Do you *c what I *c?
Proto-Batak palatals and what they (don't) say about PMP

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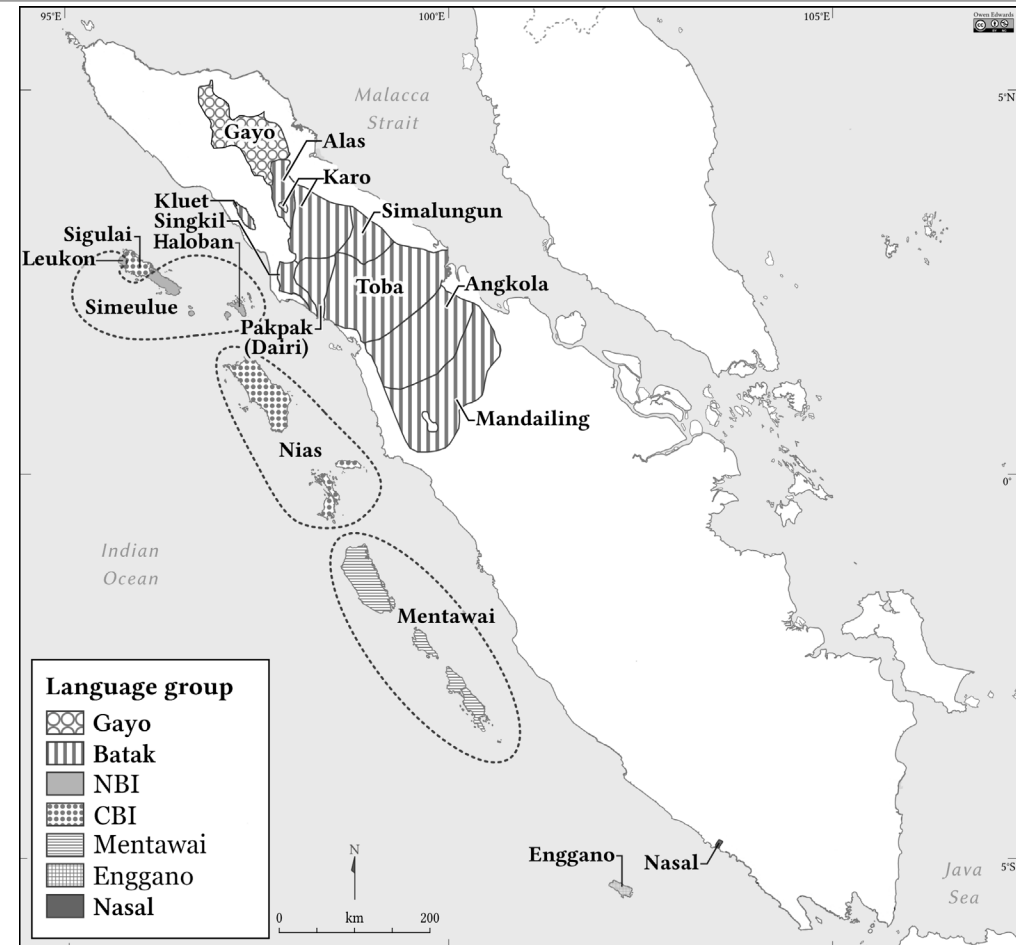
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   2. #2: *z ~ /c/ ~ [ʧ]
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4. Discussion & Conclusion

Preliminaries: Batak

Batak:
- Austronesian > Malayo-Polynesian > Sumatran > Batak > ~9 Languages
- **Two primary branches**:
  - **Northern**: Kluet, Alas, Singkil, Dairi, Karo
  - **Central-Southern**: Simalungun, Toba, Angkola, Mandailing

Adelaar (1981) reconstructed Proto-Batak (PB) phonology and 128 lexical items

Preliminaries: PMP Phonology

PMP Phonological Inventory (Blust 2013: 561):

Bil.	Alv.	Pal.	Ret.	Pal. Vel.	Vel.	Uvu./Glo.
p	t	**c [ʧ]**			k	q
b	d	**z [ʤ]**	D [ɖ]	j [gʲ]	g	
m	n	**ñ [ɲ]**			ŋ	
	s					h
	l					
	r [ɾ]				R [ʀ]	
w		y				

