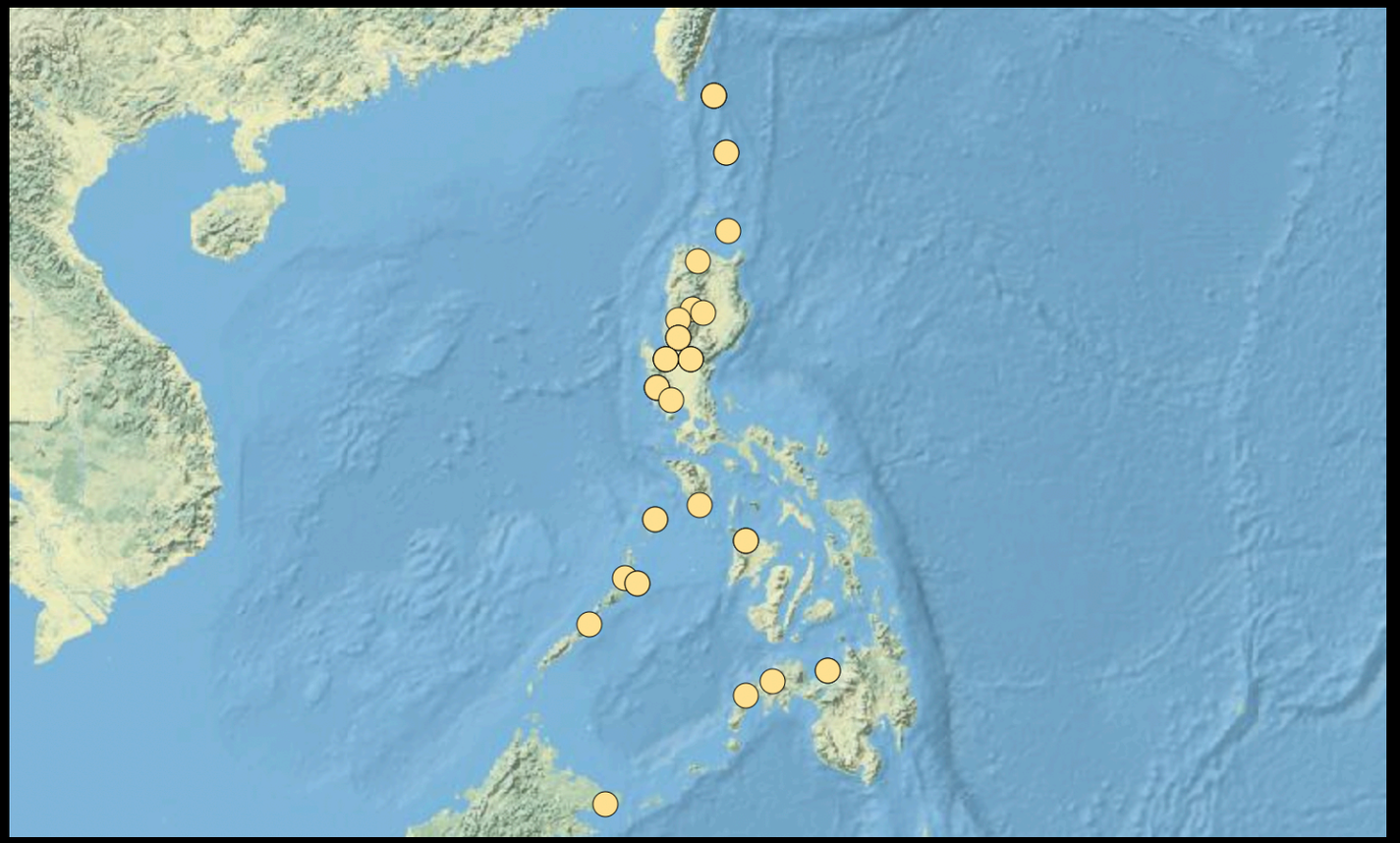
Contact or inheritance? New evidence on the Proto-Philippines debate



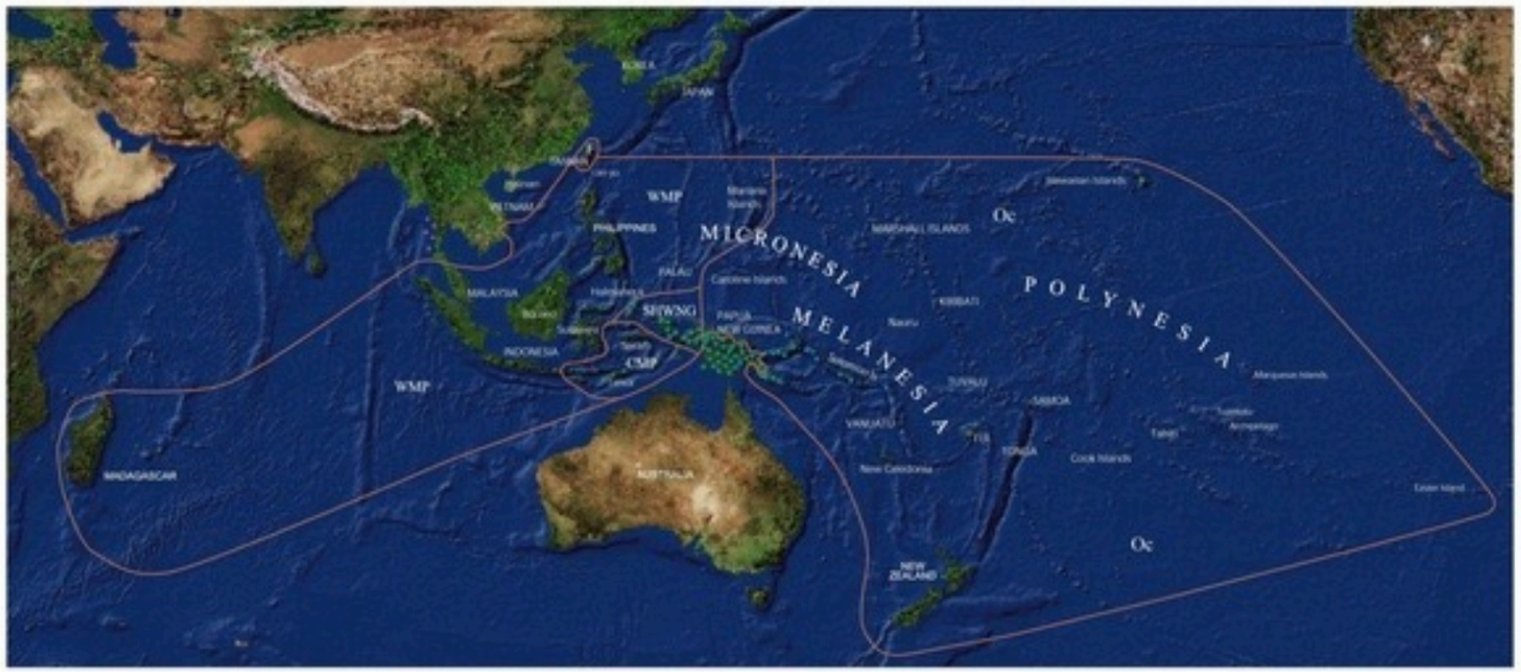
Victoria Chen[1], Kristina Gallego[2], Jonathan Kuo[3], Isaac Stead[4], & Benjamin van der Voorn[5]

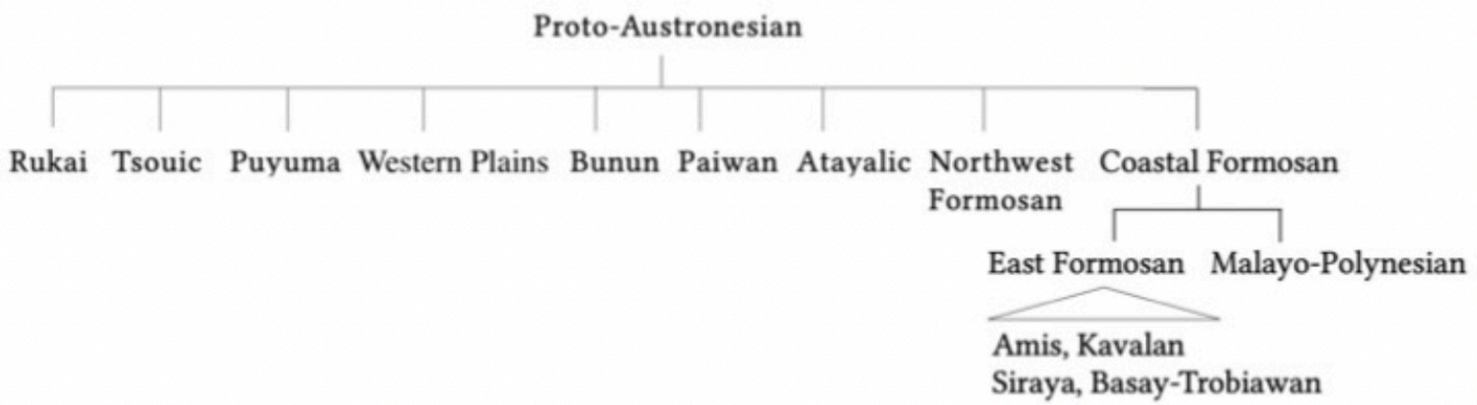
Victoria University of Wellington[1], University of the Philippines Diliman / Australian National University[2], National Taipei University of Technology[3], Max Planck Institute[4], Victoria University of Wellington[5]

