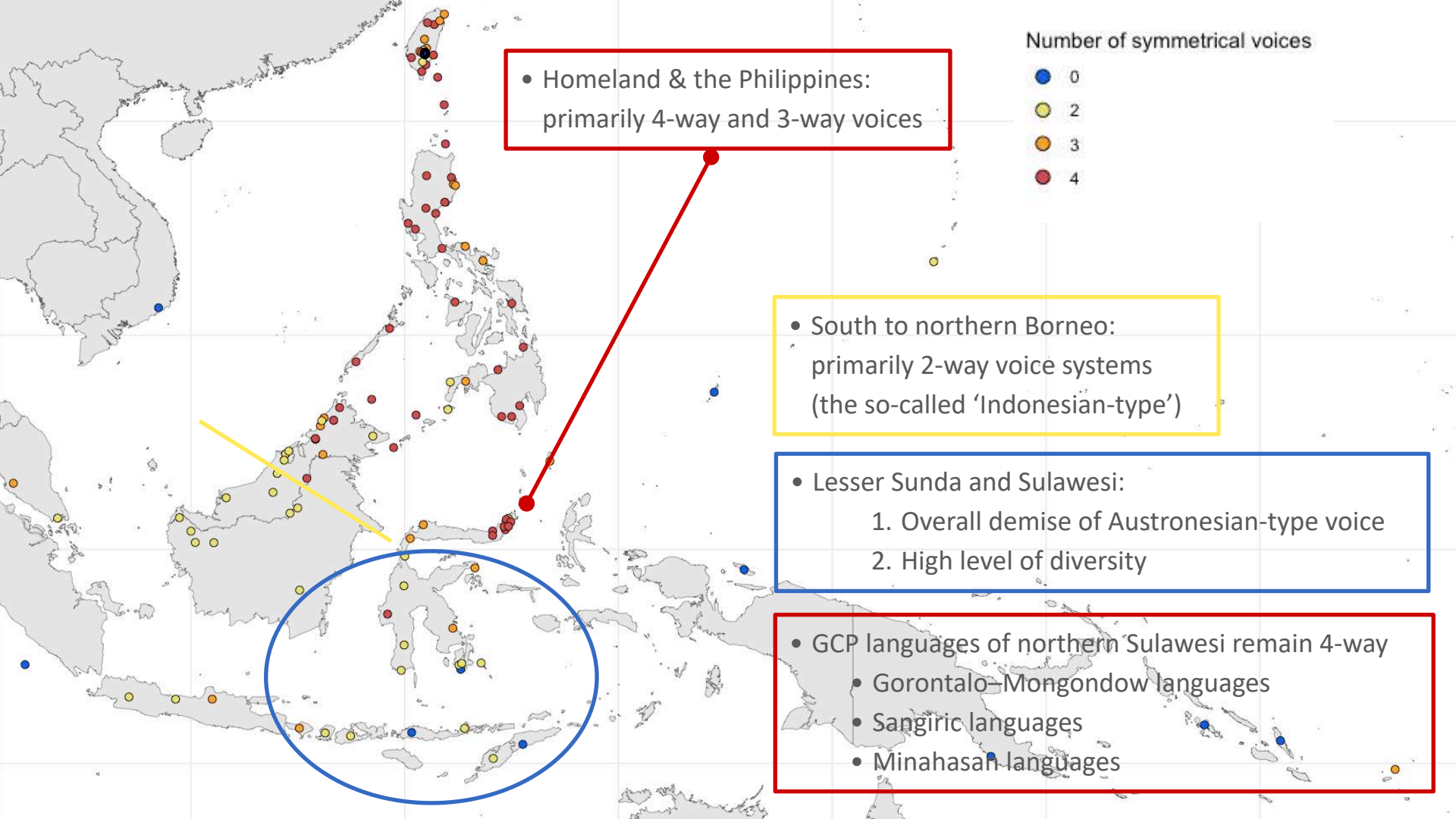
- Identify proto-types for areas of relative homogeneity and show how much of this variation is (also) surprisingly presaged by independent developments in Formosan languages.
- Draw inferences about directions of change and contact effects on voice decay.

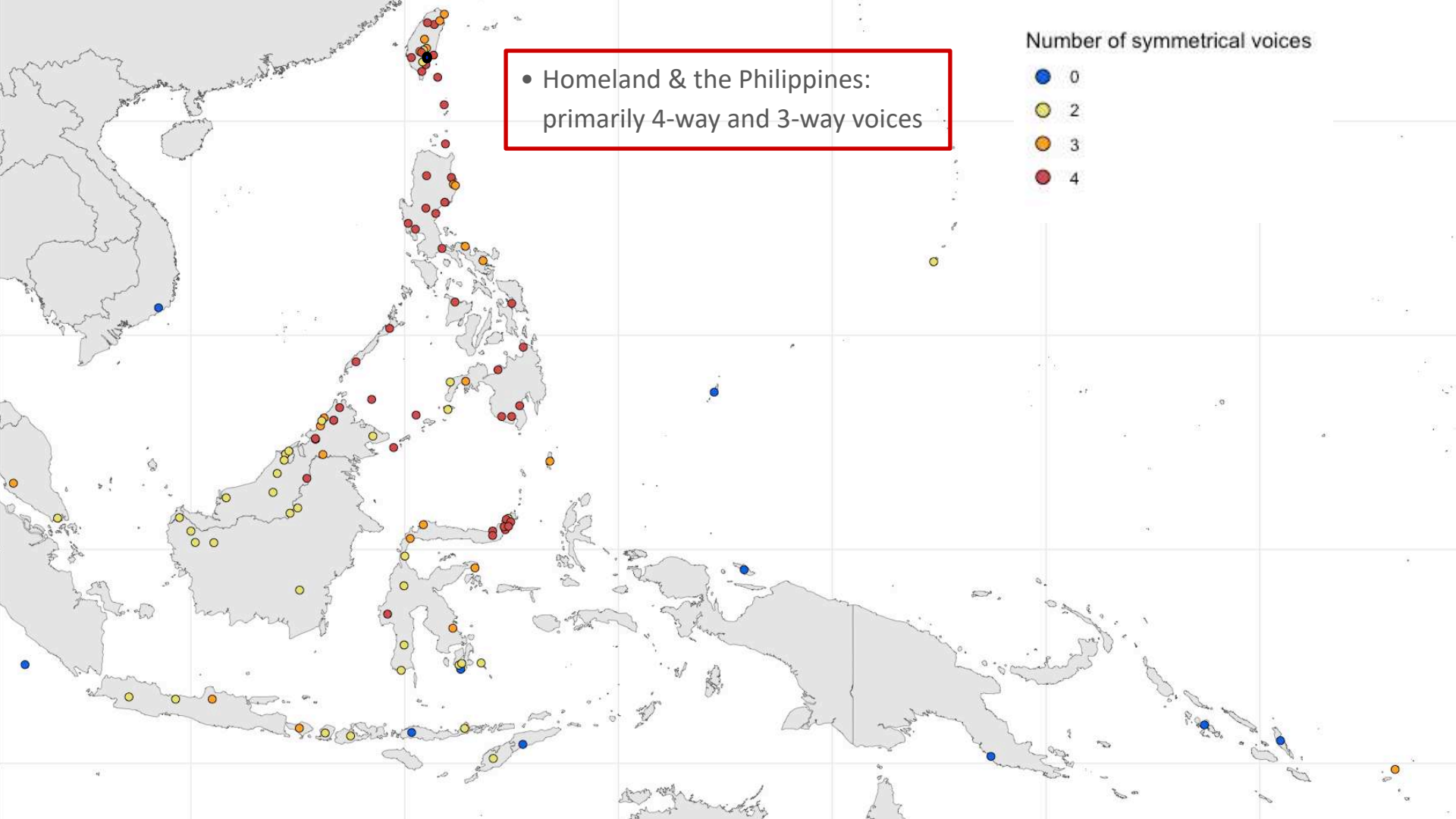
- **Also**: a preliminary look at the distribution of English-style passives in western Austronesia and demonstrate its (lack of) correlation with the presence of any subtypes of Austronesian-type voice


Number of symmetrical voices
0
2
3
4

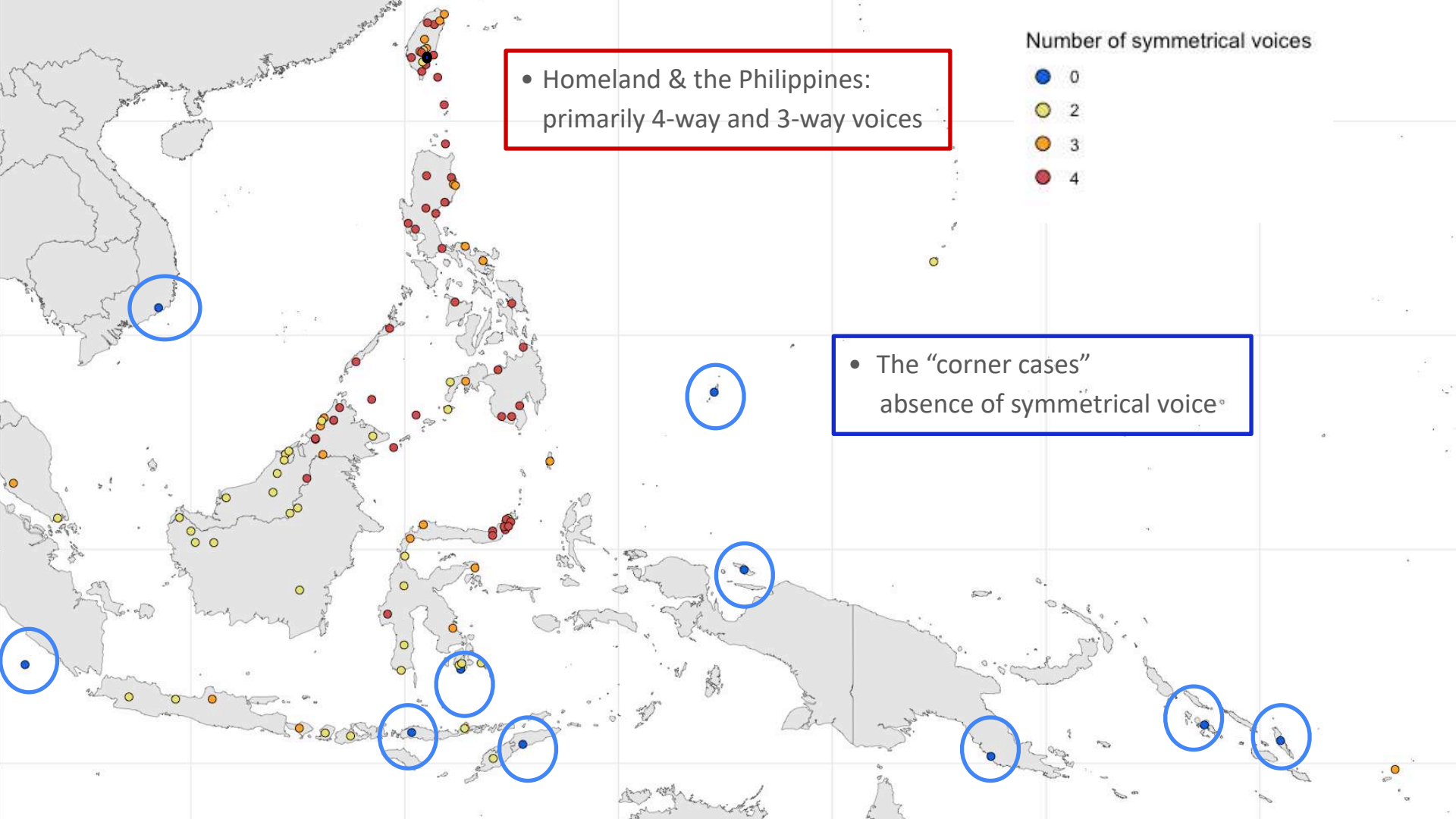

Number of symmetrical voices
0
2
3
4
Saisiyat
Basay
Thao
Kavalan
Atayal
Yami
Ivatan
Ibatan
Dupaningan Agta
Kalinga
Pahanan Agta
Ilocano
Casiguran Agta
Paranan
Botolan Sambal
Northern Alta
Kampangan
Manide
Tagalog
Bikol
Chamorro
Aklanon
Cham
Waray
Cuyonon
Mamanwa
Palawan
Sama
Bajaw (West Coast Bajau)
Cebuano
Subanen Central
Central Sama
Yakan
Palauan
Kimaragang
Kalagan
Pangutaran Sama
Tboli
Blaan
Kiput
Talaud
Kenyah
Southern Sama
Malay/Indonesian
Melanau
Kelabit (Lun Dayeh dialect)
Kendayan
Sian (Sihan)
Punan Tabu'
Totoli
Orang Seletar
Kayan
Land Dayak
Lauje
Ribun
Mualang
Balantak
Tajio
Biak
Paku
Uma
Pitu Ulunna Salu (Bambam)
Indonesian Bajau
Bugis
Wolio
Enggano
Muna
Tukang Besi
Sundanese
Makasarese
Busoa
Old Javanese
Javanese
Balinese
Roviana
Manggarai
Lamaholot
Tetun
Kwaio
Sasak
Sumbawa
Motu
Āiwoo
Uab Meto

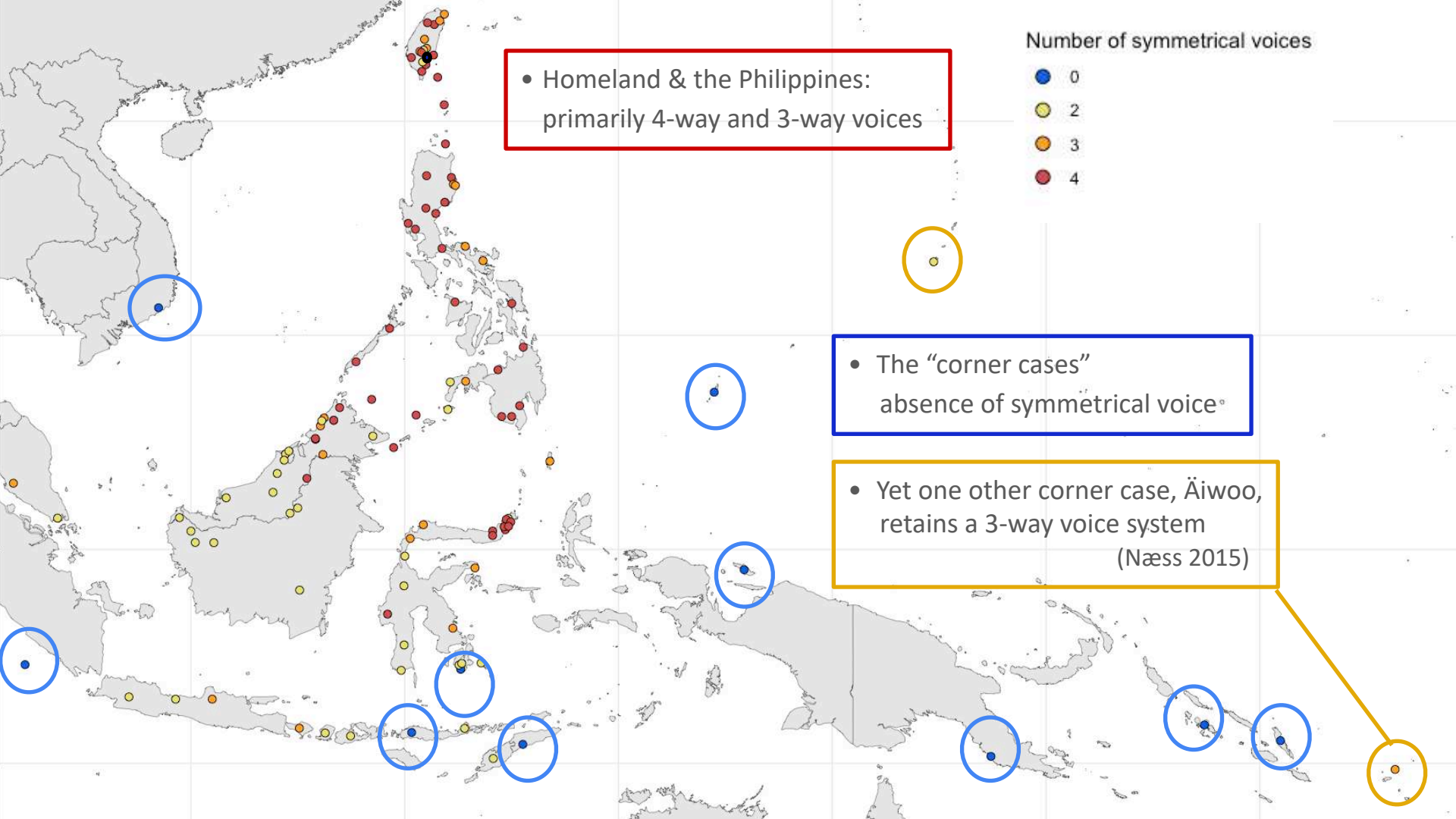

Number of symmetrical voices
0
2
3
4

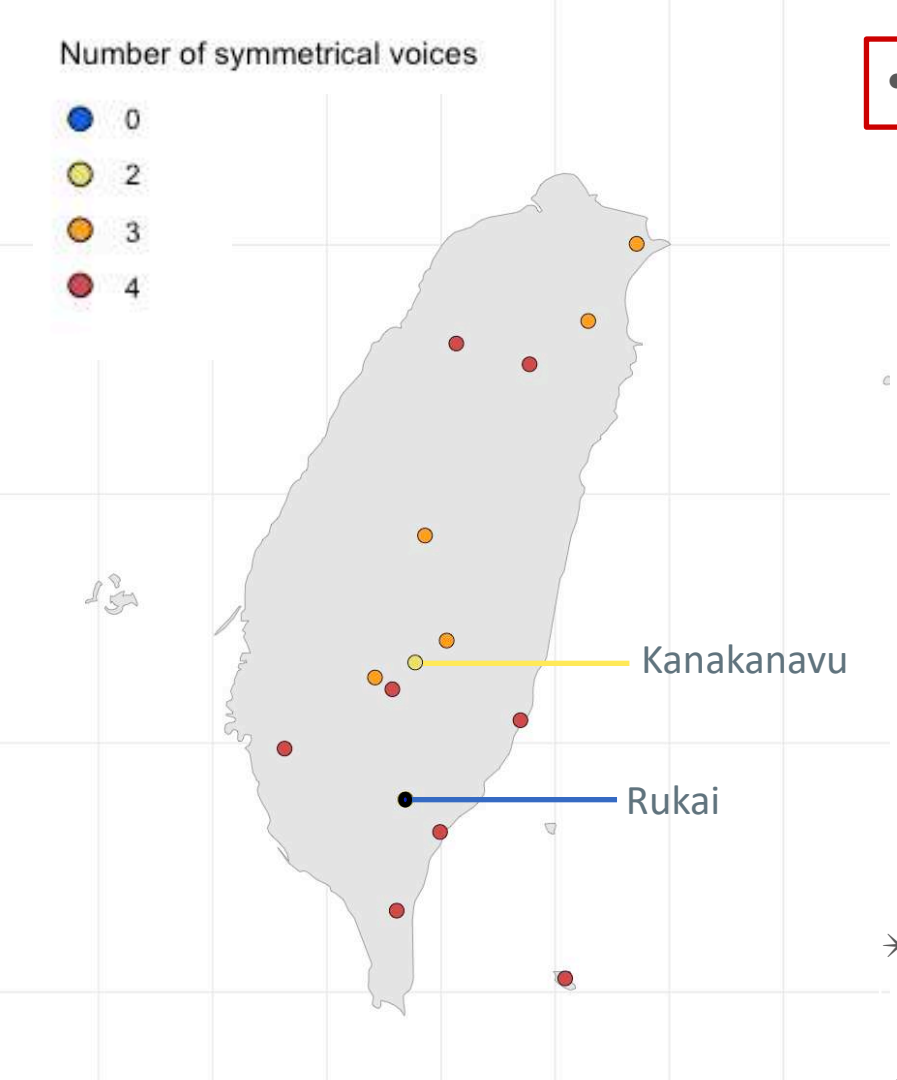

Number of symmetrical voices
0
2
3
4
• Homeland & the Philippines:
primarily 4-way and 3-way voices
• South to northern Borneo:
primarily 2-way voice systems
(the so-called 'Indonesian-type')
• Lesser Sunda and Sulawesi:
1. Overall demise of Austronesian-type voice
2. High level of diversity
• GCP languages of northern Sulawesi remain 4-way
• Gorontalo–Mongondow languages
• Sangiric languages
• Minahasan languages



- Homeland & the Philippines: primarily 4-way and 3-way voices

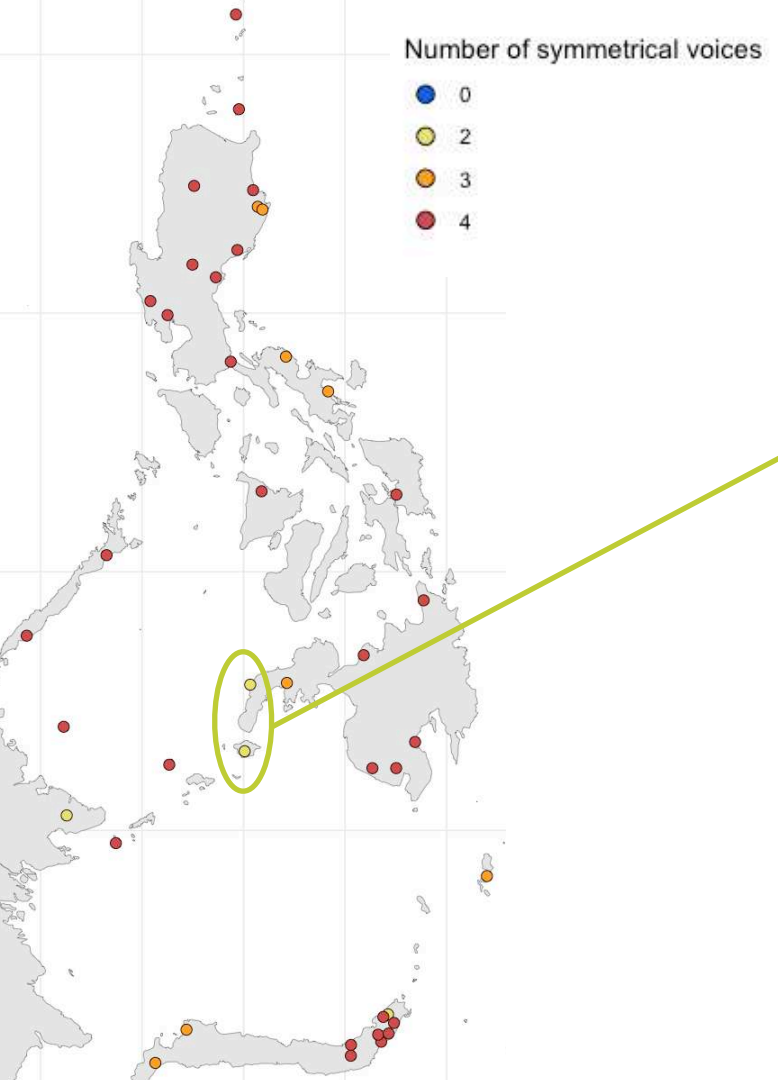

Number of symmetrical voices
0
2
3
4
• Homeland & the Philippines:
primarily 4-way and 3-way voices
• The “corner cases”
absence of symmetrical voice


Number of symmetrical voices
0
2
3
4
• Homeland & the Philippines:
primarily 4-way and 3-way voices
• The “corner cases”
absence of symmetrical voice
• Yet one other corner case, Äiwoo,
retains a 3-way voice system
(Næss 2015)



- Voice systems in the homeland
  - All Formosan languages exhibit symmetrical voice
    - 8 languages with a 4-way voice system
    - 5 languages with a 3-way voice system
    - 1 language with a 2-way voice system
      - Kanakanavu
      - Typologically similar to ‘Indonesian-type voicees’
      - Morphologically richer
    - 1 language without symmetrical voice in root clauses
      - Rukai

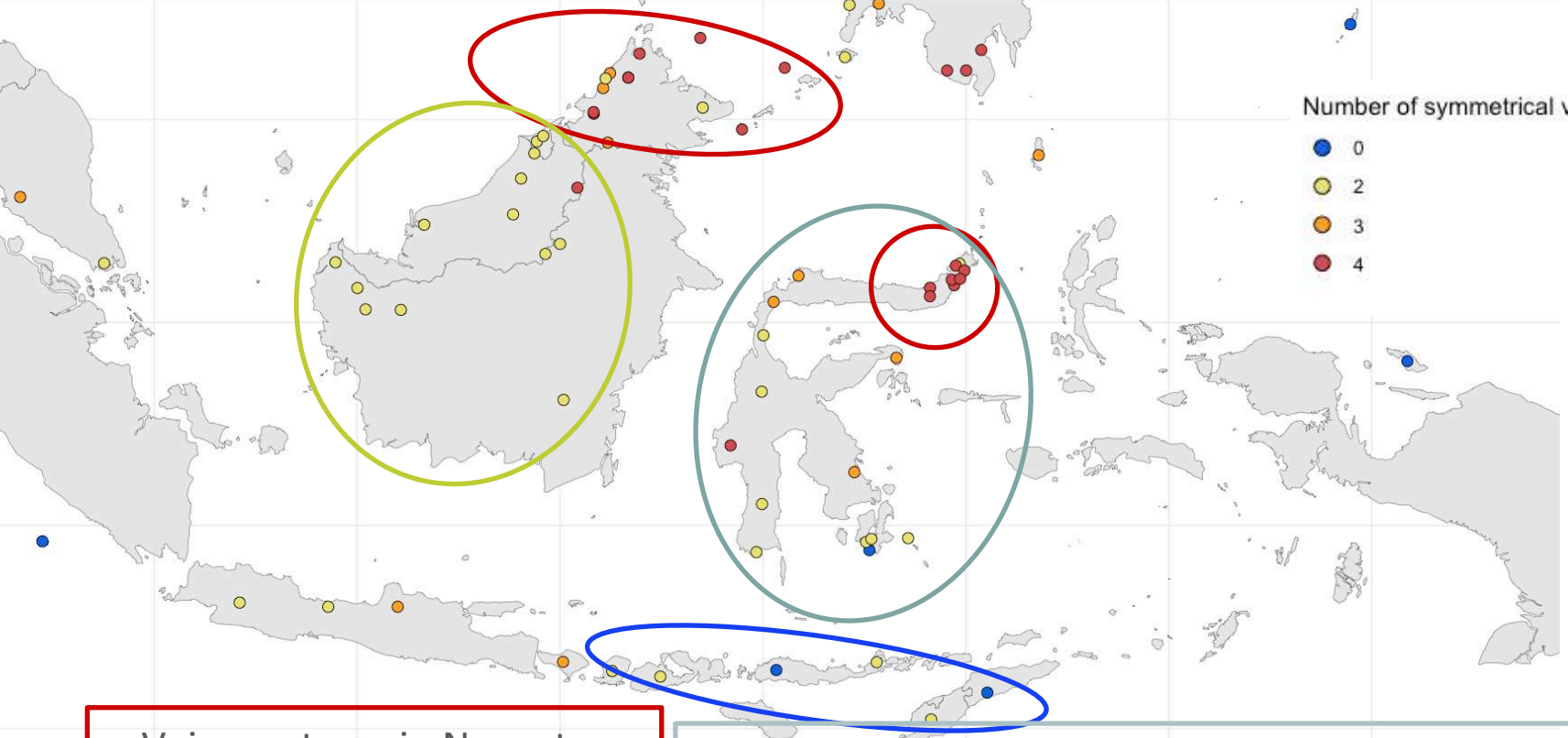
✳ All possible types of symmetrical voices are attested in the AN homeland.



- Voice systems in the Philippines

- Majority of languages have a four-way system
- 3-way voice systems are also found across Luzon, Visayas, Mindanao
- 2-way voice systems found in southern Philippines
  - Yakan and West Coast Bajaw (Sama-Bajaw)
  - Both have a distinct prehistory from other Philippine languages

✳ Overall, relatively low level of diversity



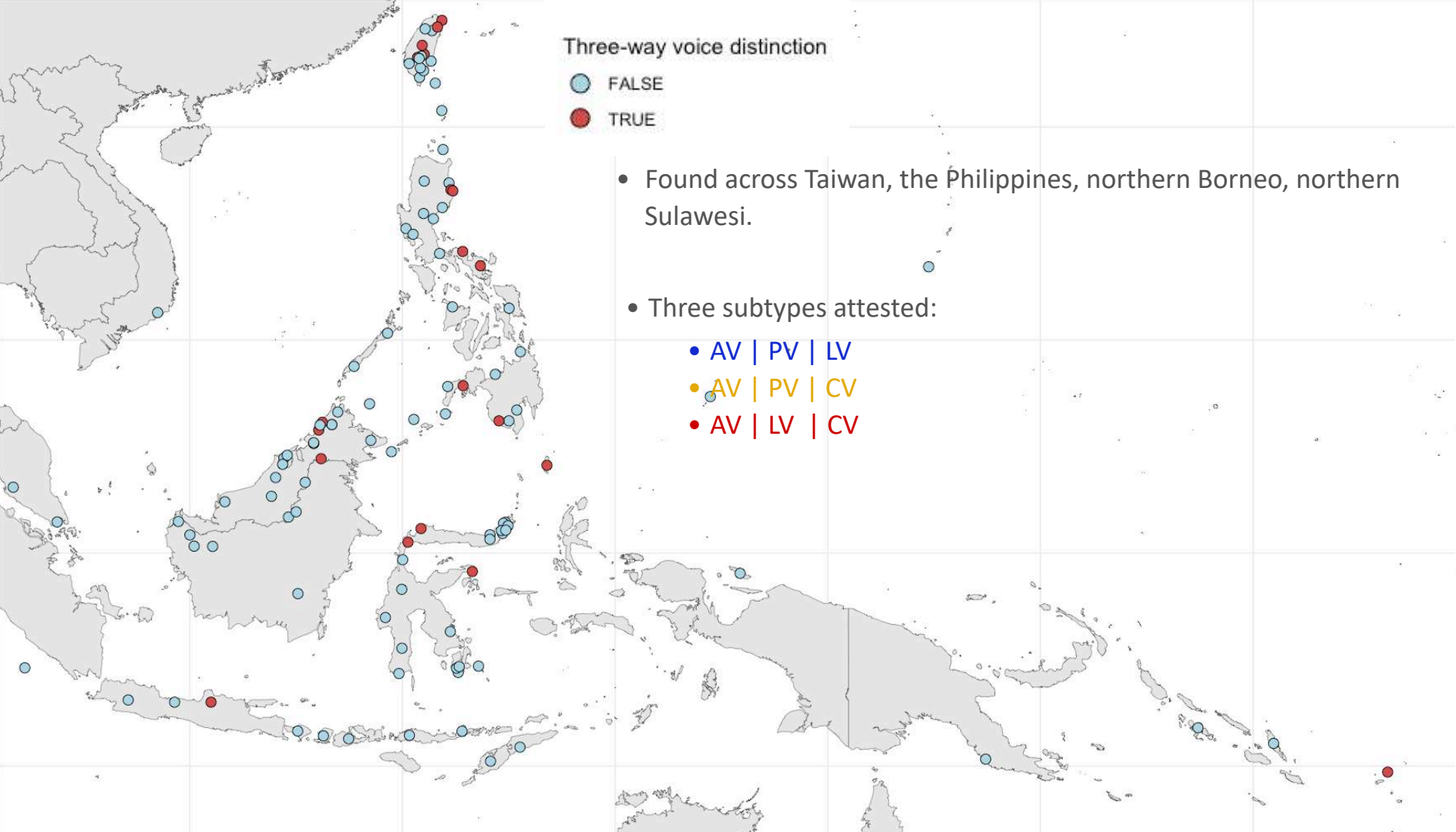
- Voice systems in Nusantara

✳ An overall north-to-south decay in the number of voice distinction

- 4-way voice systems found in northern Borneo and GCP languages of northern Sulawesi (= previous views)
- 2-way voice systems common in Borneo
- High level of diversity in Sulawesi
- Decay of symmetrical voice in Lesser Sunda

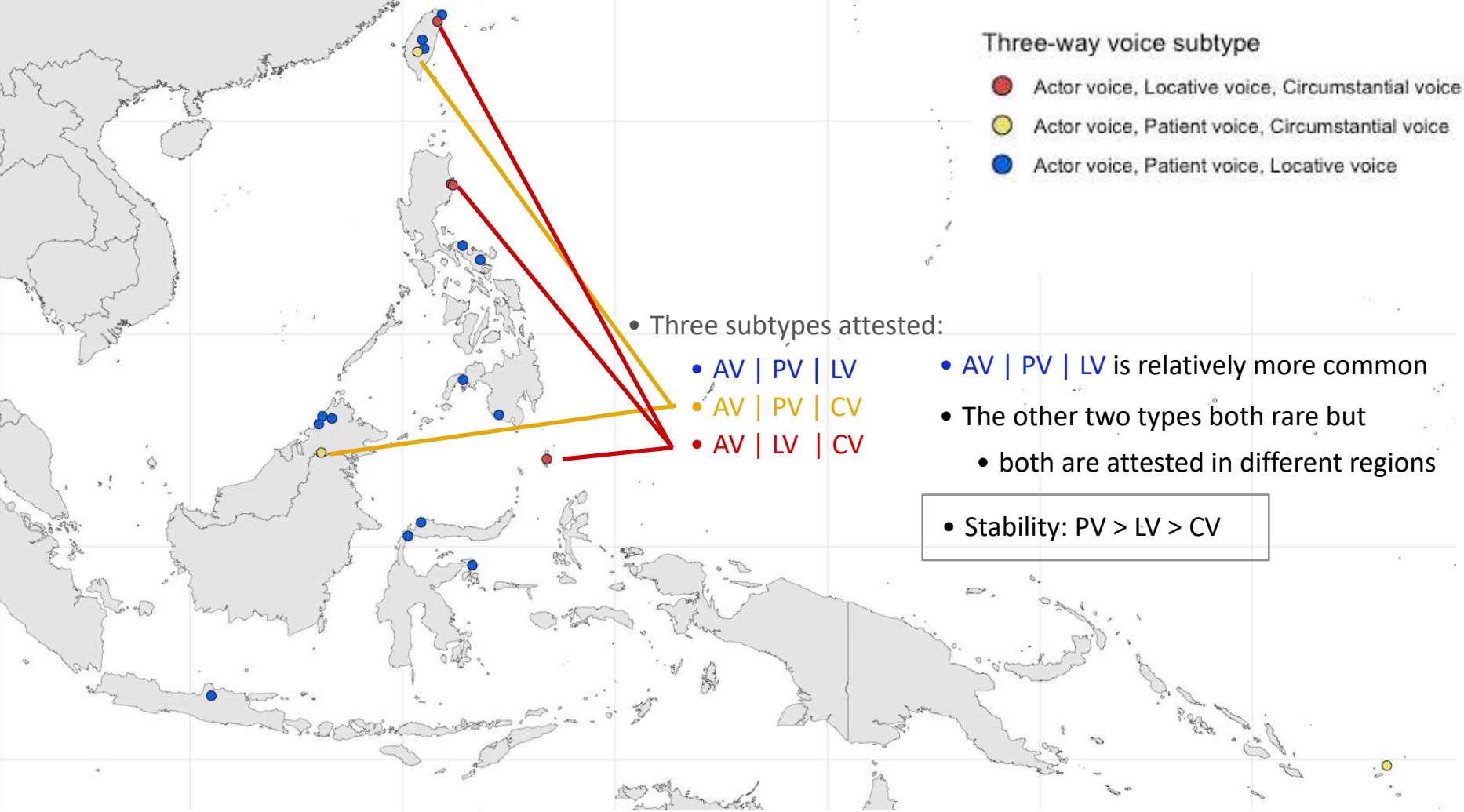
- The variation
  - 4-way voice distinction
    - AV | PV | LV | CV
  - 3-way voice distinction
    - AV | PV | LV
    - AV | PV | CV
    - AV | LV | CV
    - ~~PV | LV | CV~~
  - 2-way voice distinction
    - AV | PV
    - AV | LV AV | CV ~~PV | LV~~ ~~PV | CV~~

- A mini-typology of 3-way voice systems . . .
    - 3-way voice distinction
        - AV | PV | LV
        - AV | PV | CV
        - AV | LV | CV
        - ~~PV | LV | CV~~
            - Criterion: etymology of voice morphology



- Found across Taiwan, the Philippines, northern Borneo, northern Sulawesi.