PMP Palatal Series: *z ~ /j/ ~ [ʤ], *c ~ /c/ ~ [ʧ], *ñ ~ /ny/ ~ [ɲ]

Preliminaries: Views on Batak Palatals

"Toba Batak and Javanese [...] normally have a voiced palatal affricate corresponding to Malay j, but sometimes show d instead. [...] This correspondence may thus have arisen through an incipient depalatalisation process that has gone further in Javanese than in the Batak languages." (Blust 2013: 584)

Adelaar (1981: 18) concludes PMP *z > PB *j but PMP *Z > PB *d

—

*"In fact *c is distinguished from *s in only 20-25 languages of western Indonesia and mainland Southeast Asia, including all of the Chamic languages (Thurgood 1999:81), Iban, Malay, Karo and Dairi-Pakpak Batak, Rejang, Lampung, Sundanese, Javanese, Madurese, Balinese, Sasak, Buginese, Makasarese and some other South Sulawesi languages."* (Blust 2013: 570)

"I cannot find sufficient evidence for the treatment of [Northern Batak] /c/ as an innovation." (Adelaar 1981: 15)

Sources of Palatals

Four possible sources of palatals in lexical items:

	✕ Donor, ✕ PMP	✕ Donor, ✓ PMP	✓ Donor, ✕ PMP	✓ Donor, ✓ PMP
Palatal	Innovation	Retention	Loan	Retention/Loan
Non-Palatal		Retention		Retention/Loan

Sources of Palatals

Four possible sources of palatals in lexical items:

No Donor, No PMP: *MUST* represent **innovations**.

	✕ Donor, ✕ PMP	✕ Donor, ✓ PMP	✓ Donor, ✕ PMP	✓ Donor, ✓ PMP
Palatal	**Innovation**	**Retention**	**Loan**	**Retention/Loan**
Non-Palatal		**Retention**		**Retention/Loan**

Sources of Palatals

Four possible sources of palatals in lexical items:
      No Donor, No PMP: *MUST* represent **innovations**.
      No Donor, PMP: *MUST* represent native developments via **retentions**.

	✕ Donor, ✕ PMP	✕ Donor, ✓ PMP	✓ Donor, ✕ PMP	✓ Donor, ✓ PMP
Palatal	**Innovation**	**Retention**	**Loan**	**Retention/Loan**
Non-Palatal		**Retention**		**Retention/Loan**

Sources of Palatals

Four possible sources of palatals in lexical items:

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No Donor, PMP: *MUST* represent native developments via **retentions**.

Donor, No PMP: *MUST* be considered **loans**. (✕ yet un-reconstructed lexical items)

	✕ Donor, ✕ PMP	✕ Donor, ✓ PMP	✓ Donor, ✕ PMP	✓ Donor, ✓ PMP
Palatal	Innovation	Retention	Loan	Retention/Loan
Non-Palatal		Retention		Retention/Loan

Sources of Palatals

Four possible sources of palatals in lexical items:

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No Donor, PMP: *MUST* represent native developments via **retentions**.

Donor, No PMP: *MUST* be considered **loans**. (✕ yet un-reconstructed lexical items)

Donor, PMP: Disambiguated by above three: *retention* or *loan*.

	✕ Donor, ✕ PMP	✕ Donor, ✓ PMP	✓ Donor, ✕ PMP	✓ Donor, ✓ PMP
Palatal	**Innovation**	**Retention**	**Loan**	**Retention/Loan**
Non-Palatal		**Retention**		**Retention/Loan**

Sources of Palatals

Four possible sources of palatals in lexical items:

No Donor, No PMP: *MUST* represent **innovations**.
No Donor, PMP: *MUST* represent native developments via **retentions**.
Donor, No PMP: *MUST* be considered **loans**. (✕ yet un-reconstructed lexical items)
Donor, PMP: Disambiguated by above three: *retention* or *loan*.

	✕ Donor, ✕ PMP	✕ Donor, ✓ PMP	✓ Donor, ✕ PMP	✓ Donor, ✓ PMP
Palatal	**Innovation**	**Retention**	**Loan**	**Retention/Loan**
Non-Palatal		**Retention**		**Retention/Loan**

DO NOT CARE!   DO NOT CARE!

