

Poqomam *p*' as a “stone soup” phonological borrowing

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Summary

- ▶ Several Lowland Mayan languages innovated a /p'/ phoneme
- ▶ Present in Poqomam (and western varieties of Poqomchi')
- ▶ Sound change diffused from Lowlands
- ▶ No loanwords
- ▶ Follows the pattern of a “stone soup” diffusion (Blevins 2017)

Phonological diffusion

- ▶ Standard model: borrowed phonemes enter a recipient language through loanwords
 - ▶ “[P]honological borrowing’ of this sort is in each case...*transfer of pattern...as a result of transfer of fabric*. It is rather unusual for a borrowed sound or a borrowed phonological pattern to permeate words in a donor [sic] language that have not been borrowed” (Grant et al. 2020: 77)

Blevins' (2017) “stone soup” model

- ▶ The Yurok language of northwest California innovated glottalized consonants
- ▶ Influenced by neighbors that had those sounds
- ▶ Few or no loanwords

Blevins' (2017) “stone soup” model

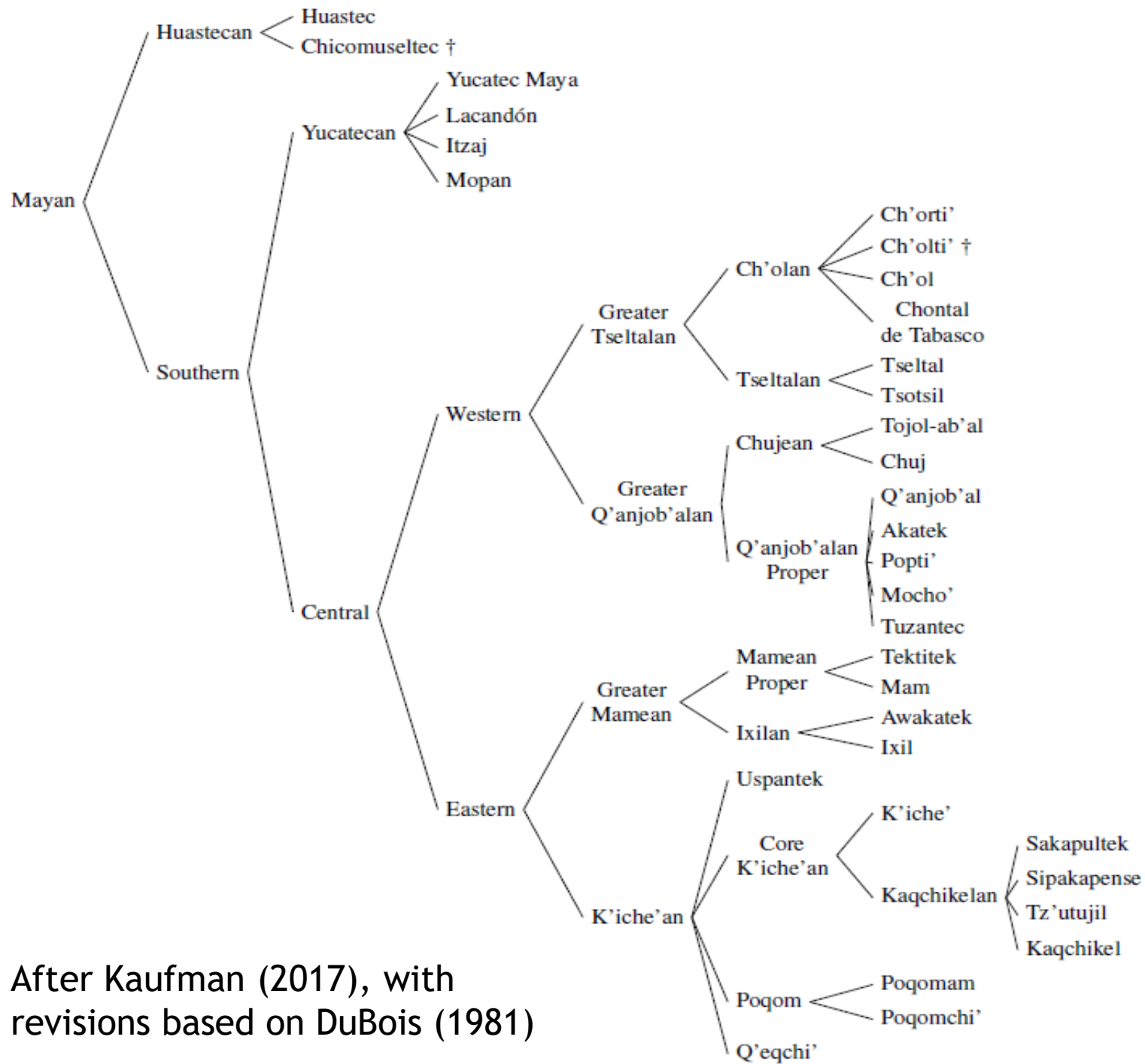
- ▶ “Stone Soup” folktale
 - ▶ A hungry traveler comes into a town and starts boiling a rock
 - ▶ Tells townspeople he is making “stone soup” but is missing some ingredients
 - ▶ They bring ingredients and end up with a delicious soup
 - ▶ The stone contributed nothing to the soup directly, but it was the impetus
- ▶ Metaphor for phonological borrowing
 - ▶ Donor language ejectives are the “stone” - a perceptual target
 - ▶ Yurok-internal conditioned sound change produced ejectives
 - ▶ Influence from donor language, but no loanwords

