On the rise of applicatives in West Nusantara languages

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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)

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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

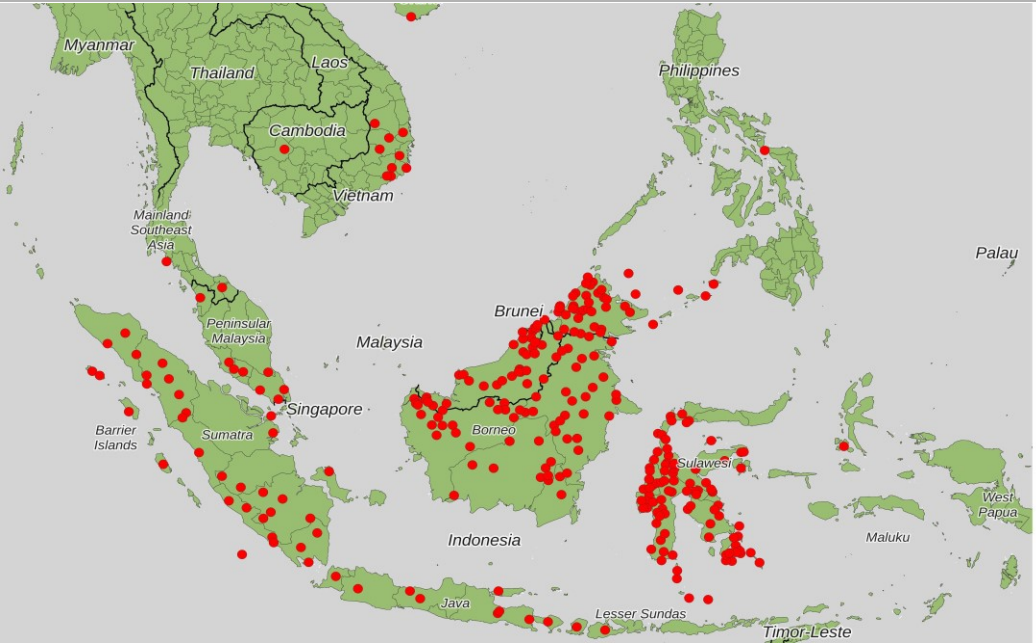
a. *Toko ento beli-in tiang buku.*
shop DIST PV.buy-LOC.APPL 1SG book

'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)

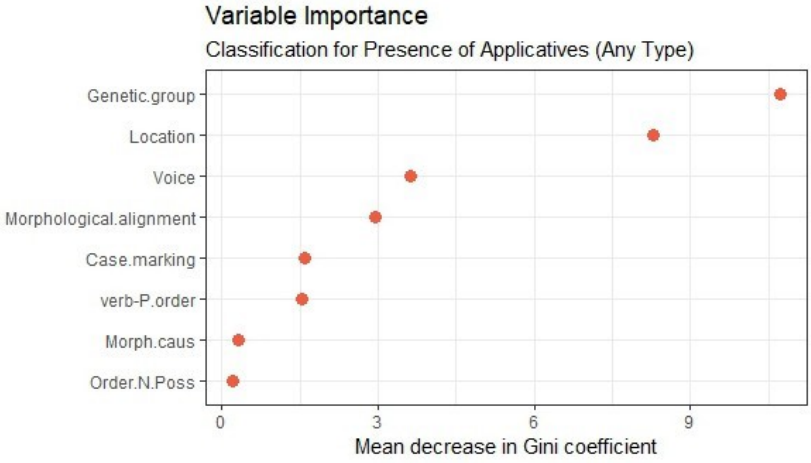
(Artawa 1998: 55)



Austronesian languages originating in West Nusantara (321)