Sources of Palatals

Three possible cases

	✗ Donor, ✗ PMP	✗ Donor, ✓ PMP	✓ Donor, ✗ PMP	✓ Donor, ✓ PMP
Palatal	**Innovation**	**Retention**	**Loan**	**Retention/Loan**
Non-Palatal		**Retention**		**Retention/Loan**

Sources of Palatals

Three possible cases
Case 1: PMP Palatal(s) Retained

Ambiguous palatal cases can be either retentions or loans (*no issue*)
No explanation necessary for palatal (!*re-*)innovations (if they exist)
Why no source?: All surrounding languages are Malayo-Chamic ⇒ *Retain* PMP *ñ, *c, *z.

	✕ Donor, ✕ PMP	✕ Donor, ✓ PMP	✓ Donor, ✕ PMP	✓ Donor, ✓ PMP
Palatal	**Innovation**	**Retention**	**Loan**	**Retention/Loan**
Non-Palatal				**Loan**

NO SOURCE!

Sources of Palatals

Three possible cases
Case 1: PMP Palatal(s) Retained
Case 2: PMP Palatal(s) NOT Retained
    Ambiguous non-palatal cases must be attributed to retention
    Ambiguous palatal cases must be attributed to loans (*!only if justified* by non-ambiguous)
    Need explanation for palatal (*!re-*)innovations (if they exist)
    Must be a justifiable merge or shift

	✕ Donor, ✕ PMP	✕ Donor, ✓ PMP	✓ Donor, ✕ PMP	✓ Donor, ✓ PMP
Palatal	**Innovation**		**Loan**	**Loan**
Non-Palatal		**Retention**		**Retention**

Sources of Palatals

Three possible cases
Case 1: PMP Palatal(s) Retained
Case 2: PMP Palatal(s) NOT Retained
Case 3: PMP Palatal(s) Split
     Ambiguous non-palatal cases must be attributed to retention
     Ambiguous palatal cases can be either retentions or loans (*no issue*)
     No explanation necessary for palatal (!*re-*)innovations (if they exist)

	✕ Donor, ✕ PMP	✕ Donor, ✓ PMP	✓ Donor, ✕ PMP	✓ Donor, ✓ PMP
Palatal	Innovation	Retention	Loan	Retention/Loan
Non-Palatal		Retention		Retention

Palatal #1: PMP *ñ ~ /ny/ ~ [ɲ]

Easiest case!

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Easiest case!

Step 1: Reflexes of PMP *ñ:

Palatal #1: PMP *ñ ~ /ny/ ~ [ɲ]

Easiest case!

Step 1: Reflexes of PMP *ñ:

PMP	Klu.	Ala.	Sin.	Dai.	Kar.	Sim.	Tob.	Ang.	Man.	Engl.	Mal.
*ñamuR			namuɣ	namur	namur	namur	nambur	nambur	nambur	'dew'	ɲamur
*ñamuk		namuk	namuk	namuk	namuk					'mosquito'	ɲamuk
*ñamñam				nanam	nanam		nanam	nanam	nanam	'taste'	
*miñak			minak	minak	minak	minak	minak			'oil'	miɲak
*qañud	anun	anun	anun	anun						'wash away'	haɲut
*pəñu				pənu			ponu	ponu	ponu	'turtle	pəɲu

Palatal #1: PMP *ñ ~ /ny/ ~ [ɲ]

Easiest case!

Step 1: Reflexes of PMP *ñ (unambiguously /n/ in all Batak languages)

Step 2: What languages have /ny/ or [ɲ]?

Palatal #1: PMP *ñ ~ /ny/ ~ [ɲ]

Easiest case!

Step 1: Reflexes of PMP *ñ (unambiguously /n/ in all Batak languages)

Step 2: What languages have /ny/ or [ɲ]?