The Maya Lowlands

- ▶ Zone of prolonged contact in the Classic Period (c. 200-900 AD)
- ▶ Shared sound changes, lexicon, grammatical patterns
- ▶ Includes over half of Mayan languages
 - ▶ Core: Ch'olan, Yucatecan, and Tzeltalan subgroups
 - ▶ Peripheral influence on other groups
- ▶ (Justeson et al. 1985, Law 2014)

Poqom Setting

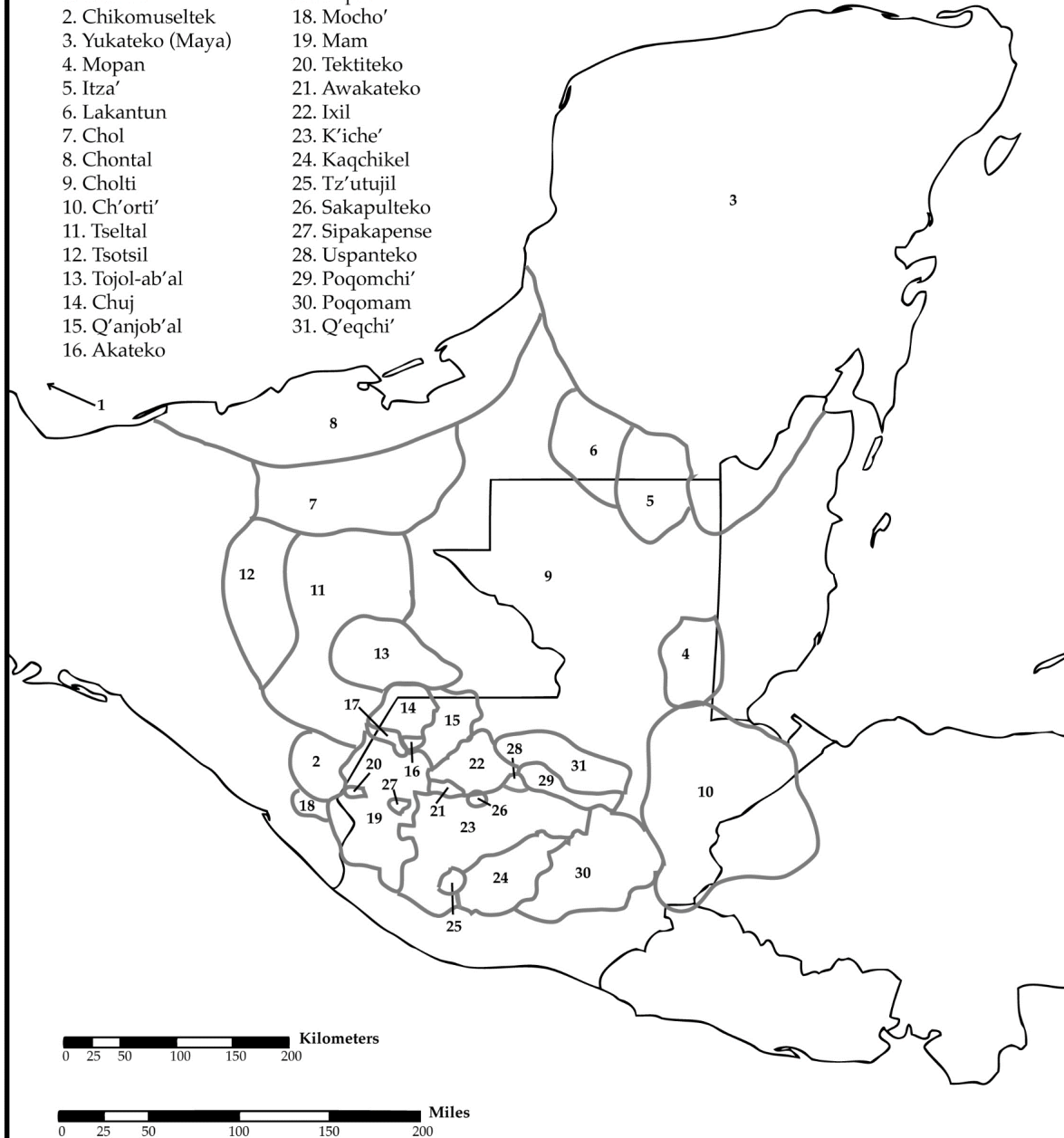
- ▶ “Poqom” - Poqomchi’ and Poqomam
- ▶ Very little divergence
- ▶ Belong to the K’iche’an branch of Mayan
 - ▶ Also includes K’iche’, Kaqchikel, and Q’eqchi’
- ▶ Location
 - ▶ Poqomam: central Guatemala, around Guatemala City
 - ▶ Poqomchi’: east central highlands, in Alta Verapaz and Baja Verapaz