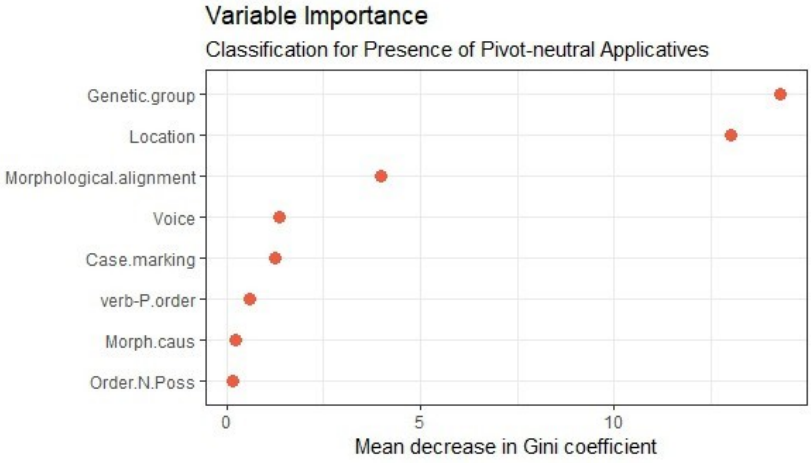
Language sample (85)

Random Forest Classification Analysis (see Breiman 2001)



OOB error estimate: 16.46%

Random Forest Classification Analysis



OOB error estimate: 18.99%

Geographic distribution

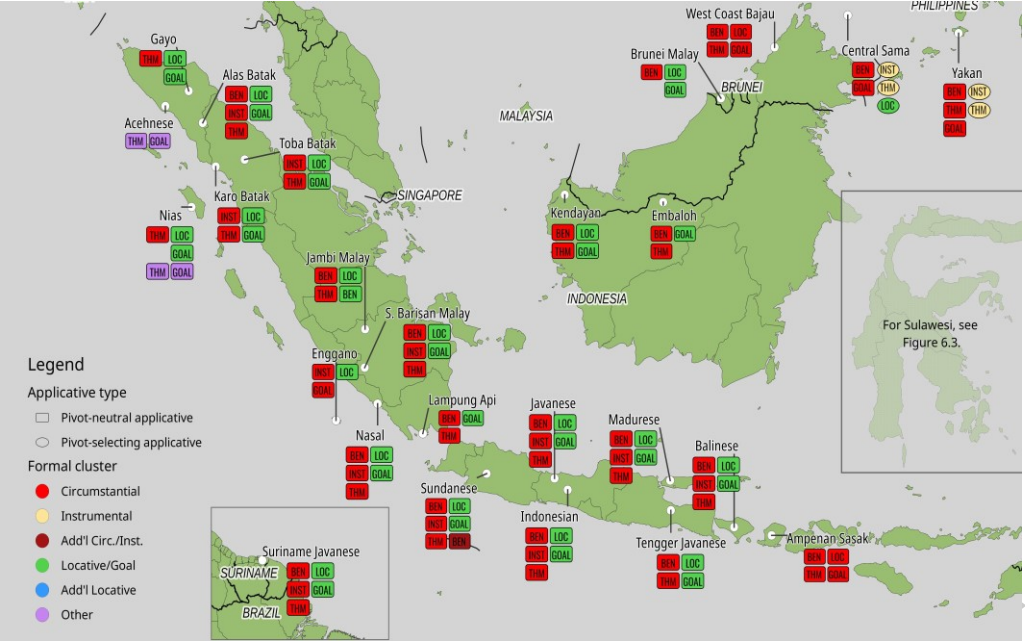
Findings

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)