- Three subtypes attested:
  - AV | PV | LV
  - AV | PV | CV
  - AV | LV | CV



- Three subtypes attested:
  - AV | PV | LV
  - AV | PV | CV
  - AV | LV | CV

- AV | PV | LV is relatively more common
- The other two types both rare but
  - both are attested in different regions

- Stability: PV > LV > CV

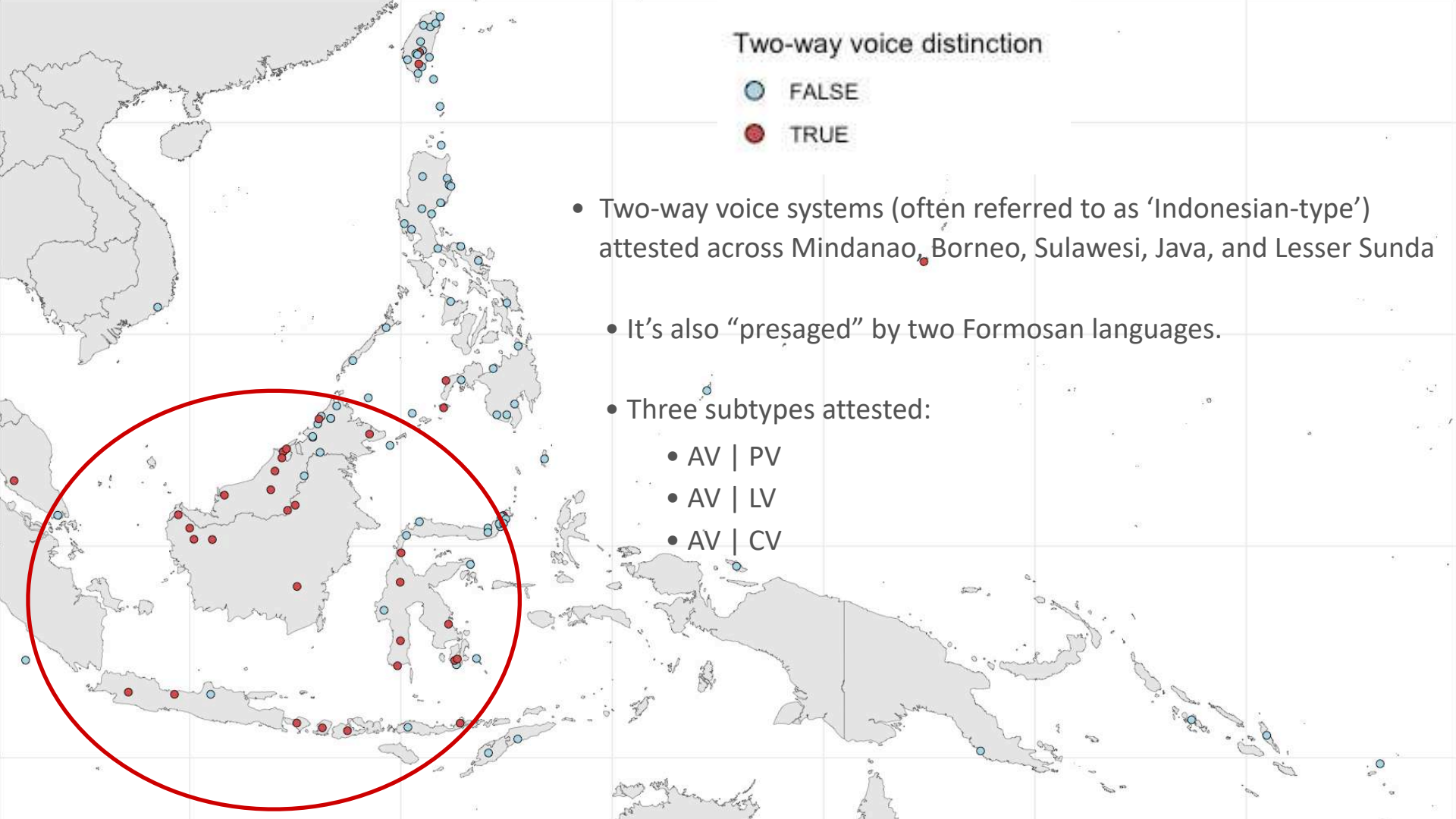
- The variation
  - 4-way voice distinction
    - AV | PV | LV | CV
  - 3-way voice distinction
    - AV | PV | LV
    - AV | PV | CV
    - AV | LV | CV
    - ~~PV | LV | CV~~
  - 2-way voice distinction
    - AV | PV
    - AV | LV AV | CV ~~PV | LV~~ ~~PV | CV~~

- A mini-typology of 2-way voice systems . . .

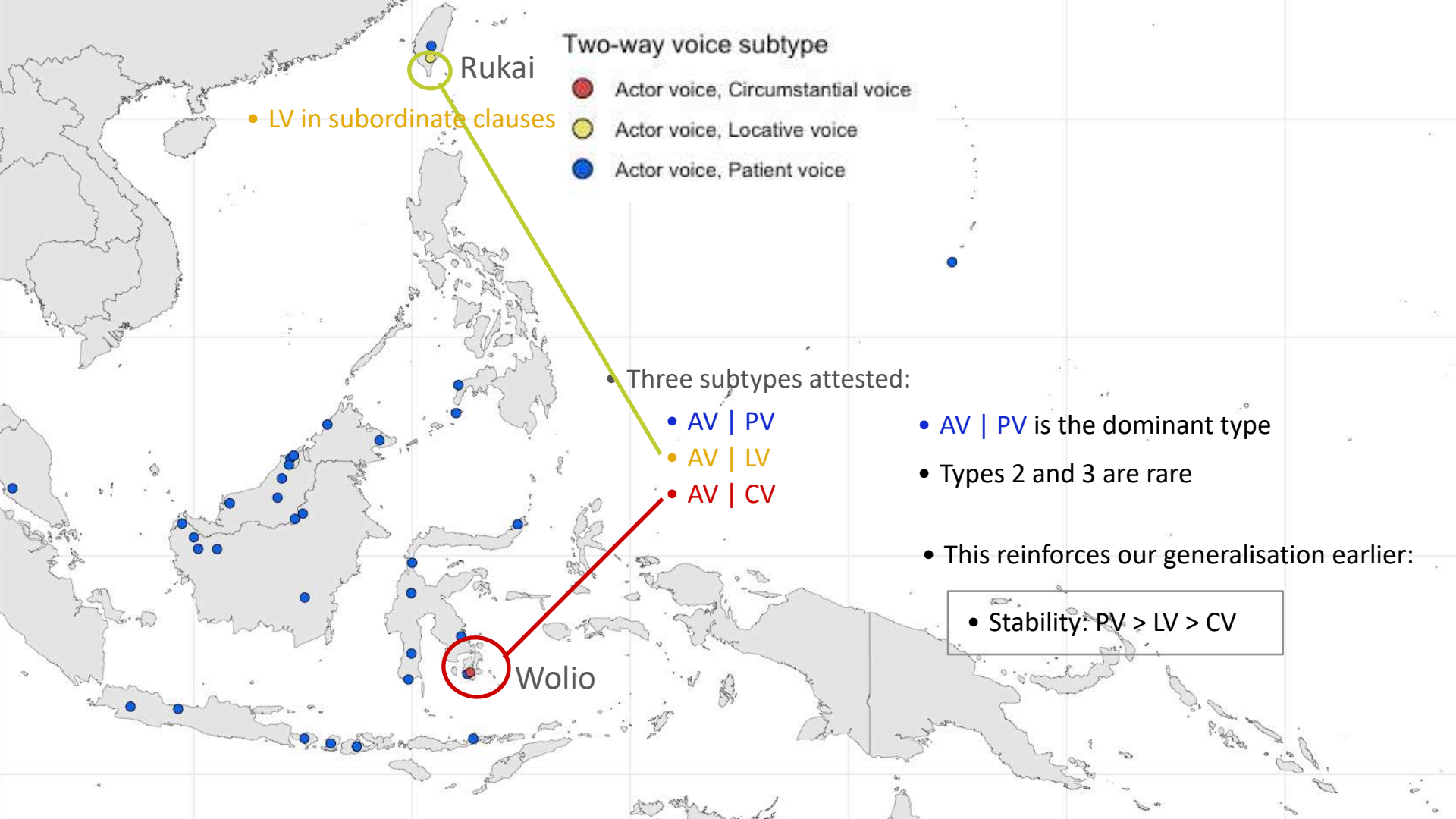
  - 2-way voice distinction

    - AV | PV
    - AV | LV
    - AV | CV
    - ~~PV | LV~~ ~~PV | CV~~

    - Criterion: etymology of voice morphology

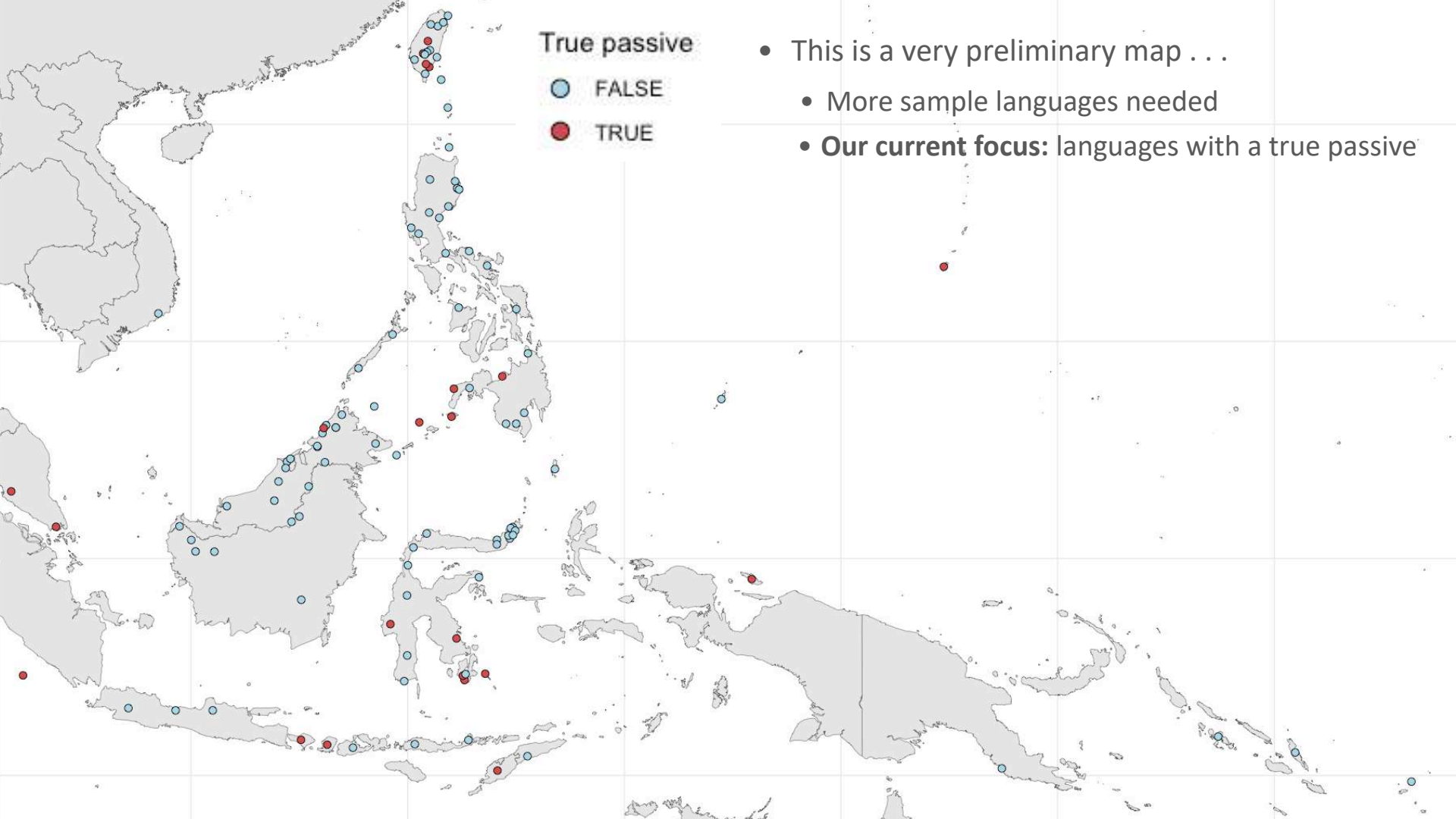


- Two-way voice systems (often referred to as ‘Indonesian-type’) attested across Mindanao, Borneo, Sulawesi, Java, and Lesser Sunda
  - It’s also “presaged” by two Formosan languages.
  - Three subtypes attested:
    - AV | PV
    - AV | LV
    - AV | CV

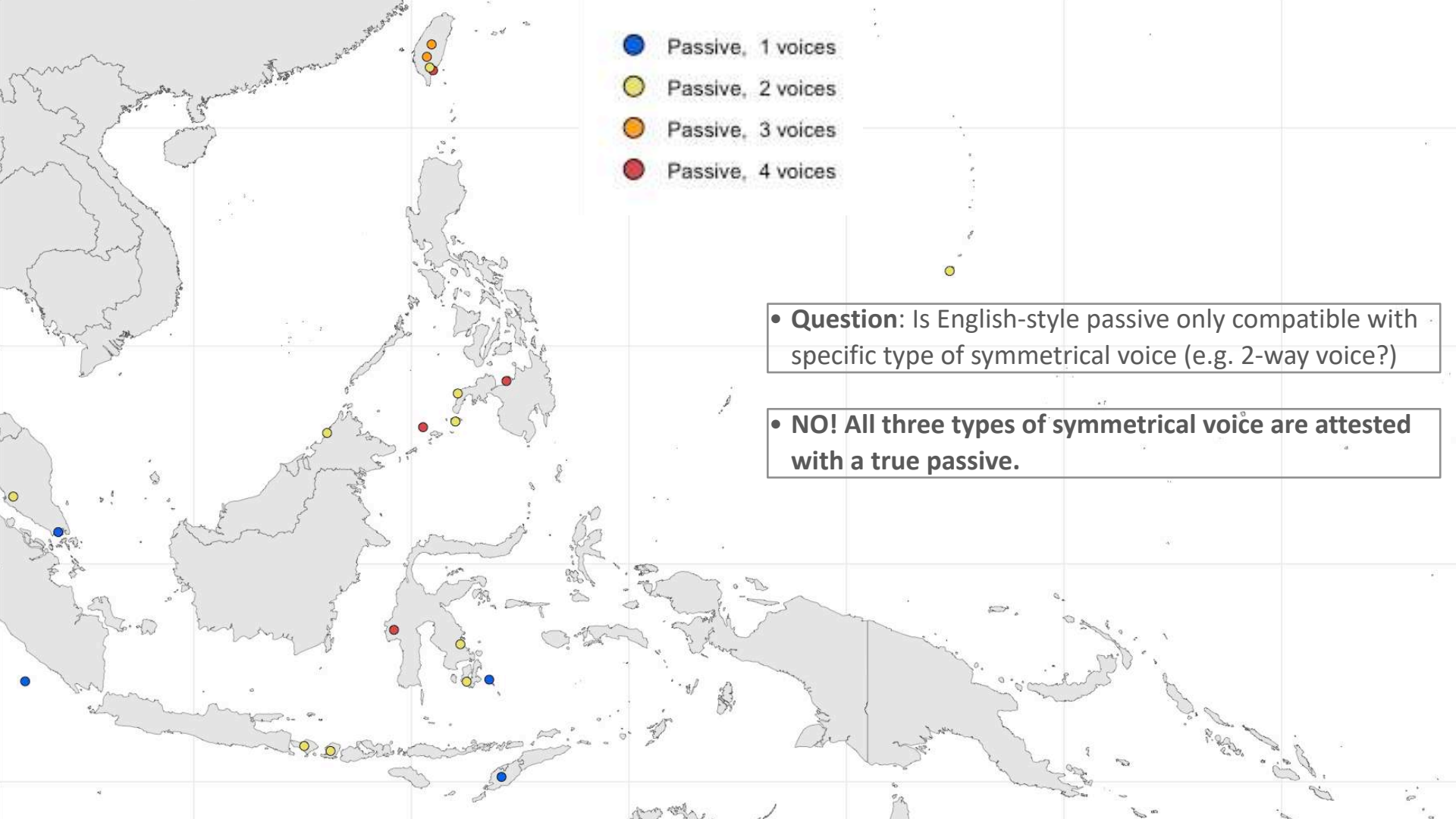

Two-way voice subtype
Actor voice, Circumstantial voice
Actor voice, Locative voice
Actor voice, Patient voice
Rukai
• LV in subordinate clauses
• Three subtypes attested:
• AV | PV
• AV | LV
• AV | CV
Wolio
• AV | PV is the dominant type
• Types 2 and 3 are rare
• This reinforces our generalisation earlier:
• Stability: PV > LV > CV

- A mini-typology of passives in western Austronesia . . .

  - Where are they found?
  - What type(s) of symmetrical voice system are compatible with them?



- This is a very preliminary map . . .
  - More sample languages needed
  - **Our current focus:** languages with a true passive



- **Question**: Is English-style passive only compatible with specific type of symmetrical voice (e.g. 2-way voice?)

- **NO! All three types of symmetrical voice are attested with a true passive.**

The lifespan of AV, PV, LV, and CV

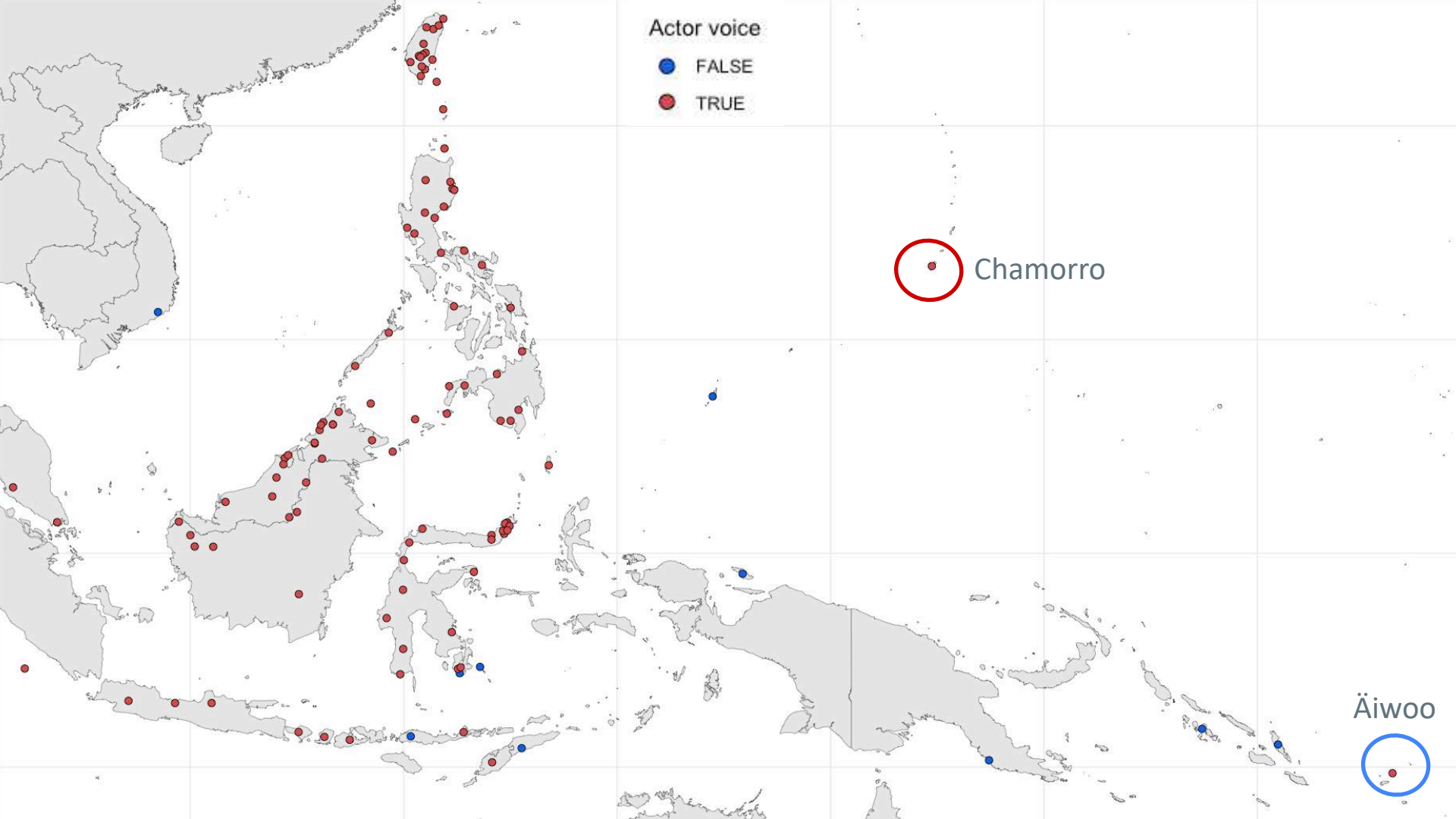
- The Proto-Austronesian voice system

	Actor Voice	*Patient Voice*	*Locative Voice*	*Circumstantial Voice*
Indicative	*<um>	*-en	*-an	*Si-/Sa-
Optative, hortative	*-a	*-aw	*-ay	*-anay
Imperative, negative	-∅	*-u	*-i	*-an

& their variants at lower levels

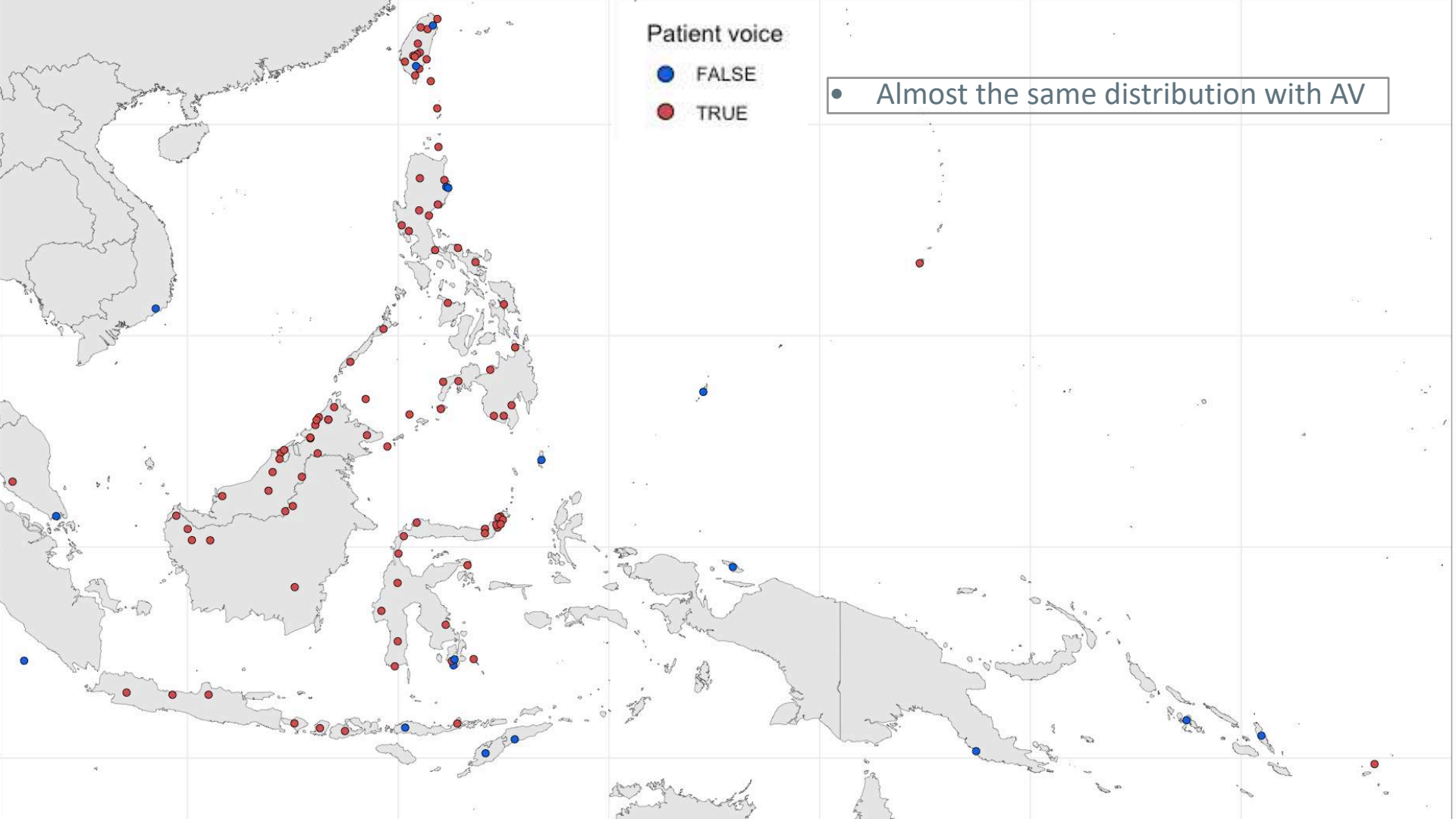
1. The lifespan of Actor voice morphology

- Proto-Austronesian *<um>
- Proto-Malayo-Polynesian *maR- and *maN-


Actor voice
FALSE
TRUE
Chamorro
Äiwoo

2. The lifespan of Patient voice morphology

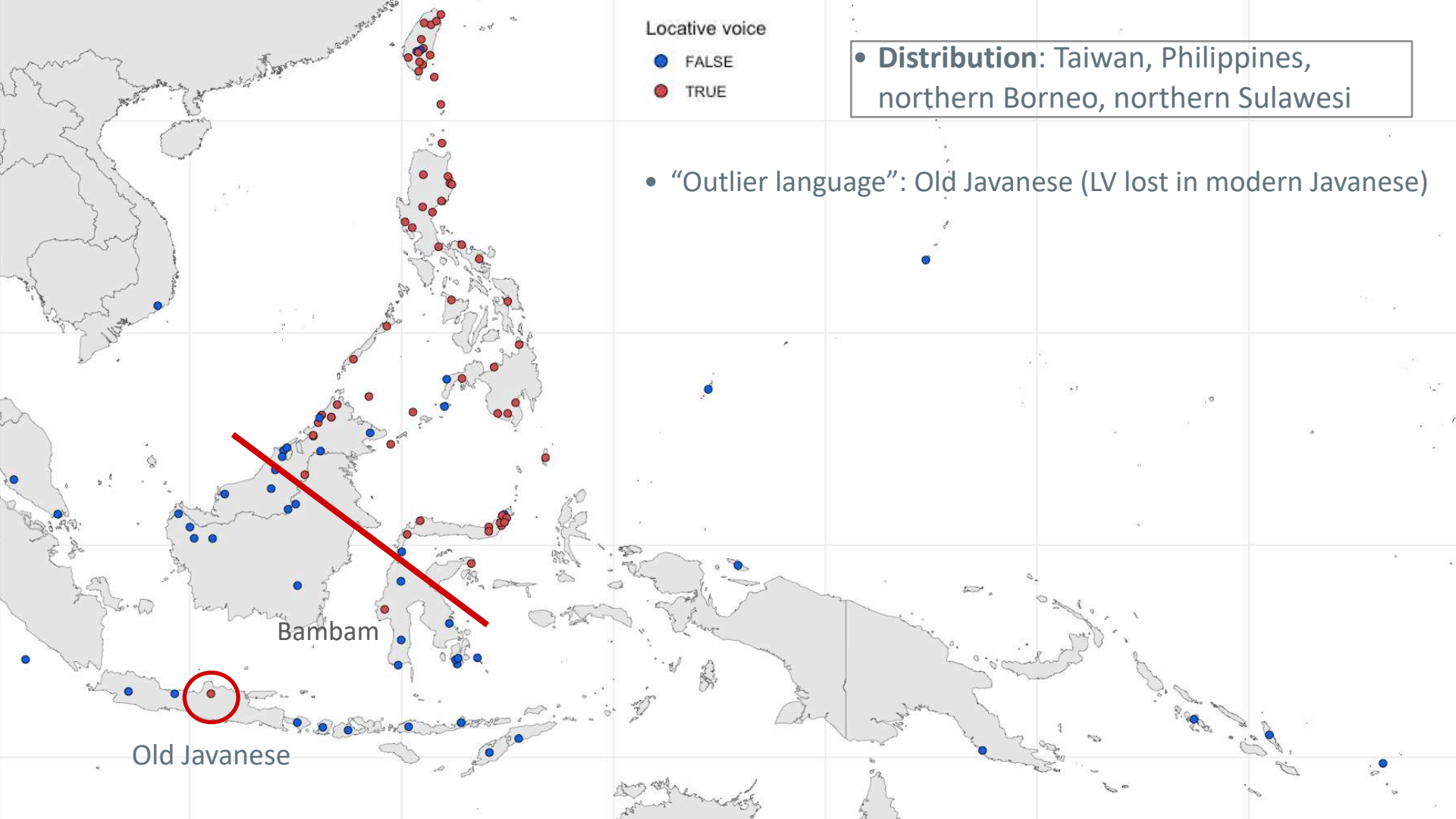
- Proto-Austronesian *-en (and its variants)



- Almost the same distribution with AV

3. The lifespan of Locative voice morphology

- Proto-Austronesian *-an (and variants)