*authors listed in alphabetical order

1. The puzzle

Philippines, Malayo-Polynesian, Austronesian

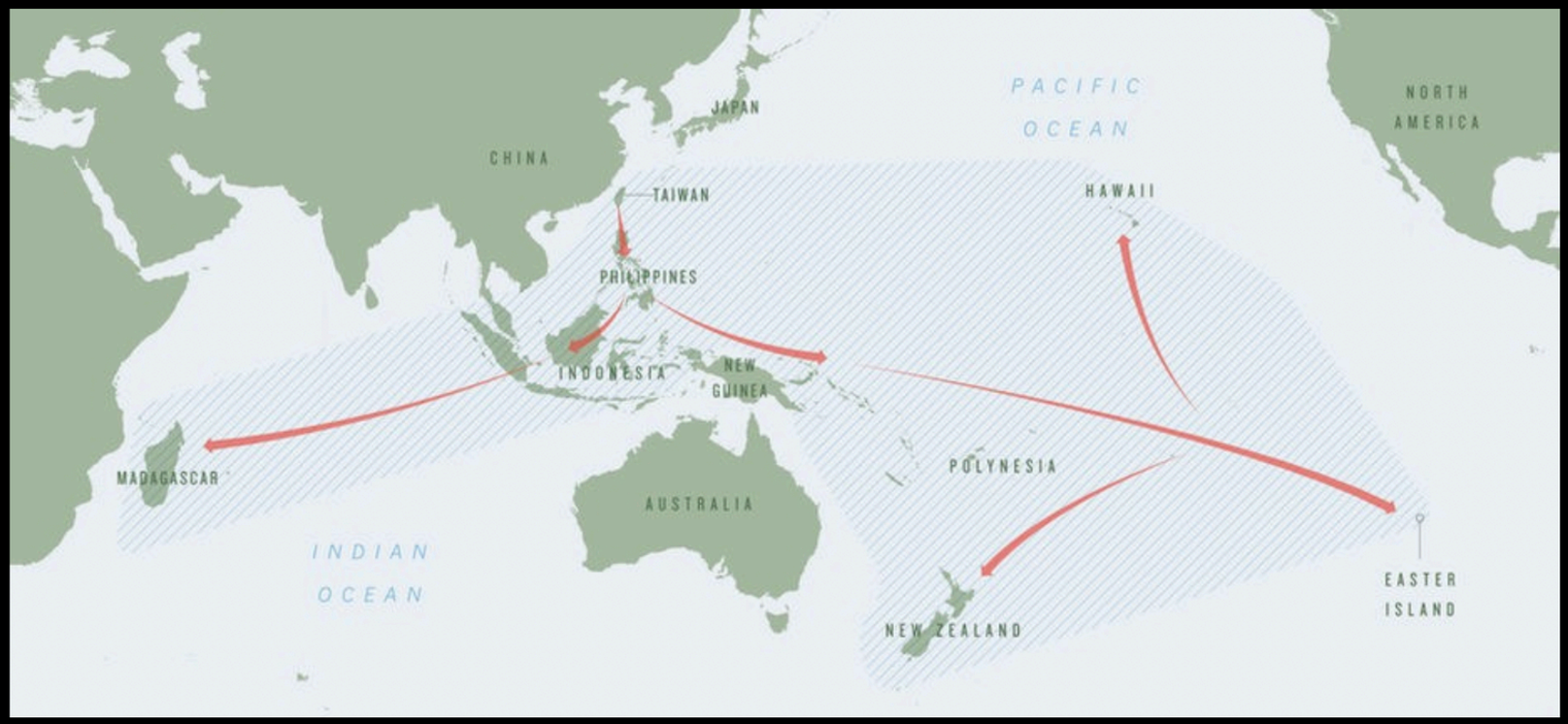




- Primary branches all located in Taiwan (Chen et al. 2022)
  - Formosan languages
  - Coastal Formosan
    - East Formosan
    - Malayo-Polynesian
      - Covers all Austronesian languages outside Taiwan

- Taiwan as the likely homeland of PAN
- Philippines as the first landing point out of Taiwan

Philippines, Malayo-Polynesian, Austronesian



- Expectation that the region exhibits high linguistic diversity similar to Taiwan
- That is, just as there was no Proto-Formosan, so there would also have been no ‘Proto-Philippine’

PROTO-PHILIPPINES?

Blake (1905) | Sheerer (1918) | Charles (1974) | Llamzon (1975) | Paz (1981)

PROTO-PHILIPPINES?

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Reid (1978, 1982)

“there is no evidence which we can at present produce to support the hypothesis that Philippine languages form a single subgroup within Austronesian”

PROTO-PHILIPPINES?

Zorc (1986), Blust (1991, 2005)

Exclusively shared lexical innovations for PPH

Reid (1978, 1982)

"there is no evidence which we can at present produce to support the hypothesis that Philippine languages form a single subgroup within Austronesian"

PROTO-PHILIPPINES?

Zorc (1986), Blust (1991, 2005)

Exclusively shared lexical innovations for PPH

Ross (2005) and Smith (2017)

Robustness of lexical innovations to rule out borrowing, diffusion, parallel development

RESURRECTING THE DEBATE

Blust (2019, 2020), Zorc (2020)

No morphological innovations for PPh; Phonological merger of *d and *z; 1740 lexical innovations

Reid (2020), Ross (2020), Liao (2020)

Distribution of innovations attests not a proper subgroup but a linkage

INTERPRETING PATTERNS

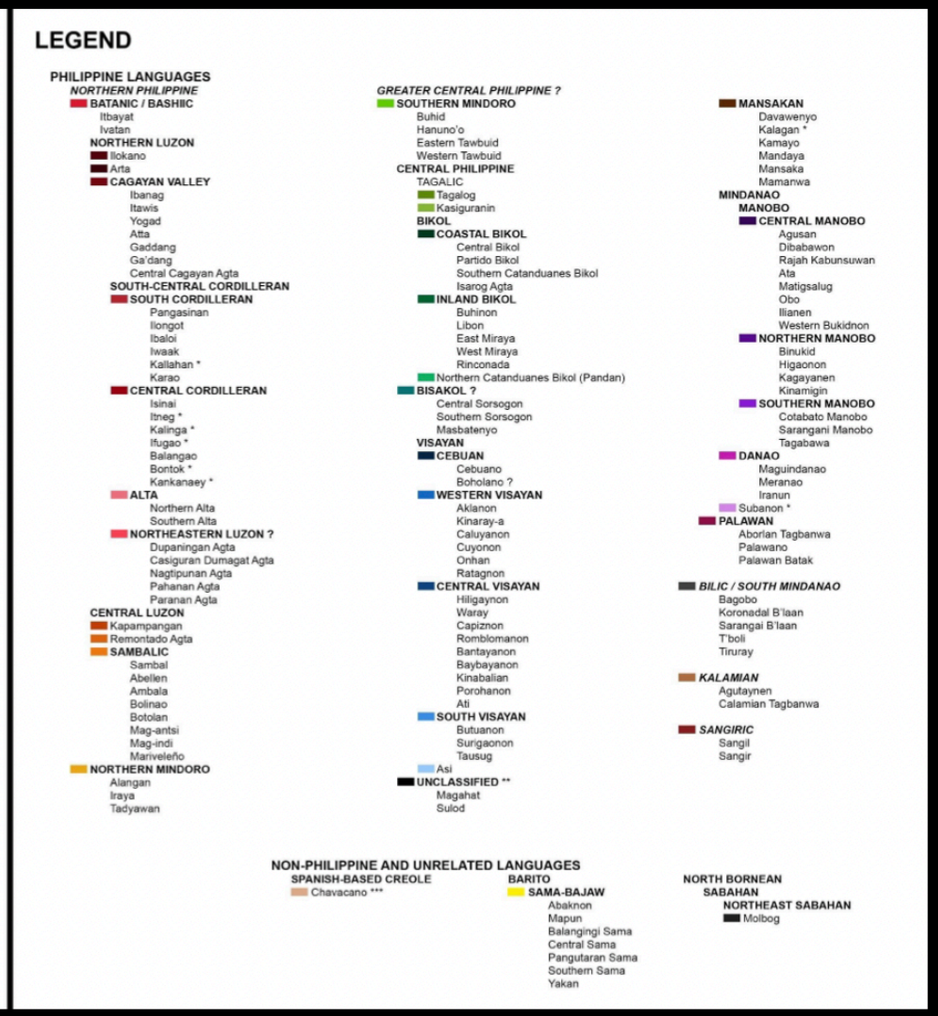


Adelaar (2005)

- The expansion of Proto-Philippines wiped away centuries of linguistic diversification in the Philippines (Blust 2005)