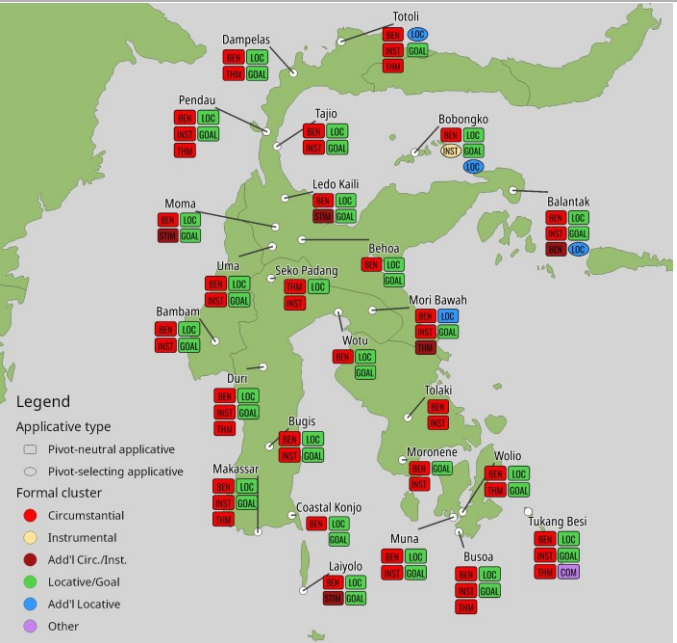
Lack of applicatives

- 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	*-∅	*-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*	*∅-/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.		Propositive		Promissory	
*-ay	AV	*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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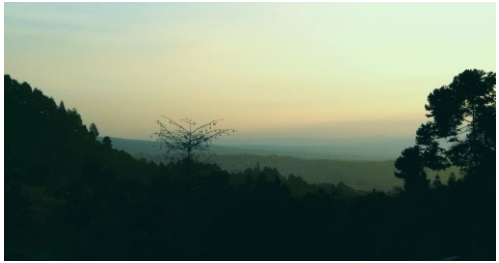

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Javanese benefactive/instrumental applicatives

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	*-á*	✓			*-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* *-Cari*	THM 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'

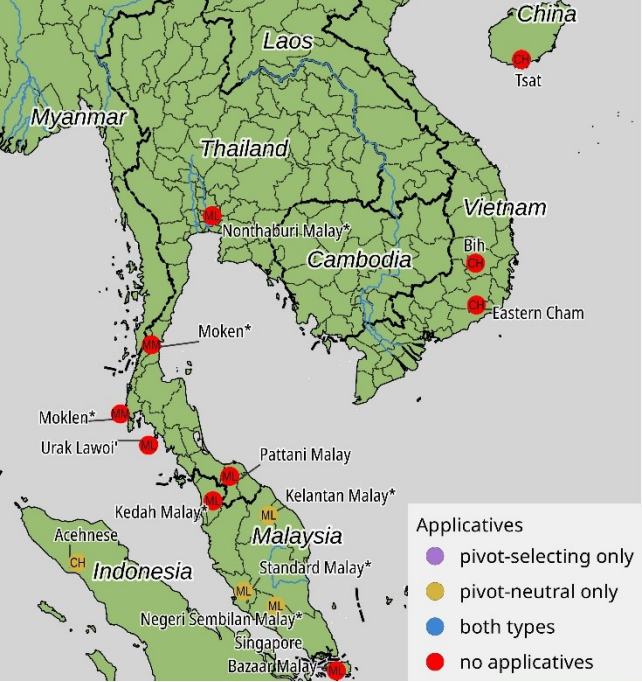
b. ***ni*** *ular aiq degeq nyora ruba turuaq=ng*
PV snake that constantly AV.attack hole dibbling.stick=3

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

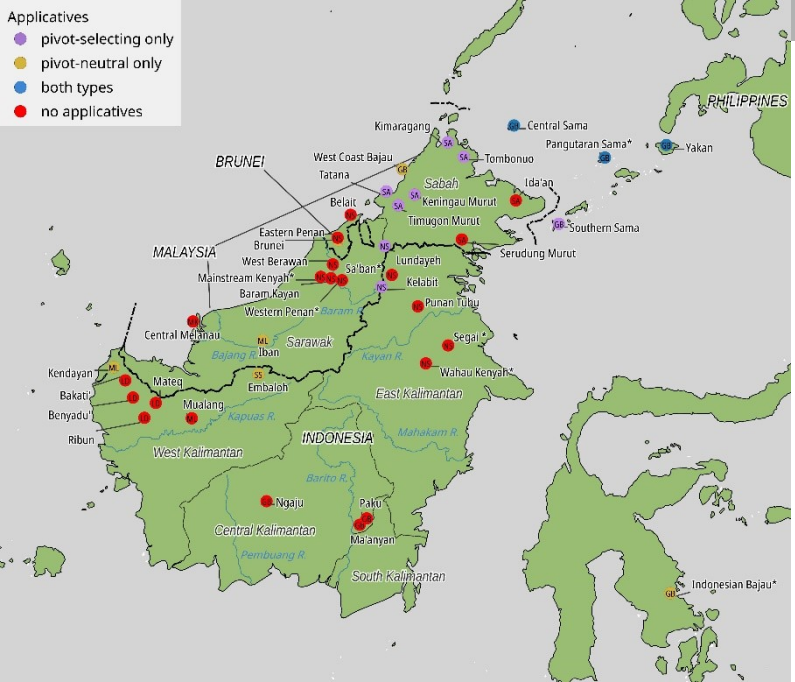
(8) Sa'ban, Periphrastic PV with 'make'