- **Kluet**:
  - ✗ **Donor, ✗ PMP:**
    - **Nasal substitution**: *jujoŋ* 'to.carry.on.head' → *ɲ-ujoŋ* 'ᴀᴠ-to.carry.on.head'; *cucoʀ* 'to.spray' → *ɲ-ucoʀ* 'ᴀᴠ-to.spray'; *sintak* 'to.pull' → *ɲ-intak* 'ᴀᴠ-to.pull'
  - ✓ **Donor, ✗ PMP**:
    - **Transparent loans**: *haɲo* 'only' < Malayic *hanya*; *təʀɲato* 'apparently' < Malayic *ternyata*

Palatal #1: PMP *ñ ~ /ny/ ~ [ɲ]

Easiest case!

Step 1: Reflexes of PMP *ñ (unambiguously /n/ in all Batak languages)

Step 2: What languages have /ny/ or [ɲ]?

◦ **Kluet**:

◦ **Alas**:

  ◦ ✕ **Donor**, ✕ **PMP**:

    ◦ **Nasal spreading from nasals and /h/ so that /y/ → [ɲ]**: *bayaʀ* 'to.buy' → *m-aɲaʀ* 'ᴀᴠ-to.buy'; *maɲat* 'corpse' < Arabic مَيْت (mayt) 'dead'; *iɲoh* 'urine' < PB *yəh < PMP *ihəq

  ◦ ✓ **Donor**, ✕ **PMP**:

    ◦ **Transparent Loans**: *ɲaɲi* 'to.sing' < Malayic *nyanyi*; *n-aɲə* 'ᴀᴠ-to.ask' < Malayic *tanya*; *koɲal* 'kind of tree' < Malayic *konyal*

Palatal #1: PMP *ñ ~ /ny/ ~ [ɲ]

Easiest case!

Step 1: Reflexes of PMP *ñ (unambiguously /n/ in all Batak languages)

Step 2: What languages have /ny/ or [ɲ]?

◦ **Kluet**:

◦ **Alas**:

◦ **Angkola/Mandailing**:

  ◦ ✗ **Donor, ✗ PMP**

  ◦ **Nasal substitution**: *susu* 'milk' → *maɲ-usu* 'ᴀᴠ-to.breastfeed'

  ◦ **Nasal spreading from nasals and /h/ so that /y/ → [ɲ]**: *hoɲat* 'beetle' < PB *kayat; *oɲo* 'urine' < PB *yəh < PMP *ihəq

  ◦ ✓ **Donor, ✗ PMP**:

  ◦ **Transparent Loans**: *ɲala* 'flame' < Malayic *nyala*; *ɲior* 'coconut' < Malayic *nyiur*

Palatal #1: PMP *ñ ~ /ny/ ~ [ɲ]

Easiest case!

Step 1: Reflexes of PMP *ñ (unambiguously /n/ in all Batak languages)

Step 2: What languages have /ny/ or [ɲ]?

Step 3: Any conflicts or anything left unexplained?

Palatal #1: PMP *ñ ~ /ny/ ~ [ɲ]

Easiest case!

Step 1: Reflexes of PMP *ñ (unambiguously /n/ in all Batak languages)

Step 2: What languages have /ny/ or [ɲ]?

Step 3: Any conflicts or anything left unexplained?

- ◦ **No!** All possible PMP **retentions** reflect /n/

    Regular processes account for **innovative** /ɲ/

    Remaining cases are clear **loan** /ɲ/

⇒ **Case 2**: **NOT Retained** – Merger of PMP *n, *ñ > PB *n

	✗ Donor, ✗ PMP	✗ Donor, ✓ PMP	✓ Donor, ✗ PMP	✓ Donor, ✓ PMP
Palatal	Innovation		Loan	Loan
Non-Palatal		Retention		Retention

Palatal #2: PMP *z ~ /j/ ~ [ʤ]