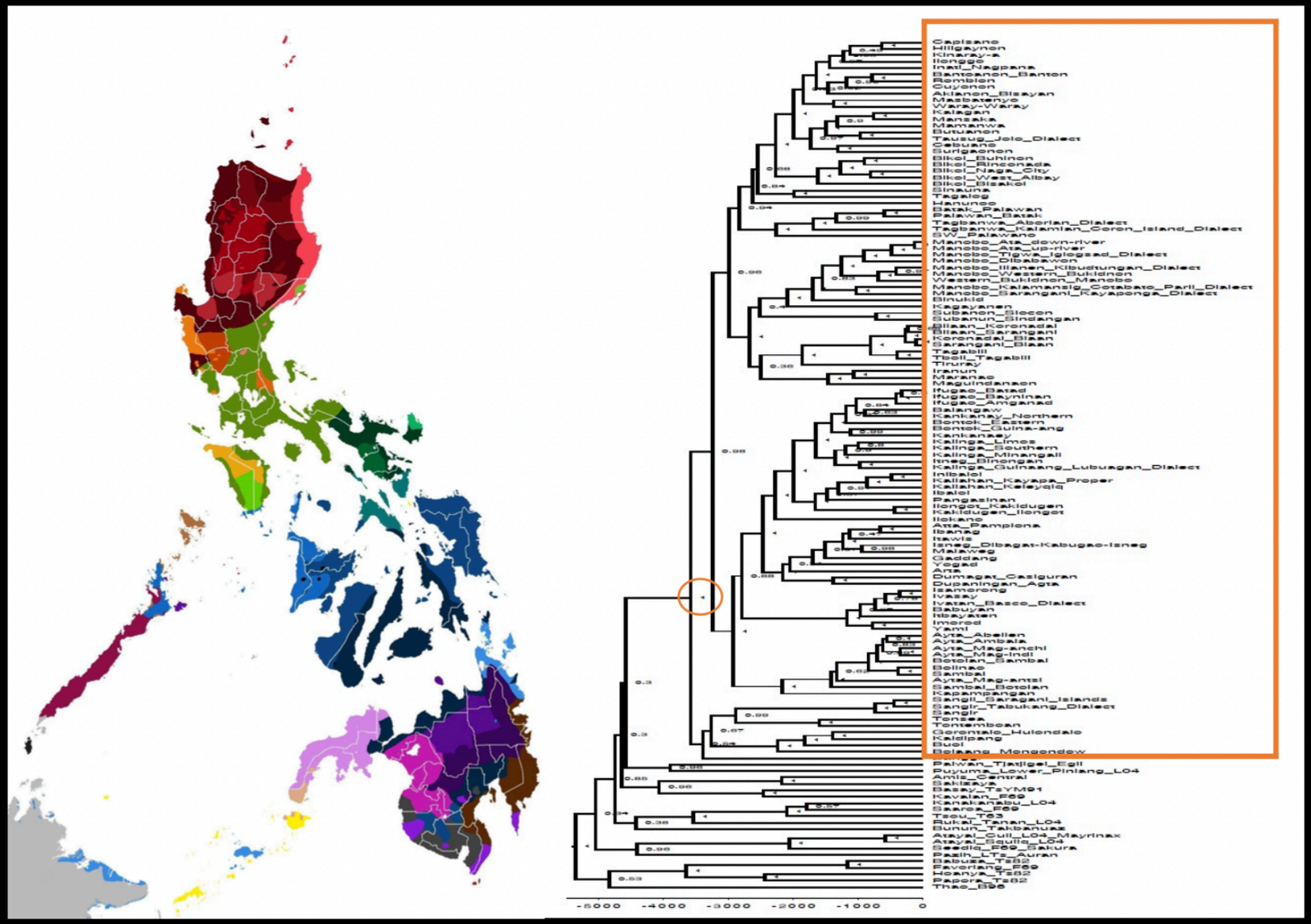
INTERPRETING PATTERNS





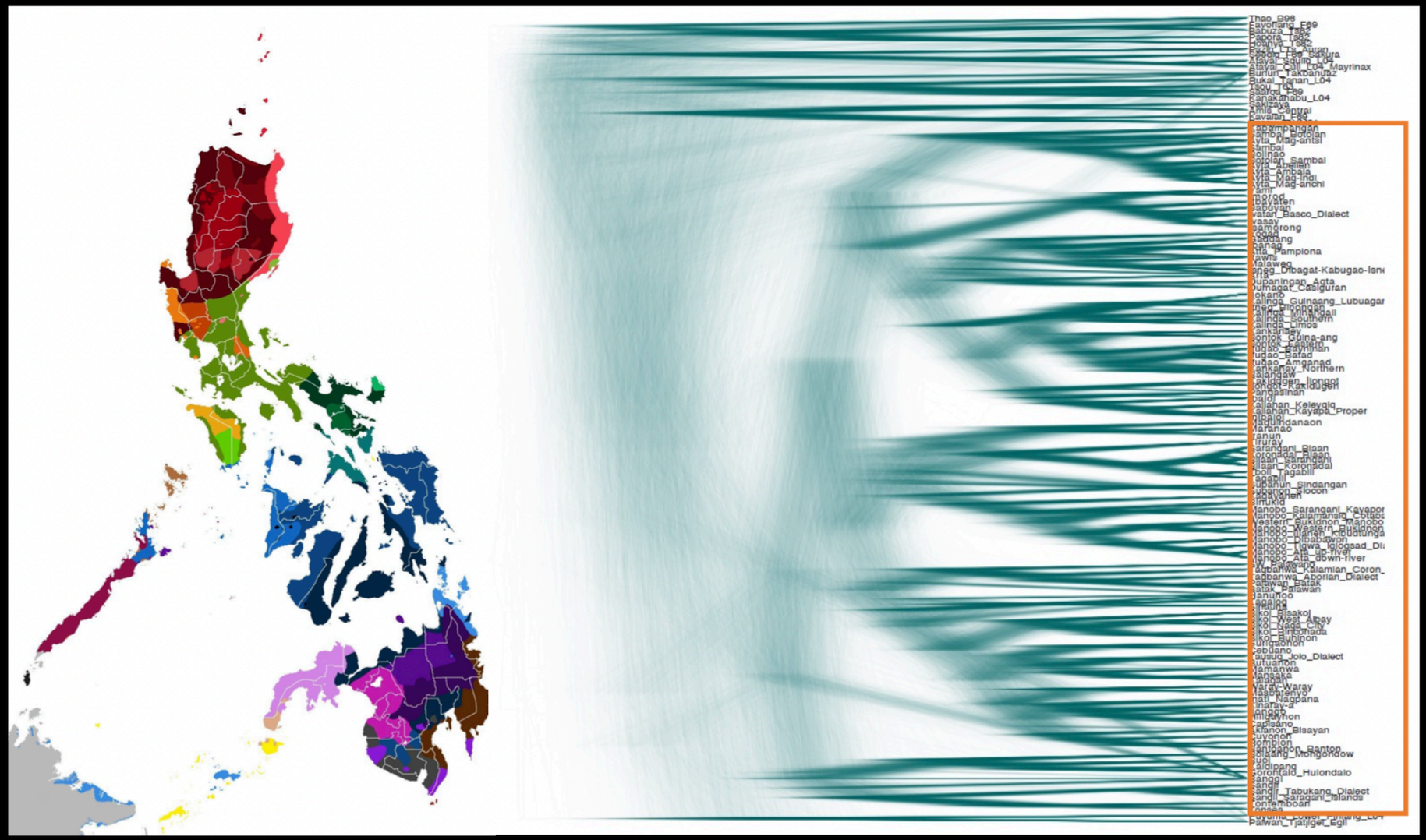
- Nine widely recognized subgroups of Philippine languages (Blust 1991, 2005)
  1. Batanic/Bashiic
  2. Cordilleran/Northern Luzon
  3. Central Luzon
  4. Inati
  5. Kalamian
  6. Greater Central Philippine (GCP)
  7. Bilic
  8. Sangiric
  9. Minahasan

INTERPRETING PATTERNS



- Bayesian phylogenetic tree of Philippine and Formosan languages (Reid 2017)

INTERPRETING PATTERNS



- Densitree plot of Philippine and Formosan languages (Reid 2017)

INTERPRETING PATTERNS

Blust (2019, 2020)
"Languages that are assigned to a Ph subgroup experienced a period of common development apart from other An languages, but **not as a dialectally homogeneous language**"

Ross (2020)
"**Distribution attests not a proper subgroup but a linkage**, ie a collection of intersecting subgroups, each group defined by its shared innovations, but also sharing some of these innovations with another group/s"

Innovation-defined vs Innovation-linked subgroups

(François 2014, Ross 1995, etc.)

INTERPRETING PATTERNS

Blust (2019, 2020)

PPH as the immediate ancestor of PLs

Ross (2020)

PMP as the immediate ancestor of PLs

Innovation-defined vs Innovation-linked subgroups

(François 2014, Ross 1995, etc.)

THE DEBATE CONTINUES

1. How robust is the merger of PMP *d and *z attributed to PPh?
2. How do we interpret the distribution of the proposed lexical innovations for PPh?
3. How does the morphosyntax of Philippine languages shed new light on the contact situation in the Philippines?

Continuing the debate in the light of new data and perspectives

2. PMP *d/z merger as a PPh innovation? A reappraisal



Previous Discussion in Blust 2019

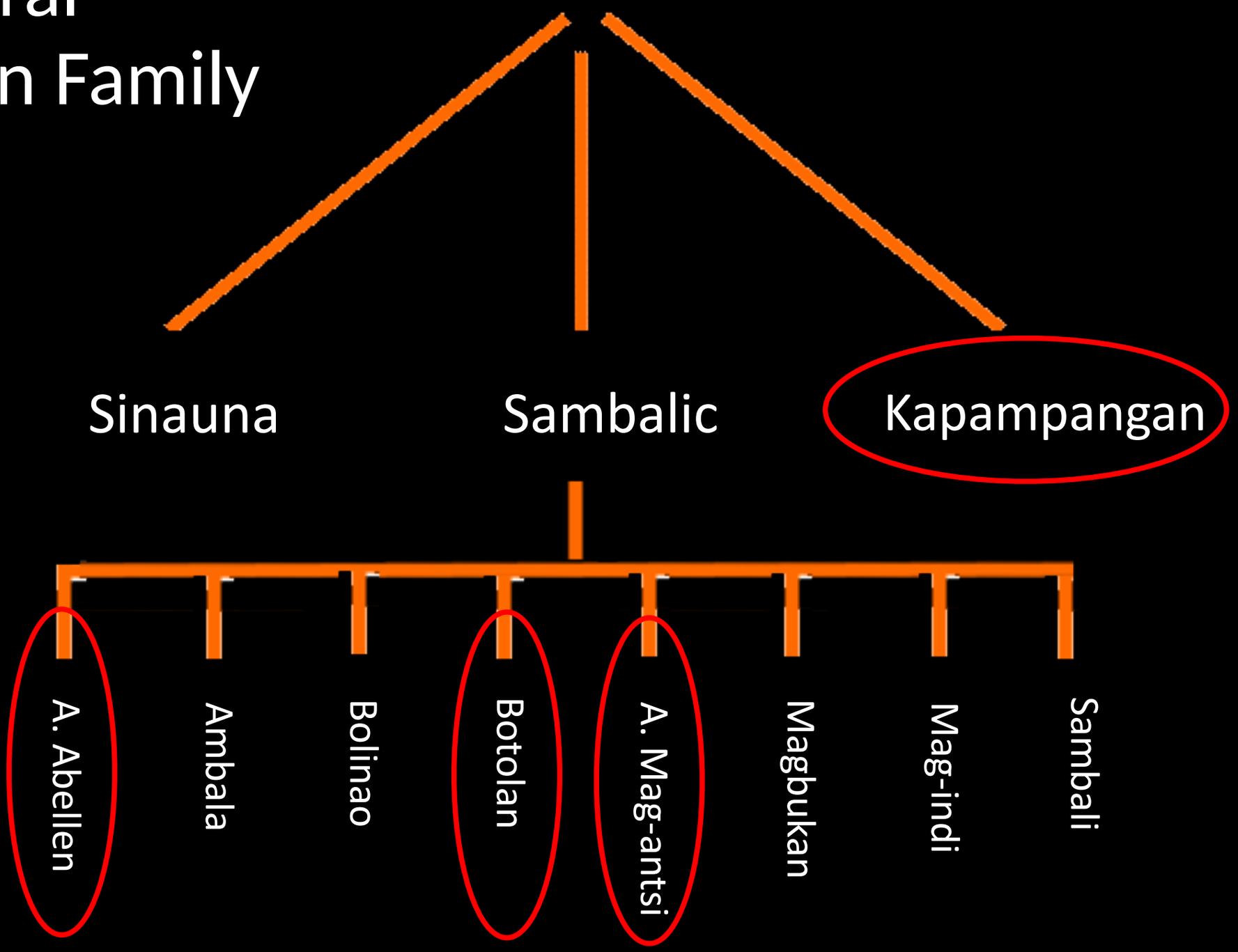
- Blust: “the *d/z contrast is not clearly preserved anywhere in the Philippines”.
- Therefore the *d/z merger is a defining sound change for PPh.
- One exception given: In Ayta Abellen there are present both udan ‘rain; to rain’ (< PMP *quzan) and ulaŋ ‘shrimp’ (< PMP *qudaŋ).



- Data from the ACD reveals many more such exceptions in Ayta Abellen and other Central Luzon languages.
- These exceptions are patterned to indicate that *d and *z were originally unmerged in Central Luzon languages.

- Himes, R. S. (2012). The Central Luzon Group of Languages. *Oceanic Linguistics*, *51*(2), 490–537.

Central
Luzon Family



Data – Ayta Abellen

Discernible Rules	Exceptions
***d > d (26 instances)** ***z > d (5 instances)** **46 Instances total**	***d > l** PAN *daNum > *lanom* ‘water’ PMP *dateŋ > *lateŋ* ‘to arrive, come’ PAN *deŋeR > *leŋe* ‘to hear’ PMP *diŋdiŋ > *liŋliŋ* ‘wall (of a house)’ PWMP *di hipaR > *lipay* ‘the opposite side of a body of water’ PAN *duSa > *lowa* ‘two’ PWMP *pu(n)dut (or *pu(n)zut) > *polot* ‘to pick up’ PAN *qañud > *anol* ‘to be carried in the current’ PPH *sápad > *sapal* ‘hand of bananas’ PWMP *sidem (or *silem) > *silem* ‘afternoon’ PPH *tadék > *talek* ‘a dance, to dance’ PAN *tuduR > *toloy* ‘to sleep’

- *z is always realised as /d/.
- *d is realised as either /d/ or /l/ in any phonological context.