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

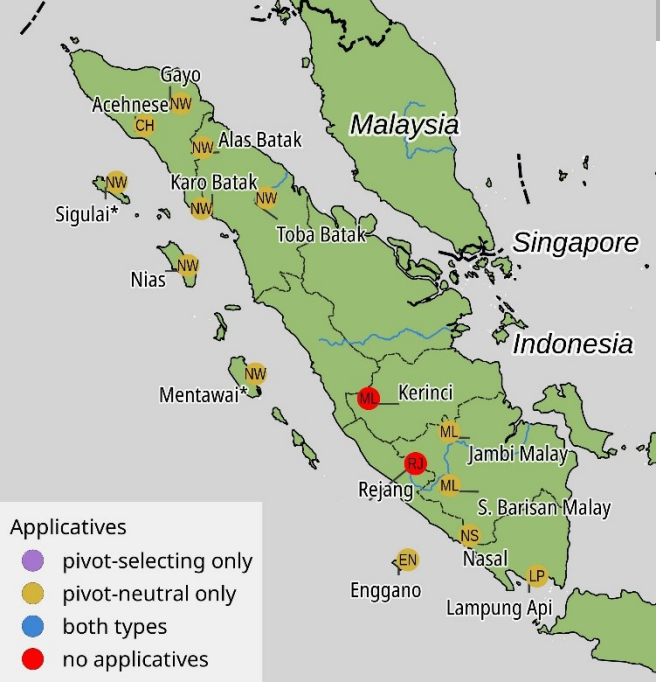
'He will cut down this tree.' (Clayre 1996: 78)



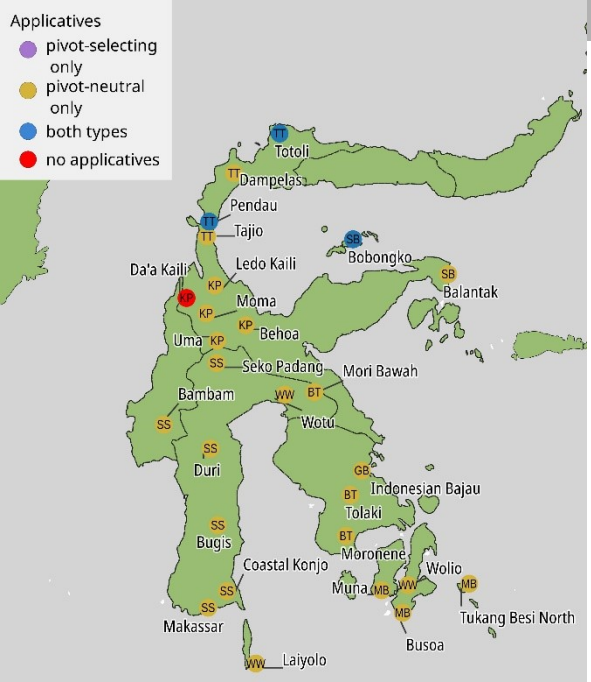
Map 6: Distribution of applicatives in Mainland SE Asia & Peninsular Malaysia



Map 7: Distribution of applicatives in Borneo



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



Map 9: Distribution of applicatives in Sulawesi