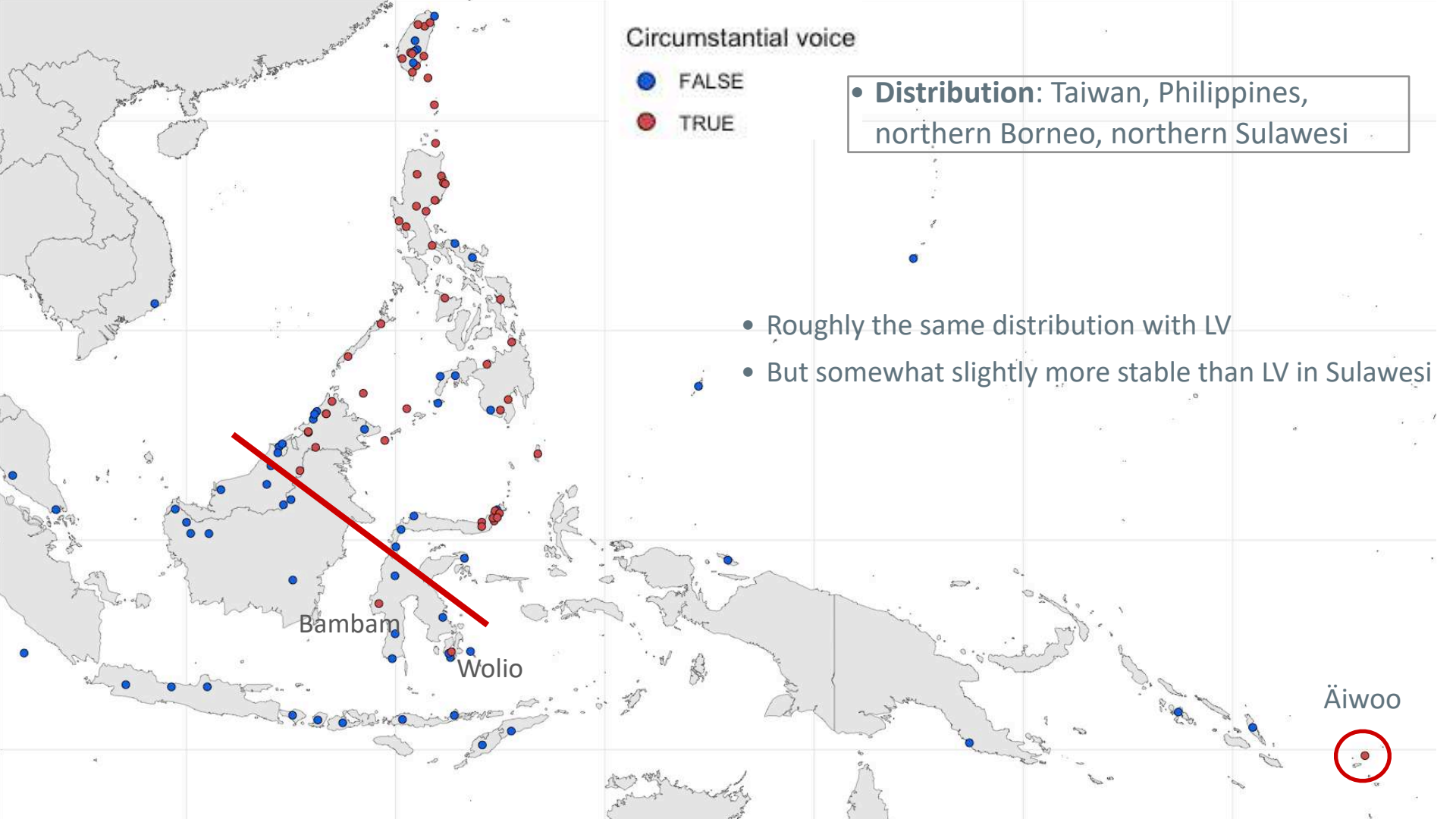


- **Distribution**: Taiwan, Philippines, northern Borneo, northern Sulawesi

- "Outlier language": Old Javanese (LV lost in modern Javanese)

4. The lifespan of Circumstantial voice morphology

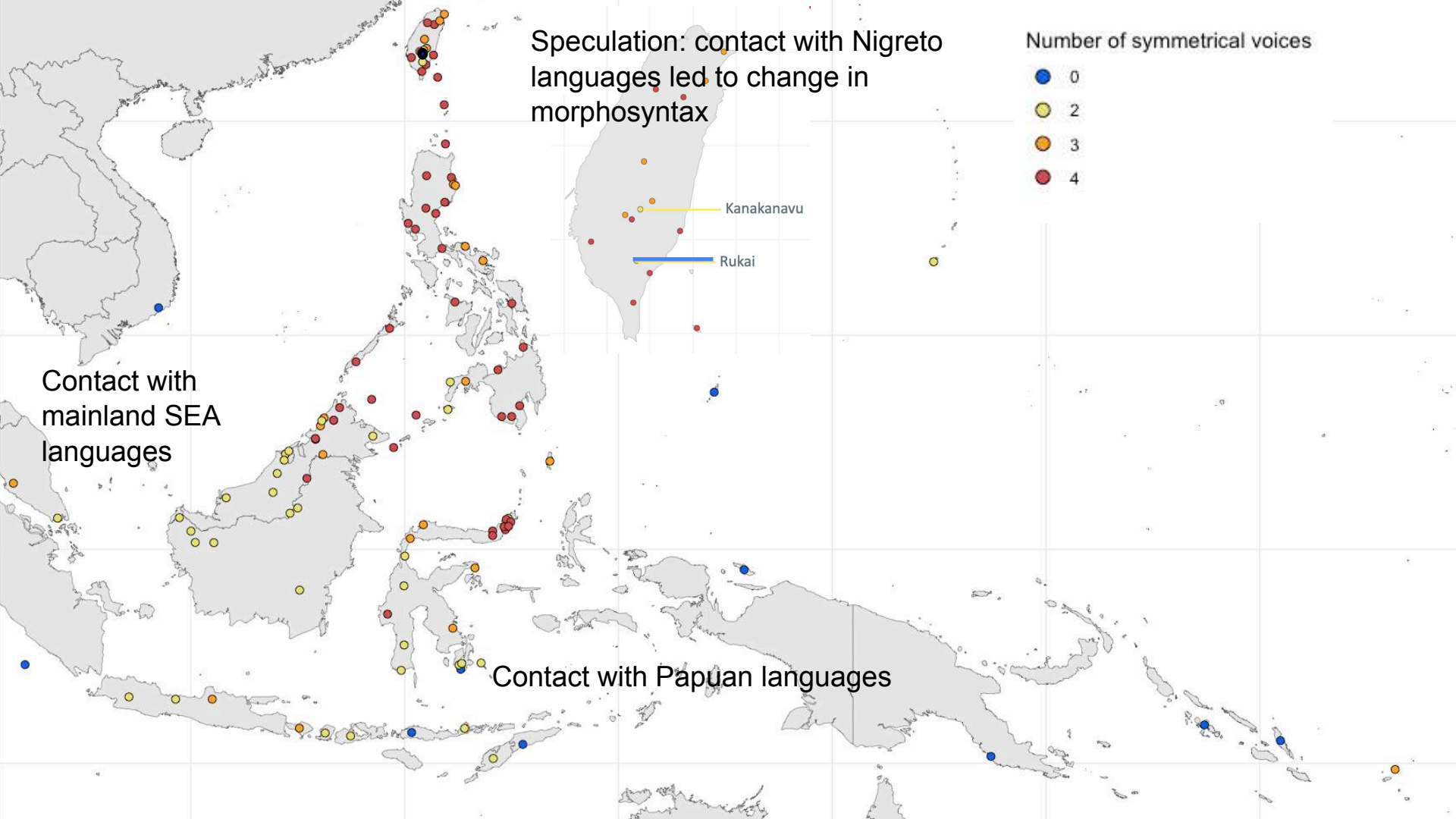
- Proto-Austronesian *Si-/Sa- (and variants)



- **Distribution**: Taiwan, Philippines, northern Borneo, northern Sulawesi

- Roughly the same distribution with LV
- But somewhat slightly more stable than LV in Sulawesi

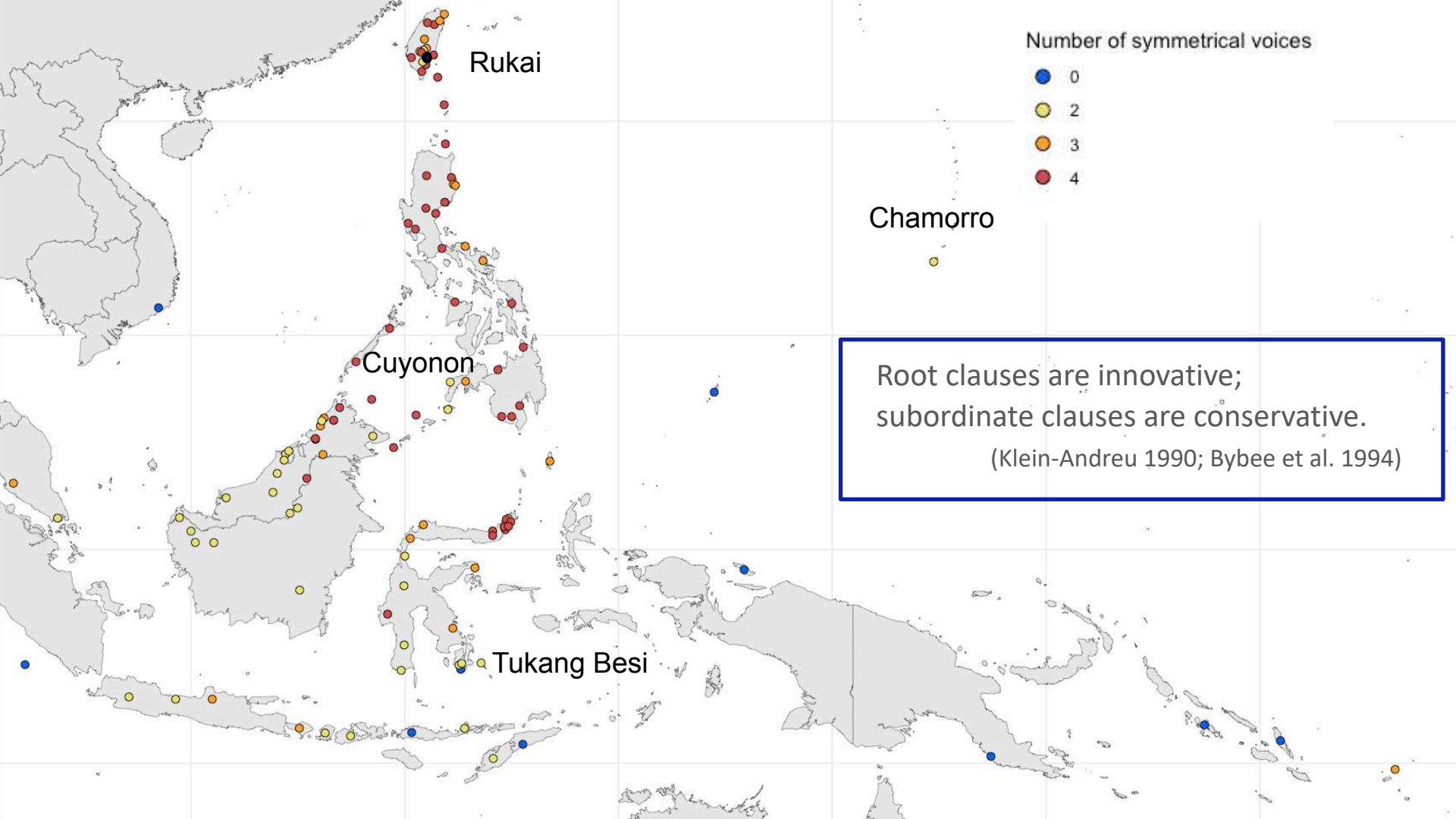
Contact effects vs. decay of symmetrical voice


Speculation: contact with Nigreto languages led to change in morphosyntax
Number of symmetrical voices
0
2
3
4
Kanakanavu
Rukai
Contact with mainland SEA languages
Contact with Papuan languages

Symmetrical voice preserved in subordination . . .

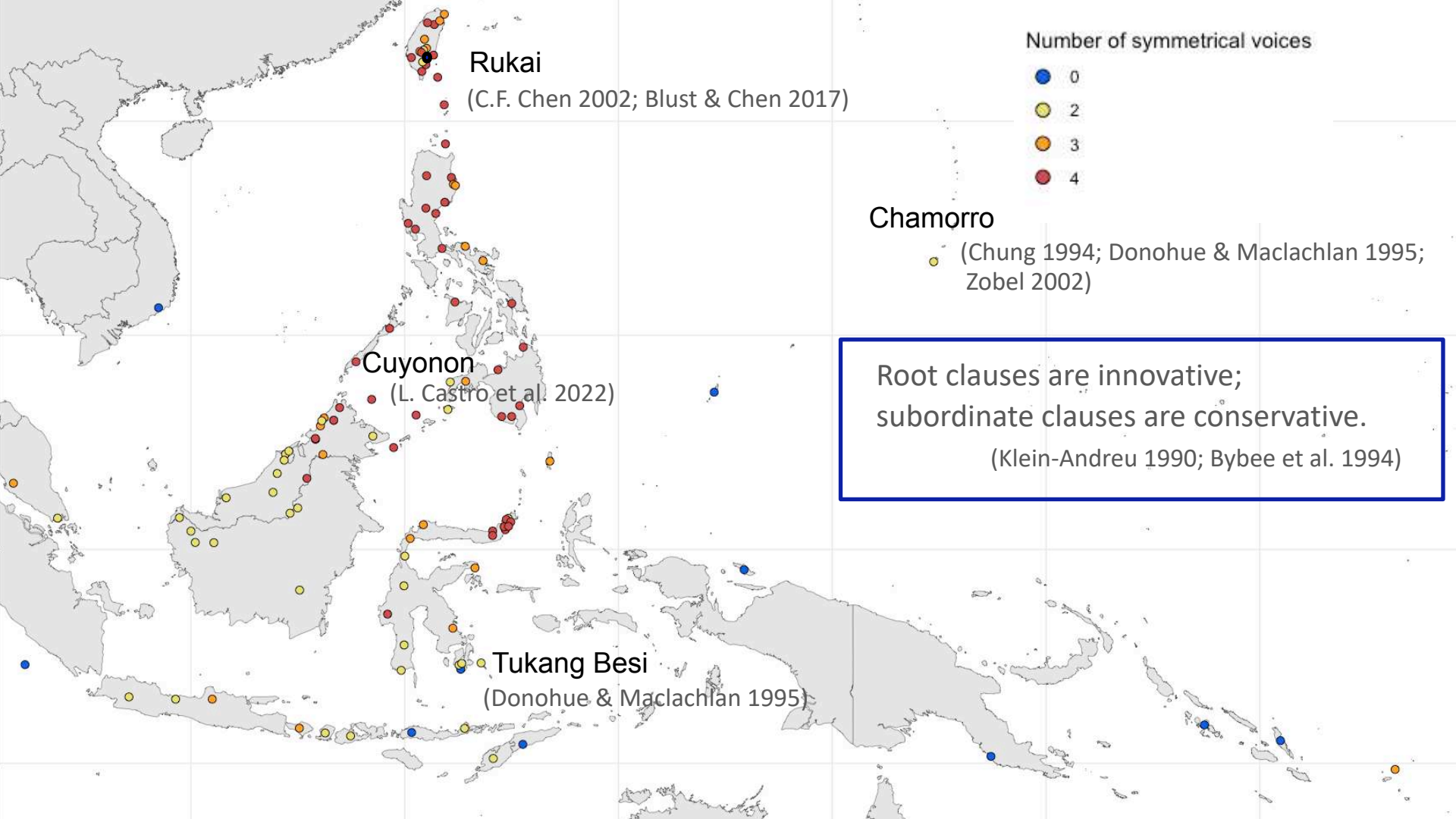
Root clauses are innovative;
subordinate clauses are conservative.

(Klein-Andreu 1990; Bybee et al. 1994)



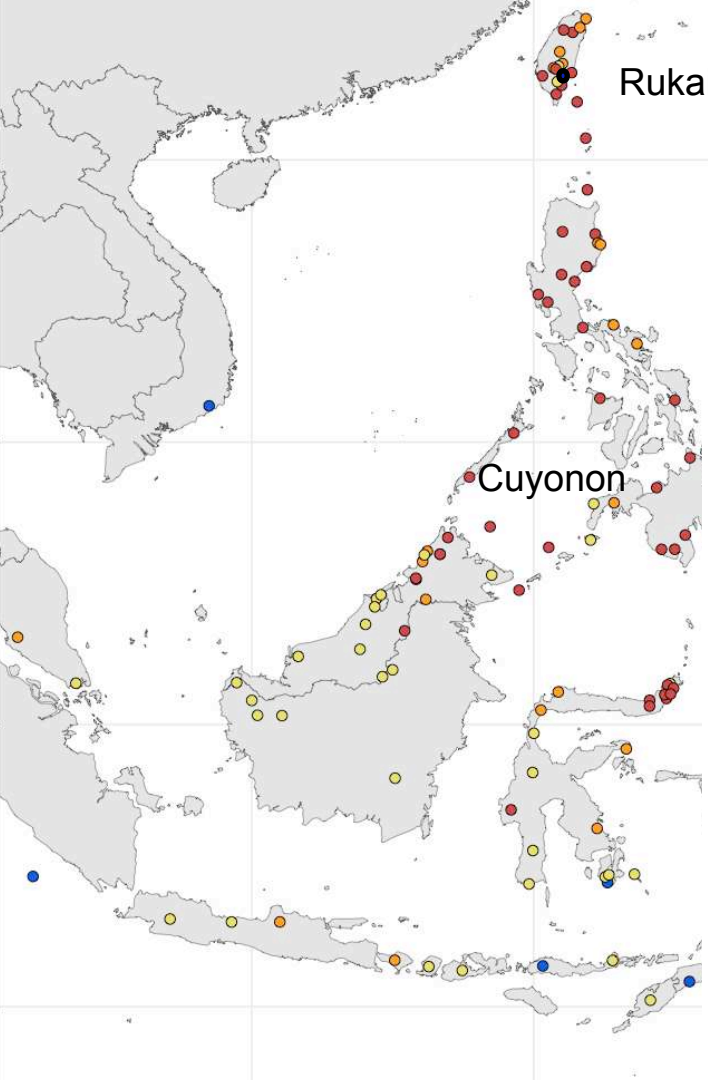
Root clauses are innovative;
subordinate clauses are conservative.

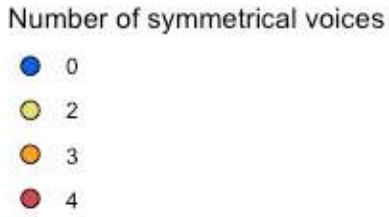
(Klein-Andreu 1990; Bybee et al. 1994)



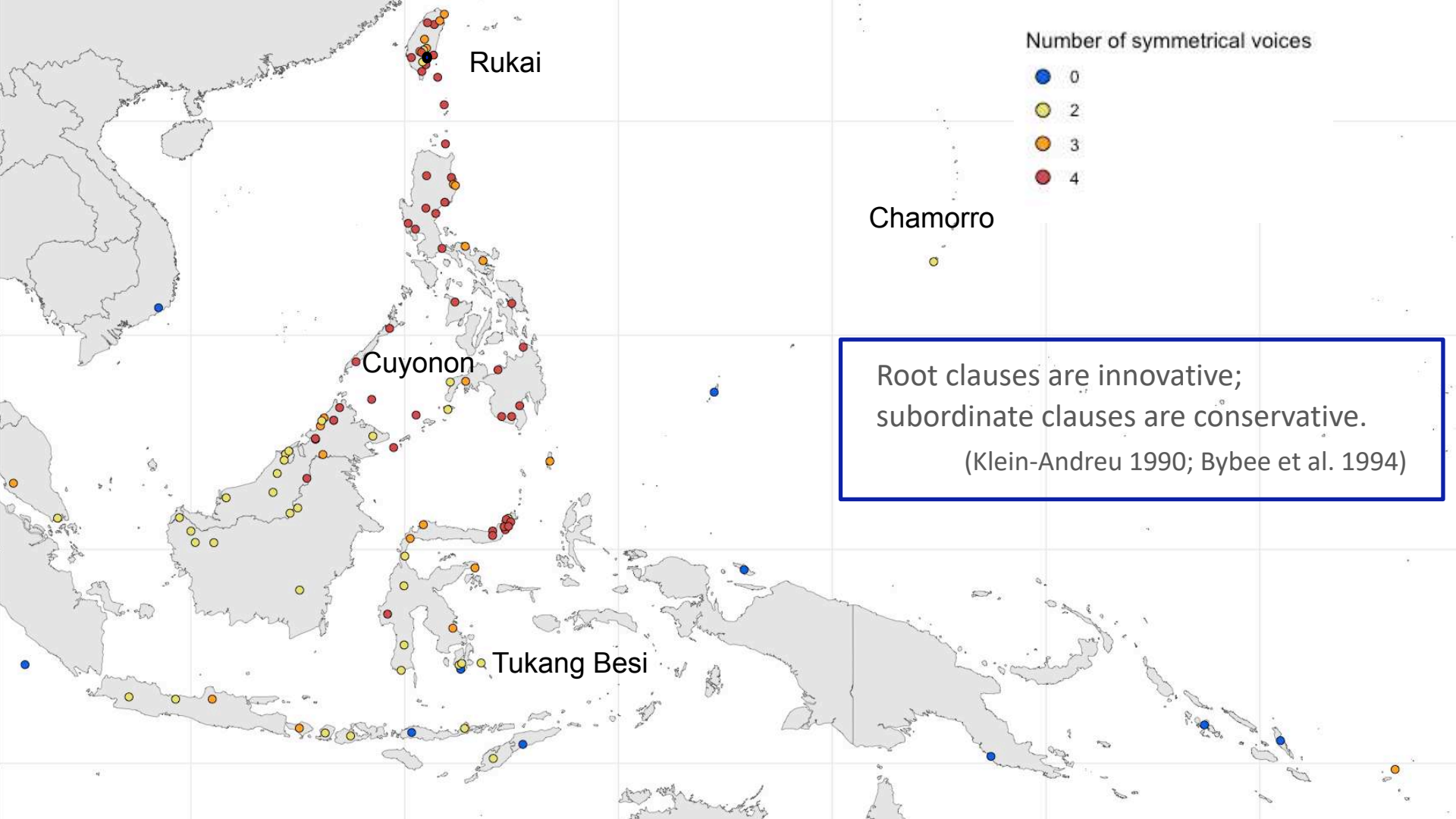
Root clauses are innovative;
subordinate clauses are conservative.

(Klein-Andreu 1990; Bybee et al. 1994)





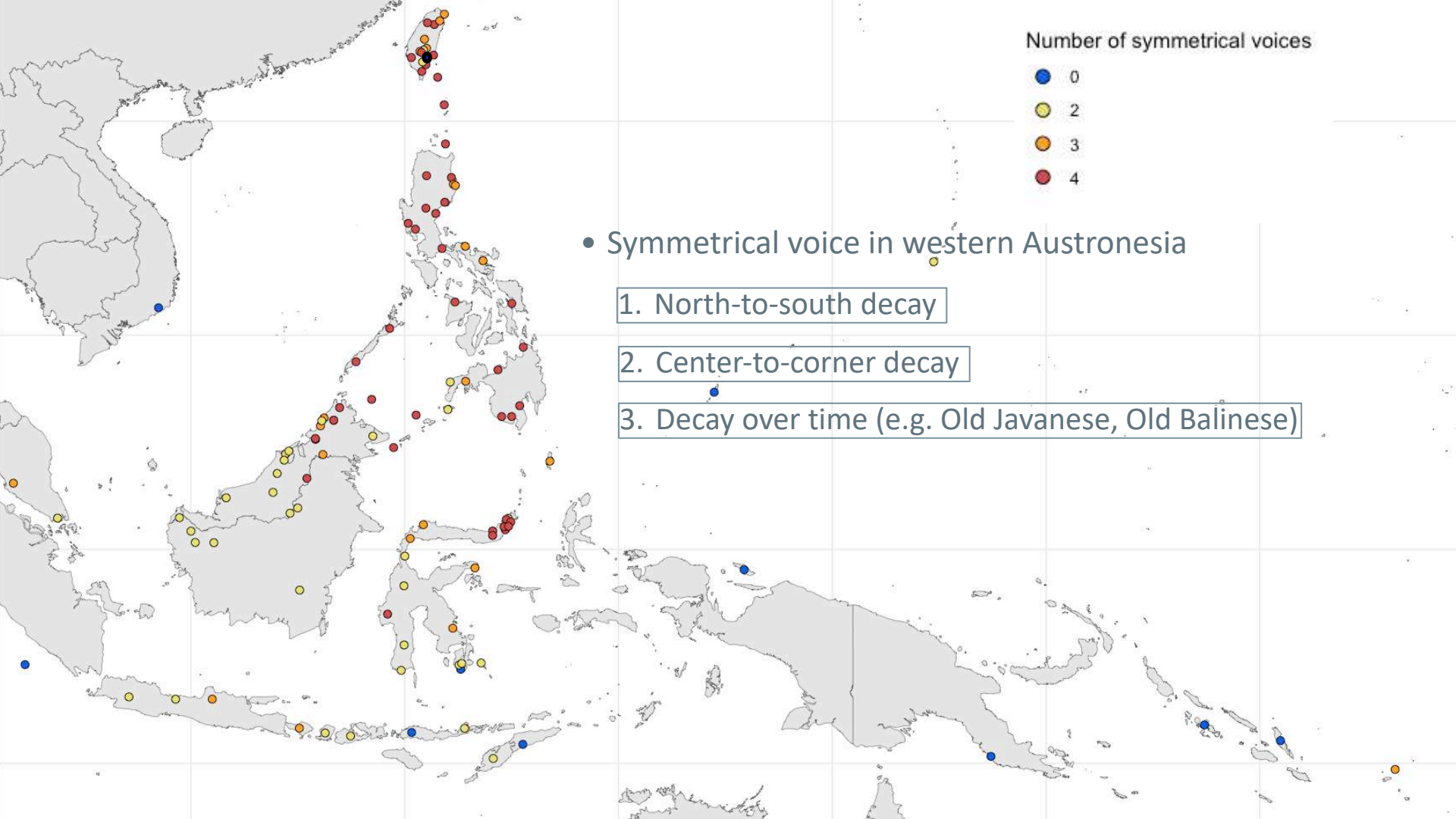
ASPECT SYSTEM	VOICE SYSTEM (L. Castro et al. 2022)				
	Agentive Voice	*Patientive Voice*	*Locative Voice*	*Benefactive Voice*	*Instrumental Voice*
Perfective	**ag**-STEM	**ing**-STEM	**ing**-STEM-**an**	**ing**-STEM-an	**ing-paN**-STEM
Imperfective	**aga**-STEM	**ing**-CV_1~$STEM_1$	**ing**-CV_1~$STEM_1$-**an**	**ing**-CV_1~$STEM_1$-**an**	**ing**-CV_1~**paN**$_1$-STEM
Contemplative	**maga**-STEM	CV_1~$STEM_1$-**en**	CV_1~$STEM_1$-**an**	CV_1~$STEM_1$-**an**	CV_1~**paN**$_1$-STEM
Infinitive	**ag**-STEM	STEM-**en**	STEM-**an**	STEM-**an**	**i-paN**-STEM
Recent Perfective	**ka**$_1$~CV_1-STEM	Ø	Ø	Ø	Ø
Immediate Prospective	**pa**-STEM	Ø	Ø	Ø	Ø



Root clauses are innovative;
subordinate clauses are conservative.

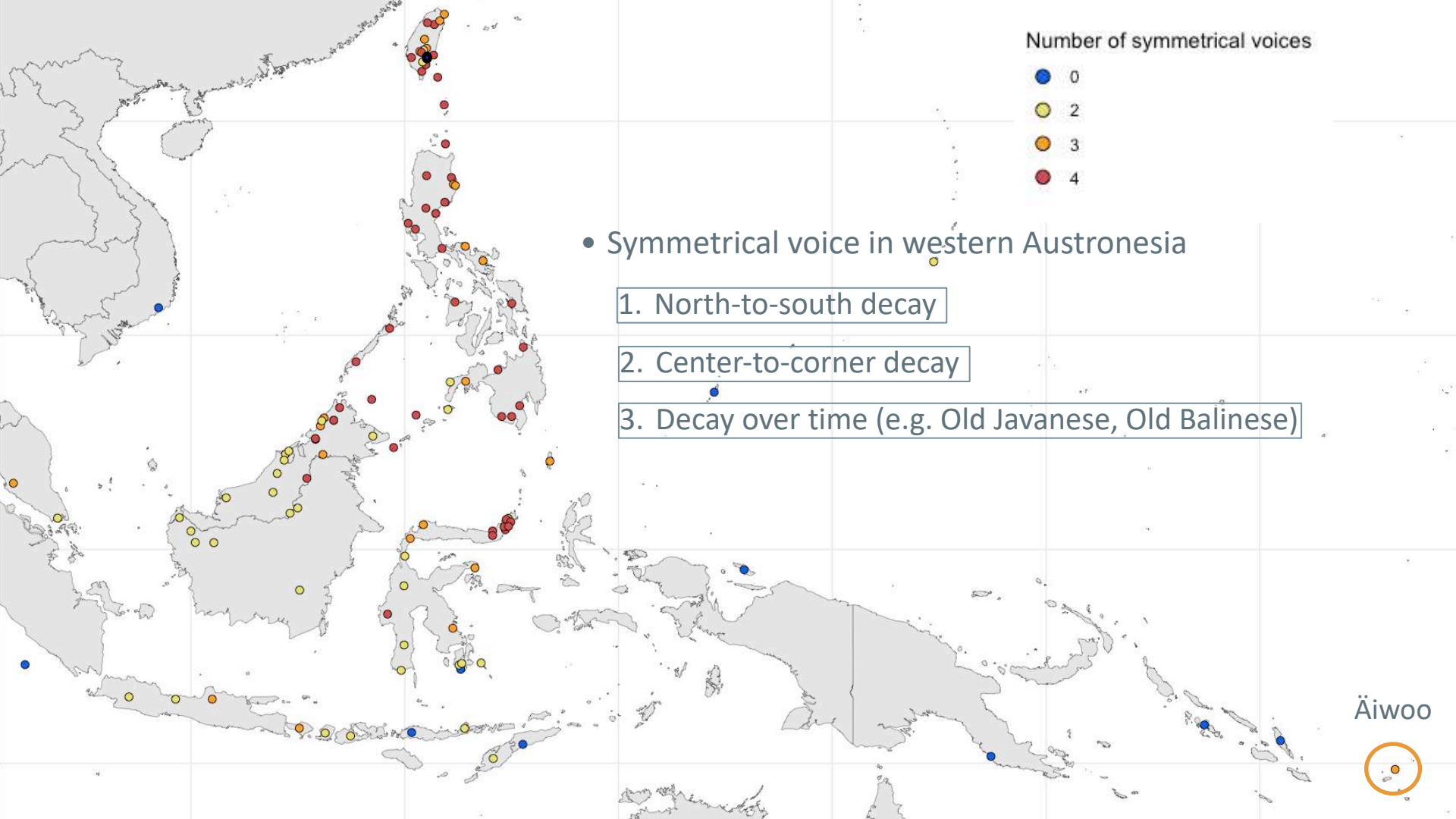
(Klein-Andreu 1990; Bybee et al. 1994)

Tentative conclusion



- Symmetrical voice in western Austronesia

1. North-to-south decay
2. Center-to-corner decay
3. Decay over time (e.g. Old Javanese, Old Balinese)



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2015 *Oceanic Linguistics* 54(1):270–307

Voice at the Crossroads: Symmetrical Clause Alternations in Äiwoo, Reef Islands, Solomon Islands

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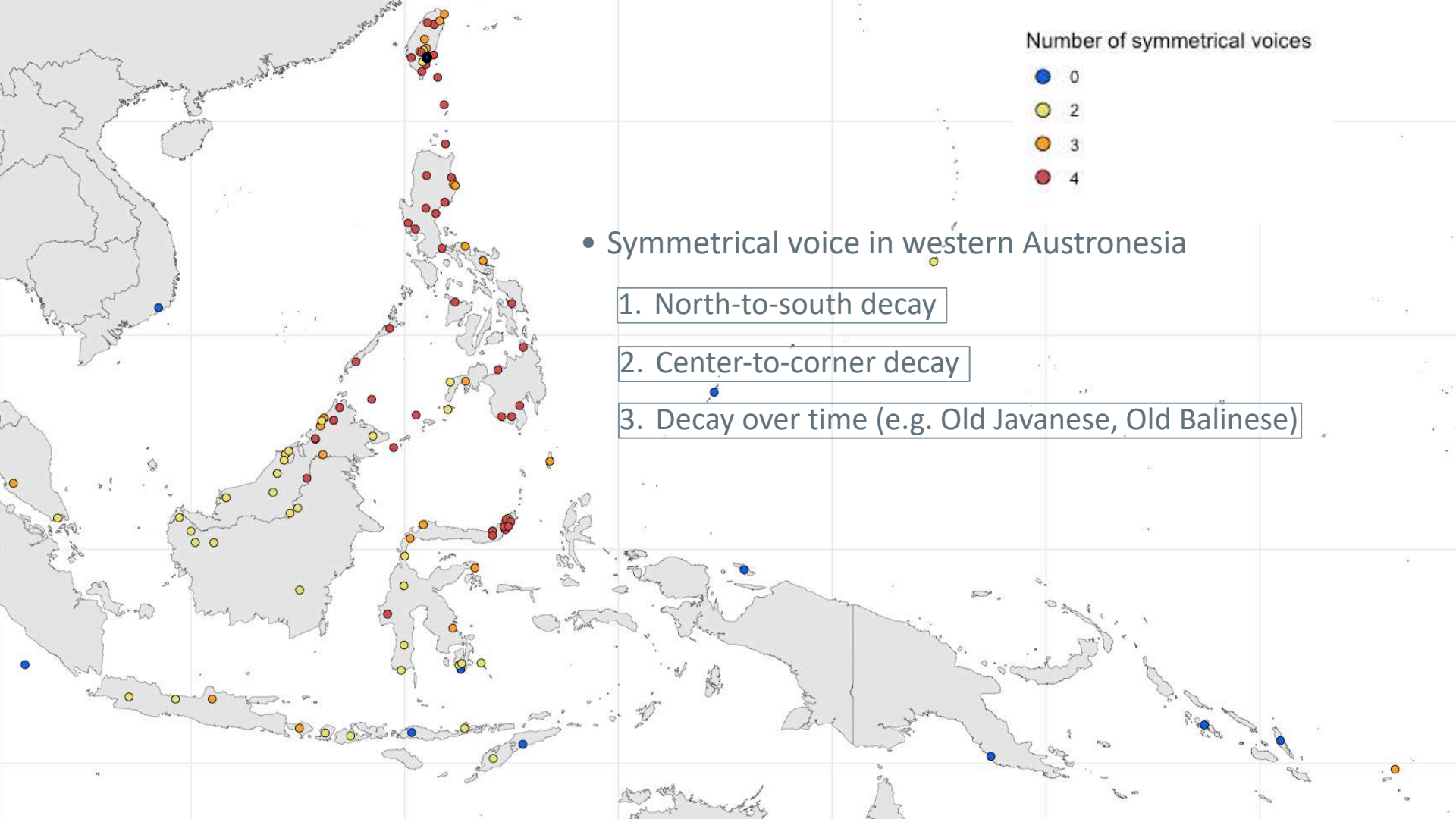
This paper argues that the Äiwoo language of the Reef Islands shows what could be characterized as a symmetrical voice system with three voices: an actor voice, an undergoer voice, and a circumstantial voice. Although it differs from better-described symmetrical voice systems in lacking a syntactic pivot, the overall pattern of morphosyntactic alternations, as well as the discourse-pragmatic function, is essentially that of a symmetrical voice system. Moreover, the Äiwoo system combines the syntactic characteristics of a "Philippine-type" symmetrical voice system with the morphological characteristics of an "Indonesian-type" system in a way that appears to be unusual

Äiwoo



- Symmetrical voice in western Austronesia

1. North-to-south decay
2. Center-to-corner decay
3. Decay over time (e.g. Old Javanese, Old Balinese)

- Selected references

Adelaar, K. A. "The Classification of the Tamanic Languages". In: *Language contact and change in the Austronesian world* (1994), pp. 1–42.