Data – Ayta Mag-antsi

Discernible Rules	Exceptions
***d > l (4 instances)**	PPH *dítaq > *dita* ‘venom, poison’
***z > r / V_V (3 instances)**	PPH *pidek$_2$ > *kiɾip* ‘eyelash’
9 Instances total	

- *z is realised as /r/ (vowel medially)
- *d is realised as /l/ with two exceptions.

Data - Botolan

Discernible Rules	Exceptions
***d > l / V_V (6 instances)**	***d > l** PPH *agud > *ágol* ‘to moan (in pain)’ PAN *daNum > *lánum* ‘water’ PAN *duSa > *lua* ‘two’ PAN *SateD > *atel* ‘escort’
***d > d (15 instances)**	
***z > r / V_V (2 instances)**	
29 Instances Total	***d > r / V_V** PPH *pidek$_2$ > kirɨp ‘eyelash’ PMP *pudul > poról ‘blunt, dull’

- *z is realised as /r/ (vowel-medially).
- *d is realised as either /d/ or /l/ except vowel-medially, where it is realised as either /l/ or /r/.

Data - Kapampangan

Discernible Rules	Exceptions
***d > d (41 instances)**	***d > l / V_V**
	PMP *badas > *balás*
***z > r / V_V (6 instances)**	‘sand’
	PAN *tuduq > *tulu(?)*
	‘drop; flow; spill; pour’
***z > d (4 instances)**	PMP *ida > *ila* ‘they’
	*ludem > *ma-lúlam*
	‘cloudy’
59 Instances Total	***d > r / V_V**
	PPH *dúdun > *durún*
	‘locust’
	PPH *katúday > *kature*
	‘Pl. Sesbania grandiflora’
	PAN *kuden > *kúran*
	‘large rice pot’

- *z is always realised as /d/ (and /r/ vowel-medially)
- *d is realised as /d/ except vowel-medially, where it is realised as either /l/ or /r/.

Conclusions

- *z is realised *consistently* within and across the languages examined (from 20 instances).
- *d is realised *inconsistently* in all languages examined.
- If *d and *z were merged in Proto-Central Luzon, we should find a similar pattern of realisation in the reflexes of both proto-forms – but we do not.
- This fact strongly suggests an underlying separation of *z and *d in Proto-Central Luzon.
- The *d/z merger no longer has a firm foundation as a defining sound change in PPh – this leaves PPh with no phonological evidence at all.

3. Revisiting the lexical evidence for PPh

Negrito ethnonyms

- Most Negrito groups refer to themselves using a reflex of PMP *qaRta “outsiders, alien people” (Blust & Trussel 2022)

- Reflexes of this are widespread outside the Philippines, but within the Philippines reflexes seem to refer exclusively to indigenous Filipino groups as an ethnonym used by themselves as well as by other groups

- Reflexes in Negrito languages of the Philippines regularly reflect the sound changes which have taken place in the microgroups to which they belong (Reid 2013)

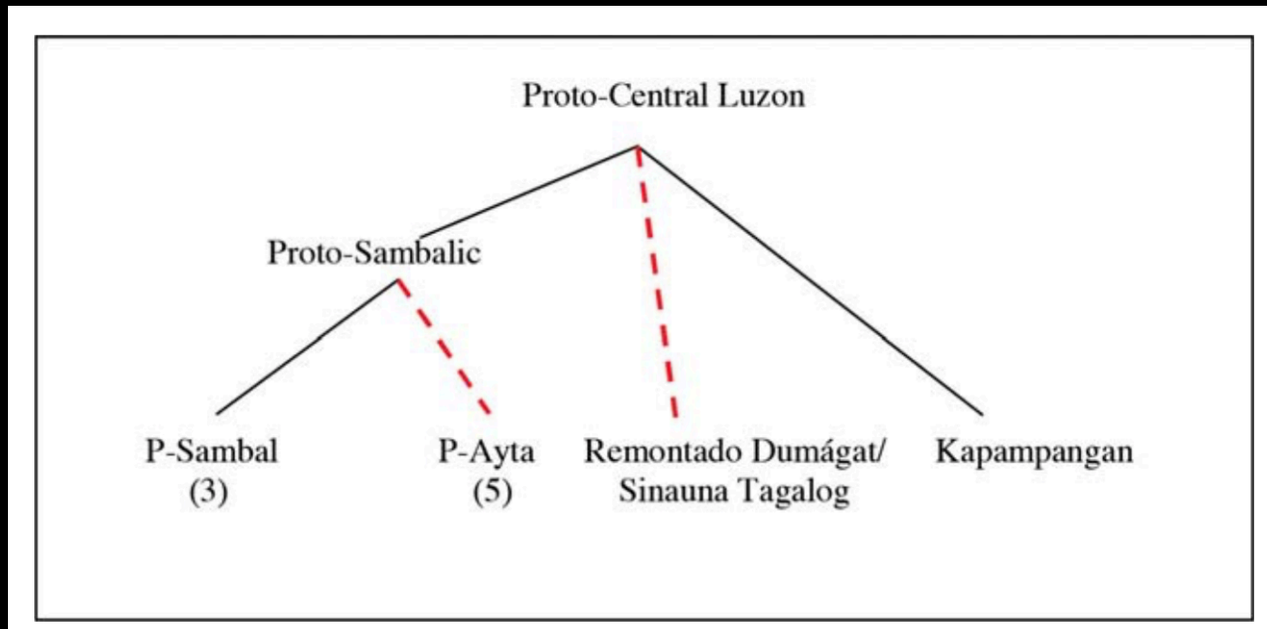
- If the Proto-Philippine expansion and replacement proposed by Blust did take place, why is this the case?



(Reid 2013)

Lexical properties of Negrito languages suggest great time depth

- Several authors have pointed to features of Negrito languages that suggest that the language shift to PMP happened at a remote time, many thousands of years ago (Reid 1987; Himes 2005, 2006, 2012)
- The Central Luzon languages (whether spoken by Negrito groups or others) share a large number of lexical innovations. Some of these can be reconstructed to a proto-CL, but there has also been an enormous amount of diffusion between them (Himes 2012).
- And because certain Negrito languages are first-order branches within their microgroups and preserve conservative features of PMP lost elsewhere, we can assume that they must have been acquired from incoming PMP-speaking populations at an early date – directly from speakers of the spreading PMP linkage?
- This does not seem to leave any room temporally for the replacement of direct descendants of PMP by a putative PPh.



(Reid 2013)

Are hidden loanwords present in the list of proposed PPh lexical innovations?

- The literature on the archaeology and anthropology of the Philippines points to complex and long-standing trading relationships throughout the Philippine archipelago (e.g. Hutterer 1978; Peterson 2013)

- These trading relationships existed between different coastal trading polities but also between highland populations exploiting forest products (Negritos) and lowland rice cultivators

- We know that loanwords are likely to diffuse through trading relationships

- And because of the similarity of Philippine phonologies, loanwords may have gone undetected

Hidden loanword detection

- Tagged 1291 of PPh lexical innovations with more than 2 reflexes from the Austronesian Comparative Dictionary according to the semantic typology used in the World Loanword Database project (Haspelmath & Tadmor 2009)
- H&T found words from certain semantic categories more likely to be borrowed crosslinguistically:

	A	B	C	D	E	F	G
1	ProtoForm	ProtoFormGloss	ProtoLa	nReflexes	SemanticFieldNum	SemanticFieldDe	TaggedBy
2	*siám	nine	PPh	42	13	Quantity	Isaac
3	*tulduq	to point, indicate; to point out, instruct	PPh	41	9	Basic actions an	Isaac
4	*habél	weave cloth	PPh	39	9	Basic actions an	Isaac
5	*sunúd	next; to follow in succession	PPh	39	24	Misc function wo	Isaac
6	*dúyan	swinging cradle for an infant	PPh	38	9	Basic actions and technology	
7	*qábut	to reach, overtake, catch up with	PPh	37	10	Basic actions and technology	
8	*bantug	fame; famous, renowned	PPh	35	19	Social and political relations	
9	*dakél	big, large (in size or quantity)	PPh	34	12	Spatial relations	
10	*labas	pass by, overlook something when searching; to pass by (of time)	PPh	33	10	Motion	
11	*paypáy	to wave the hand, as in beckoning someone or in fanning oneself	PPh	33	9	Basic actions and technology	
12	*pásuq	to roast, broil; scald, sear, burn	PPh	33	5	Food and drink	
13	*pílit	to insist; to force, compel someone to do something	PPh	33	19	Social and political relations	
14	*ísip	thinking, thoughts; opinion	PPh	33	17	Cognition	
15	*túnaw	to melt, dissolve	PPh	30			
16	*lúbid	string, rope, cordage made by twining fibers	PPh	29	9	Basic actions and technology	
17	*bulbúl	body hair, feathers	PPh	28	4	The body	
18	*suka$_2$	to vomit	PPh	28	4	The body	
19	*tebáR	to answer	PPh	28	18	Speech and language	
20	*haq(e)muq	tame, docile, mild-mannered	PPh	26	16	Emotions and values	
21	*lúgaw	rice porridge	PPh	26	5	Food and drink	
22	*sikát	sunrise, rising sun; to show off, be ostentatious, parade one's talents, pos	PPh	26	1 / 19		
23	*típun	to assemble, come together (of people); bring together (of things)	PPh	26	9 / 19		
24	*dáwat	to receive; to ask for	PPh	25	18		
25	*kápuy	weakness, debility; feeble, unable to perform	PPh	25	4		
26	*ugtu	zenith; noon, mid-day	PPh	25	14		
27	*man	particle expressing solidarity, concession, qualification, or emphasis	PPh	24			
28	*sáRep	catch fish by damming a stream	PPh	24	9		
29	*sápad	hand of bananas	PPh	24	5 / 8		
30	*síkad	push with the feet; press feet against, set feet firmly to prevent being mov	PPh	24	9		
31	*súŋay	horn of an animal; to butt or gore	PPh	24	4		
32	*atúbaŋ	to face, confront	PPh	23	16 / 19		
33	*bítin	hang, suspend	PPh	23	9		
34	*lesles$_1$	lift up the clothes, roll up the pant legs (as when crossing shallow water)	PPh	23	9		
35	*paspás$_4$	do something quickly, in a hurry	PPh	23	14		
36	*súbuq	put something into or through an opening	PPh	23	9		
37	*lipat	to forget	PPh	22	17		
38	*nákem	will; intellect; reasoning, intention, mental presence, mind	PPh	22	17		