Step 1: Reflexes of PMP *z

PMP	Klu.	Ala.	Sin.	Dai.	Kar.	Sim.	Tob.	Ang.	Man.	Engl.	Mal.
*zalan	dalan	dalan	dalan	dalan	dalan	dalan	dalan	dalan	dalan	'road'	jalan
*zakan	dakan	dakan	dakan	dakan	dakan	dahan	dahan	dahan	dahan	'to.cook.rice'	
*zauq	dauh	dauh	daoh	daoh	dauh	daoh	dao	dao	dao	'far'	jauh
*zuRu		duʁu	duɣu	duru	duru		duru	duru	duru	'corner'	
*zuRuq				duruh	duruh					'sap'	
*quzan	udan	udan	udan	udan	udan	udan	udan	udan	udan	'rain'	hujan
*tuzuq		tuduh	tuduh	tuduh	tuduh	tuduh	tudu	tudu	tudu	'to.point'	tujuh
*pəzəm	pədom	pədəm	pədəm	pədəm	pədəm	podom	podom	podom	podom	'to.sleep'	pəjam
*haRəzan			ɣədan	ardan	rədan					'ladder'	
*qəzən		dən	ədən			odon	odon	odon	odon	'to.push.out'	əjan

Palatal #2: PMP *z ~ /j/ ~ [ʤ]

Step 1: Reflexes of PMP *z

PMP	Klu.	Ala.	Sin.	Dai.	Kar.	Sim.	Tob.	Ang.	Man.	Engl.	Mal.
*zəlay		jale	jale							'kind.of.grain'	anjalay
*zariaŋaw		jəʀaŋow	jəɣaŋo	jəraŋo	jəraŋo	jaraŋow				'kind.of.plant'	jerangau
*zəRət		jəʀat	jəɣət	jər[əa]t	jər[əa]t	jorot	jorat	jorat	jorat	'trap'	jerat
*zuliŋ		juliŋ	juliŋ		juliŋ	juliŋ	joliŋ	juliŋ	juliŋ	'squint'	juling
*zəRa		jəʀə	jəɣa	jəra	jəra	jora	jora	jora	jora	'wary'	jera
*buzuk		bujuk			bujuk	bujuk	bujuk	bujuk	bujuk	'kind.of.fish'	bujuk
*uzi	uji	uji	oji	uji	uji	uji	uji	uji	'to.test'	uji
*tuzu	tuju	tuju	tuju				tuju	tuju	tuju	'direction'	tuju
*tazəm	tajəm	tajəm	tajəm	tajəm		tajom	tajom	tajom	'sharp'	tajam
*ŋazəl		majəl	maj[əa]l		maj[oa]l	majal	majal	majal	'dull'	majal

Palatal #2: PMP *z ~ /j/ ~ [ʤ]

Step 1: Reflexes of PMP *z (ambiguous /j/ and /d/ in all Batak languages)

Palatal #2: PMP *z ~ /j/ ~ [ʤ]

Step 1: Reflexes of PMP *z (ambiguous /j/ and /d/ in all Batak languages)

Step 2: What languages have /j/ or [ʤ]?

- All of them! With no clear phonological/phonetic conditioning
- Many innovations and loans (145):
  - ✕ Donor, ✕ PMP
    - **Lexical Innovations (42/145)**: *bajar* 'goat', *jampal* 'palm', *jagul* 'corn'
    - **Phonological Innovations (4/145)**: PB *julu 'upstream', *jahe 'downstream', *juma 'field' < PMP *qulu, *qaqay, *quma (innovated from *di 'at' + …)
  - ✓ Donor, ✕ PMP
    - **Non-Austronesian (43/145)**: *panji* 'cotton' < Tamil பஞ்சி (pañci), *jasat* 'body' < Arabic جَسَد (jasad) 'body', *jas* 'jacket' < Dutch *jas*, *jəlma* 'person' < Sanskrit जन्म (janma)
    - **Austronesian (55/145)**: *jəmur* 'to.tame' < Malayic *jəmur*, *jinak* 'wild' < Malayic *jinak*, *anjiŋ* 'dog' < Malayic *anjiŋ*

Palatal #2: PMP *z ~ /j/ ~ [ʤ]

Step 1: Reflexes of PMP *z (ambiguous /j/ and /d/ in all Batak languages)

Step 2: What languages have /j/ or [ʤ]?

Step 3: Any conflicts or anything left unexplained?

Palatal #2: PMP *z ~ /j/ ~ [ʥ]

Step 1: Reflexes of PMP *z (ambiguous /j/ and /d/ in all Batak languages)

Step 2: What languages have /j/ or [ʥ]?