Adriani, N. *De Bare'e Sprekende Toradjas van Midden-Celebes (de Oost-Toradjas)*. 1-3. Landsdrukkerij, 1914.

Aïkhenvald, A. Y. *Language Contact in Amazonia*. Oxford University Press on Demand, 2002. ISBN: 0-19-925785-X.

Aldridge, E. C. "Ergativity and Word Order in Austronesian Languages." PhD Thesis. Ithaca, New York: Cornell University, 2004.

Arka, I. W. "Voice Systems in the Austronesian Languages of Nusantara: Typology, Symmetricality and Undergoer Orientation". In: (2002).

Arka, I. W. and J. Kosmas. "Passive without Passive Morphology? Evidence from Manggarai." In: *The Many Faces of Austronesian Voice Systems: Some New Empirical Studies*. Ed. by I. W. Arka, M. Ross, and A. N. University. Pacific Linguistics 571. Canberra: Pacific Linguistics, Research School of Pacific and Asian Studies, ANU, 2005, pp. 87–118. ISBN: 978-0-85883-556-6.

Arka, I. "Balinese Morphosyntax: A Lexical-Functional Approach". In: *Pacific Linguistics, Research School of Pacific and Asian Studies* (2003).

Arka, I. and J. Kosmas. "Passive without Passive Morphology? Evidence from Manggarai." In: *The Many Faces of Austronesian Voice Systems: Some New Empirical Studies*. 2002.

Ballard, C. "The Wetland Field Systems of the New Guinea Highlands". In: *Ten Thousand Years of Cultivation at Kuk Swamp in the Highlands of Papua New Guinea*. Ed. by T. Denham et al. ANU Press, 2017, pp. 65–84.

Bellwood, P. *First Islanders: Prehistory and Human Migration in Island Southeast Asia*. Wiley, 2017. ISBN: 978-1-119-25154-5. URL: https://books.google.co.nz/books?id=SmBGDgAAQBAJ.

— *From Birds Head to Birds Eye View: Long Term Structures and Trends in Indo-Pacific Prehistory*. 1998.

Bellwood, P. *Prehistory of the Indo-Malaysian Archipelago: Revised Edition*. Canberra, ACT, Australia: ANU Press, 2007. ISBN: 1-921313-12-9.

Blench, R. "The Enggano: Archaic Foragers and Their Interactions with the Austronesian World". Unpublished draft. Unpublished draft. 2014. URL: http://www.rogerblench.info/Language/Austronesian/Enggano/Enggano.

Blench, R., L. Sagart, and A. Sanchez-Mazas. *The Peopling of East Asia Putting Together Archaeology, Linguistics and Genetics*. 2005. ISBN: 978-0-203-34368-5.

Blench, R., L. Sagart, and A. Sanchez-Mazas. *The Peopling of East Asia Putting Together Archaeology, Linguistics and Genetics*. 2005. ISBN: 978-0-203-34368-5.

Blom, E., D. Polienská, and F. Weerman. "Effects of Age on the Acquisition of Agreement Inflection". In: *Morphology* 17.1 (2007), pp. 179–179. DOI: 10.1007/s11525-007-9116-8. URL: https://doi.org/10.1007/s11525-007-9116-8.

Blust, R. "Terror from the Sky: Unconventional Linguistic Clues to the Negrito Past". In: *Human Biology* 85.13 (2013), pp. 401–416. DOI: 10.3378/027.085.0319. URL: https://doi.org/10.3378/027.085.0319.

Blust, R. A. "Chamorro Historical Phonology". In: *Oceanic Linguistics* 39.1 (2000), pp. 83–122. ISSN: 1527-9421. DOI: 10.1353/ol.2000.0002. URL: http://muse.jhu.edu/content/crossref/journals/oceanic_linguistics/v039/39.1blust.pdf (visited on 06/03/2020).

— "From Ancient Cham to Modern Dialects: Two Thousand Years of Language Contact and Change (Review)". In: *Oceanic Linguistics* 39.2 (2000), pp. 435–445. ISSN: 1527-9421. DOI: 10.1353/ol.2000.0014. URL: http://muse.jhu.edu/content/crossref/journals/oceanic_linguistics/v039/39.2blust02.pdf (visited on 04/19/2020).

Blust, R. "Notes on the History of Focus in Austronesian Languages". In: *The history and typology of western Austronesian voice systems* (2002), pp. 63–78.

— "Palauan Historical Phonology: Whence the Intrusive Velar Nasal?" In: *Oceanic Linguistics* 48.2 (2009), pp. 307–336. ISSN: 00298115, 15279421. URL: www.jstor.org/stable/40783532 (visited on 06/02/2020).

— "Subgrouping, Circularity and Extinction: Some Issues in Austronesian Comparative Linguistics". In: Selected Papers from the Eighth International Conference on Austronesian Linguistics. Vol. 1. 1999, pp. 31–94.

— "The Austronesian Homeland: A Linguistic Perspective". In: *Asian Perspectives* 26.1 (1984), pp. 45–67. ISSN: 0066-8435.

— *The Austronesian Languages*. Asia-Pacific Linguistics, School of Culture, History and Language, College, 2013. ISBN: 1-922185-07-8.

Bondoc, I. "A Grammatical Sketch of Blaan". [MA thesis]. University of the Philippines, 2015.

Bourke, R. "Environment and Food Production in Papua New Guinea". In: *Ten Thousand Years of Cultivation at Kuk Swamp in the Highlands of Papua New Guinea*. Ed. by T. Denham et al. ANU Press, 2017, pp. 51–64.

Bowden, J. *Taba: Description of a South Halmahera Austronesian Language*. Pacific Linguistics, 2015, 42M, xxvi + 451 pages. ISBN: 978-0-85883-517-7. DOI: 10.15144/PL-521. URL: http://sealang.net/archives/pl/pdf/PL-521.pdf (visited on 06/03/2020).

Chang, H. Y. "Triadic Encoding in Tsou". In: *Language and Linguistics* 12.4 (2011), pp. 799–843.

Chantanakomes, V. "A Description of Moken: A Malayo-Polynesian Language". MA thesis. Mueang Nakhon Pathom: University of Nakhon Pathom, 1980. URL: http://hdl.handle.net/11858/00-001M-0000-0012-7EAC-F.

- Selected references

Chen, C.-F. "Object Voice and Nominalization in Rukai". In: Proceedings of the Twelfth Annual Conference of the Austronesian Formal Linguistics Association (AFLA XII). 2005.

Chen, V. "A Reexamination of the Philippine-Type Voice System and Its Implications for Austronesian Primary-Level Subgrouping Victoria". PhD Thesis. Mnoa, Honolulu, Hawai'i: University of Hawai'i at Mnoa, Dec. 2017. URL: lingbuzz/003904.

Chen, V. and B. McDonnell. "Western Austronesian Voice". In: *Annual Review of Linguistics* 5.1 (Jan. 14, 2019), pp. 173–195. ISSN: 2333-9683, 2333-9691. DOI: 10.1146/annurev-linguistics011718-011731. URL: https://www.annualreviews.org/doi/10.1146/annurev-linguistic011718-011731 (visited on 05/11/2020).

Chung, S. "Wh-Agreement and" Referentiality" in Chamorro". In: *Linguistic inquiry* 25.1 (1994), pp. 1–44. ISSN: 0024-3892.

Conners, T. "Tengger Javanese". PhD Thesis. New Haven, Connecticut: Yale University, 2008.

Davies, W. D. *A Grammar of Maduresе*. Vol. 50. Walter de Gruyter, 2010. ISBN: 3-11-022444-5.

De Busser, R. "Towards a Grammar of Takivatan Bunun: Selected Topics". [PhD thesis]. La Trobe University, 2009.

De Guzman, V. P. "Ergative Analysis for Philippine Languages: An Analysis". In: *Studies in Austronesian linguistics* 76 (1988), pp. 323–346.

De Wolff, C. M. "Voice in Austronesian Languages of Philippine Type: Passive, Ergative, or Neither". In: *Passive and voice* 16 (1988), pp. 143–193.

Den Besten, H. "From Khoekhoe Foreignertalk via Hottentot Dutch to Afrikaans: The Creation o a Novel Grammar". In: *Wheels within Wheels; Papers of the Duisberg Symposium on Pidgin an Creole Languages*. 1989, pp. 207–249.

Denham, T. "Envisaging Early Agriculture in the Highlands of New Guinea: Landscapes, Plant and Practices". In: *World Archaeology* 37.2 (2005), pp. 290–306. DOI: 10.1080/00438240500095 URL: https://doi.org/10.1080/00438240500095447.

Denham, T., S. Haberle, and C. Lentfer. "New Evidence and Revised Interpretations of Early Agri culture in Highland New Guinea". In: *Antiquity* 78.302 (2004), pp. 839–857. DOI: 10.1017 S0003598X00113481. URL: https://doi.org/10.1017/S0003598X00113481.

Donohue, M. "Malay as a Mirror of Austronesian: Voice Development and Voice Variation". In *Lingua* 118.10 (2008), pp. 1470–1499. DOI: 10.1016/j.lingua.2007.08.007. URL: https //doi.org/10.1016/j.lingua.2007.08.007.

— "Voice in Tukang Besi and the Austronesian Focus System". In: *The History and Typology o Western Austronesian Voice Systems*. Ed. by F. Wouk and M. Ross. Pacific Linguistics: Researc School of Pacific and Asian Studies, Australian National University, 2002, pp. 81–99.

Donohue, M. and C. E. Grimes. "Yet More on the Position of the Languages of Eastern Indonesi and East Timor". In: *Oceanic Linguistics* (2008), pp. 114–158. ISSN: 0029-8115.

Nothofer, B. "The Relationship between the Languages of the Barrier Islands and the Sulawesi-Philippine Languages". In: *Language contact and change in the Austronesian world* 389410 (1994).

Oliveira, N. V. "Subsistence Archaeobotany: Food Production and the Agricultural Transition in East Timor". PhD Thesis. Department of Archaeology and Natural History, Research School of Pacific and Asian Studies, College of Asia and the Pacific, The Australian National University, 2008.

Pawley, A. and L. A. Reid. "The Evolution of Transitive Constructions in Austronesian". In: *Austronesian Studies: Papers from the Second Eastern Conference on Austronesian Languages*. Ed. by P. Naylor. Michigan Papers on South and Southeast Asia No. 15. Ann Arbor, Michigan: Center for South and Southeast Asian Studies, University of Michigan, 1979, pp. 103–130. URL: http://hdl.handle.net/10125/33014.

Pawley, A. "Chasing Rainbows: Implications of the Rapid Dispersal of Austronesian Languages for Subgrouping and Reconstruction". In: Selected Papers from the Eighth International Conference on Austronesian Linguistics. Symposium Series of the Institute of Linguistics, Academia Sinica Taipei, Taiwan, 1999, pp. 95–138.

Pearson, M. "Voice morphology, case, and argument structure in Malagasy". In: *Austronesian Formal Linguistics Association: Proceedings of AFLA ..., Teil: 11, ZAS* 34 (Vol. 34 (2004), pp. 229–243. URL: http://publikationen.ub.uni-frankfurt.de/frontdoor/index/index/docId/30888.

Prentice, D. "Form and Function in the Verbs of Sabah Murut: A Preliminary Analysis". In: *Oceanic Linguistics* 4.1/2 (1965), pp. 127–156. DOI: 10.2307/3622919. URL: https://doi.org/10.2307/3622919.

Rackowski, A. and N. Richards. "Phase Edge and Extraction: A Tagalog Case Study". In: *Linguistic Inquiry* 36.4 (2005), pp. 565–599. DOI: 10.1162/002438905774464368. URL: https://doi.org/10.1162/002438905774464368.

Reich, D. et al. "Denisova Admixture and the First Modern Human Dispersals into Southeast Asia and Oceania". In: *The American Journal of Human Genetics* 89.4 (2011), pp. 516–528. DOI: 10.1016/j.ajhg.2011.09.005.

Reid, L. A. "The Demise of Proto-Philippines". In: *Papers from the Third International Conference on Austronesian Linguistics* 2 (1982). Ed. by A. Halim, pp. 201–216.

Riesberg, S. *Symmetrical Voice and Linking in Western Austronesian Languages*. Vol. 646. Walter de Gruyter GmbH & Co KG, 2014. ISBN: 1-61451-871-8.

Ross, M. "Pronouns as a preliminary diagnostic for grouping Papuan languages". In: *Papuan pasts: Cultural, linguistic and biological histories of Papuan-speaking peoples*. Pacific Linguistics, 2005, pp. 15–66.

Ross, M. "In Defense of Nuclear Austronesian (and against Tsouic)". In: *Language and Linguistics* 13.6 (2012), p. 1253. ISSN: 1606-822X.

— "Just How Different Was Proto Oceanic from Proto Malayo-Polynesian". In: 12th International Conference on Austronesian Linguistics (12ICAL), Denpasar, Indonesia, July. 2012.

— "Proto Austronesian Verbal Morphology: A Reappraisal". In: *Austronesian Historical Linguistics and Culture History: A Festschrift for Robert Blust*. Asia-Pacific Linguistics, College of Asia and the Pacific, The Australian, 2009. ISBN: 0-85883-601-7.

— "Reconstructing the Case-Marking and Personal Pronoun Systems of Proto Austronesian". In: *Streams converging into an ocean: Festschrift in honor of Professor Paul Jen-kuei Li on his 70th*

3 On the rise of applicatives in West Nusantara languages

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This study examines the distribution of applicative constructions in Malayo-Polynesian languages of West Nusantara, and the relationships between applicatives, geographic location, genetic affiliation, and other typological features of language. Eighty-five languages were sampled across genetic groupings indigenous to West Nusantara (Malaysia, Singapore, Brunei, and Indonesia west of Lombok) by geographic subregion. Using existing descriptive, lexical, and pedagogical resources, each language was evaluated for the presence of applicative constructions in which morphological marking on the predicate coincides with selection of a peripheral semantic role as a core argument (Peterson 2007). Data on structural properties, including word order, alignment, voice system, and case marking, and semantic and syntactic properties of the applicative constructions were also compiled. Analysis was conducted using geospatial mapping, and statistical tests for non-random association (Pearsons exact tests) and evaluation of possible classification trees (Random Forest algorithm, see Breiman 2001).

The results indicate that applicative constructions distinct from major voice alternations are an areal feature of West Nusantara associated with the breakdown of Philippine-type voice. Furthermore, genetic affiliation and geographic subregion are strongly predictive of the presence or absence of applicatives, with contact-induced change being implicated for the lack of applicatives in most of Borneo and mainland Southeast Asia. The presence of applicatives otherwise cuts across types of voice system (e.g. symmetrical, asymmetrical), alignment (e.g. ergative, accusative, mixed), word order (e.g. verb-initial, verb-medial) and case marking (e.g. case marking particles, pronominal distinctions, no case marking). This cast doubts on the usefulness of a proposed Indonesian-type of western Austronesian languages associated with applicatives (see Himmelmann 2005). Some features of applicative constructions are quite stable, including the distribution of beneficiary/instrument/theme-selecting functions and locative/goal-selecting functions across separate morphemes. However, syntactic properties of the applied phrase show variance, especially for beneficiaries, likely due to animacy effects.

References

Breiman, Leo. 2001. Random forests. *Machine learning* 45. 5–32. https://doi.org/10.1023/ A:1010933404324.

Himmelmann, Nikolaus P. 2005. The Austronesian languages of Asia and Madagascar: Typological characteristics. In K. Alexander Adelaar & Nikolaus P. Himmelmann (eds.), *The Austronesian languages of Asia and Madagascar (Routledge Family Language Series)*, 110–181. New York: Routledge.

Peterson, David A. 2007. *Applicative constructions (Oxford Studies in Typology and Linguistic Theory).* Oxford: Oxford University Press.

On the rise of applicatives in West Nusantara languages

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16th International Conference on Austronesian Linguistics
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Introduction

- This study examines the distribution of applicative constructions (ACs) in Malayo-Polynesian languages of West Nusantara
- Considers the relationships between applicatives and geographic location, genetic affiliation, and other typological features of language
- Part of a larger dissertation research project (Truong 2024)

(1) An applicative construction is a kind of clausal construction in which overt morphological marking* on the verbal complex coincides with the selection of a non-agent, non-patient semantic role to map to a core argument in the clause.

* This overt morphological marking = Applicative morpheme (AM)

https://christinaltruong.org/downloads/

Types of applicatives

In this study, I include two types of constructions:

- Philippine-type LV and CV constructions
  - Function as applicatives (though not a language-specific category ala Haspelmath 2010)
  - The peripheral role must be the pivot = *Pivot-selecting*
  - Examples: Kimaragang, Tatana, Central Sama
- Pivot-neutral applicative constructions
  - Peripheral role is a clausal argument
  - Co-occur with other voice constructions that determine mapping of role to the pivot (e.g. AV, PV, passive)
  - Examples: Balinese, Sundanese, Pendau

LV and CV in Tatana (Pivot-Selecting)

(2) Tatana, Philippine-type voice alternations

a. *Naka-bali aku do kana' sino do pasar.*
AV.NVOL.PST-buy 1SG.NOM DAT fish there DAT market

'I bought the fish there at the market.' (AV) (Dillon 1994: 69)

b. *Boli-on ku dudungu' diti*
BUY-PV 1SG.GEN banana this

'I am buying these bananas.' (PV) (Dillon 1994: 44)

c. *Bali-an ku okou do dudungu.*
buy-CV 1SG.GEN 2SG.NOM DAT banana

'I am buying bananas for you.' (CV) (Dillon 1994: 52)

d. *Kadai diti andang-andang pam-(b)ali-an ku*
shop this RDP-usual LV-buy-LV 1SG.GEN

'This shop is where I usually buy things.' (LV) (Dillon 1994: 60)

Pivot-neutral applicatives in Balinese

(3) Balinese, Voice alternations

a. *Buku beli tiang di toko ento.*
book PV.buy 1SG at shop DIST

'I bought the book in that shop.'
(PV, with patient pivot)

b. *Tiang m-(b)eli buku di toko ento.*
1sg AV-buy book at shop DIST

'I bought the book in that shop.'
(AV, with agent pivot) (Artawa 1998: 48)

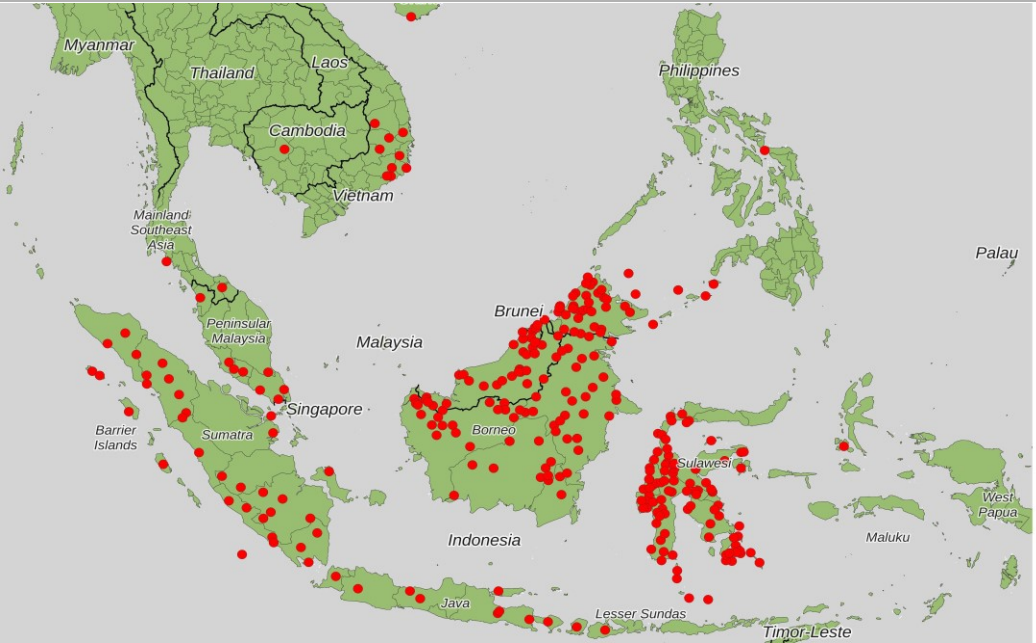
(4) Balinese, Loc. appl. + Voice alternations

a. *Toko ento beli-in tiang buku.*
shop DIST PV.buy-LOC.APPL 1SG book

'I bought the book in that shop.'
(AC in PV, with location pivot)

b. *Tiang m-(b)eli-in toko ento buku.*
1SG AV-buy-LOC.APPL shop DIST book

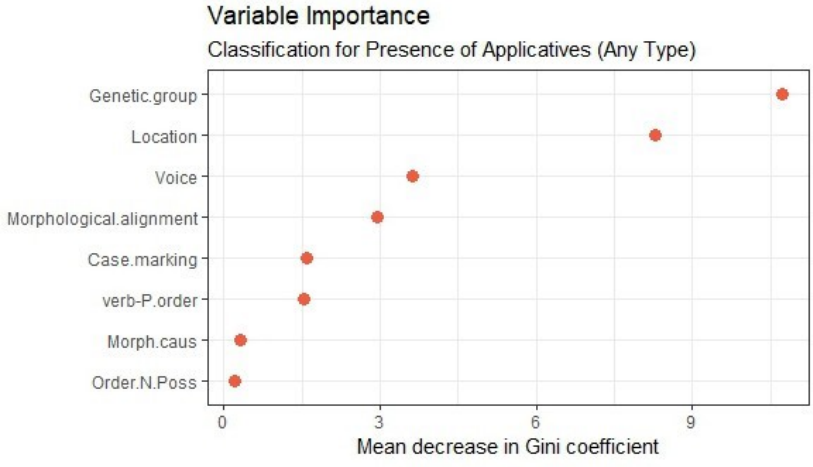
'I bought the book in that shop.'
(AC in AV, with agent pivot)
(Artawa 1998: 55)



Austronesian languages originating in West Nusantara (321)

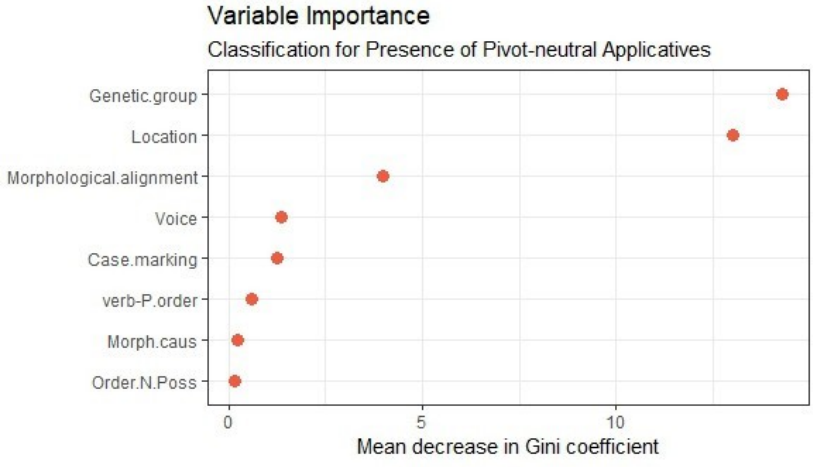
Language sample (85)

Random Forest Classification Analysis (see Breiman 2001)



OOB error estimate: 16.46%

Random Forest Classification Analysis



OOB error estimate: 18.99%

Geographic distribution

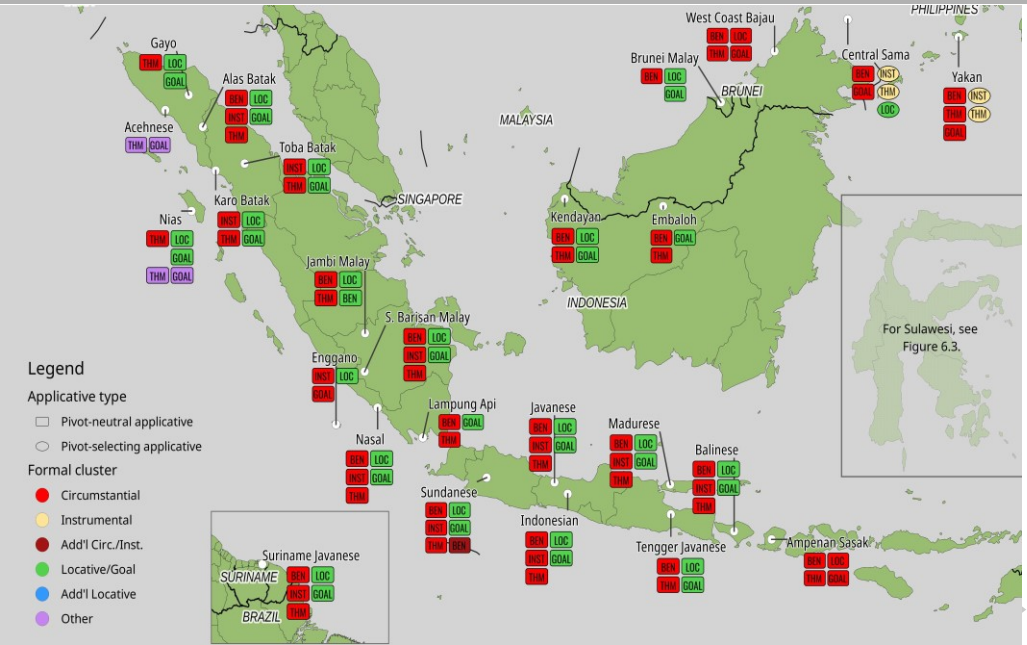
Findings

Pivot-neutral applicatives are a broadly distributed areal feature

- Associated with reduction of the four-way Philippine-type voice system
- Found across different symmetrical & asymmetrical voice systems
  - Philippine-type, in transition (Balantak, Totoli, Central Sama)
  - two-way symmetrical (Balinese, Pendau)
  - marginal two-way (Bugis)
  - asymmetrical (Muna)
- Found across patterns of morphological alignment
  - ergative (Bugis)
  - accusative (Muna)
  - mixed, special marking of non-pivot A (Sundanese)
  - mixed, other (Ampenan Sasak, Jambi)
- Found across types of case marking, use of pronominal sets
- Not associated with an "Indonesian-type" profile (see Himmelmann 2005)

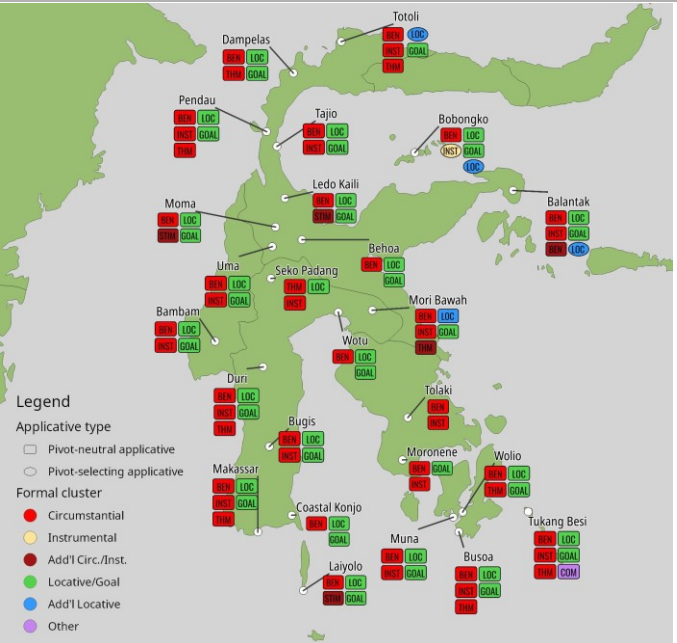
Lack of applicatives

- Applicatives are conspicuously missing in:
  - Mainland SE Asia & northern peninsular Malaysia
  - Borneo south of Sabah
- Emergence of new typological profiles showing:
  - Reduced morphological complexity, esp. loss of suffixation
  - Greater reliance on word order to signal grammatical relations
  - Shift towards analytic structures (e.g. serial verb constructions, voice markers = verbs, clitics)
- Language contact drives these changes



Applicative systems in West Nusantara

Map 4: Pivot-neutral and mixed applicative systems of West Nusantara



Applicative systems in West Nusantara

Map 5: Pivot-neutral and mixed applicative systems of Sulawesi

Findings

- Predominant pattern: one form of AM for locative and goal ACs, and one for benefactive, instrumental, and theme-selecting ACs.
  - Typologically unusual, trend is for locatives & instrumentals to share form, not benefactives and instrumentals (Peterson 2007).
  - But reconstructed for PAn and PMP.
- Remnant constructions show TAM conditioned alternations of *-i* and *-an* for locative/goal applicatives, as seen in PAn, PMP.
  - Interpretation: Locative/goal AMs mark constructions derived from earlier LV (PMP *-i imp.,*-an indic.)
- For benefactive/instrumental AMs, older form is -AN type, newer forms are -K and -AK type (see Sirk 1996).
  - Interpretation: Benefactive/instrumental AMs mark those derived from earlier CV (PMP *-an imp., *Si- indic.), sometimes with replacement forms.