Hidden loanword detection

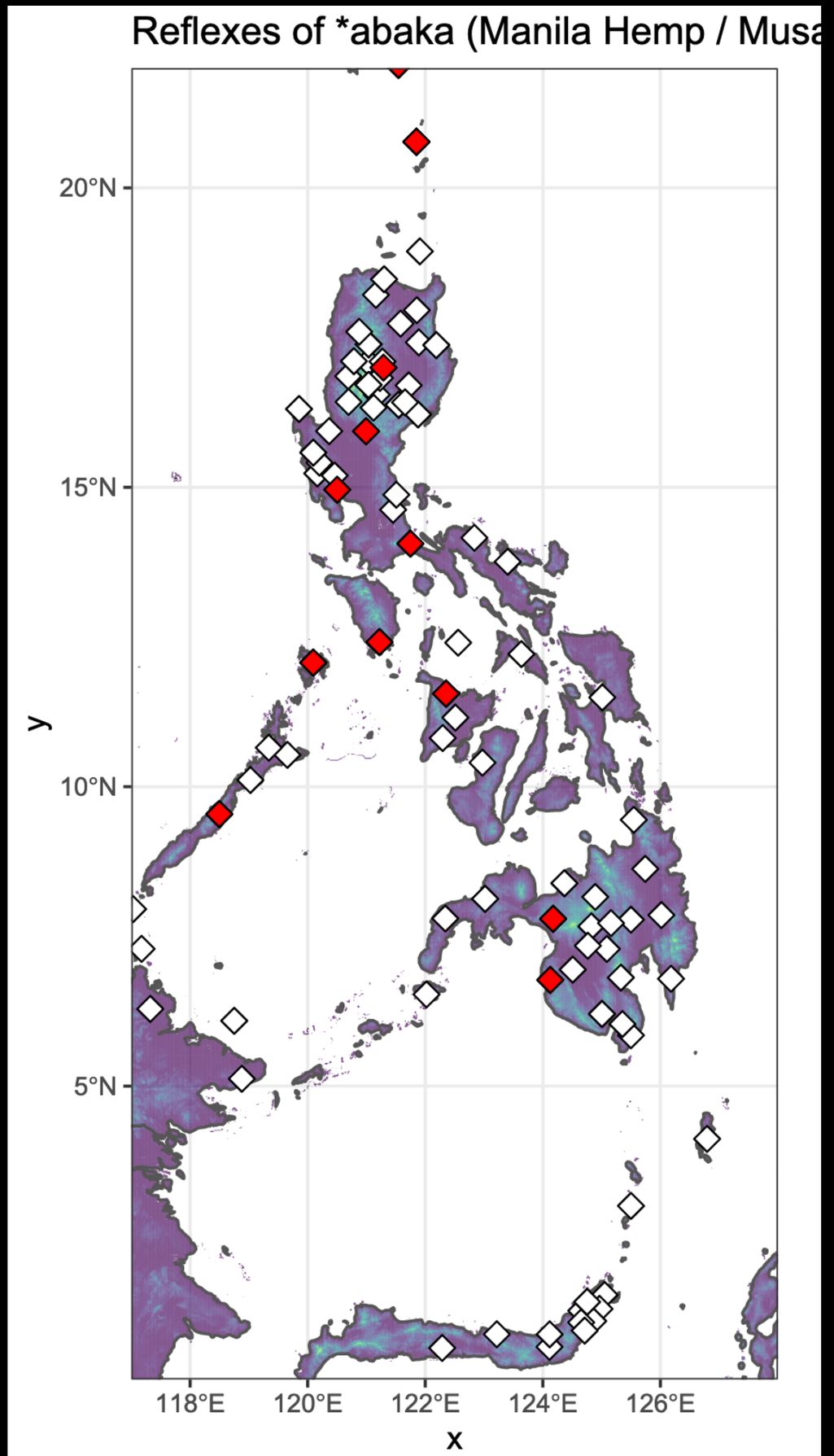
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Showing 1 to 24 of 24 entries

No.	Name	Number of meanings	Borrowed score
Search	Search	True	Search
1	The physical world	86	0.21
2	Kinship	102	0.23
3	Animals	155	0.32
4	The body	171	0.17
5	Food and drink	103	0.37
6	Clothing and grooming	68	0.40
7	The house	53	0.40
8	Agriculture and vegetation	128	0.45
9	Basic actions and technology	112	0.33
10	Motion	89	0.21
11	Possession	53	0.34
12	Spatial relations	77	0.15
13	Quantity	47	0.33
14	Time	62	0.28
15	Sense perception	55	0.19
16	Emotions and values	63	0.30
17	Cognition	58	0.29
18	Speech and language	53	0.36
19	Social and political relations	76	0.64
20	Warfare and hunting	48	0.34
21	Law	28	0.36
22	Religion and belief	40	0.49
23	Modern world	58	0.64
24	Miscellaneous function words	29	0.44

Hidden loanword detection

- Hypothesis:
  - The data contains hidden loanwords
- Proving/disproving the hypothesis:
  - If the data contains hidden loanwords, we'll see geographical clusters of loanwords from categories which are more "borrowable"
  - Clusters which contain a lexeme which appears in a major regional language such as Tagalog and Ilocano and a number of minor languages may demonstrate a sociological gradient along which borrowing could have taken place



4. Structural borrowing in Circumstantial Voice morphology

4. Structural borrowing in Circumstantial Voice morphology

Early Austronesian indicative voice morphology

a. Actor Voice: *<um>

b. Patient Voice: *-in

c. Locative Voice: *-an

d. Circumstantial Voice: *Si-/Sa-

(Blust 2009; Ross 2009, 2012; Blust & Chen 2017)

4. Structural borrowing in Circumstantial Voice morphology

Paiwan (Paiwan)

(7) Paiwan

a. Q<m>alup a caucau tua vavuy i gadu tua vuluq.
<AV>hunt PIVOT man CM_2 pig LOC mountain CM_2 spear
'The man hunts wild pigs in the mountains with a spear.' (ACTOR VOICE)

b. Qalup-**en** nua caucau a vavuy i gadu tua vuluq.
hunt-**PV** CM_1 man PIVOT pig LOC mountain CM_2 spear
'The man hunts wild pigs in the mountains with a spear.' (PATIENT VOICE)

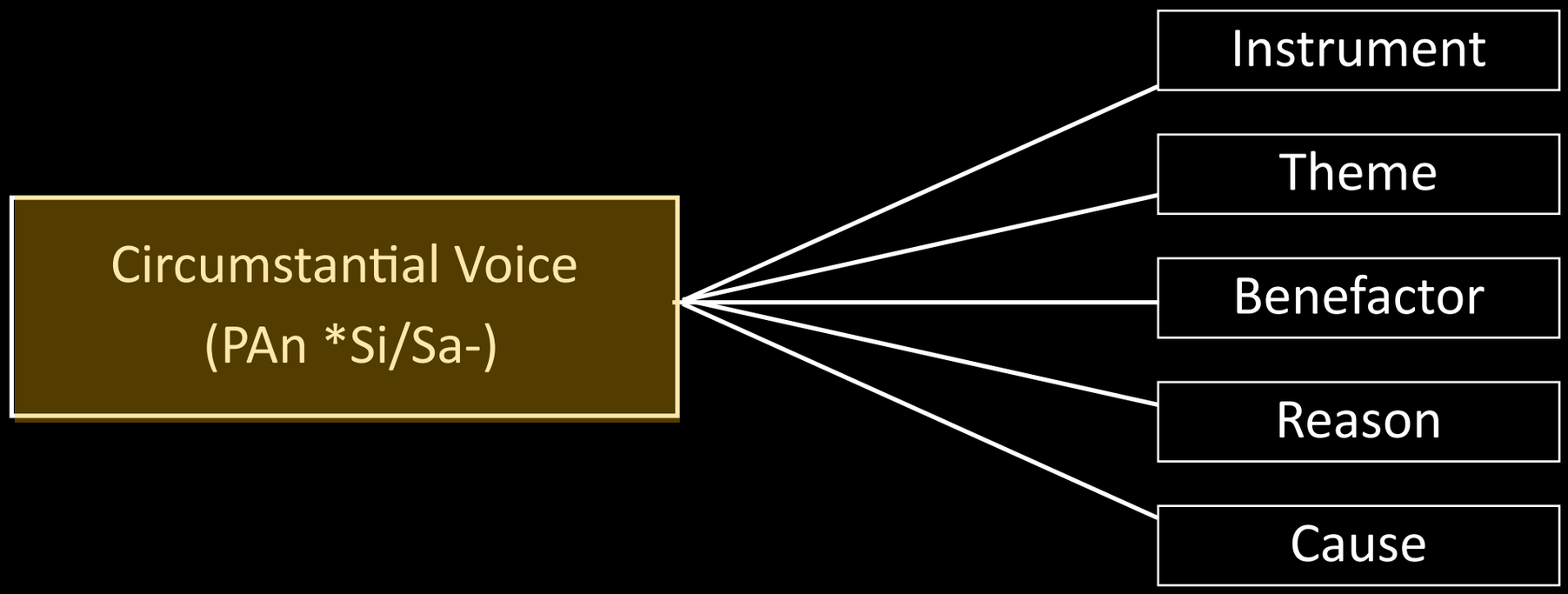
c. Qalup-**an** nua caucau tua vavuy a gadu tua vuluq.
hunt-**LV** CM_1 man CM_2 pig pivot mountain CM_2 spear
'The man hunts wild pigs in the mountains with a spear.' (LOCATIVE VOICE)

d. **si**-qalup nua caucau tua vavuy i gadu a vuluq.
CV-hunt CM_1 man CM_2 pig LOC mountain PIVOT spear
'The man hunts wild pigs in the mountains with a spear.' (Ferrell 1979:202) (CIRCUMSTANTIAL VOICE)

AV	PV	LV	CV
<m>	*-en*	*-an*	*si-*

4. Structural borrowing in Circumstantial Voice morphology

- In the majority of Austronesian primary branches, Circumstantial Voice is free to combine with pivot phrases of a wide range of thematic roles: instrument, theme, benefactor, reason, and cause.



4. Structural borrowing in Circumstantial Voice morphology

- In the majority of Austronesian primary branches, Circumstantial Voice is free to combine with pivot phrases of a wide range of thematic roles: instrument, theme, benefactor, reason, and cause.

- e.g. Paiwan



(9) Paiwan (Formosan)

a. ’u-s<in>i-pangul sa a’-pungdjuq ta kasiw ti kapi.
1SG.GEN-CV<PFV>hit LK STAT-broken ACC wood PIVOT Kpi
‘I hit the wood broken for Kepi.’ (Wu 2013:192) (benefactor pivot)

b. si-tekel ni kapi ta vava a kupu.
CV-drink PN.GEN Kapi ACC wine PIVOT cup
‘Kapi drinks wines with the cup.’ (Wu 2013:31) (instrument pivot)

c. s<in>i-kan m zepul ta ci’aw a za vengaLay nimadu.
CV<PFV>eat PN.GEN Zepul ACC fish PIVOT that pregmancy 3SG.GEN
‘Zepul ate fish because of her preagnancy.’ (Chang 2006:73) (reason pivot)

d. si-pavai ti cemedas a zua hana tjay zapul.
CV-give PN.GEN Cemedas PIVOT that flower ACC Zepul
‘Cemedas gave that flower to Zepul.’ (Chang 2006:297) (theme pivot in ditransitives)

e. ’u-si-pa-veli=anga tjay kapi a vatu.
1SG.GEN-CV-CAUS-sell=COS ACC Kapi PIVOT dog
‘I have caused Kapi to buy (i.e. sold Kapi) the dog.’ (Wu 2013:33) (theme pivot in causatives)

4. Structural borrowing in Circumstantial Voice morphology

- In the majority of Austronesian primary branches, Circumstantial Voice is free to combine with pivot phrases of a wide range of thematic roles: instrument, theme, benefactor, reason, and cause.