Step 3: Any conflicts or anything left unexplained?
- **Yes!** Appears like **Case 3: Split** but with no clear criteria – is this an unconditioned split?

	✗ Donor, ✗ PMP	✗ Donor, ✓ PMP	✓ Donor, ✗ PMP	✓ Donor, ✓ PMP
Palatal	Innovation	Retention	Loan	Retention/Loan
Non-Palatal		Retention		Retention

Palatal #2: PMP *z ~ /j/ ~ [ʤ]

Step 1: Reflexes of PMP *z (ambiguous /j/ and /d/ in all Batak languages)

Step 2: What languages have /j/ or [ʤ]?

Step 3: Any conflicts or anything left unexplained?

◦ **Yes!** Appears like **Case 3: Split** but with no clear criteria – is this an unconditioned split?

◦ *Let's look again*:

  ◦ Nearly all ✓ PMP *z that reflect /j/ have clear ✓ Donor (e.g., Malayic *tuju* < PMP *tuzu)

  ◦ Multiple PB forms show irregularity for PB retention, but *regularity* for Malayic

    ◦ PMP *zəlay > Malayic *anjalai* > Batak *jale* NOT Batak **jəle

    ◦ PMP *ŋazəl > Malayic *majal* > Batak *maj[aə]l* (also PMP *ŋuda 'young' > Malayic *muda*)

    ◦ Unlikely inheritances and other languages *support* borrowing of early Malayic *əC#

      ◦ Malayic *pijar* 'glowing.metal' > Batak *pijər* (metallurgy)

      ◦ Malayic *jərat* 'trap' > Nasal *jəχuʔ*; Malayic *tərkam* 'to.pounce' > Nasal *təχəkum*

Palatal #2: PMP *z ~ /j/ ~ [ʤ]

Step 1: Reflexes of PMP *z (ambiguous /j/ and /d/ in all Batak languages)

Step 2: What languages have /j/ or [ʤ]?

Step 3: Any conflicts or anything left unexplained?

◦ **So...** there *is* clear evidence for the ✓ Donor /j/, ✓ PMP /d/ division!

	✕ Donor, ✕ PMP	✕ Donor, ✓ PMP	✓ Donor, ✕ PMP	✓ Donor, ✓ PMP
Palatal	**Innovation**		**Loan**	**Loan**
Non-Palatal		**Retention**		**Retention**

Palatal #2: PMP *z ~ /j/ ~ [ʤ]

Step 1: Reflexes of PMP *z (ambiguous /j/ and /d/ in all Batak languages)

Step 2: What languages have /j/ or [ʤ]?

Step 3: Any conflicts or anything left unexplained?

- **So...** there *is* clear evidence for the ✓ Donor /j/, ✓ PMP /d/ division!
  - ✓ Donor palatals *must* be taken as **loans**
  - ✓ PMP non-palatals *must* be taken as true **retention**
- **Case 2**: Palatal *z NOT Retained – Merger of PMP *d, *z > PB *d
- **What about /j/ innovations**? Phoneme /j/ reappeared under pressure from loans and via language-internal processes (e.g., PB *di + ...)

	✕ Donor, ✕ PMP	✕ Donor, ✓ PMP	✓ Donor, ✕ PMP	✓ Donor, ✓ PMP
Palatal	Innovation		Loan	Loan
Non-Palatal		Retention		Retention

Palatal #3: PMP *c ~ /c/ ~ [ʧ]

Step 1: Reflexes of PMP *c

PMP	Klu.	Ala.	Sin.	Dai.	Kar.	Sim.	Tob.	Ang.	Man.	Engl.	Mal.
*aŋ(ə)cəj			ancəŋ	ancəŋ			ansok	ancok	ancok	'armpit.sweat'	
*cək-cək			cakcakən	cakcakən	cakcak			ancocak	ancocak	'gecko'	cəcak
*cabaŋ		cabaŋ	cabaŋ		cabaŋ		sabaŋ	sabaŋ	sabaŋ	'branch'	cabaŋ
*(qa)pucuk		pucuk	pucuk	pucuk	pucuk	pusuk	pusuk	pusuk	pusuk	'sprout/tip'	pucuk
*cit-cit		cecet		cicit	cicət					'bird'	cicit
*cawi				əncawi	cawi					'bird'	cawi
*cirit		ceʁek	ceɣeʔ	cirit	cirət		sirit			'diarrhea'	cirit
*cir-cir		ciciʁ	ceceɣ	circir	circir		sirsir	sirsir	sirsir	'to.sow'	cicir

Palatal #3: PMP *c ~ /c/ ~ [ʧ]

Step 1: Reflexes of PMP *c (unambiguously /c/ in NB, /s/ in SB except /nc/ in Ang. & Man.)