PAn voice morphology

Table: Proto-Austronesian voice morphology (Chen 2017: 151)

Mood	Actor Voice	Patient Voice	Locative Voice	Circumstantial Voice
Indicative	*<um>	*-ən	*-an	*Si-/*Sa-
Optative, hortative	*-a	*-aw	*-ay	*-anay
Imperative, negative	*-ø	*-u	*-i	*-an

TAM-conditioned remnant alternations for locative/goal AMs

Table: Morphological marking for locative applicatives and TAM in selected languages

PAn (LV)		Std. Javanese	Totoli	Toba Batak	Bobongko
Indic., neutral		Indicative	Nonrealis	Indicative	Unrealized
*-an	AV	*N- -i*	*mo(g)-/moN- -i*	*mang-/mar-/ma- -i*	*mon- -i*
	PV	*-i*	*-i*	*Ø-/di- -i*	*ku-/o- -i*
Indic., perf.		PV, archaic	Realis	Compl. participial	Realized
*-in- -an	AV	(no form)	*no(g)-/noN- -i*	*-um- -i*	*non- -i*
	PV	(no data)	*ni- -an*	*ni- -an*	*-in- -an*
Imper./Neg.		Imper./Irr.	Imperative	Imperative	Imperative
*-i	AV	(no form)	(no data)	(no form)	*pon- -i*
	PV	*-an-a*	(no data)	*-i*	*-i*
Opt./Hort.	AV	Propositive		Promissory	
*-ay		*N- -i*		(no form)	
	PV	*-an-é*		*-an*	

Sources: Oglobin 2005; Himmelmann & Riesberg 2013; Nababan 1981; Mead 2001

Distribution of benefactive/instrumentals

- -AN type suffixes have broad geographic and genetic distribution
  - Found in South Sulawesi (incl. Badaic), Tolitoli, Malayic, Sama-Bajau, Bali-Sasak-Sumbawa, possibly others.
- -K and -AK forms are newer, sometimes clear replacements
  - Found in Sumatran (e.g. Batak, Barrier Islands, Gayo, Enggano, Nasal), Celebic (excl. Tolitoli, Badaic), Malayic, Javanese, Sundanese, Madurese.
  - But sound correspondences are frequently problematic
  - In Malayic *-kan* or *-ka* known to have replaced applicative *-an (Adelaar 1992).
  - Javanese *-aken* and -aké cannot be reconstructed to Proto-Javanese (Adelaar 2011).
  - Replacement patterns may be complex
    - Std. Jav. *-akən* replaced Old Jav. *-(ʔ)ən, itself a possible merger of PMP PV *-ən and CV *-an.
    - Muna *-ghoo*, but fused AMs *-angko* 2SG, *-ane* 3SG, *-anda* 3PL (van den Berg 2013), suggesting < PMP CV imperative *-an

Muna pronominal suffixes

Table: Muna pronominal suffixes for direct and indirect objects

	Direct object	Indirect object
1SG	-kanau	-kanau
2SG	-ko	-angko
2SG.POL	-kaeta	-kaeta
3.SG	-e	-ane
1DU.INCL	—	—
1PL.INCL	—	—
1PL.EXCL	-kasami	-kasami
2PL	-ko-omu	-angko-omu
2PL.POL	-kaeta-amu	-kaeta-amu
3PL	-da	-anda

Source: van den Berg 2013

Takeaways

- Philippine-type LV & CV constructions and “Indonesian-type” pivot-neutral applicatives are related historically, functionally, typologically.
- But the latter are not associated with any coherent “Indonesian-type” profile with specific settings for voice, alignment, case marking, word order, etc.
- They are simply associated with breakdown of the Philippine-type voice system.
- The distribution of applicative functions to forms in West Nusantara is best explained by inheritance (in large part).
- However, for benefactive/instrumental applicative markers, the forms themselves may have undergone replacement, with newer forms being of the -K and -AK shapes.
- Older forms are likely inherited, from PMP CV imperative *-an and LV imperative *-i or indicative *-an.

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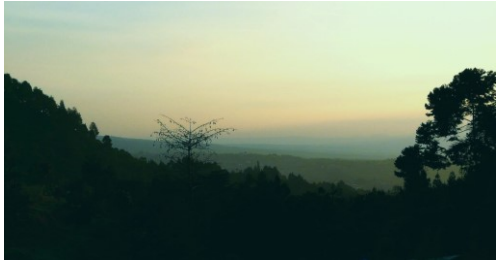


References I

Adelaar, K. Alexander. 1992. *Proto Malayic: The reconstruction of its phonology and parts of its lexicon and morphology*. (Pacific Linguistics C 119). Canberra: Pacific Linguistics and Australia National University. 253 pp.

Adelaar, K. Alexander. 2011. Javanese *-aké* and *-akən*: A short history. *Oceanic Linguistics* 50(2). 338–350.

Artawa, Ketut. 1998. Ergativity and Balinese Syntax: Part I. NUSA: Linguistic Studies of Indonesian and Other Languages in Indonesia (42).

Breiman, Leo. 2001. Random forests. *Machine Learning* 45. 5–32. https://link-springer-com.eres.library.manoa.hawaii.edu/content/pdf/10.1023/A:1010933404324.pdf (13 April, 2023).

Chen, Victoria. 2017. *A reexamination of the Philippine-type voice system and its implications for Austronesian primary-level subgrouping*. Honolulu: University of Hawai i at Mānoa dissertation.

Clayre, Beatrice. 1996. The changing face of focus in the languages of Borneo. *Pacific Linguistics. Series A. Occasional Papers* 84. 51–88.

Connell, Timothy M. 2013. *A sketch grammar of Matéq: A Land Dayak language of West Kalimantan*. University of Canterbury Master's thesis.

Conners, Thomas J. 2008. *Tengger Javanese*. New Haven, CT: Yale University dissertation.

Dillon, John A. 1994. *A grammatical description of Tatana'*. Ann Arbor: University of Michigan Master's thesis. ix 155.

Hammarström, Harald, Robert Forkel, Martin Haspelmath & Sebastian Bank (eds.). 2022. *Glottolog 4.7*. Leipzig: Max Planck Institute for Evolutionary Anthropology. https://doi.org/10.5281/zenodo.7398962.

References II

Haspelmath, Martin. 2010. Comparative concepts and descriptive categories in crosslinguistic studies. *Language* 86(3). 663–687.

Himmelmann, Nikolaus P. 2005. The Austronesian languages of Asia and Madagascar: Typological characteristics. In K. Alexander Adelaar & Nikolaus P. Himmelmann (eds.), *The Austronesian languages of Asia and Madagascar* (Routledge Family Language Series), 110–181. New York: Routledge.

Himmelmann, Nikolaus P. & Sonja Riesberg. 2013. Symmetrical voice and applicative alternations: Evidence from Totoli. *Oceanic Linguistics* 52(2). 396–422. http://muse.jhu.edu/content/crossref/journals/oceanic_linguistics/v052/52.2.himmelmann.html (7 April, 2021).

Mead, David. 2001. A preliminary sketch of the Bobongko language. *NUSA: Linguistic Studies of Indonesian and Other Languages* 49. 61–94.

Nababan, P. W. J. 1981. *A grammar of Toba-Batak*. (Pacific Linguistics 37). Canberra, A.C.T: Research School of Pacific Studies, Australian National University. 146 pp.

Nguyen, Tam Thi Minh. 2013. *A grammar of Bih*. Eugene, OR: University of Oregon dissertation. 373 pp.

Oglobin, Alexander K. 2005. Javanese. In K. Alexander Adelaar & Nikolaus P. Himmelmann (eds.), *The Austronesian languages of Asia and Madagascar*. New York: Routledge.

Peterson, David A. 2007. *Applicative constructions*. (Oxford Studies in Typology and Linguistic Theory). Oxford: Oxford University Press. 293 pp.

References III

Ross, Malcolm. 2009. Proto Austronesian verbal morphology: A reappraisal. In K. Alexander Adelaar & Andrew Pawley (eds.), *Austronesian historical linguistics and culture history: A festschrift for Robert Blust*, 295–326. Canberra: Pacific Linguistics.

Sirk, Ülo. 1996. On the history of transitive verb suffixes in the languages of western Indonesia. In Hein Steinhauer (ed.), *Papers in Austronesian linguistics, no. 3* (Pacific Linguistics A 84), 191–205. Canberra: Pacific Linguistics.

Tadmor, Uri. 1995. *Language contact and systemic restructuring: The Malay dialect of Nonthaburi, central Thailand*. Honolulu, HI: University of Hawai'i at Mānoa dissertation. 382 pp.

Truong, Christina L. 2024. *Western Austronesian applicative constructions: Typological and functional approaches*. Honolulu, HI: University of Hawai'i at Mānoa dissertation.

van den Berg, René. 2013. *A grammar of the Muna language*. (SIL E-Books 52). Dallas, TX: SIL International. https://www.sil.org/resources/archives/52170 (22 February, 2022).

Javanese benefactive/instrumental applicatives

Table: Benefactive/instrumental applicatives and TAM in Javanese

PAn (PV)	PAn (CV)		Std. Javanese	Tengger Jav.
Indic., neutral	Indic., neutral		Indicative	Indicative
*-ən	*Si-/Sa-	AV	*N- -aké*	*N- -ən*
		PV	*∅-/di- -aké*	*∅-/di- -ən*
Indic., perf.	Indic., perf.		PV, archaic	PV, archaic
*-in- -	*-in- -an	PV	*-in- -aké*	(no data)
			Non-volitional	Non-volitional
		PV	*kə- -aké*	*kə- -∅*
Imper./Neg.	Imper./Neg.		Imper./Irr.	Imper./Irr.
stem	*-an(-i)	AV	*N- -n-a*	*N- -ən*
		PV	*-n-a*	*-na*
Opt./Hort.	Opt./Hort.		Propositive	Propositive
*-a	*-an-ay	AV	*N- -aké*	*N- -na*
		PV	*-n-é*	(no form)

Sources: Chen 2017; Ross 2009: 306; Oglobin 2005; Conners 2008.

Table 7.3: Applicative morphology by semantic role of the applied phrase

Language		Single Form				
		BEN	INST	THM	LOC	GOAL
W. Coast Bajau	*-an*	✓	✓	✓	✓	✓
Yakan	*-an*	✓		✓		
Sasak	*-an*	✓	✓		✓	✓
Tolaki	*-Cako*	✓	✓			

Language		Form 1				Form 2	
		BEN	INST	THM		LOC	GOAL
Toba Batak	*-hon*	✓	✓	✓	*-i/an*	✓	✓
Nasal	*-kun*	✓	✓	✓	*-i*	✓	✓
Kendayan	*-an*	✓		✓	*-i*	✓	✓
S. Barisan Mal.	*-ka*	✓	✓	✓	*-i*	✓	✓
Std. Indonesian	*-kan*	✓	✓	✓	*-i*	✓	✓
Javanese	*-aké*	✓	✓	✓	*-i*	✓	✓
Madurese	*-agi*	✓	✓	✓	*-e*	✓	✓
Balinese	*-ang*	✓	✓	✓	*-i*	✓	✓
Pendau	*-a'*	✓	✓	✓	*-i*	✓	✓
Behoa	*-â*	✓			*-i*	✓	✓
Muna	*-ghoo*	✓	✓		*-i*	✓	✓
Bugis	*-Ceng*	✓	✓	✓	*-i*	✓	✓
Makasar	*-ang*	✓	✓	✓	*-i*	✓	✓
Duri	*-an*	✓	✓	✓	*-i*	✓	✓

Language		Form 1				Form 2			Form 3
		BEN	INST	THM		LOC	GOAL		
Nias	*-'ö*			✓	*-(C)i*	✓	✓	*fa-*	THM, GOAL
Sundanese	*-keun*	✓	✓	✓	*-an*	✓	✓	*pang- -keun*	BEN
Kaili Ledo	*-ka*	✓			*-i*	✓	✓	*-aka*	THM, INST
Balantak	*-kun*	✓	✓	✓	*-i*	✓	✓	*-ii*	BEN
Tukang Besi	*-ako*	✓	✓	✓	*-(VC)i*	✓	✓	*-ngkene*	COM

Language		Form 1				Form 2			Forms 3 & 4
		BEN	INST	THM		LOC	GOAL		
Mori Bawah	*-ako*	✓	✓		*-(C)i*	✓	✓	*-Cako*	THM
								-Cari	GOAL, STIM

Table: Applicative morphology by semantic role of the applied phrase (selected languages)

Analytic benefactive constructions

(5) Bih, Periphrastic benefactive construction with ‘give’

Thô gơ magĭr ngă ana năn
T. 3 PFX.try make crossbow DIST

ngă leh ngă ana rĭ răm,
make PFV make crossbow whittle arrow

dua tlâo urăt, ***brei*** *kơ ñu.*
two three CL **BEN** DAT 3

‘Thô tried to make a crossbow and some arrows for him.’ (Nguyen 2013: 90)

(6) Nonthaburi Malay, Periphrastic benefactive construction with ‘give’

mɔʔ bli tpoŋ bi an makiŋ
mother buy snack give child eat

‘The mother bought snacks for her children.’ (Tadmor 1995: 261)

Analytic PV constructions

(7) Matéq, Analytic PV

a. *pingàt aiq yoh* ***ni*** *koq moruh*
plate that PRT **PV** 1sg AV.smash

'I smashed the plate'

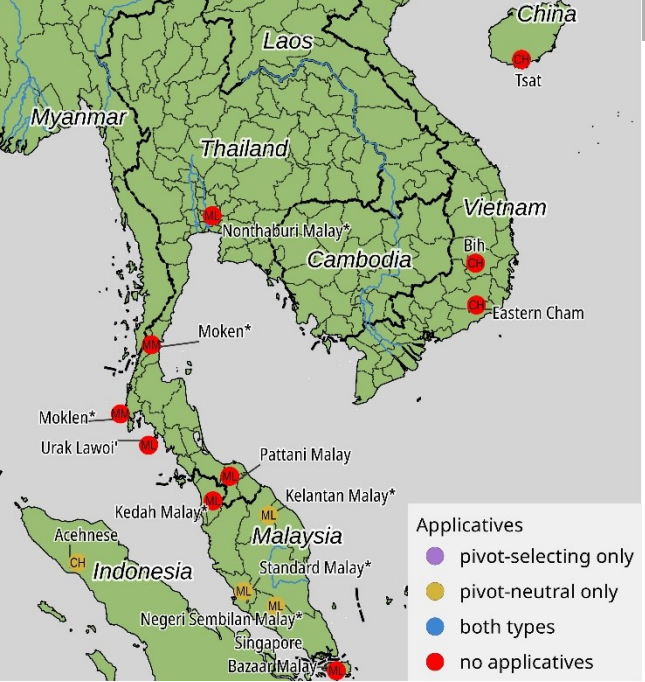
b. ***ni*** *ular aiq degeq nyora ruba turuaq=ng*
PV snake that constantly AV.attack hole dibbling.stick=3

'the snake kept on attacking their dibbling holes' (Connell 2013: 113)

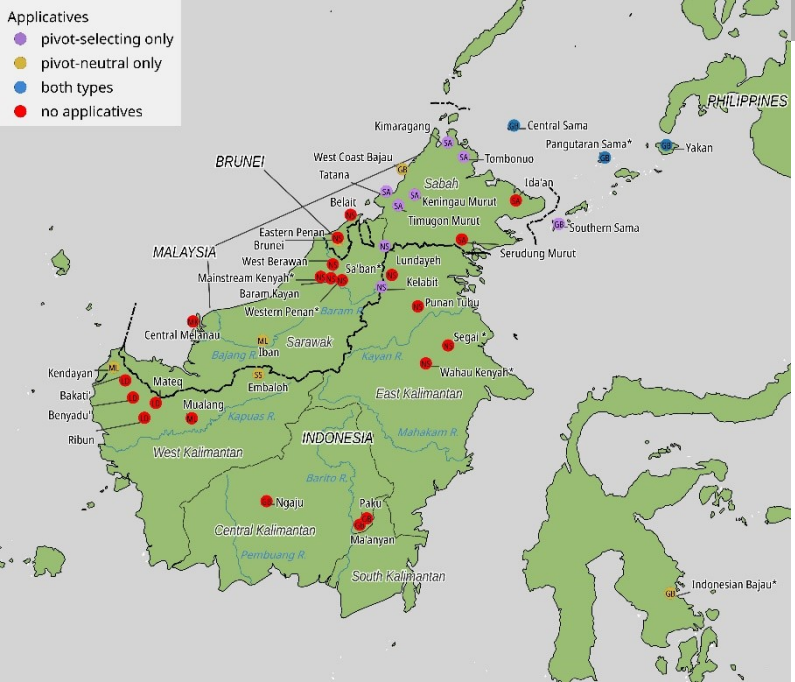
(8) Sa'ban, Periphrastic PV with 'make'

Ayeu noknai ***an*** *ieh m-paeng.*
tree this **make** 3SG AV-cut.down

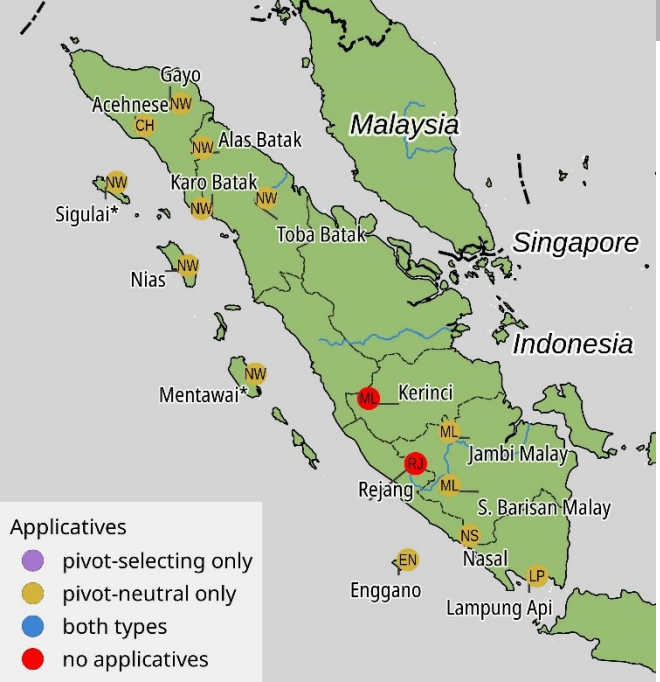
'He will cut down this tree.' (Clayre 1996: 78)



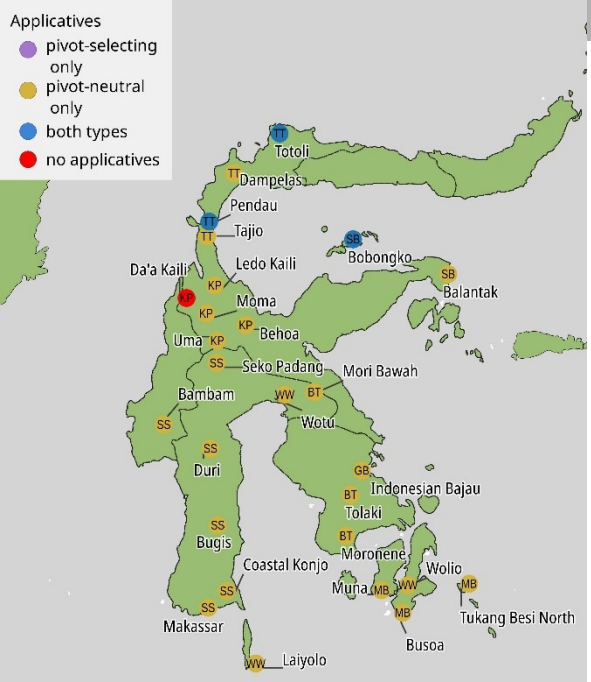
Map 6: Distribution of applicatives in Mainland SE Asia & Peninsular Malaysia



Map 7: Distribution of applicatives in Borneo



Map 8: Distribution of applicatives in Sumatra & the Barrier Islands



Map 9: Distribution of applicatives in Sulawesi

4 Distribution of lexical innovations in the Philippines

Isaac Stead
Max Planck Institute for Evolutionary Anthropology

The Proto-Philippines hypothesis (Blust 2019, 2020) proposes that all languages of the Philippines are descended from a single protolanguage, Proto-Philippines (PPh). According to this hypothesis, the multiple primary branches of Malayo-Polynesian (MP) that would be expected in the Philippines as the area into which the MP languages first expanded ex-Taiwan were replaced by PPh. A key piece of evidence advanced in support of this proposal is a list of 1511 lexical items. Using a recently published phylogeny of Philippine languages (King et al. 2023) and the Austronesian Comparative Dictionary (Blust, Trussell Smith 2023), I show using various metrics of phylogenetic signal (Fritz Purvis 2010; Holland et al. 2002) that a large proportion of these cognate sets are not reconstructable to a common protolanguage and instead represent later innovations which diffused between Philippine subgroups. The geographical distribution of these cognate sets also calls into question their common origin, instead showing that they must have diffused between geographically adjacent subgroups after the diversification of Philippine languages. Some concordance is present between these results and the geographical axes proposed by Zorc (2021).

References

Blust, R. (2019). The resurrection of Proto-Philippines. *Oceanic Linguistics* 58(2), 153–256.

Blust, R. (2020). Response to comments on 'The resurrection of Proto-Philippines'. *Oceanic Linguistics* 59(12), 450–479.

Blust R., Trussell S., & Smith A. D. (2023). CLDF dataset derived from Blust's "Austronesian Comparative Dictionary"

Fritz, S. A. and Purvis A. (2010). Selectivity in mammalian extinction risk and threat types: a new measure of phylogenetic signal strength in binary traits. *Conservation Biology* 24(4):1042–1051.

BR Holland, KT Huber, A Dress, V Moulton (2002) Plots: a tool for analyzing phylogenetic distance data Russell D. Gray, David Bryant, Simon J. Greenhill (2010) *On the shape and fabric of human history Molecular Biology and Evolution* 19(12) 2051–2059.

King, B., Greenhill, S. J., Reid, L. A., Ross, M., Walworth, M., & Gray, R. (2023, March 31). Bayesian phylogenetic analysis of Philippine languages supports a rapid migration of Malayo-Polynesian languages.

Zorc, D. (2021). Axis relationships in the Philippines: Where traditional subgrouping falls short. Paper Presented at the 14th Philippine Linguistics Congress, University of the Philippines Diliman.

Revisiting the lexical evidence for PPh

Lexical evidence for PPh: 1,259 items (!)

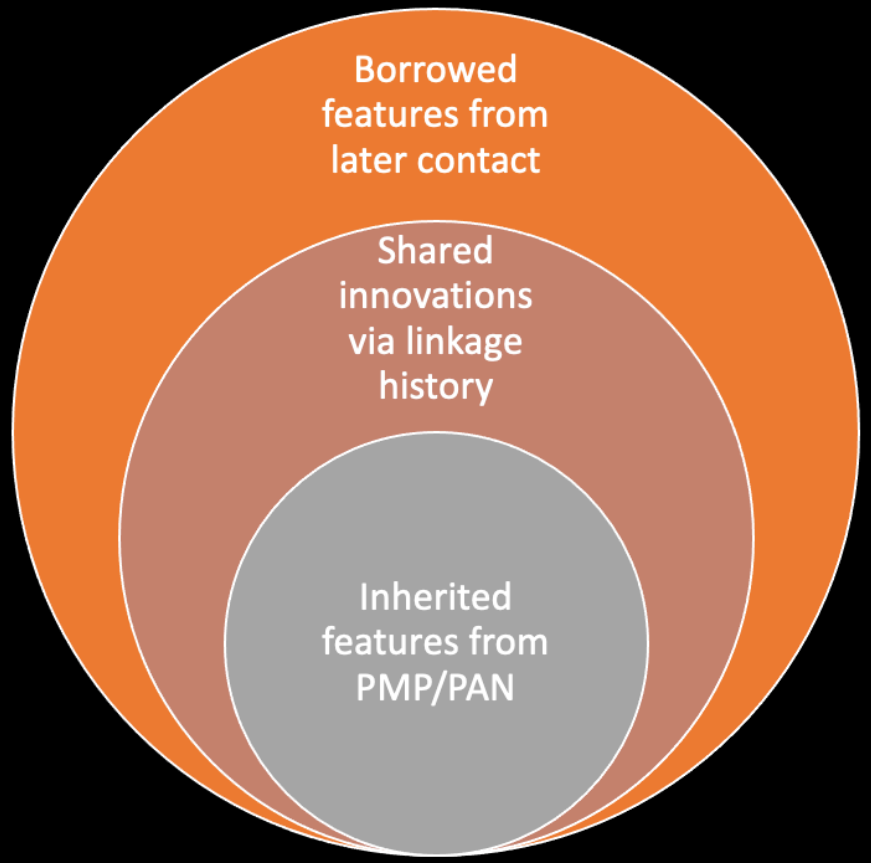
Plg	form	Initial	Gloss
PPh	Search	Search	Search
PPh	*aba$_2$	a	carry pick-a-back
PPh	*abag	a	join forces, cooperate in working
PPh	*abaká	a	Manila hemp: Musa textilis
PPh	*abal abal	a	beetle sp.
PPh	*abála	a	to bother, disturb, annoy or inconvenience someone
PPh	*abat$_2$	a	spirit that causes sickness
PPh	*abat$_4$	a	to extract from body (as sliver, or imagined cause of illness in shamanic practice)
PPh	*abay	a	side by side
PPh	*abij	a	copulate
PPh	*abijay	a	sling over the shoulder
PPh	*abilus	a	a plant: Acalypha spp.
PPh	*abúluy	a	assistance given to someone in need
PPh	*ábuR	a	chase, drive away
PPh	*abuyu	a	to boil sugarcane to make sugarcane wine
PPh	*adayúq	a	far
PPh	*ága	a	early; punctual
PPh	*ágiw	a	soot
PPh	*águm	a	to appropriate for oneself
PPh	*agúm	a	to associate with someone
PPh	*alabat	a	fence, wall
PPh	*alagád	a	to wait
PPh	*alaŋ	a	doubt; hesitation
PPh	*álem	a	a shrub or tree: Melanolepis multiglandulosa
PPh	*alílaq	a	to care for someone, wait on
PPh	*alinaw	a	shadow
PPh	*áman	a	careful, cautious
PPh	*amuluŋ	a	type of wild vine used to blacken the teeth
PPh	*amuma	a	to entertain guests, look after visitors
PPh	*anad	a	accustomed to, skilled at, used to
PPh	*anam	a	a plant: Glochidion spp.
PPh	*ananay$_1$	a	exclamation of pain; ouch!
PPh	*ananay$_2$	a	go or do something slowly, take one's time
PPh	*anayup	a	beautyberry: Callicarpa spp.
PPh	*antábay	a	stay with, accompany
PPh	*antad	a	open, spacious

- 1,259 cognate sets found only in the Philippines, nowhere else
- It's argued that this many etyma restricted to the Philippines means that they can only be inherited from a protolanguage which was (Blust 2019, 2020 etc):
  - Present in the Philippines
  - Later than PMP
  - Must have replaced all previous Ph languages
- 37 are replacement innovations
- Therefore, PPh?

Lexical evidence for PPh: selection of previous counterarguments

- Reid (2018), Smith (2017), Ross (2020) argued for the possibility of diffusion by short and long-distance trading networks
- The same authors argued against the nature of the replacement innovations as replacement innovations
- Rather than going over the same ground, we attempt some new methods of analysis

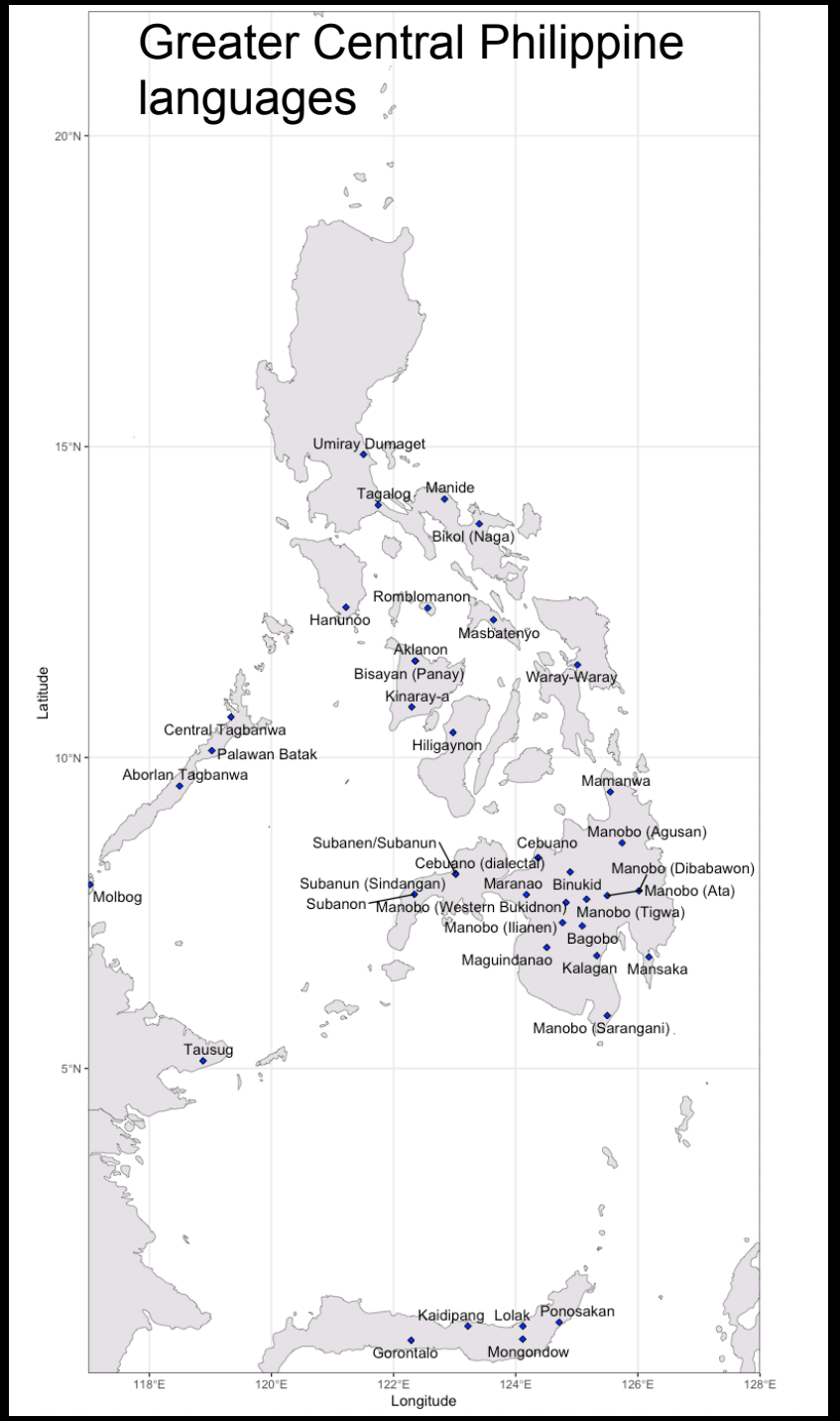
Lexical evidence: key points



- PPh no longer supported by any exclusively shared phonological innovations ~~*d/z merger~~
- Therefore, it's not possible to distinguish:
  - Retentions only present in Philippines
  - Etyma which diffused through PMP dialect network
  - Etyma spread by later contact
- History and prehistory show abundance of contact

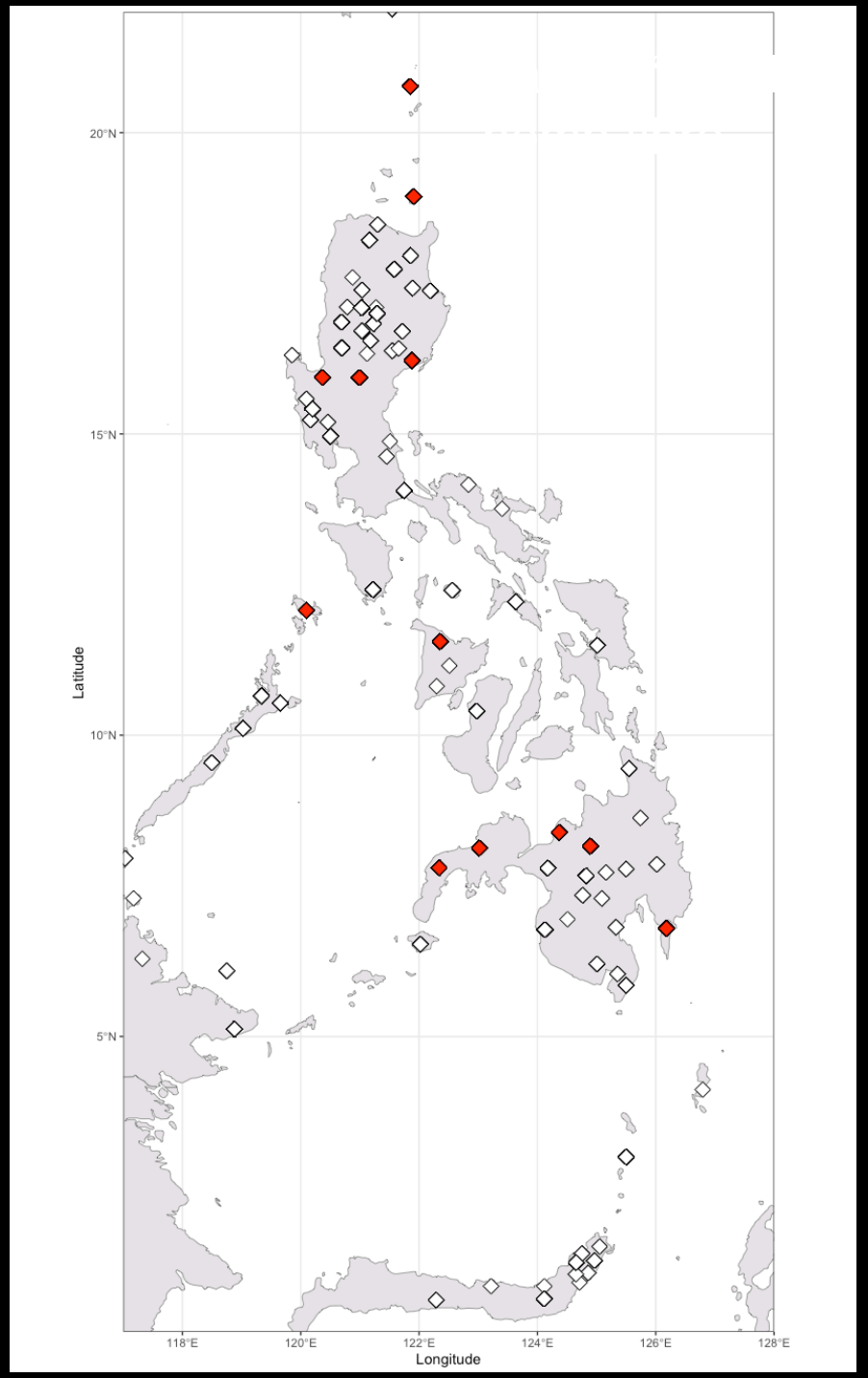
Lexical evidence: the case of Northern Sulawesi