- e.g. Atayalic

(8) Seediq (Formosan)

a. s-hanguc=mu ∅ sari ka dakis.
CV-cook=1SG.GEN ACC taro PIVOT Dakis
'I cooked meat for Dakis.' (Chen 2017:101) (benefactor pivot)

b. ga=na s-sebuc ∅ ricah ka qreti.
PROG=3SG.GEN CV-hit ACC plum PIVOT stick
'He/she is knocking down plums (from the trees) with a stick.' (Chen 2017:99) (instrument pivot)

c. s-k<n>-narux na temi ka knrudan=na.
CV-STAT<PFV>sick GEN Temi PIVOT age=3SG.POSS
'Temi got sick because of her age.' (Chen 2017:79) (reason pivot)

d. Wada=mu s-paadis ∅ dakis ka tigami.
PFV=1SG.GEN CV-send ACC Dakis PIVOT letter
'I sent Dakis a/the letter.' (Chen 2017:121) (theme pivot in ditransitives)

e. s-p-seeliq=mu ∅ robo ka rodux nii.
CV-CAUS-butcher=1SG.GEN ACC Robo PIVOT chicken this
'I asked Robo to butcher this chicken.' (theme pivot in causatives)

4. Structural borrowing in Circumstantial Voice morphology

- Many Philippine languages exhibit an innovative affix that co-occurs with CV morphology. This affix specifies the thematic role of the pivot phrase. In Tagalog, for example, the sequence *i-ka-* indicates reason phrases, *i-pag-* indicates instrument, and *i-pang-* for benefactor.

(10) Tagalog (Malayo-Polynesian)

a. i-p<in>ag-luto ni Kyla ng adobo si Juan.
CV-PAG<PFV>-cook GEN Kyla INDF.ACC adobo PIVOT Juan
'Kyla cooked adobo for Juan.' (CV + *pag-* for benefactive pivot)

b. i-p<in>ang-ka-kain ni kyla ang kutsara.
CV-PANG<PFV>-RED-eat PN.GEN Ryan PIVOT spoon
'Kyla is eating with the spoon.' (CV + *pang-* for instrument pivot)

c. Ang paninigarilyo ang i-k<in>a-matay ni Juan.
PIVOT cancer PIVOT CV-KA<PFV>-die GEN Juan
'The reason Juan died was because of cancer.' (CV + *ka-* for reason pivot)

4. Structural borrowing in Circumstantial Voice morphology

- Regardless, there are also verbs that do not take the innovative affix *ka-, pag-* and *pang-* in Tagalog; also, other types of pivot possible in CV, such as the theme, do not appear with the additional affix *pang-, pag-, or ka-*:

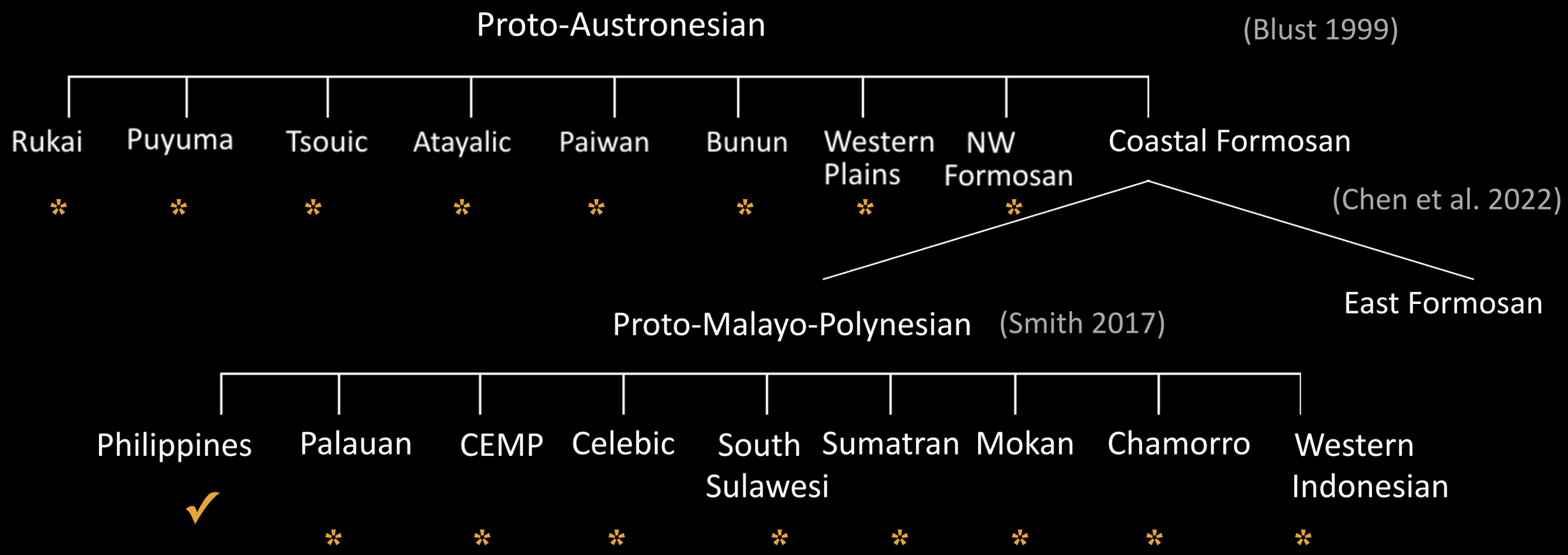
(11) Tagalog (Malayo-Polynesian)

a. i-b<in>igay ni ivan ang pera kay viktoria.
CV-<PFV>give PN.GEN Ivan PIVOT money PN.ACC Victoria
'Ivan gave Victoria the money.' (CV for theme pivot in ditransitives)

b. i-p<in>a-kanta=ko kay ivan ang kanta.
CV-CAUS<PFV>sing=PN.GEN PN.ACC Ivan PIVOT song
'I asked Ivan to sing a song.' (CV for theme pivot in causatives)

4. Structural borrowing in Circumstantial Voice morphology

- This innovation is found in various Philippine languages but is unattested in Formosan or any Malayo-Polynesian langauges outside the Philippines (to the best of our knowledge).



4. Structural borrowing in Circumstantial Voice morphology

- This innovation is found in various Philippine languages but is unattested in Formosan or Malayo-Polynesian langauges outside the Philippines (to the best of our knowledge).

- e.g. Kimaragang (West Indonesian)



(8) Kimaragang

a. **Mang**-alapak okuh do niyuw.
AV-TR-split 1SG.PIVOT CM_2 coconut
'I will split the coconut(s).' (ACTOR VOICE)

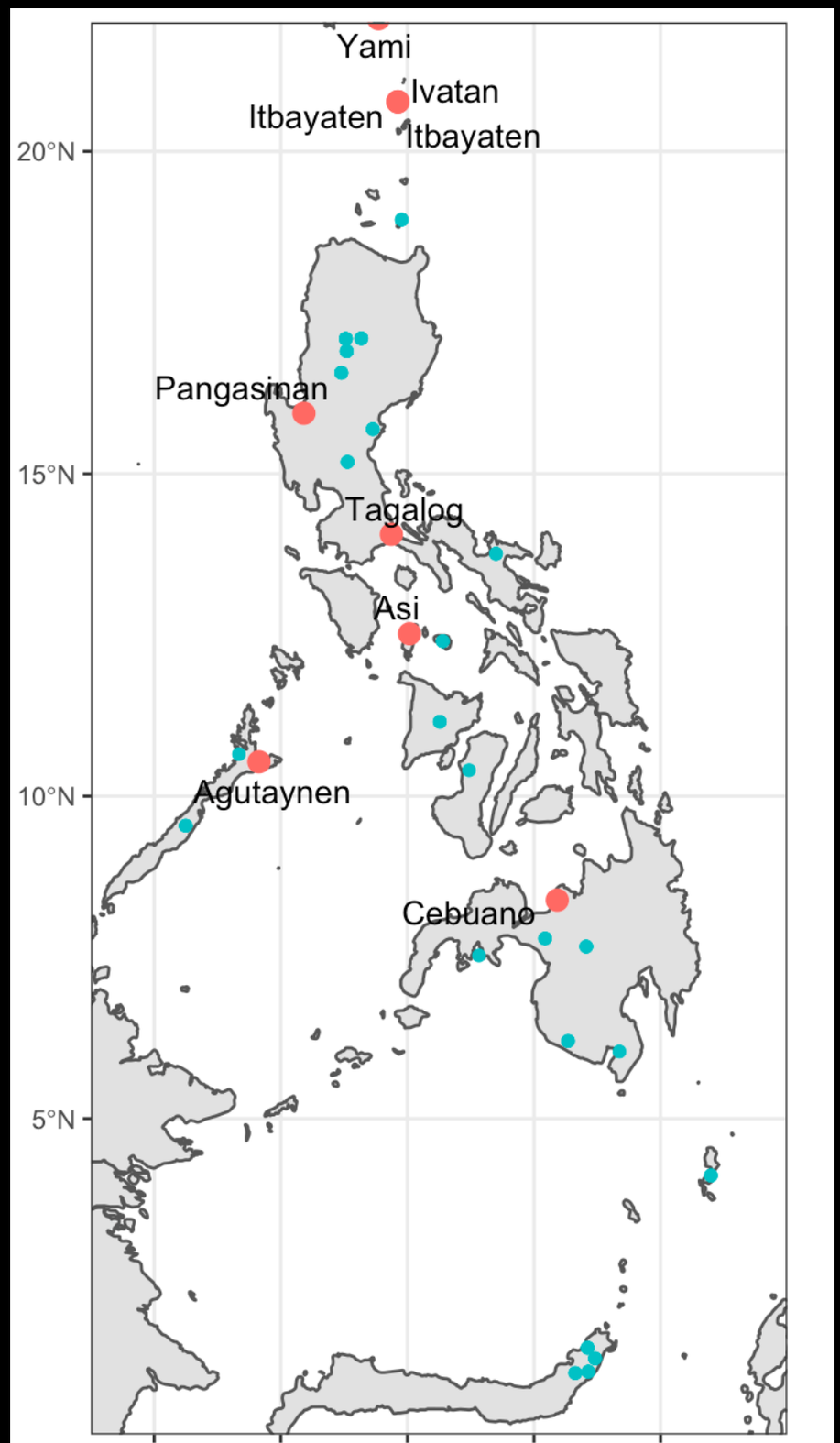
b. Lapak-**on** kuh it niyuw.
split-**PV** $1SG.CM_1$ PIVOT coconut
'I will split the coconut(s).' (PATIENT VOICE)

c. Lapak-**an** kuh do niyuw it wogok.
split-**LV** $1SG.CM_1$ CM_2 coconut PIVOT pig
'I will split some coconuts for the pigs (to eat).' (BENEFICIARY VOICE)

d. Nokuroh.tu n-**i**-lapak nuh do niyuw inoh dangol kuh.
why PST-**CV**-split $2SG.CM_1$ CM_2 coconut MED.PIVOT bush.knife 1SG.POSS
'Why did you sue my bush knife to split coconuts?' (Kroeger 2005; glossed ours)(CIRCUMSTANTIAL VOICE)

4. Structural borrowing in Circumstantial Voice morphology

- Within the Philippines, this change is also attested only in a subset of langauges in 3 subbranches:
  - Greater Central Philippines
  - Bashiic
  - Meso-Cordilleran
  - Kalamian (?)