Step 2: What languages have /c/ or [ʧ]?

- **Northern Batak**:
  - ✕ Donor, ✕ PMP
    - **Lexical Innovations (86/254)**:
    - **Phonological Innovations (45/254)**:
      - PB *t > PNB *c / _i (18):
      - PB *s > PNB, Ang., Man. *c / n_ (27):
  - ✓ Donor, ✕ PMP
    - **Non-Austronesian (30/254)**:
    - **Austronesian (93/254)**:

Palatal #3: PMP *c ~ /c/ ~ [ʧ]

Step 1: Reflexes of PMP *c (unambiguously /c/ in NB, /s/ in SB except /nc/ in Ang. & Man.)

Step 2: What languages have /c/ or [ʧ]?

Step 3: Any conflicts or anything left unexplained?
- **No!** This looks like **Case 1: Retained**

	✕ Donor, ✕ PMP	✕ Donor, ✓ PMP	✓ Donor, ✕ PMP	✓ Donor, ✓ PMP
Palatal	Innovation	Retention	Loan	Retention/Loan
Non-Palatal				

Palatal #3: PMP *c ~ /c/ ~ [ʧ]

Step 1: Reflexes of PMP *c (unambiguously /c/ in NB, /s/ in SB except /nc/ in Ang. & Man.)

Step 2: What languages have /c/ or [ʧ]?

Step 3: Any conflicts or anything left unexplained?

◦ **No!** This looks like **Case 1: Retained**

◦ **But...** if we account for the innovations...

 ◦ **E.g.** PB *aŋcəg actually derives from *ansəj, *incir from *insir, etc.

	✕ Donor, ✕ PMP	✕ Donor, ✓ PMP	✓ Donor, ✕ PMP	✓ Donor, ✓ PMP
Palatal	**Innovation**	**Retention**	**Loan**	**Retention/Loan**
Non-Palatal				

Palatal #3: PMP *c ~ /c/ ~ [t͡ʃ]

Step 1: Reflexes of PMP *c (unambiguously /c/ in NB, /s/ in SB except /nc/ in Ang. & Man.)

Step 2: What languages have /c/ or [t͡ʃ]?

Step 3: Any conflicts or anything left unexplained?

- **No!** This looks like **Case 1: Retained**
- **But…** if we account for the innovations…
  - **E.g.** PB *aŋcəg actually derives from *ansəj, *incir from *insir, etc.
- … we only find /c/ with ✓ Donor
- ⇒ Inherited /c/ is only ever found in Batak when there is a Malayic cognate!

	✕ Donor, ✕ PMP	✕ Donor, ✓ PMP	✓ Donor, ✕ PMP	✓ Donor, ✓ PMP
Palatal	**Innovation**	~~Retention~~	**Loan** ⟶	**Retention/Loan**
Non-Palatal				

Palatal #3: PMP *c ~ /c/ ~ [ʧ]

Step 1: Reflexes of PMP *c (unambiguously /c/ in NB, /s/ in SB except /nc/ in Ang. & Man.)

Step 2: What languages have /c/ or [ʧ]?

Step 3: Any conflicts or anything left unexplained?

- ⇒ Inherited /c/ is only ever found in Batak when there is a Malayic cognate!
- Why is this concerning? Let's look at some PMP etyma...
  - *pecəq > Karo *pəcah* but *ə > /a/ is irregular ... < Malayic *pəcah*
  - *muncuŋ > Karo *muncuŋ* but could easily be PB *munsuŋ or < Malayic *muncuŋ*
  - *caŋkət > Dairi *saŋkət...* not *c > /c/?