- All data for this and other maps from the ACD: Robert Blust, Stephen Trussel, & Alexander D. Smith. (2023)



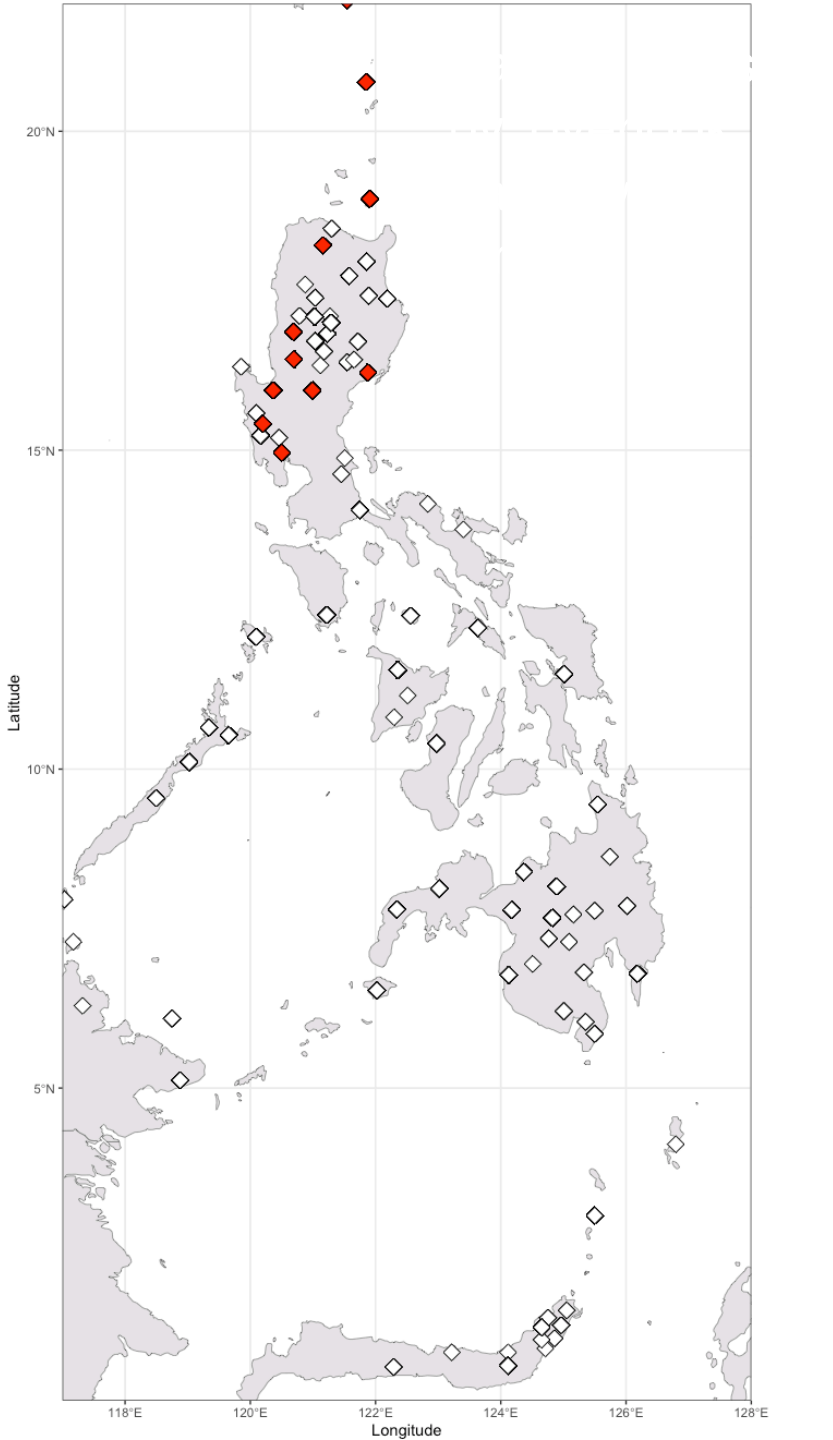
Lexical evidence: most PPh etyma not found in N. Sulawesi

- The Northern Sulawesi languages are part of GCP, but only 7 etyma of the 1,259 are found in them: *usauR, *láyug, *liqed, *iqit, *habél, *buál, and *butí
- If all Philippine languages are descended from PPh, why are so few purported PPh etyma found in the N. Sulawesi GCP languages?
- Makes more sense “PPh” etyma diffused through littoral areas of Philippines but not periphery



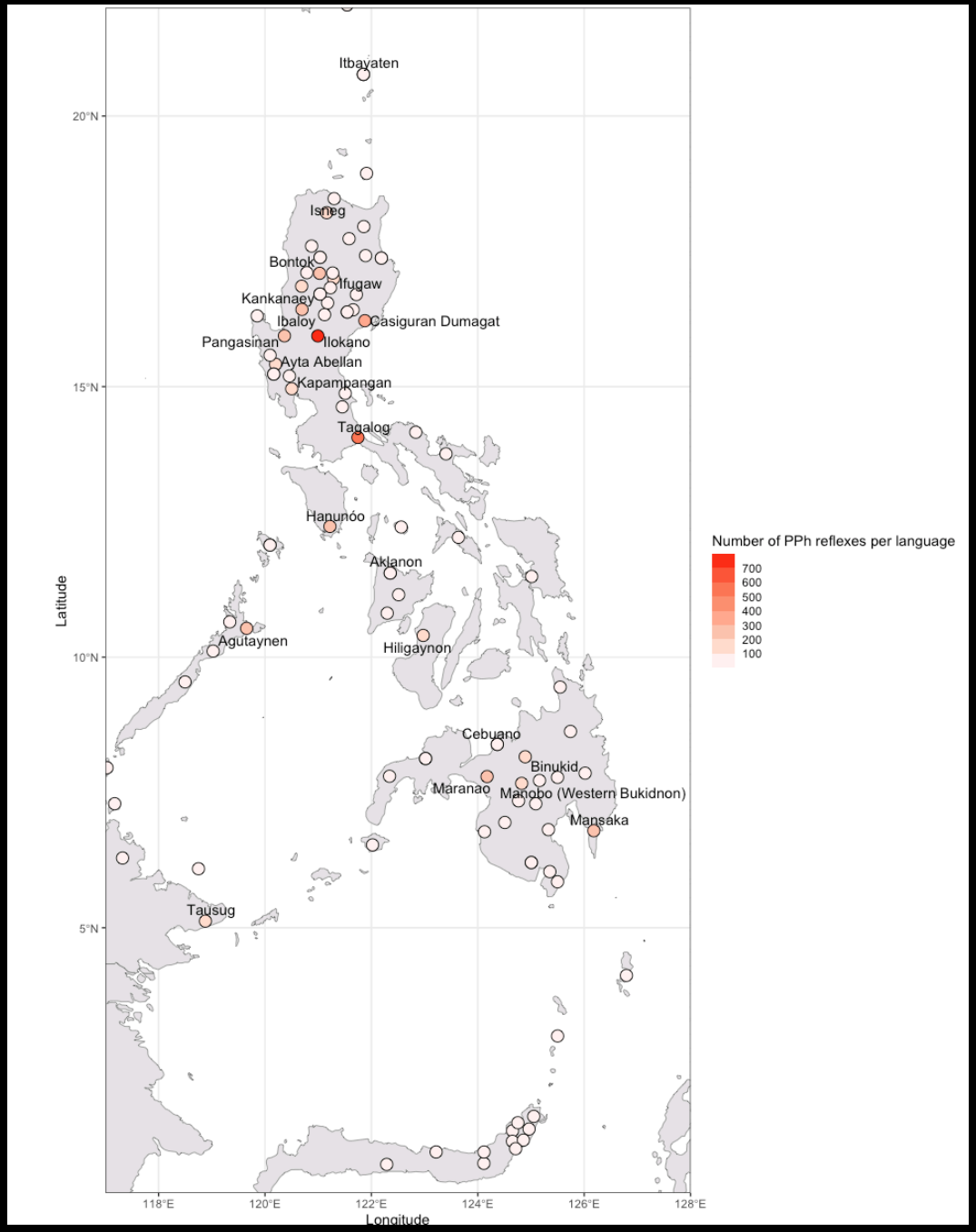
Lexical evidence: distribution of PPh etyma shows contact more likely

	Reflex	Reflex Gloss	ACD Name	Speakers, approx.
1	labah	to pass by	Ayta Abellan	3500
2	lábis	excessive, more than enough (as a pole that is longer than it needs to be); excess	Casiguran Dumagat	610
3	debas-en	to make, take , etc. something too far (as house dimension beyond the specifications, bananas beyond proper ripeness)	Ibaloy	116000
4	h<om>abas	to pass by (object, day or time)	Ibatan	33000
5	ag-pa-lábas	to let pass; tolerate; be understanding	Ilokano	8100000
6	na-lábas	past	Isneg	40000
7	pa-xavas-en	to let pass	Itbayaten	3500
8	na-labás	gone; gone away; passed; passed on	Kankanaey	240000
9	labas	pass by, pass through (in the process of leaving, going out)	Kapampangan	2800000
10	on-labás	to go beyond, pass through; surplus, excess above requirements	Pangasinan	1800000
11	ni-mi-avas	passed by	Yami	4000



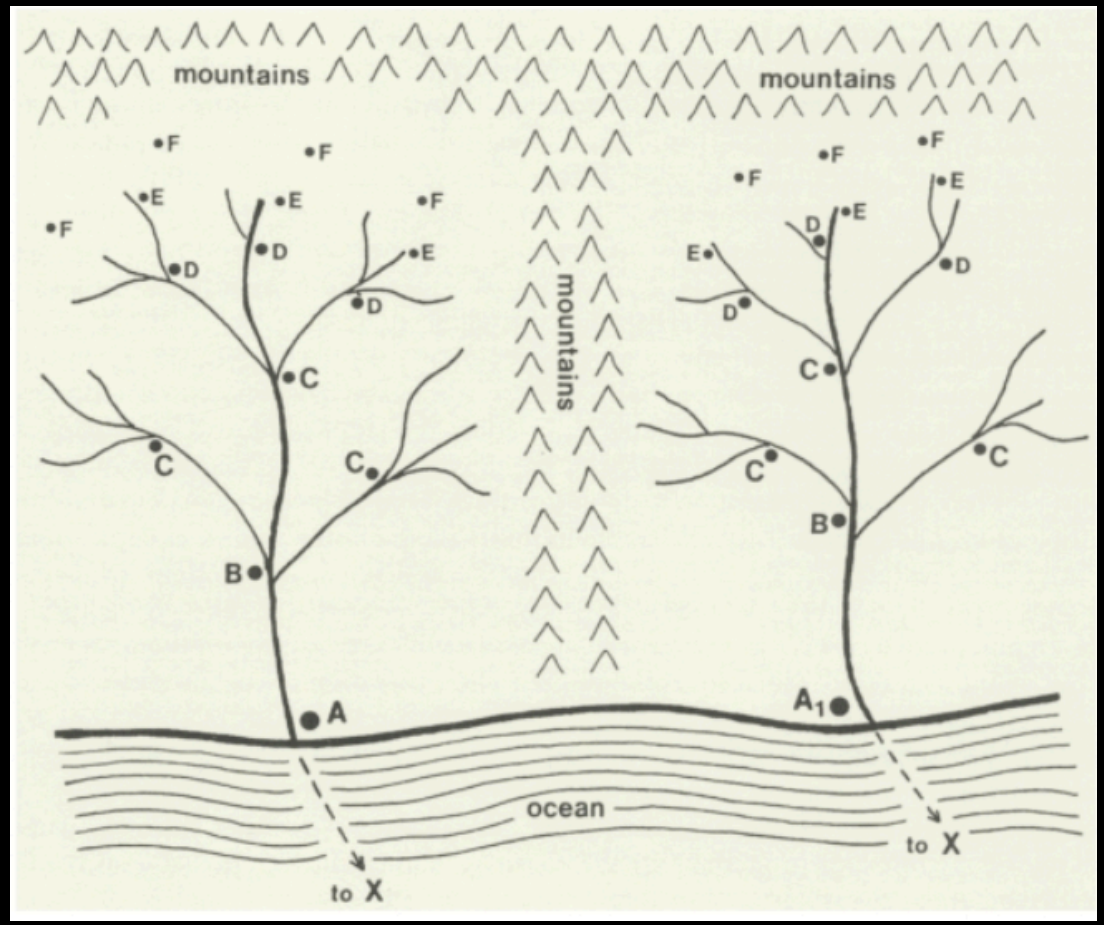
Lexical evidence: more widely spoken languages show more PPh reflexes

Languages with > 100 PPh reflexes labelled

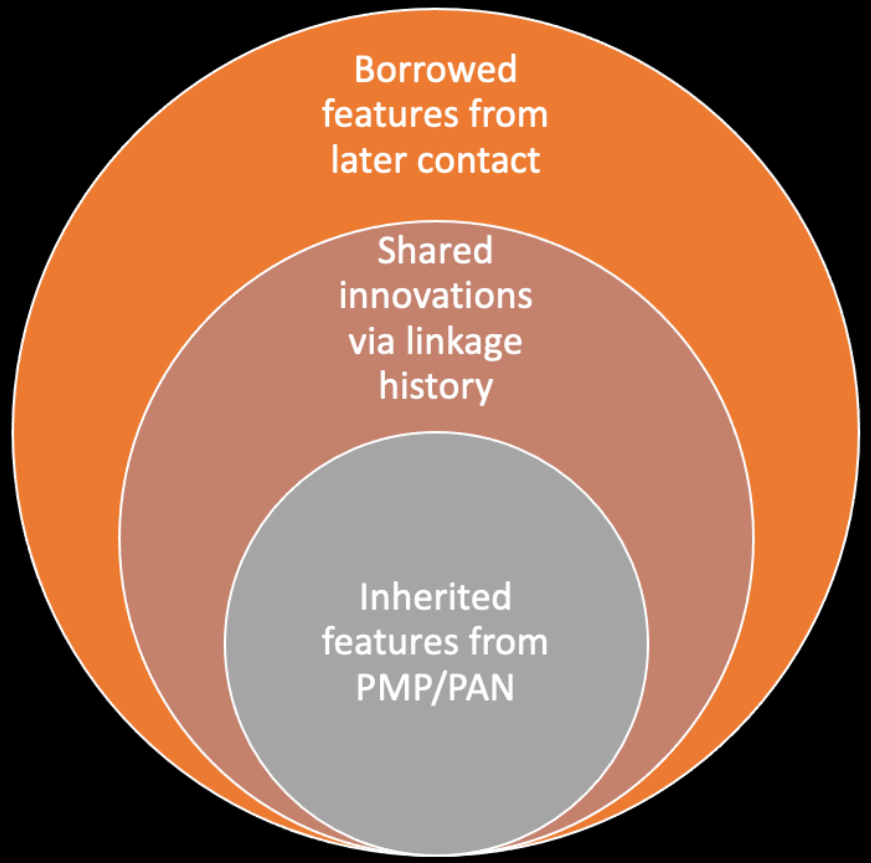


Lexical evidence: supporting evidence for diffusion

- Long distance maritime trade networks have a long history in Island SE Asia
- “no reason to assume that the processes by which immigrant MP languages became established in ISEA involved swift “replacement” of original inhabitants and their non-MP languages. Rather, it is more likely to have involved millennia-long periods of sequences of disasters and migrations, and often intense and stable multi or bilingual contact.” – Klamer (2019)
- Replacement by PPh speakers: Occam’s razor



Lexical evidence: key points (again)



- PPh no longer supported by any exclusively shared phonological innovations ~~*d/z merger~~
- Therefore, it's not possible to distinguish:
  - Retentions only present in Philippines
  - Etyma which diffused through PMP dialect network
  - Etyma spread by later contact
- History and prehistory show abundance of contact

5 Emergence of divergent phonotactics in Austronesian: a distributional typological approach

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Descriptions of the typological profile of the Austronesian language family and its subgroupings often comment on the ‘inconspicuous’ (Adelaar & Himmelmann 2005: 115) nature of the phonology of these languages. Phonotactic patterns are characterized as clustering around a simple syllable structure permitting a single segment in onset and coda positions (Blust 2013; Adelaar Himmelmann 2005; Lynch, Ross, Crowley 2001). Blust (2013) illustrates outlying phonotactic patterns with a handful of language-specific and subgroup-specific examples. However, to date there is no reference quantifying the relative frequency of various phonotactic patterns within the family.

This study takes a distributional typological approach to understanding the diversity and emergence of phonotactic patterns in Austronesian. In a genetically diversified and geographically stratified sample of over 150 languages, we collected data on maximal syllable margin patterns, sonority contours in consonant clusters, properties of word-medial codas, sesquisyllabic patterns, properties of complex nuclei and vowel hiatus, and word stress properties.

This comprehensive data set yields a distributional typology of Austronesian phonotactics that elucidates the geographical patterning of various phonotactic features. We find that canonical (C)V(C) syllable patterns, as posited for Proto-Austronesian, are characteristic of a number of (historically conservative) languages in Taiwan, the Philippines, and Indonesia (see e.g. Blust 2013: 215-222). However, some regions of Austronesia exhibit phonotactic features which are divergent both within the family and crosslinguistically. Among other patterns, these include a concentration of languages with large, Sonority Sequencing Principle-defying consonant clusters in Vanuatu, and a tendency for languages to have unusually diverse complex vocalic nuclei and permissive vowel hiatus patterns in the Polynesian region.

In addition to illustrating the geographical patterning of phonotactic features in Austronesian, this study will use methods of diachronic typology (Greenberg 1969) to examine aspects of the emergence of some of the divergent and complex patterns we observe.

References

Adelaar, Alexander and Nikolaus P. Himmelmann (eds.). 2005. *The Austronesian languages of Asia and Madagascar.* Routledge.

Blust, Robert. 2013. *The Austronesian languages*. Asia-Pacific Linguistics, School of Culture, History and Language, College of Asia and the Pacific, The Australian National University.

Greenberg, Joseph. 1969. Some methods of dynamic comparison in linguistics. In Jean Puhvel (ed.), *Substance and structure of language*. Berkeley & Los Angeles: University of California Press. 147-203.

Lynch, John, Malcolm Ross, and Terry Crowley (eds.). 2002. *The Oceanic languages*. Curzon.

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Emergence of divergent phonotactics in Austronesian: a distributional typological approach

(https://bit.ly/3VAAI2B)

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Background

Austronesian phonology is often described as unremarkable.

Statements about syllable structure and phonotactics in the family emphasize their relative simplicity.

Background

*"Viewed crosslinguistically, Austronesian languages tend to be **fairly inconspicuous with regard to basic phonological features.** [...] The most common syllable structures are **(C)V** and **(C)V(C)**."*

(Adelaar & Himmelmann 2005: 115)

*"[L]anguages in this subgroup are frequently **phonologically less complex than those of many other linguistic groupings in the world**. Syllable structures tend to approximate a simple **CV** type."*

(Lynch, Ross, & Crowley 2002: 34)

Background

Blust (2013) illustrates outlying phonotactic patterns with a handful of language-specific and subgroup-specific examples.

However, to date, there is no reference work **quantifying the relative frequency of phonotactic patterns** within the family.

(But see Donohue to appear on the segmental phonology of Malayo-Polynesian languages of Southeast Asia)

Research questions

1. What is the range and distribution of phonotactic patterns in Austronesian?
2. How do Austronesian phonotactic patterns compare to global patterns?
3. What is the geographic patterning of divergent patterns within Austronesian?
4. How have diverging patterns emerged?

We take a **distributional typology** approach to these questions (Bickel 2015).

Methodology: language sample

148 Austronesian languages (currently)

Selected for:

- genealogical diversity
- geographical representation
- adequate phonological description in source (usually a reference grammar)

Methodology: data

Languages coded for:

- Maximal onset and coda size
- Obligatoriness of onset
- Biconsonantal onset patterns
- Properties of word-internal codas
- Diphthong/complex nucleus inventories
- Vowel hiatus patterns
- Stress patterns

Methodology: global context

For some of our comparisons, we use a global sample of **178 languages** from the Syllable Structure chapter (Easterday to appear) in the ATLAs database (Inman et al. to appear).

- no family represented by more than one language
- geographically diverse

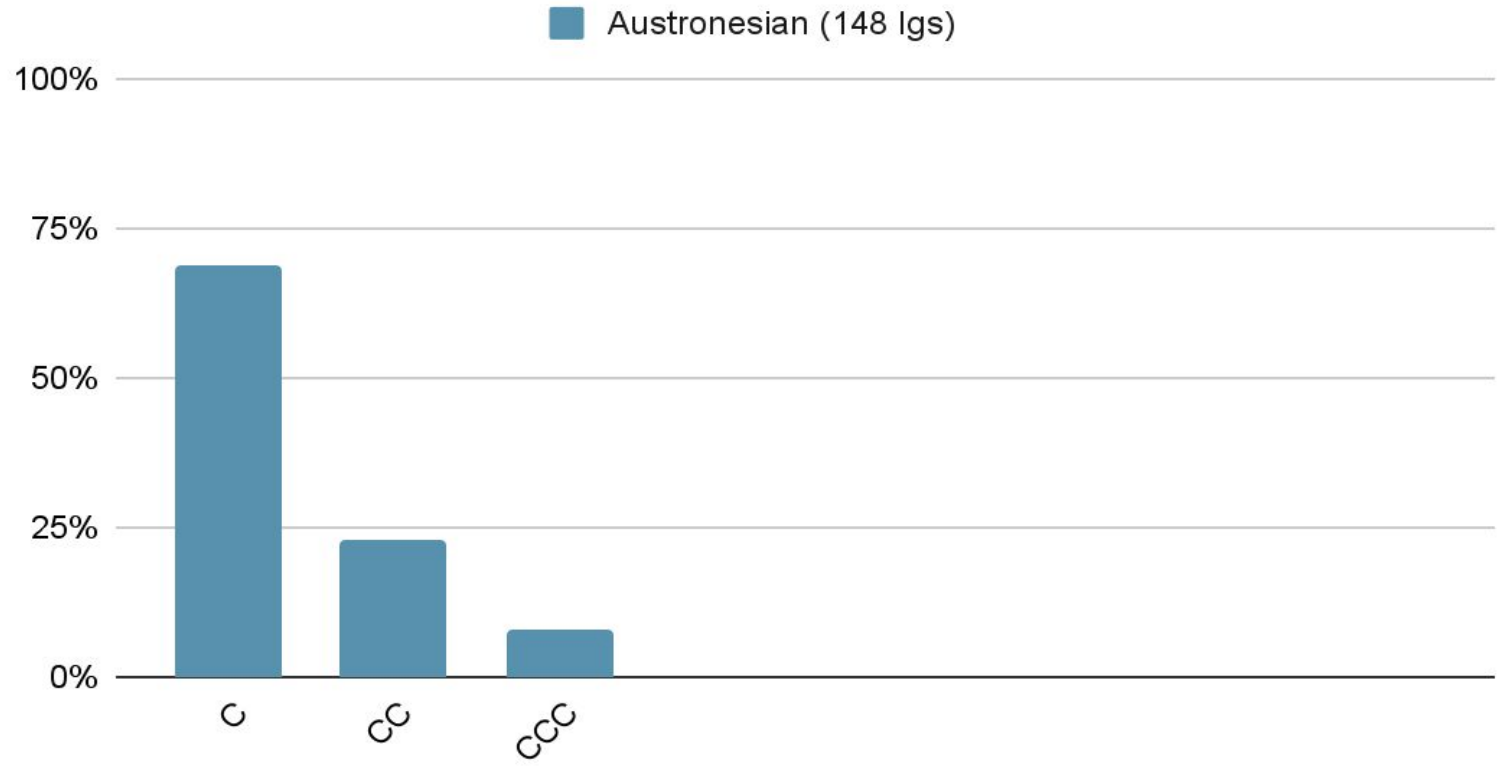
Results: onset patterns

Previous claim:

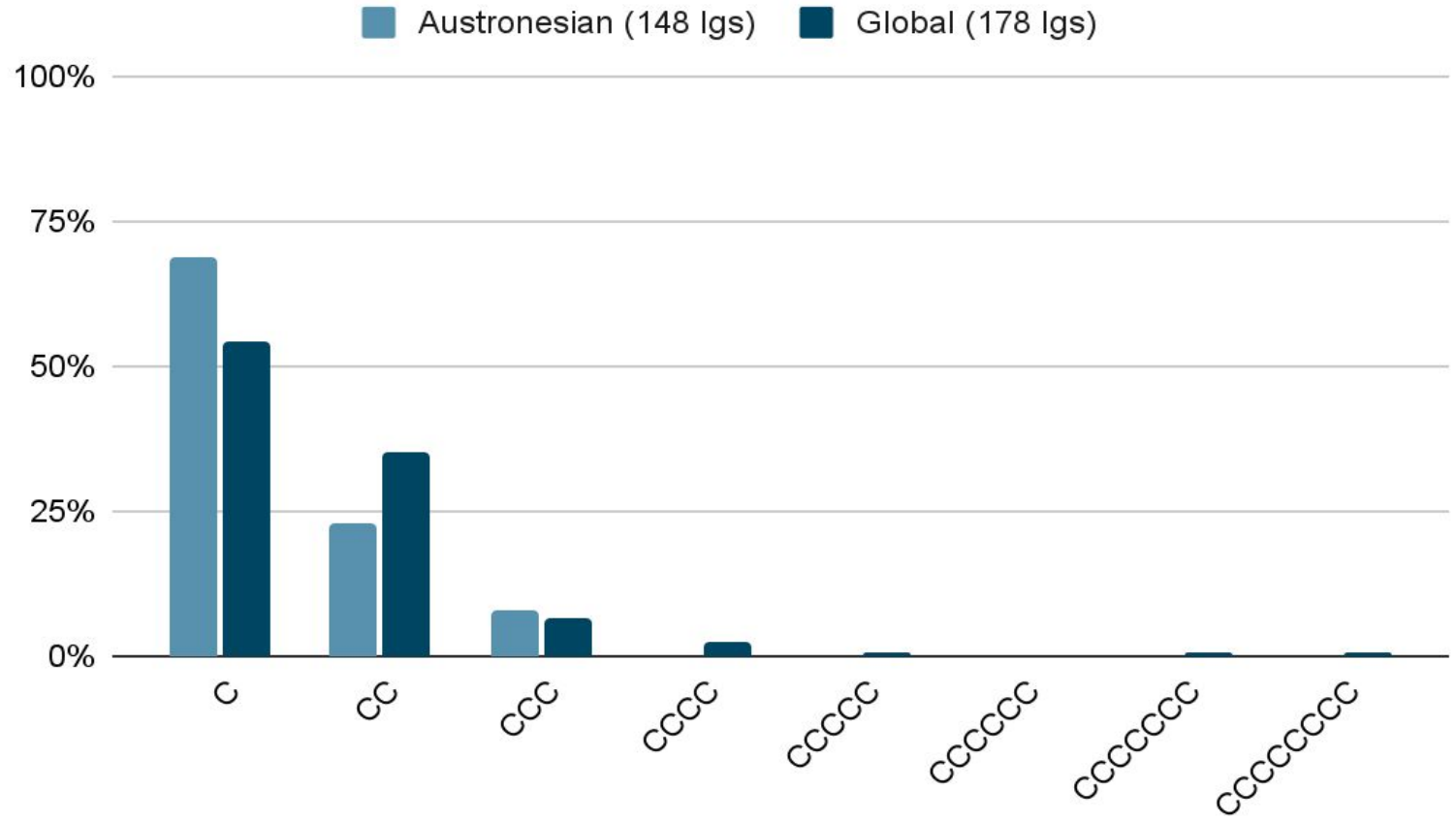
*“The most common syllable structures are **(C)V** and **(C)V(C)**.”*

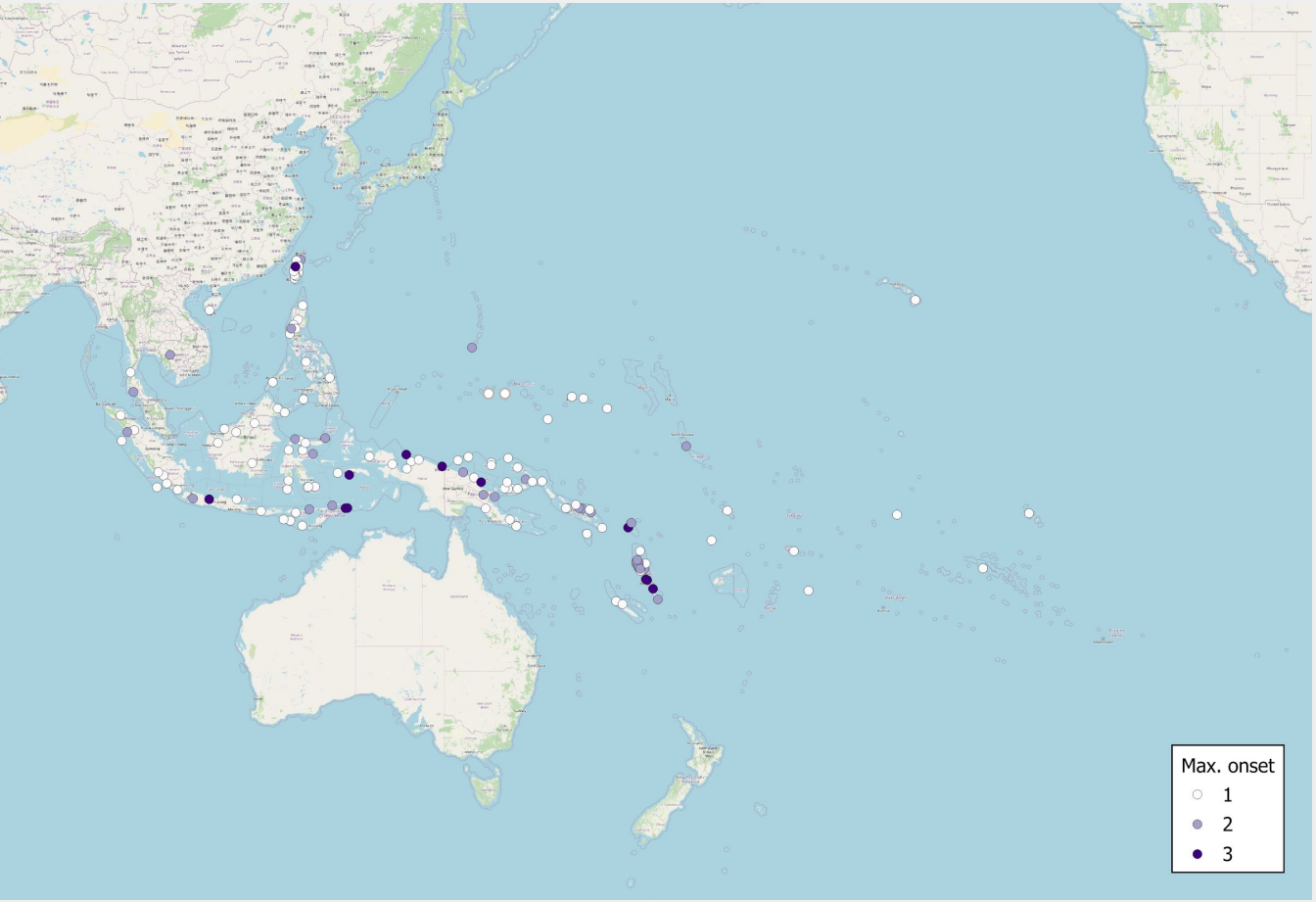
(Adelaar & Himmelmann 2005: 115)