4. Structural borrowing in Circumstantial Voice morphology

- Itbayaten, a Bashiic language that does not bear a particularly close relationship with Tagalog, exhibits the same four-way themaric-oriented subdivision in CV morphology.



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- Itbayaten, a Bashiic language that does not bear a particularly close relationship with Tagalog, exhibits the same four-way themaric-oriented subdivision in CV morphology.

(12) Itbayaten (Malayo-Polynesian)

a. i-cha -hakey
CV-KA-like
'A is the cause of liking.' (Yamada 2015:50) — CV + *ka-* for reason pivot

b. i-pang -ngamong
CV-PAN-fish
'to fish with A' (Yamada 2015:50) — (CV + *paN-* for instrument pivot)

c. i-pang -xap
CV-PAN-get
'to get for A' (Yamada 2015:50) — CV + *paN-* for benefactive pivot

(13) Itbayaten (Bashiic, Malayo-Polynesian)

a. i -chali
CV-dig
'to dig with A' (Yamada 2015:50) — (CV for instrument pivot)

b. i -'inom
CV-drink
'to drink with A' (Yamada 2015:50) — (CV for instrument pivot)

4. Structural borrowing in Circumstantial Voice morphology

- Similar innovative morphology is across different regions of the Philippines. Consider below examples from Asi (Greater Central Philippines) and Pangasinan (Meso-Cordilleran).

(14) Asi (Greater Central Philippines, Malayo-Polynesian)

a. i-pang-limpyo nako kag suka it mga gaha.
F-CV-PANG-clean 1SG.GEN ACC vinegar G PL window
'I'll clean the windows with vinegar.' (Hendrickson & Kilgour 1985:39) (CV + *pang-* for instrument pivot)

b. i-sandrok nako sida it suya.
CV-dish.food 1SG.GEN 3SG.PIVOT G viand
'I'll dish up some of this viand for her.' (Hendrickson & Kilgour 1985:40) (CV + for benefactive pivot)

c. Kag i-k<in>a-matay nida ay kanser.
N CV-KA<PFV>-die 3SG.GEN PIVOT cancer
'What he died of was cancer.' (Hendrickson & Kilgour 1985:40) (CV + *ka-* for reason pivot)

(15) Pangasinan (Meso-Cordilleran, Malayo-Polynesian)

a. i-mpan-katli nen Mark iyan katli ed samay papel.
CV-PAN.PFV-cut GEN Mark DEM.PIVOT scissors OBL obl paper
'Mark used this scissors to cut that paper.' (Rosario 2017:81) (CV + PAN- for instrument pivot)

4. Structural borrowing in Circumstantial Voice morphology

- Although these languages represent four of the nine branches under the putative Philippine subgroup. Most other members of these branches do not share this innovation.

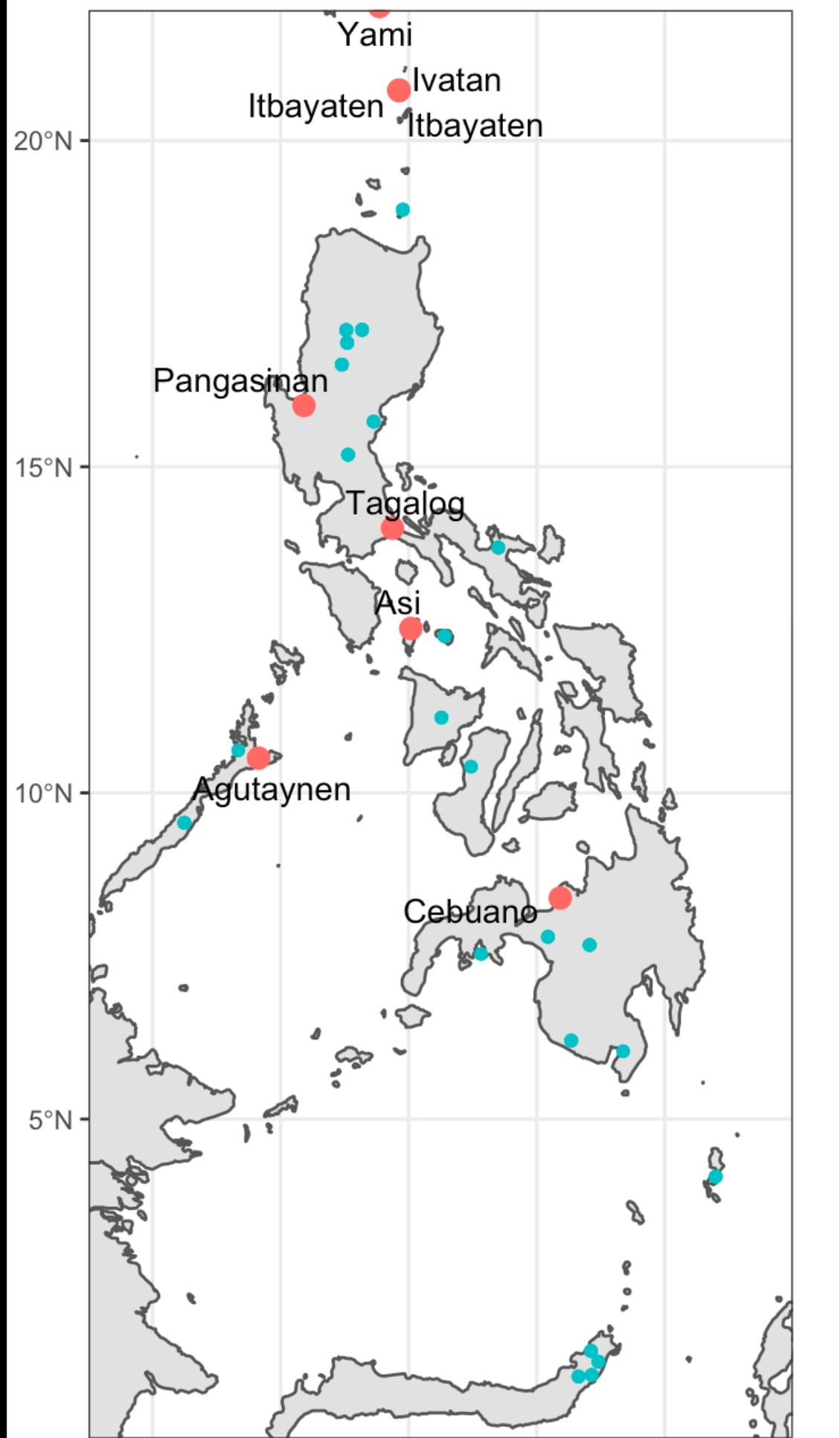
(15) Pangasinan (Meso-Cordilleran, Malayo-Polynesian)

a. i-mpan-katli nen Mark iyan katli ed samay papel.
CV-PAN.PFV-cut GEN Mark DEM.PIVOT scissors OBL obl paper
'Mark used this scissors to cut that paper.' (Rosario 2017:81) (CV + PAN- for instrument pivot)

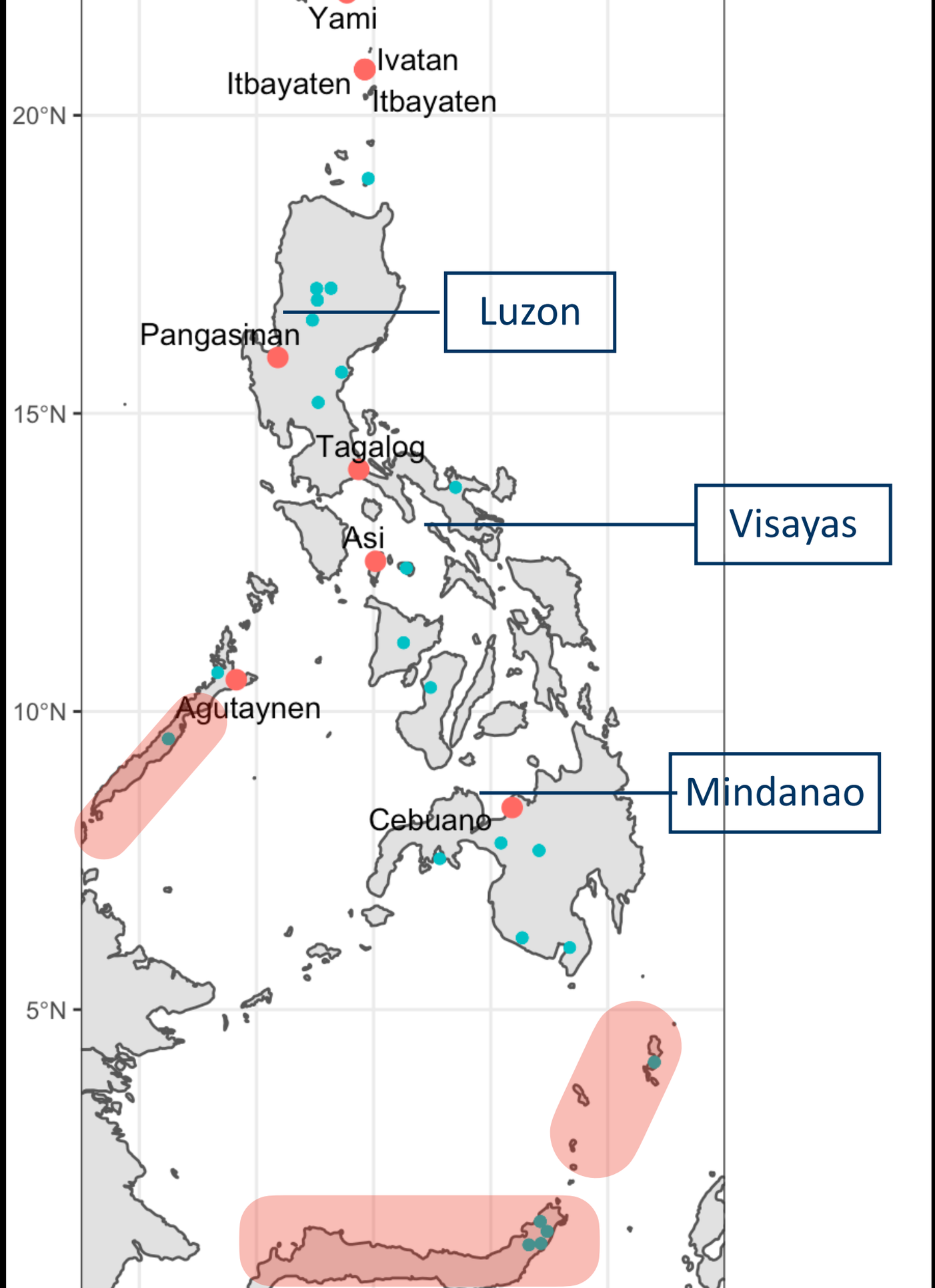
(16) Karao (Meso-Cordilleran, Malayo-Polynesian)

a. 'i-tegteg na nga'ngiy bathod.
CV-flatten GEN child PIVOT rock OBL wire
'The child will use the rock to flatten the wire.' (Brainard 1997:101) (CV for instrument pivot)

- This change is also attested only in a subset of langauges in 3 subbranches:
  - Greater Central Philippines
  - Bashiic
  - Meso-Cordilleran
  - Kalamian (?)