	✗ Donor, ✗ PMP	✗ Donor, ✓ PMP	✓ Donor, ✗ PMP	✓ Donor, ✓ PMP
Palatal	**Innovation**	**Retention**	**Loan** ⟶	**Retention/Loan**
Non-Palatal				

Palatal #3: PMP *c ~ /c/ ~ [ʧ]

Step 1: Reflexes of PMP *c (unambiguously /c/ in NB, /s/ in SB except /nc/ in Ang. & Man.)
Step 2: What languages have /c/ or [ʧ]?
Step 3: Any conflicts or anything left unexplained?
What does this mean for PB *c?

	✗ Donor, ✗ PMP	✗ Donor, ✓ PMP	✓ Donor, ✗ PMP	✓ Donor, ✓ PMP
Palatal	**Innovation**	**Retention**	**Loan** ⟶	**Retention/Loan**
Non-Palatal				

Palatal #3: PMP *c ~ /c/ ~ [t͡ʃ]

Step 1: Reflexes of PMP *c (unambiguously /c/ in NB, /s/ in SB except /nc/ in Ang. & Man.)

Step 2: What languages have /c/ or [t͡ʃ]?

Step 3: Any conflicts or anything left unexplained?

What does this mean for PB *c?

◦ We can't say anything about an "inheritance" since all "inheritances" are *dubious* at best

◦ All apparent "inheritances" should be considered **loans**

◦ All other /c/ can either be attributed to PB *ns, *ti, or PNB lexical innovation and therefore all non-loan /c/ are **innovation**

	✕ Donor, ✕ PMP	✕ Donor, ✓ PMP	✓ Donor, ✕ PMP	✓ Donor, ✓ PMP
Palatal	**Innovation**		**Loan**	
Non-Palatal				

Discussion

What does this tell us about PB palatals?

◦ NO evidence for phonemic PB *ɲ

◦ NO evidence for phonemic PB *c   (but *yes* for phonetic)

◦ Evidence for phonemic PB *j

What does this tell us about PMP palatals?

◦ PMP *ñ, *n > PB *n *and* Batak cannot be used as evidence for *ñ vs. *n

◦ PMP *z, *d > PB *d *and* Batak cannot be used as evidence for *z vs. *d

◦ Batak cannot be used as evidence for *c vs. *s

Conclusion

Timeline of changes:

1. PMP palatals all merged with alveolars before PB
   - *ñ, *n > *n and *z, *d > *d
2. Pre-PB re-innovated /j/
   - Probably under influence from loan phonology and language-internal processes
3. By PB, [c] was likely an allophone of *s after *n
   - See: Karo synchronic allomorph –*ca* of –*sa* after consonants (Woollams 1996: 42)
   - See: Some Toba varieties pronunciation of geminate /s:/ as /c/ (Nababan 1981: 5–6)

Elsewhere:

- Evidence for Proto-Malayic *əC# in Batak loans
- Batak cannot be used as a diagnostic for PMP palatals (except via its loans)

	/ɲ/	/c/	/z/
PMP	✓	✓ (?)	✓
Pre-PB	✕	✕	✕
PB	✕	~	✓

Thank you!

References

Adelaar, K. A. 1981. Reconstruction of Proto-Batak phonology. In Blust, Robert A. (ed.), *Historical linguistics in Indonesia*. Jakarta: Atma Jaya University.

Blust, Robert A., Stephen Trussel, & Alexander D. Smith. 2023. *CLDF dataset derived from Blust's "Austronesian comparative dictionary"* (v1.2) [Data set]. Zenodo. doi:10.5281/zenodo.7741197

Lexical Sources: https://www.e-hsl.com/sources

Comments/Questions

*pucuk/*qapucuk: Malayic loan

*puncu: /ns/

*aŋ(ə)cəŋ/*aŋ(ə)cəj/*qaŋ(ə)səj: /ns/

*mu(n)cuŋ: /ns/ or Malayic loan

*pəcəq: Malayic loan (əC# → aC#)

*kacaw: Malayic loan

*icir/*iŋsiD: /ns/

*pacək: Malayic loan (əC# → aC#)

*ca(ŋ)kət: /c/ not retained in Dairi