Maximal onset size



Maximal onset size

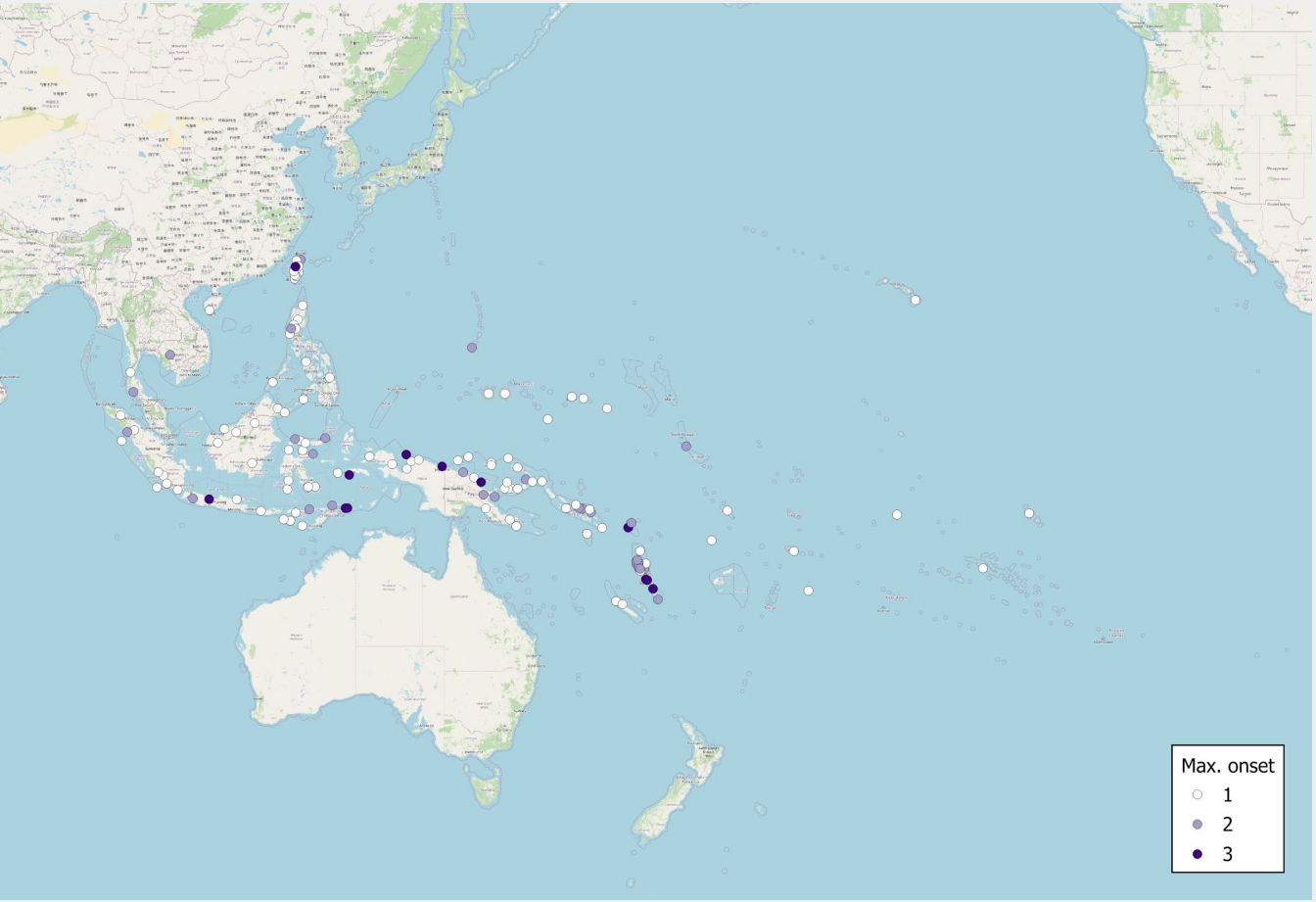




Map made using QGIS 3.36.3; basemap OpenStreetMap

Areas where onsets are almost exclusively simple:

- Philippines
- Borneo
- New Britain
- Polynesia



Map made using QGIS 3.36.3; basemap OpenStreetMap

Languages with **CCC** onsets (12/148) are concentrated in Vanuatu and scattered elsewhere.

e.g. Sie

/**ntru**/ ‘loya cane’

(Crowley 1998: 20)

e.g. Luang

/**tnjamni**/ ‘grave’

(Taber & Taber 2015: 17)

Results: onset patterns

Previous claim:

*“A fair number of languages, including [...] many Philippine languages [...] have **mandatory onsets**.”*

(Adelaar & Himmelmann 2005: 117)

e.g. Ilocano

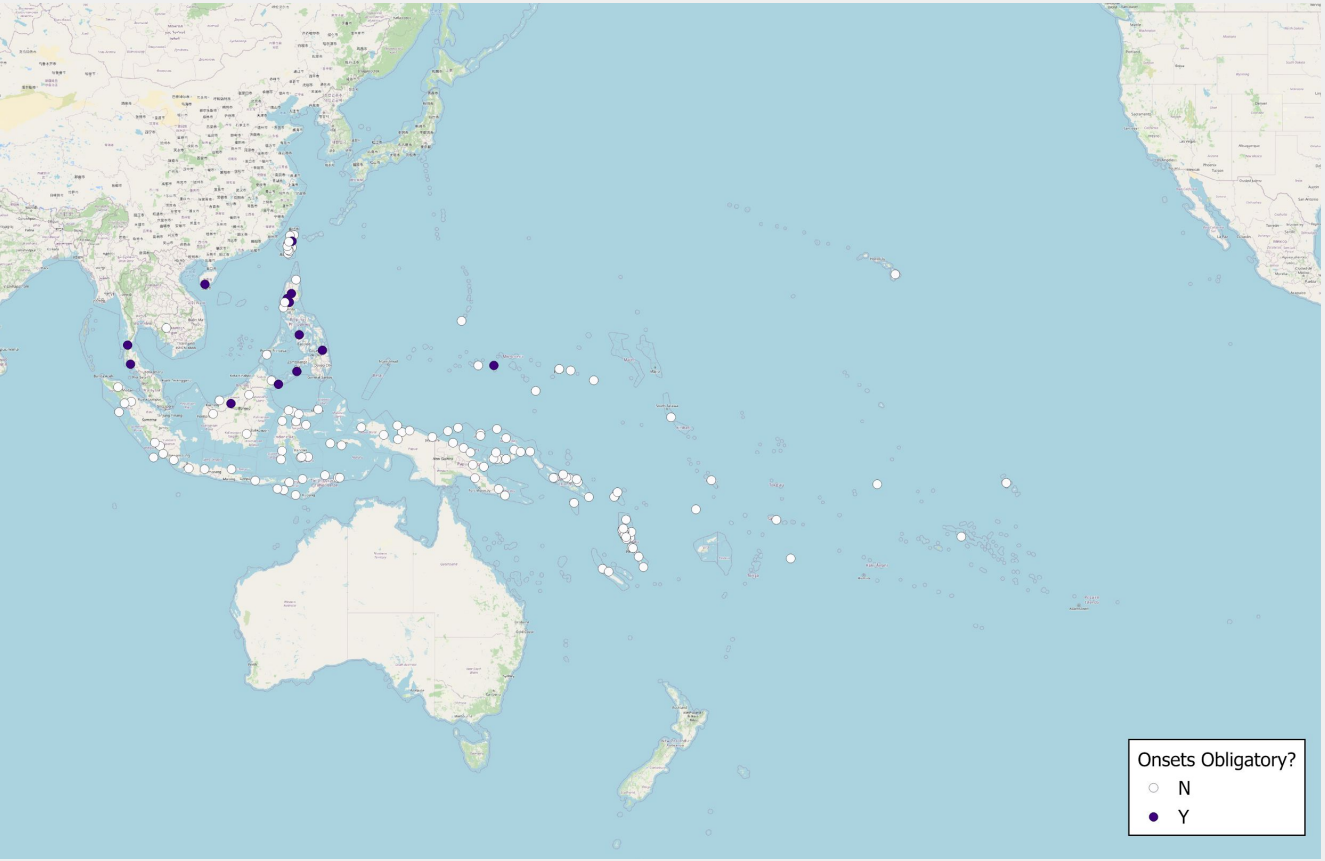
“Every syllable in Ilocano is composed of a consonantal onset and vowel, with an optional consonantal coda.”

/ʔa.rak/ ‘wine’

/ʔag.sa.ŋit/ ‘to cry’

/na.sam.ʔit/ ‘sweet’

(Rubino 1997: 28)



Map made using QGIS 3.36.3; basemap OpenStreetMap

Obligatory onsets are a minority pattern: only **14/148 lgs** show this feature.

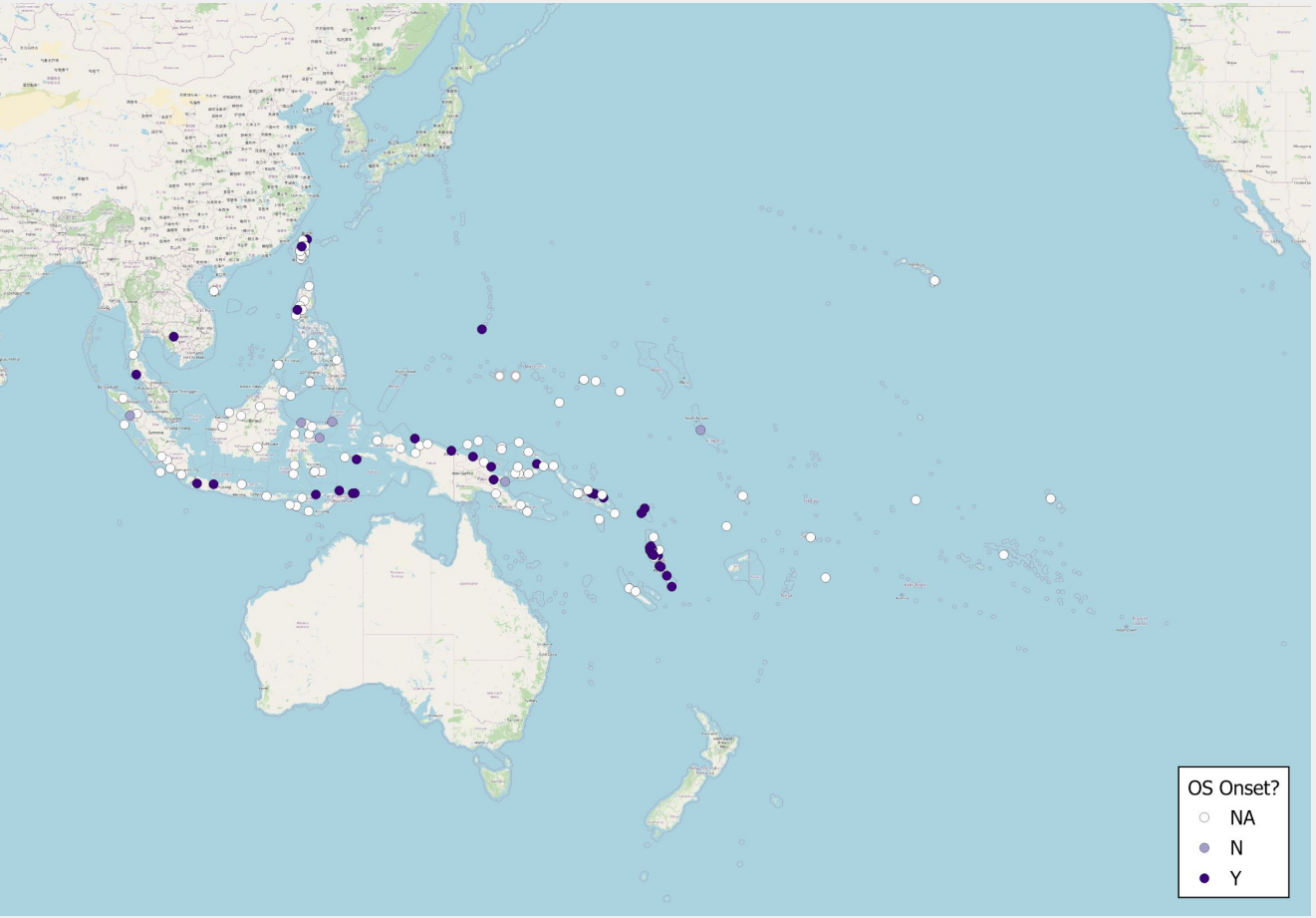
*(Languages with complex onsets are much more frequent at **46/148**.)*

Results: onset patterns

Previous claim:

*"Syllable-internal consonant clusters are typically restricted to onset position and usually consist of **nasal plus obstruent** or **obstruent plus glide or liquid**."*

(Adelaar & Himmelmann 2005: 115)



Map made using QGIS 3.36.3; basemap OpenStreetMap

40/46 lgs with complex onsets have the shape **OS** (obstruent-sonorant).

e.g. CHamoru

/**sjenti**/ ‘feel’

(Chung 2020: 654)

e.g. Nese

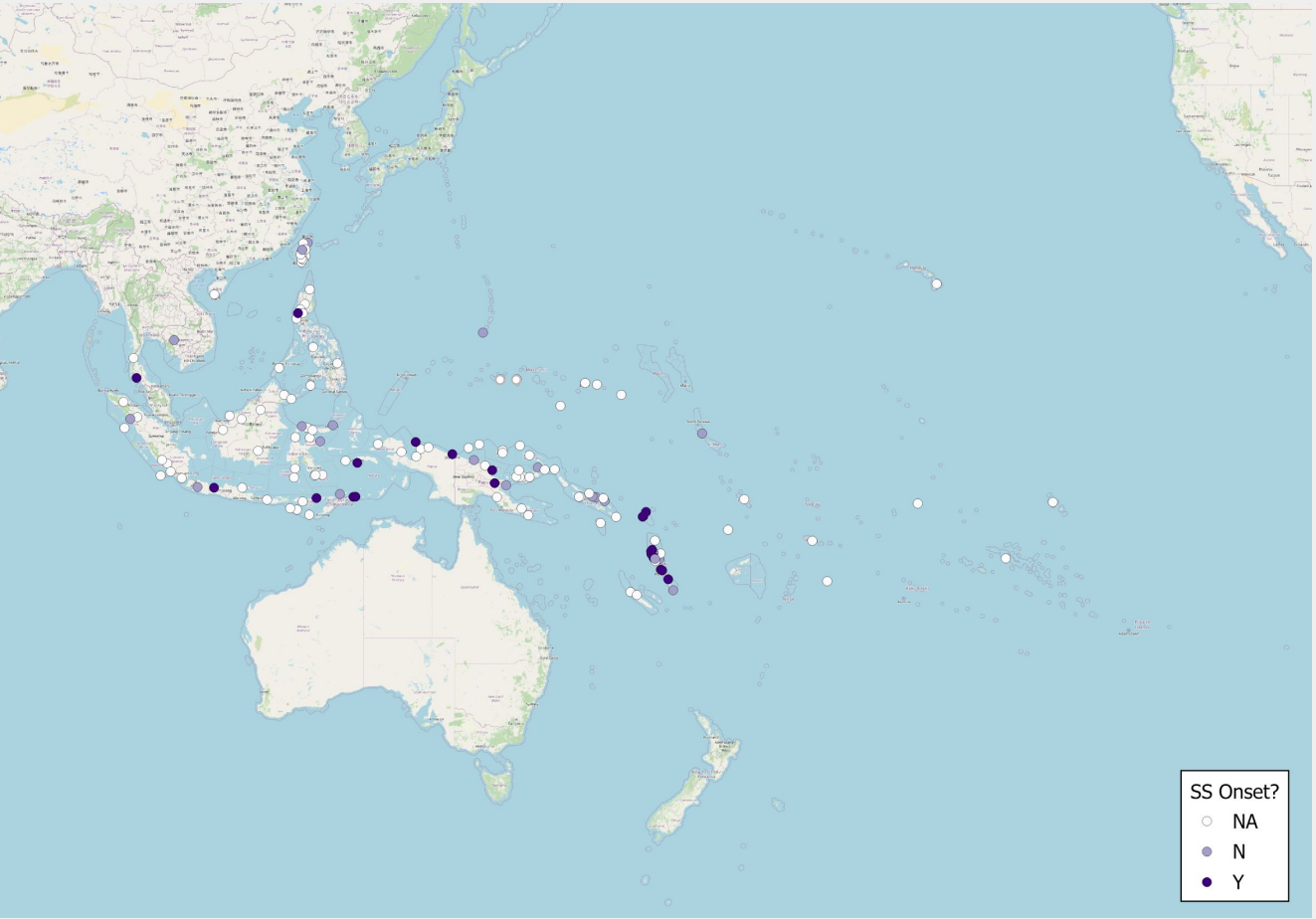
/**tro**/ ‘stand’

(Takau 2016: 65)

e.g. Lamaholot

/**blaha**/ ‘long’

(Kroon 2016: 264)



Map made using QGIS 3.36.3; basemap OpenStreetMap

23/46 lgs with complex onsets have the shape **SS** (sonorant-sonorant).

e.g. Nanggu

/**nj**ɔ/ ‘my (CL.V)”

(Vaa 2013: 112)

e.g. Tobati

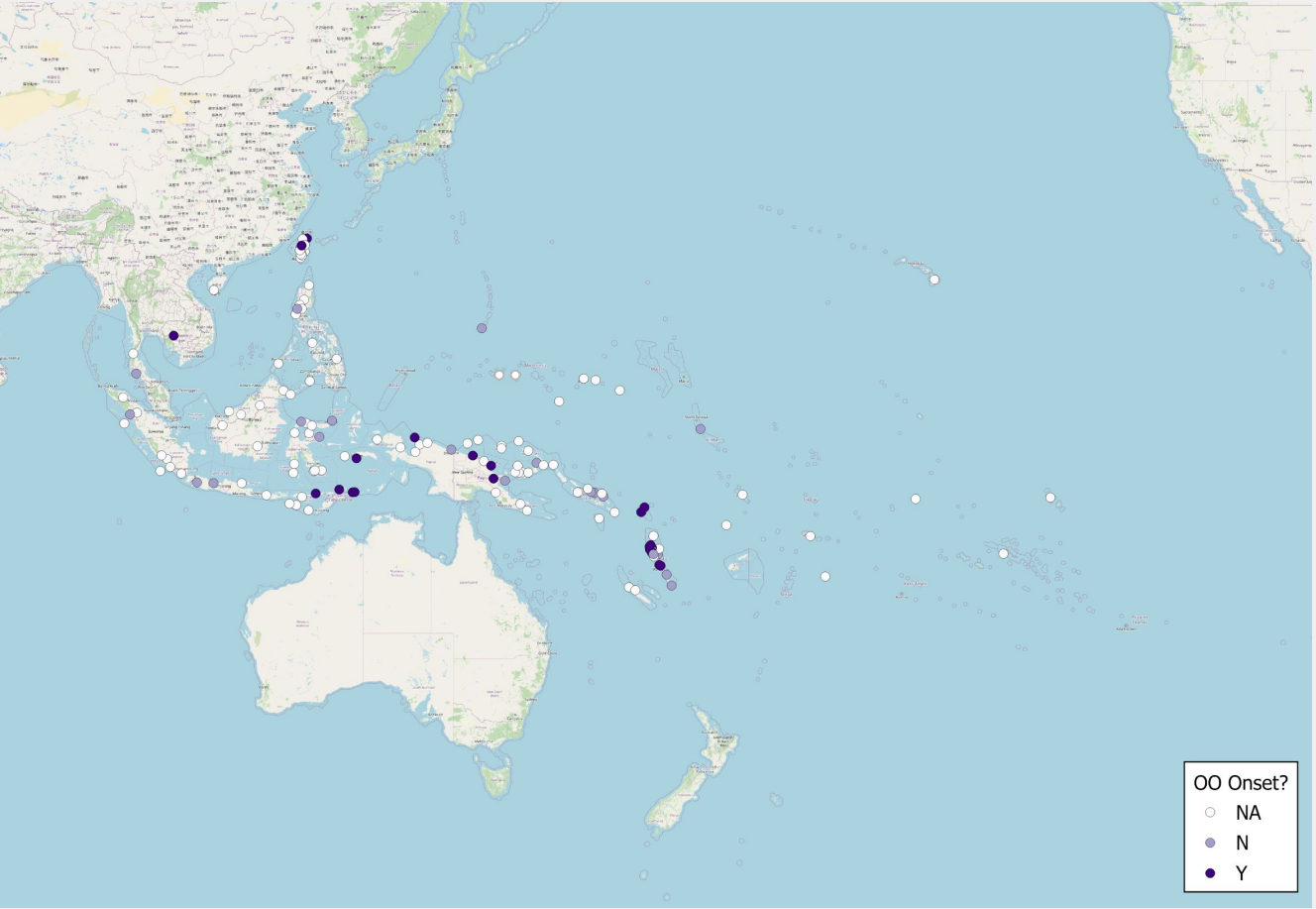
/**rw**ador/ ‘six’

(Donohue 2002: 189)

e.g. Urak Lawoi’

/**ml**upatʃ/ ‘jump’

(Saengmani 1979: 41)



Map made using QGIS 3.36.3; basemap OpenStreetMap

22/46 lgs with complex onsets have the shape **OO** (obstruent-obstruent).

e.g. Leti

/**pt**una/ ‘star’

(Van Engelenhoven 2004: 67)

e.g. Thao

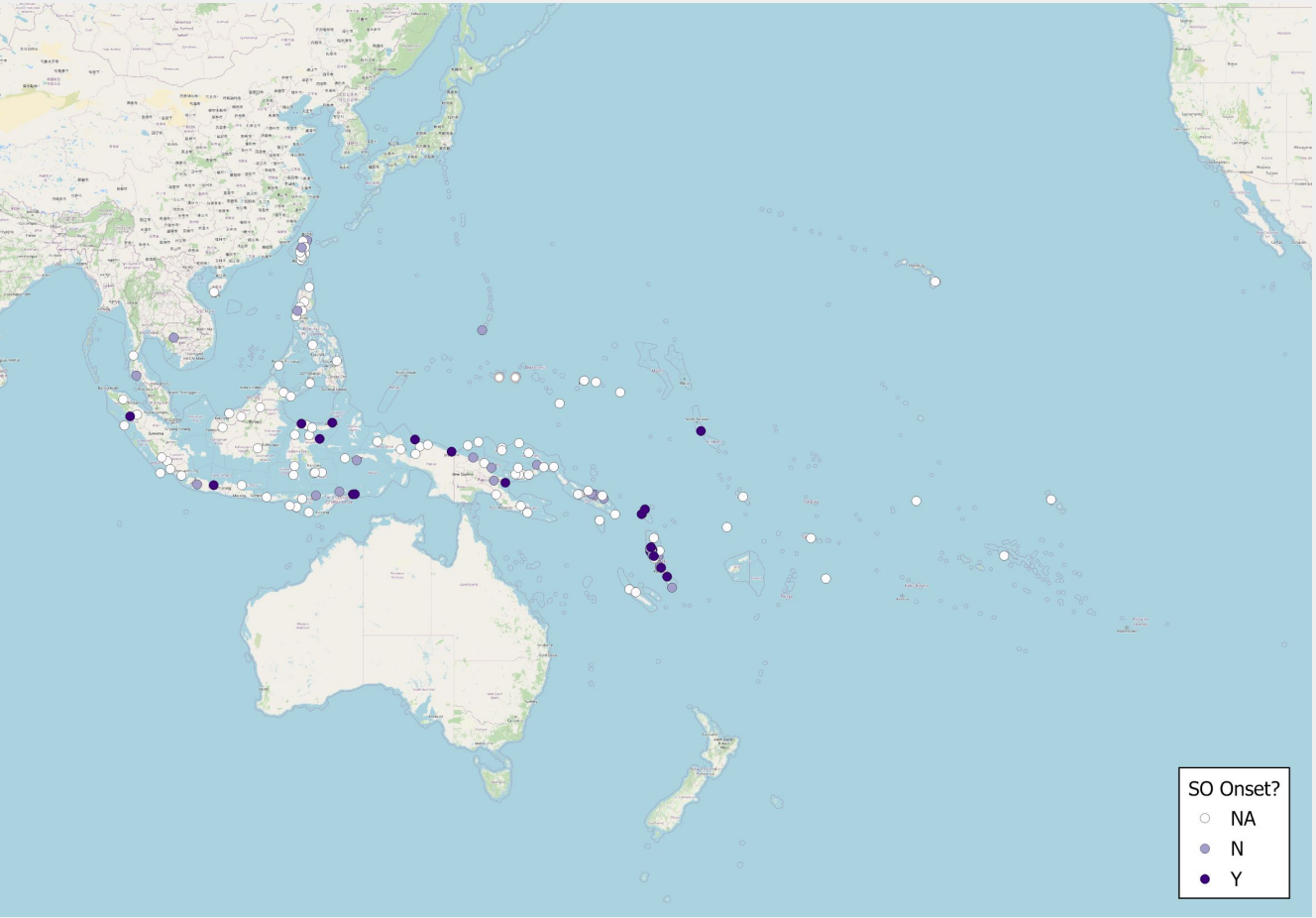
/**qt**iła/ ‘salt’

(Blust 2003: 20)

e.g. Lelepa

/**sk**ei/ ‘INDEF’

(Lacrampe 2014: 42)



Map made using QGIS 3.36.3; basemap OpenStreetMap

19/46 lgs with complex onsets have the shape **SO** (sonorant-obstruent).

e.g. Biak

/**mk**un/ ‘little’

(van den Heuvel 2006: 38)

e.g. Sakao

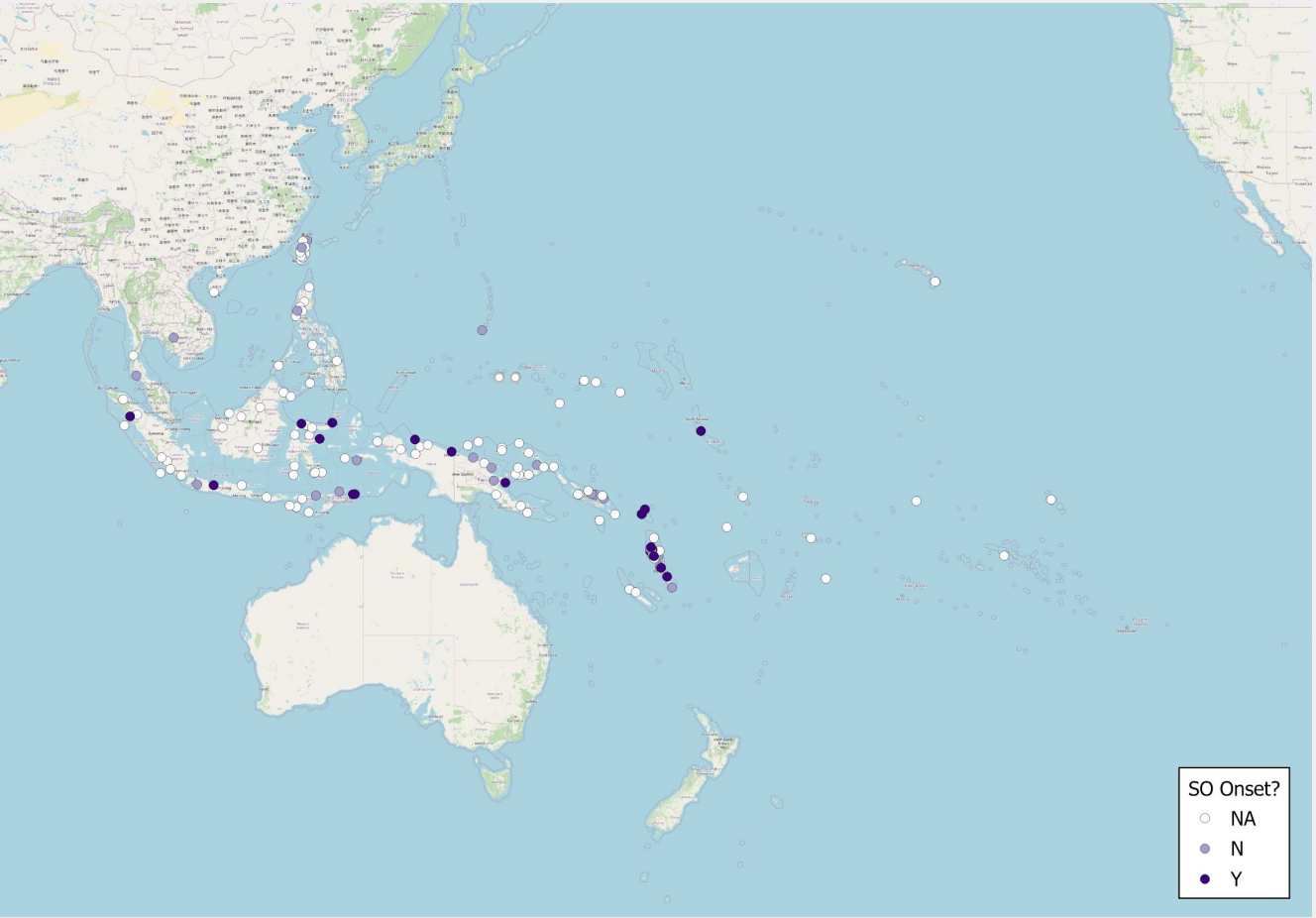
/**rt**ateʁ/ ‘my sisters’

(Touati 2014: 73)

e.g. Gilbertese

/**ŋk**e/ ‘when (PAST)’

(Groves et al. 1985: 18)



Map made using QGIS 3.36.3; basemap OpenStreetMap

6 languages in the sample were reported to have **only SO shapes**:

- Balantak
- Batak Karo
- Gilbertese
- Tondano
- Totoli
- Yabem

CC onset shape	**Austronesian** (46 lgs)	**Global** (78 lgs)
OS	40 lgs *(87%)*	74 lgs *(95%)*
SS	23 lgs *(50%)*	45 lgs *(58%)*
OO	22 lgs ***(48%)***	31 lgs ***(40%)***
SO	19 lgs ***(41%)***	21 lgs ***(27%)***

In comparison to the global sample, Austronesian languages are (somewhat) **more likely to have obstruent-final CC onsets,** and (somewhat) **less likely to have sonorant-final CC onsets.**

Globally, **obstruent-final CC onsets** are more likely to be found in languages with maximal onsets of **3 Cs or more**. In Austronesian, these are usually found in languages with maximal onsets of **2 Cs**.

There are **9 languages** with all shapes (OS, OO, SO, and SS):

Vanuatu and Santa Cruz Islands

- Araki
- Axamb
- Nafsan
- Nalögo
- Vaeakau-Taumako
- Wanohe

Maluku

- Leti
- Luang

New Guinea

- Biak

In Vanuatu, the deletion of unstressed interconsonantal vowels, often ***high vowels in pretonic position***, has led to the historical emergence of diverse onset cluster types:

e.g. Nanggu

POc ‘eye’	pre-PRSC	PRSC	Nanggu
*mata	*mala	*na mnɒ	mnɔ

(Vaa 2013: 105; Ross & Næss 2007: 467)

e.g. Merei /ˈtlui/ ~ Tiale /tuˈlui/ ‘pull’

Merei /ˈlmana/ ~ Tiale /liˈmana/ ‘his/her hand’

(Chung 2005: 8)

Similar ***optional processes*** are reported to operate synchronically in Nanggu, Araki, Mavea, and Lelepa.