- Although this innovation is found across the three major islands, Luzon, Visayas, and Mindanao, it is found only in the northern tip of Palawan. It is also unattested in any member of the Greater Central Philippine group that is spoken in northern Sulawesi or the islands between Sulawesi and Mindanao.



4. Structural borrowing in Circumstantial Voice morphology

- Furthermore, although this innovation is found across the three major islands, Luzon, Visayas, and Mindanao, it is attested neither in Palawan nor in members of the Greater Central Philippine group that are spoken in northern Sulawesi and islands between Sulawesi and Mindanao.



(17) Talaud

a. lama'a i-saraing ngimangitou.
dish CV-dance 3PL.GEN
'Dishes will be used by them in a dance.' (Utsumi ms.:20) (CV for instrument pivot)

b. inassa n-i-laha=ku huna m-maria.
fish PST-CV-cook=1SG.GEN for GEN Maria
'I cooked fish for Maria.' (Utsumi ms.:24) (CV for benefactor)

c. ana itou n-i-luass i-piteres [uauggu na-akat=te huru].
child 3SG.GEN PST-CV-be.pleased GEN-Peter because AV.PST-promote=COMP teacher
'Her/his child made her/him pleased because (her/his child) became a teacher.' (Utsumi ms:25) (CV for reason pivot)

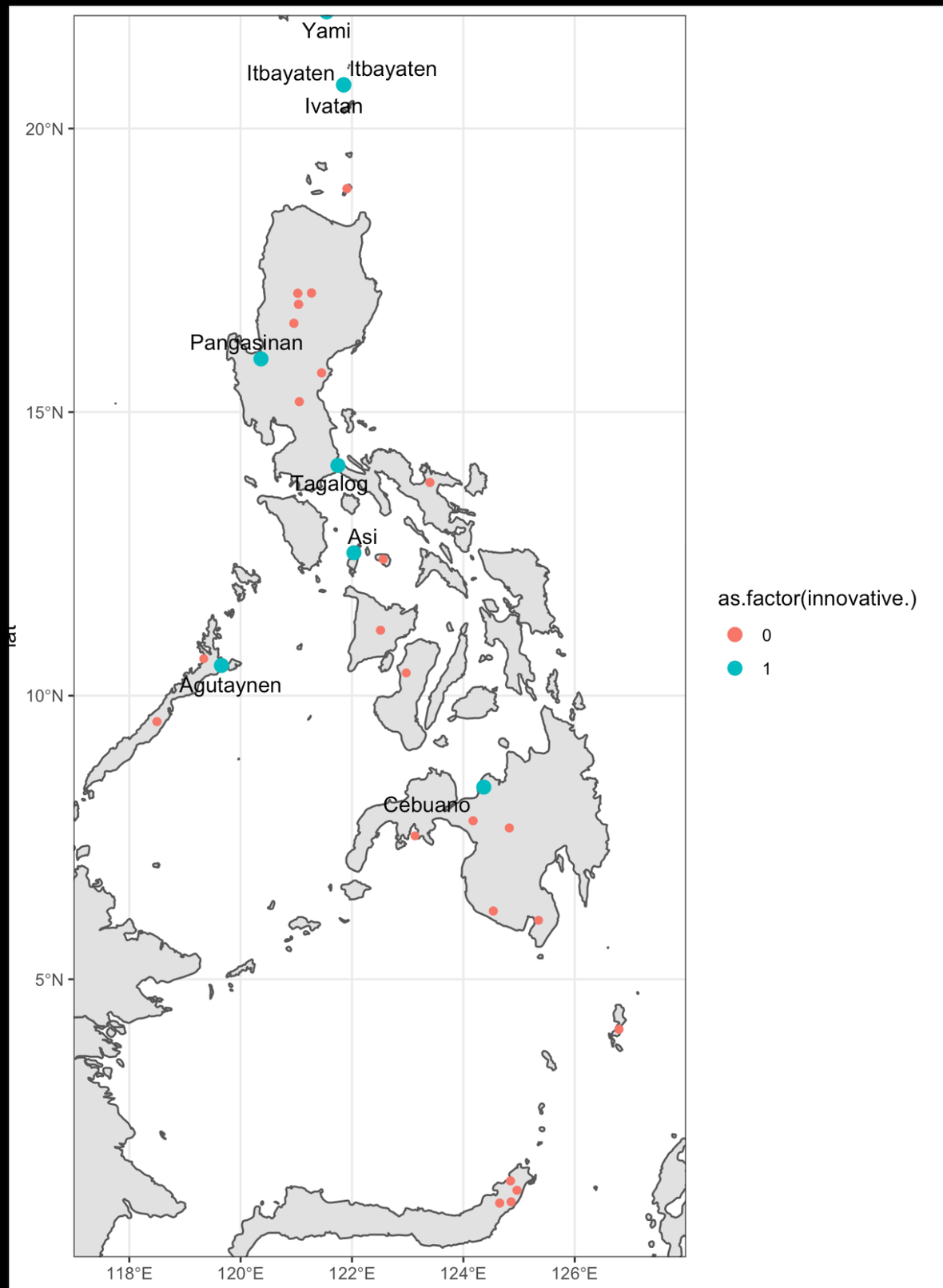
4. Structural borrowing in Circumstantial Voice morphology

- Implications:

1. This innovative pattern is likely a case of structural borrowing among languages spoken in ‘mainland Philippines’.

   - It is unlikely to be an inheritance from Proto-Philippines, as that scenario would entail the loss of this pattern in (i) all languages spoken outside the three major islands, (ii) all Negrito languages, and (iii) the majority of languages under the three branches attested with this change.

2. The borrowing is likely to take place after GCP languages spread to northern Sulawesi.



4. Structural borrowing in Circumstantial Voice morphology

The distribution of the innovative CV affixes suggests frequent and intense contact and borrowings among Luzon, Visayas, and Mindanao.

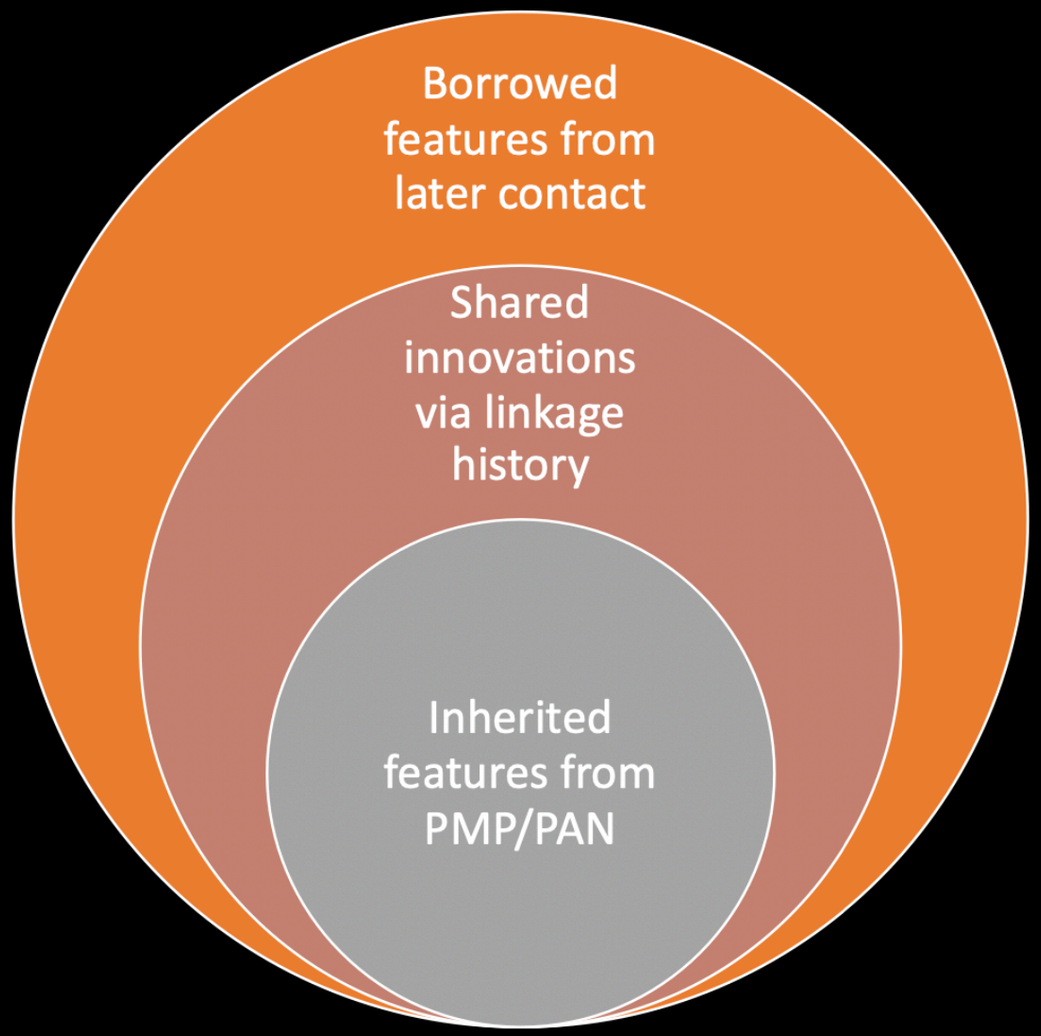


5. Summary & conclusion

Summary

	Phonological evidence	Leixcal evidence	Morphosyntactic evidence
Previous claim	Putative PMP *d/z merger defining PPh	More than 1,000 lexical items unattested outside the Philippines	—
Our claim	Not a shared innovation	Not solid evidence for subgrouping	—
Our findings	*d/z merger not attested in Central Luzon languages	Early borrowings or shared innovations from a linkage history	Structrual borrowing of CV morphology found exclusively in (a subset of languages in) mainland Philippines
Proposal	PMP *d/z merger is likely to be a case of drift	“Mainland” Philippines as a contact zone	“Mainland” Philippines as a contact zone

IMPLICATIONS ON PREHISTORY



- Current linguistic features among PLs reflect layers of change
- Linguistic macrohistory
  - Philippine Negrito groups
  - The 9 Philippine microgroups