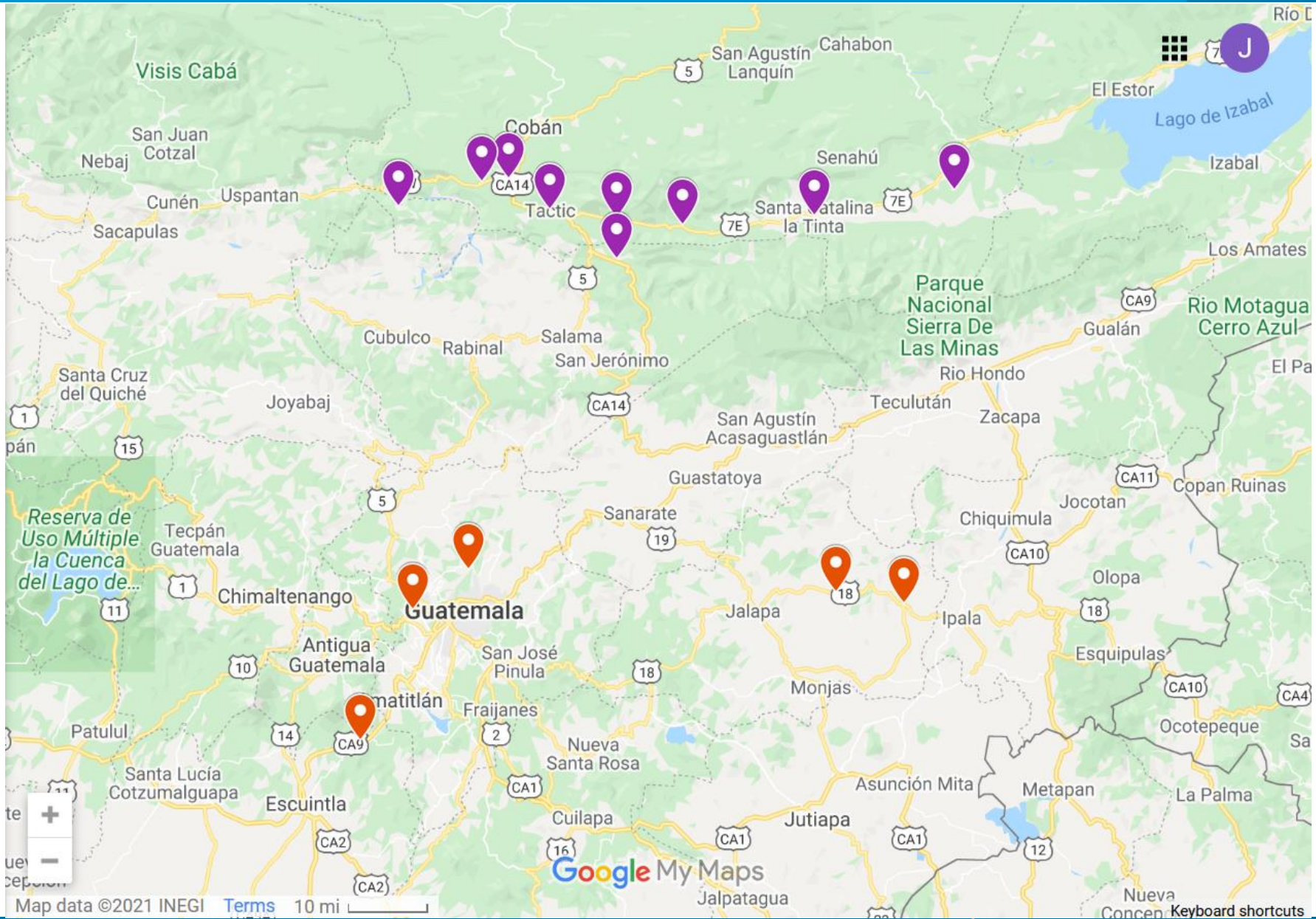
After Kaufman (2017), with revisions based on DuBois (1981)