Results: coda patterns

Previous claims:

*"The most common syllable structures are **(C)V** and **(C)V(C)**."*

(Adelaar & Himmelmann 2005: 115)

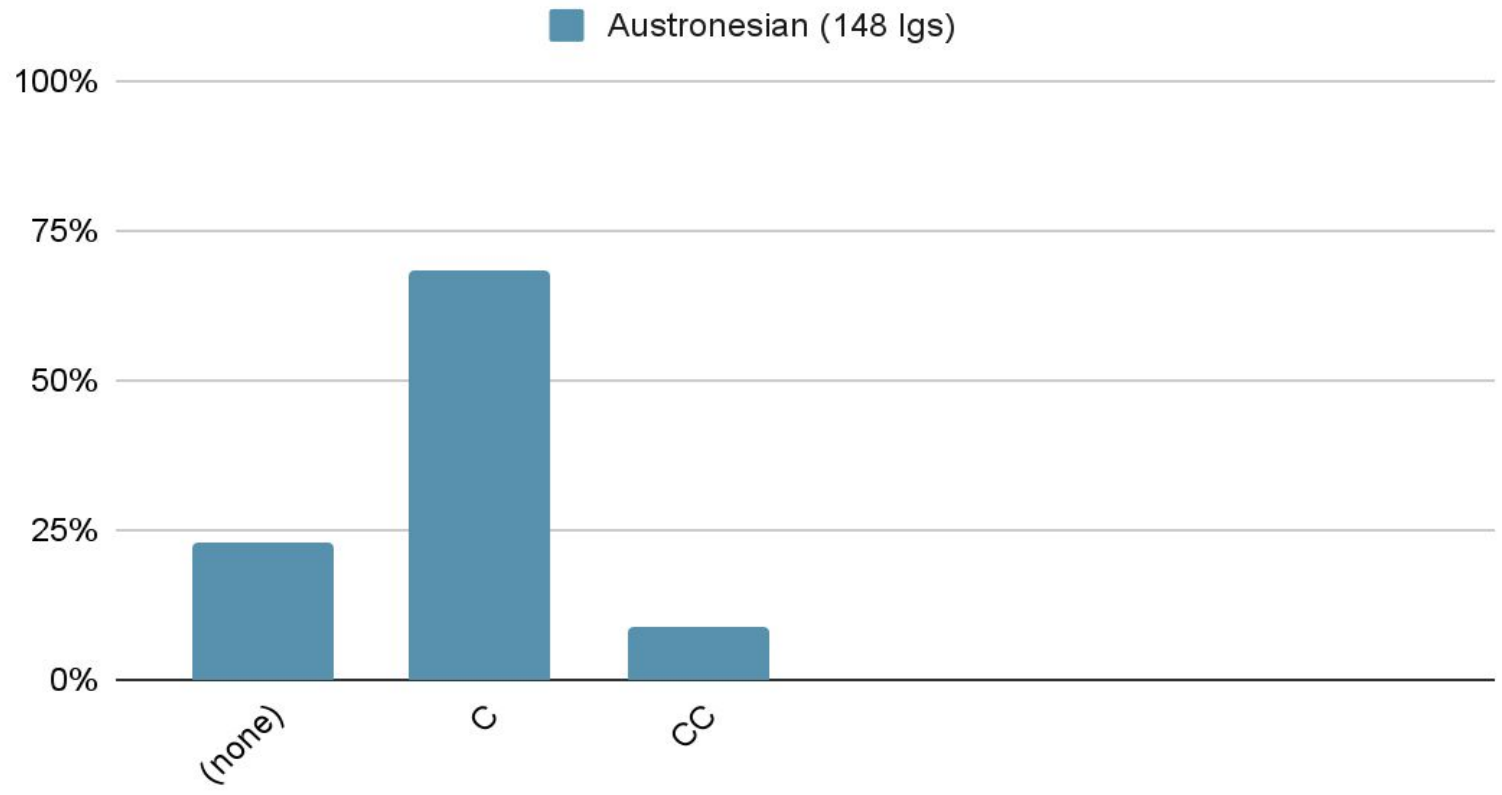
*"Syllable structures tend to approximate a simple **CV** type."*

(Lynch, Ross, & Crowley 2002: 34)

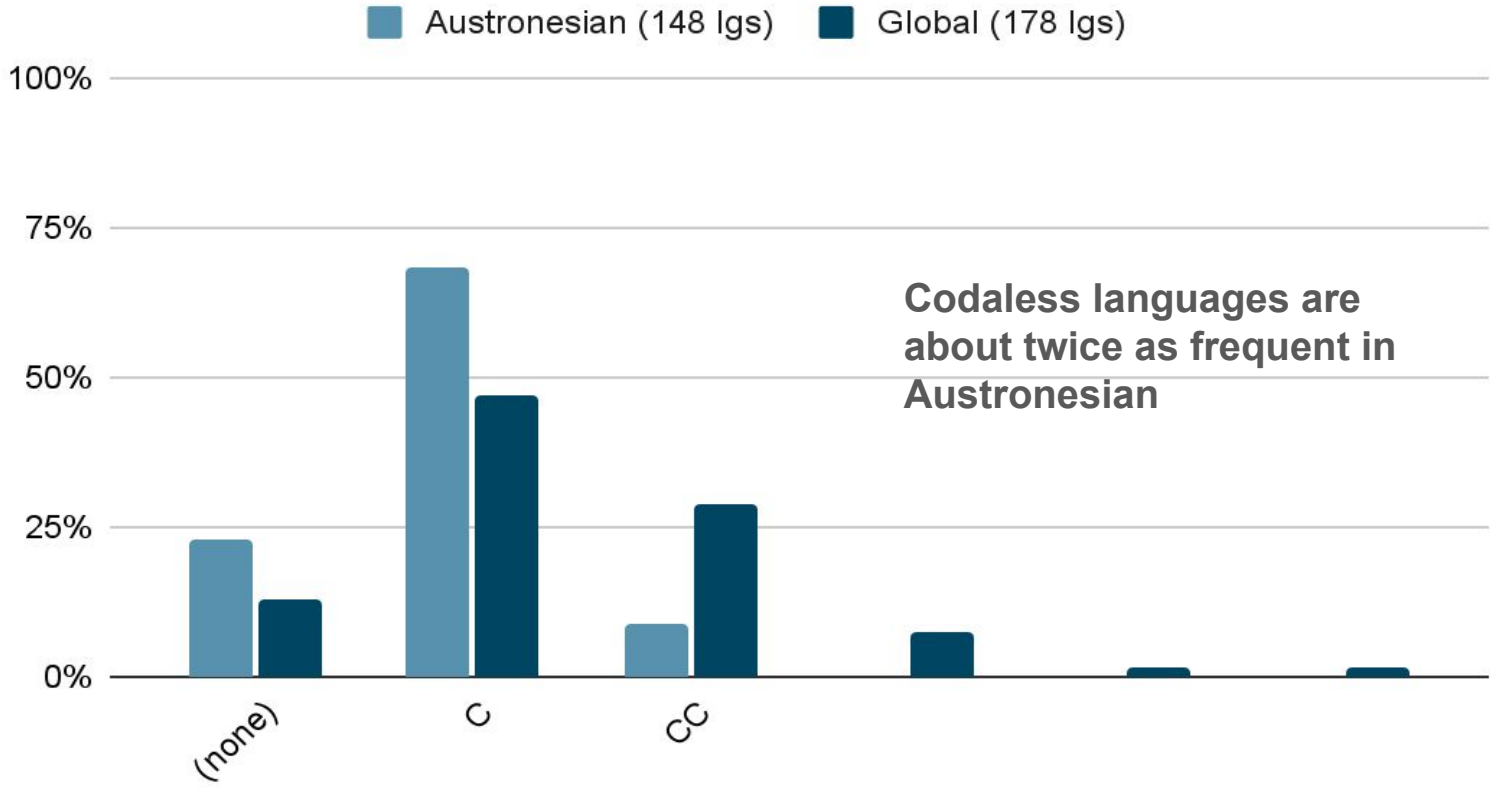
"Syllable-internal consonant clusters are typically restricted to onset position..."

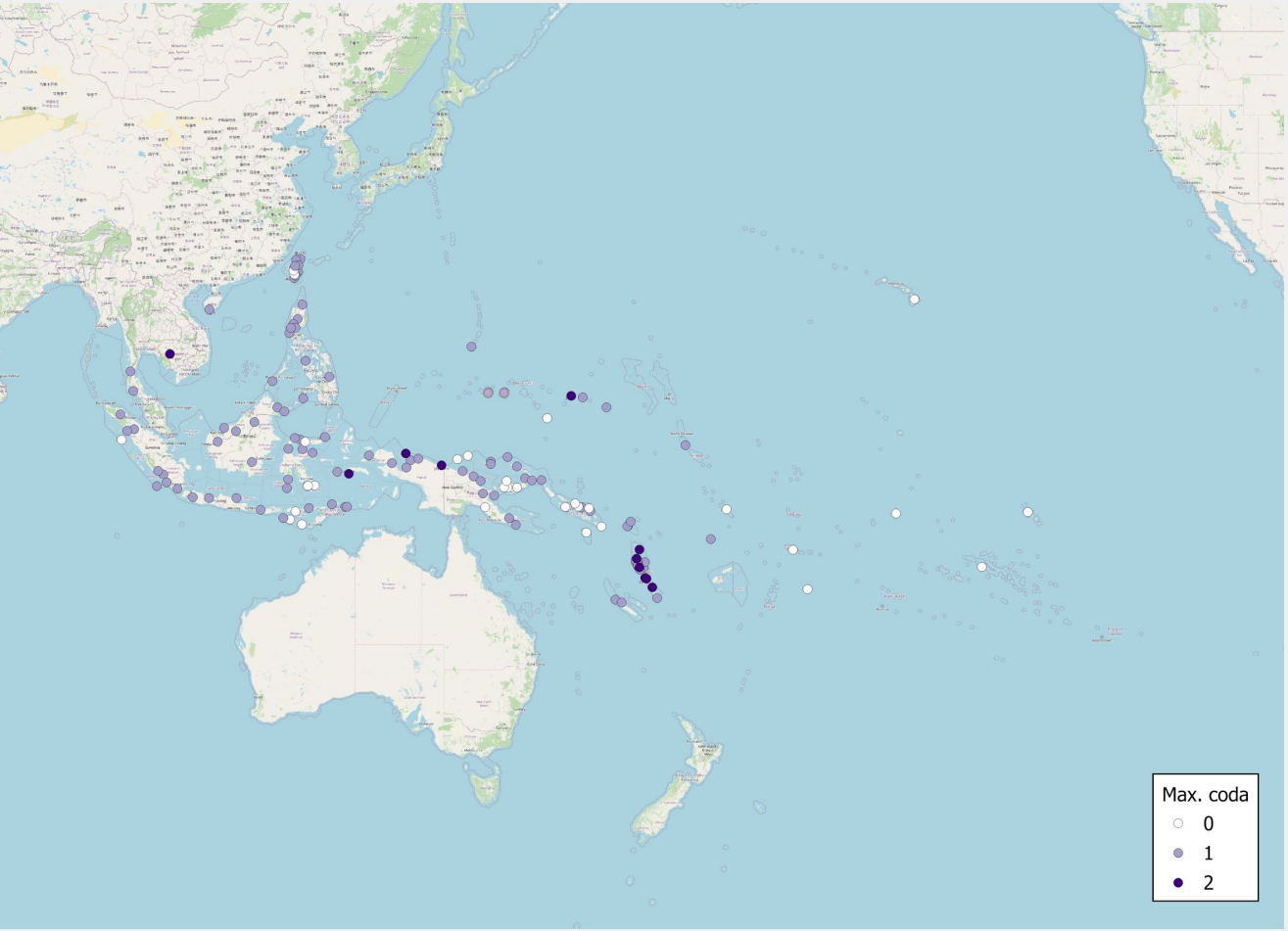
(Adelaar & Himmelmann 2005: 115)

Maximal coda size



Maximal coda size





Map made using QGIS 3.36.3; basemap OpenStreetMap

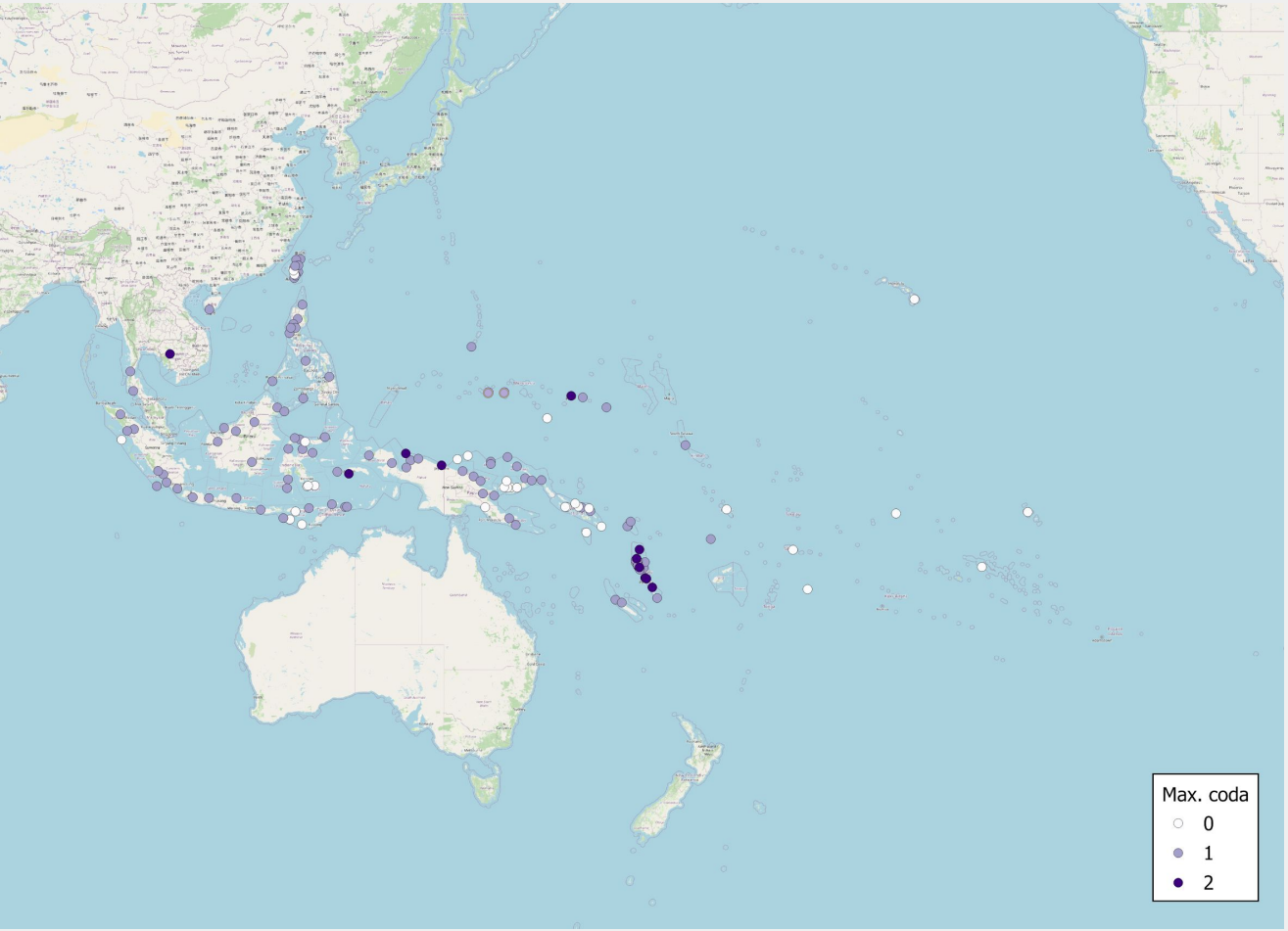
Languages with codas predominate (**114/148**, or **77%** of languages).

Solomons, New Britain, and Polynesia are codaless hotspots.

Complex codas are heavily concentrated in Vanuatu. They tend to be substantially more restricted than complex onsets.

e.g. Nafsan complex coda inventory /**lf rk**/

(Thieberger 2004: 63)



Map made using QGIS 3.36.3; basemap OpenStreetMap

In the sample, we observe codas emerging from word-final unstressed vowel reduction and deletion, often of ***high vowels***.

e.g. Nanggu

/**u**/ is particularly subject to weakening after oral and nasal stops:

/**dɔn(u)**/ ‘here’

Older speakers:

[ˈ**dɔnu̯**]

Younger speakers:

[ˈ**dɔn**]

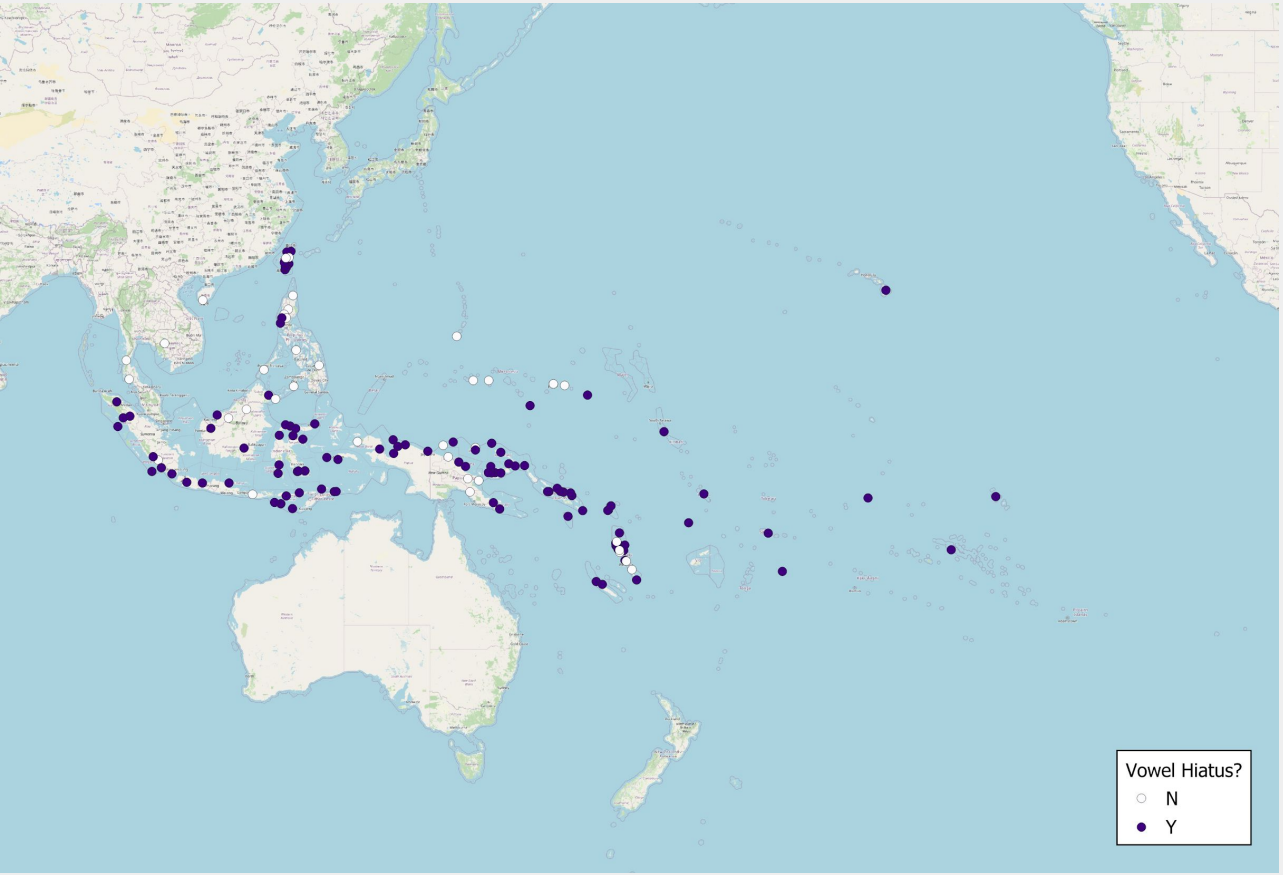
(Vaa 2013: 119)

Results: vowel hiatus

Vowel hiatus is significantly more likely to occur in languages with canonical **(C)V** structure, globally:

- $p < .001$ in 100 language sample stratified for syllable complexity (Easterday 2019)

Since canonical **(C)V** structure is more common in Austronesian than it is globally, we'd expect vowel hiatus to be widespread in the family.

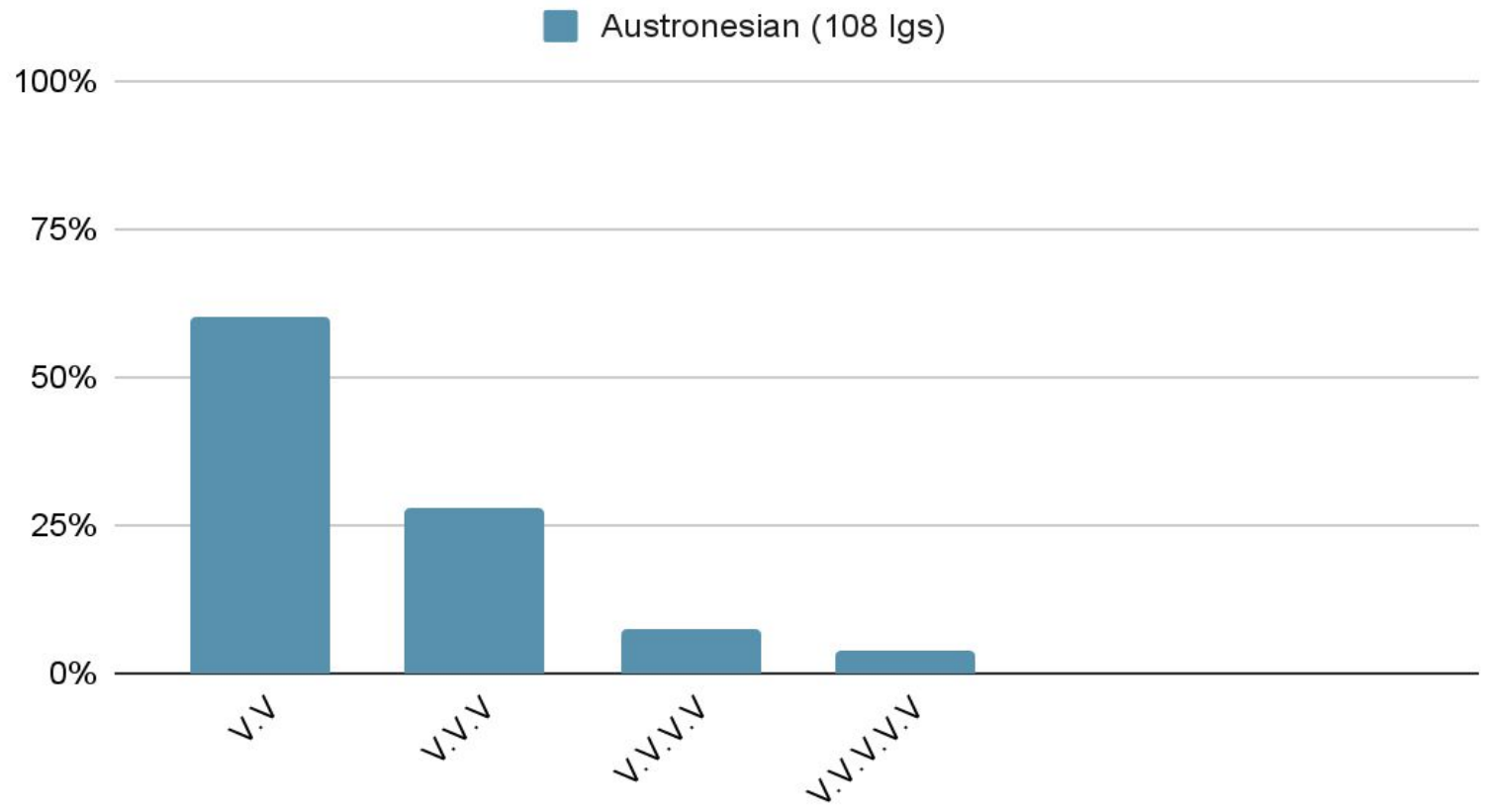


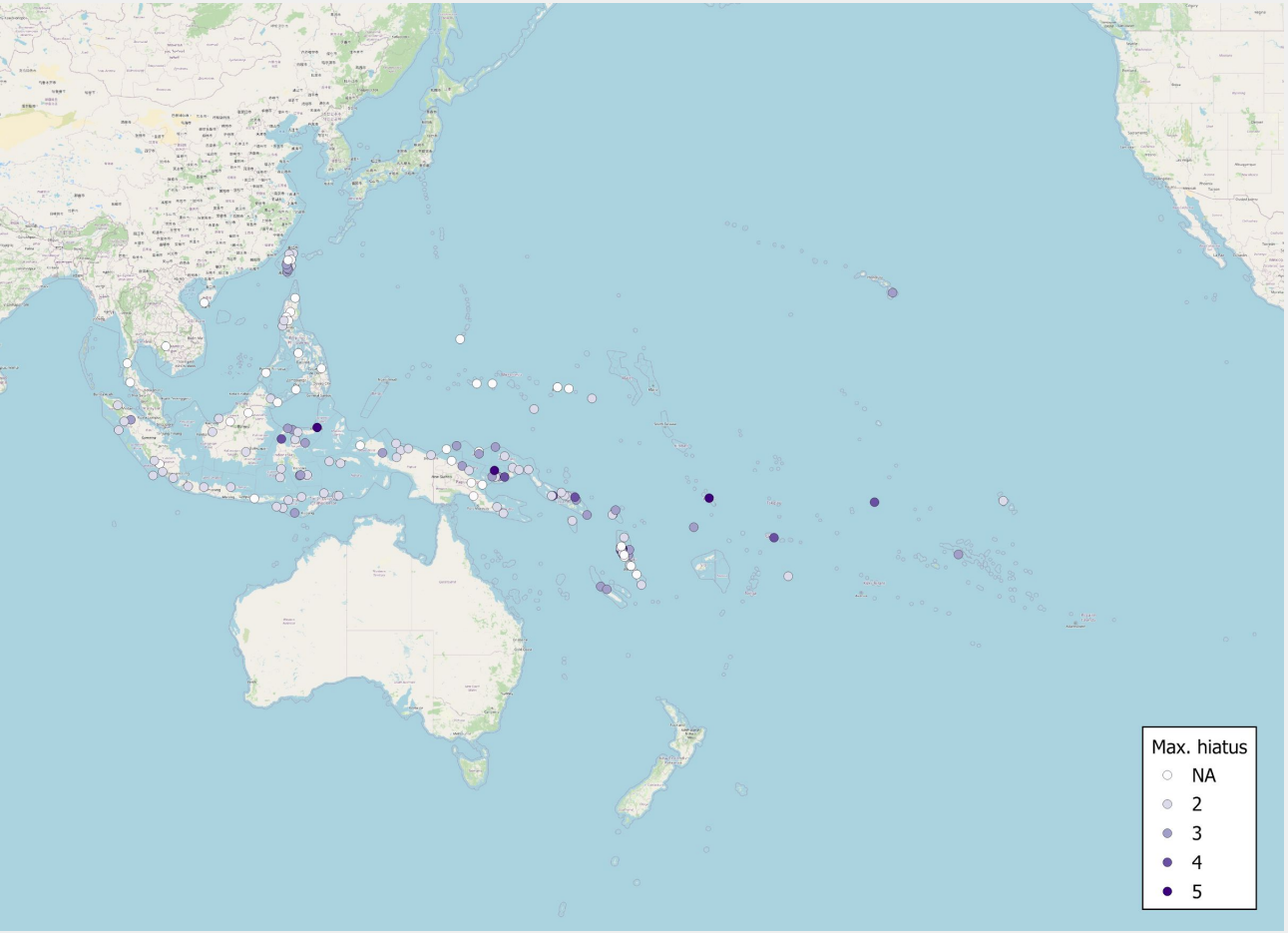
Map made using QGIS 3.36.3; basemap OpenStreetMap

Vowel hiatus within words is widespread outside Philippines, where onsets are usually obligatory.

This pattern is ubiquitous in Polynesia, Solomons, and New Britain, which are all also notable codaless regions, as well as Sulawesi.

Maximal sequence of vowels in hiatus





Map made using QGIS 3.36.3; basemap OpenStreetMap

Extreme manifestations of hiatus (4 or 5 vowels) are reported for languages in Polynesia, New Britain, Vanuatu, and Sulawesi.

e.g. Nakanai

'Whole word [and initial] clusters of two to four vowels may occur.'

/**eiau**/ 'I'

(Johnston 1980: 254)

e.g. Tondano

'[O]ne sequence of five vowels [has] been recorded.'

/**maoaoas**/

'is continually washing'

(Sneddon 1975: 26)

Discussion

Austronesian phonotactics are not uniform.

- Within-family variation tends to cluster in geographical hotspots according to the feature, but not exclusively, and most patterns show some scatter.

Austronesian phonotactics are not inconspicuous from a crosslinguistic perspective.

- Higher prevalence of sonority reversals and plateaus in biconsonantal onsets.
- Higher rates of simple syllable structure and vowel hiatus.

Mahalo nui loa!

References

Adelaar, Alexander and Nikolaus P. Himmelmann (eds.). 2005. The Austronesian languages of Asia and Madagascar. Routledge.

Bickel, Balthasar 2015. Distributional typology: statistical inquiries into the dynamics of linguistic diversity. In Bernd Heine & Heiko Narrog (eds.), The Oxford Handbook of Linguistic Analysis, 2nd edition, Oxford: Oxford University Press.

Blust, Robert. 2003. Thao Dictionary. (Language and Linguistics Monograph Series, A5.) Taipei: Academia Sinica, Institute of Ethnology.

Blust, Robert. 2013. The Austronesian languages. Asia-Pacific Linguistics, School of Culture, History and Language, College of Asia and the Pacific, The Australian National University.

Chung, Sandra. 2020. Chamorro grammar. Santa Cruz: University of California.

Crowley, Terry. 1998. An Erromangan (Sye) Grammar. (Oceanic Linguistics Special Publication, 27.) Honolulu: University of Hawaii Press.

Donohue, Mark. To appear. Malayo-Polynesian languages of Southeast Asia: segmental phonologies. In Alexander Adelaar and Antoinette Schapper (eds.), The Oxford Guide to the Malayo-Polynesian Languages of Southeast Asia.

Donohue, Mark. 2002. Tobati. In John Lynch and Malcolm Ross and Terry Crowley (eds.), The Oceanic Languages, 186-203. Richmond: Curzon.

Easterday, Shelece. 2019. Highly complex syllable structure: A typological and diachronic study. Studies in Laboratory Phonology 9. Berlin: Language Science Press.

Easterday, Shelece. To appear. Syllable structure. In David Inman, Natalia Chousou-Polydouri, Marine Vuillermet, Kellen Parker van Dam, Shelece Easterday, Françoise Rose, Alena Witzlack-Makarevich, Kevin M. Bätscher, Oscar Cocaud-Degrève, Anna Graff, Selma Hardegger, Tai Hong, Thomas C. Huber, Diana Krasovskaya, Raphaël Luffroy, Nora Muheim, André Müller, Alexandra Nogina, David Timothy Perrot, & Balthasar Bickel (eds.), The ATLAs database: Areal Typology of the Languages of the Americas.

Engelenhoven, Aone van. 2004. Leti: A Language of Southwest Maluku. (Verhandelingen van het Koninklijk instituut voor taal-, land- en volkenkunde, 211.) Leiden: KITLV Press.

Groves, Terab'ata R., Gordon W. Groves & Roderick Jacobs. 1985. Kiribatese: An Outline Description. (Pacific Linguistics: Series D, 64.) In Terab'ata R. Groves and Gordon W. Groves and Roderick Jacobs (eds.) Canberra: Research School of Pacific and Asian Studies, Australian National University.

Guérin, Valérie M. P. R. 2011. A grammar of Mavea: An Oceanic language of Vanuatu. (Oceanic Linguistics Special Publication, 39.) Oceanic Linguistics. Honolulu: University of Hawai'i Press.

Mahalo nui loa!

References

Inman, David, Natalia Chousou-Polydouri, Marine Vuillermet, Kellen Parker van Dam, Shelece Easterday, Françoise Rose, Alena Witzlack-Makarevich, Kevin M. Bätscher, Oscar Cocaud-Degrève, Anna Graff, Selma Hardegger, Tai Hong, Thomas C. Huber, Diana Krasovskaya, Raphaël Luffroy, Nora Muheim, André Müller, Alexandra Nogina, David Timothy Perrot, & Balthasar Bickel (eds.). To appear. The ATLAs database: Areal Typology of the Languages of the Americas.

Heuvel, Wilco van den. 2006. Biak: Description of an Austronesian language of Papua. 138. Utrecht: Vrije Universiteit Amsterdam dissertation.

Johnston, Raymond L. 1980. Nakani of New Britain: The grammar of an oceanic language. (Pacific Linguistics B, 70.) Canberra: Australian National University.

Kroon, Yosep Bisara. 2016. A grammar of Solor-Lamaholot: A Language of Flores, Eastern Indonesia. Adelaide: University of Adelaide dissertation.

Lacrampe, Sébastien. 2014. Lelepa: Topics in the grammar of a Vanuatu language. Australian National University dissertation.

Lynch, John, Malcolm Ross, and Terry Crowley (eds.). 2002. The Oceanic languages. Curzon.

Ross, Malcolm, & Åshild Næss. 2007. An Oceanic origin for Äiwoo, the language of the Reef Islands. *Oceanic Linguistics* 46(2): 456-48.

Rubino, Carl Ralph Galvez. 1997. A Reference Grammar of Ilocano. Ann Arbor: University of California at Santa Barbara dissertation.

Saengmani, Amon. 1979. Phonology of the Urak Lawoi' language: Adang island. Bangkok: Mahidol University MA thesis.

Sneddon, James N. 1975. Tondano Phonology and Grammar. (Pacific Linguistics: Series B, 38.) Canberra: Research School of Pacific and Asian Studies, Australian National University.

Taber, Kathleen B. & Mark H. Taber. 2015. Luang Grammar and Phonology Sketch. (SIL e-Books, 63.) [Dallas]: SIL International.

Takau, Lana Grelyn. 2016. A grammar of Nese. Australia: University of Newcastle dissertation.

Touati, Benjamin. 2014. Description du sakao, langue océanienne du nord-est Santo (Vanuatu). Université de la Sorbonne (Paris IV) dissertation.

Vaa, Anders. 2013. A Grammar of Engdewu: An Oceanic language of Solomon Islands. University of Oslo dissertation.