The Mayan Languages *before the Spanish Conquest*

- | | |
|--------------------|-----------------|
| 1. Wastek | 17. Popit' |
| 2. Chikomuseltek | 18. Mocho' |
| 3. Yukateko (Maya) | 19. Mam |
| 4. Mopan | 20. Tektiteko |
| 5. Itza' | 21. Awakateko |
| 6. Lakantun | 22. Ixil |
| 7. Chol | 23. K'iche' |
| 8. Chontal | 24. Kaqchikel |
| 9. Cholti | 25. Tz'utujil |
| 10. Ch'orti' | 26. Sakapulteko |
| 11. Tseltal | 27. Sipakapense |
| 12. Tsotsil | 28. Uspanteko |
| 13. Tojol-ab'al | 29. Poqomchi' |
| 14. Chuj | 30. Poqomam |
| 15. Q'anjob'al | 31. Q'eqchi' |
| 16. Akateko | |



Map credit:
Law (2014)



Poqom History

- ▶ Originally a contiguous group
- ▶ In the 1400s, K'iche' expansion into Rabinal drove a “wedge” between the northern and southern groups (Campbell 1978)
- ▶ Currently considered distinct ethnic and linguistic groups
- ▶ Evidence of contact:
 - ▶ From Lowland Mayan languages, especially Ch'olan (Wichmann 2006, Law 2014, Vinogradov 2020)
 - ▶ Between Poqom(chi') and Q'eqchi' (Campbell 1973, Vinogradov 2020)

Poqomam and Poqomchi': Dialectology

- ▶ Three major dialect areas (Campbell 1978)
 - ▶ Eastern Poqomchi'
 - ▶ Western Poqomchi'
 - ▶ Poqomam
- ▶ Western Poqomchi' and Poqomam share the innovation of /p'/
 - ▶ Occurred before the K'iche' expansion
- ▶ Some innovations occurred only in Poqomam or only in Poqomchi' (Eastern and Western)
 - ▶ Malchic Nicolás et al. (2000)

The /p' / phoneme

- ▶ Innovation of /p' / phoneme in Maya Lowlands
- ▶ Yucatecan, Ch'olan, Tzeltalan, and Poqom
- ▶ From words that originally had /p/ and /b/ (Kaufman and Norman 1984)
- ▶ Sporadic change (Wichmann 2006)
 - ▶ Notoriously impossible to write a rule
 - ▶ Attempts: Campbell (1977), Kaufman and Norman (1984), Campbell (1996)
- ▶ Fills a gap in the inventory

Proto-Mayan consonants (Campbell 2017)

	Bilabial	Alveolar	Palatalized alveolar	(Alveo-) palatal	Velar	Uvular	Glottal
Stop	p ɓ	t t'	tʲ tʲ'		k k'	q q'	ʔ
Affricate		ts ts'		tʃ tʃ'			
Fricative		s		ʃ		χ	h
Nasal	m	n			ŋ		
Trill		r					
Approximant	w	l		j			

Lowland consonants (generalized)

	Bilabial	Alveolar	(Alveo-) palatal	Velar	Glottal
Stop	p ɓ p'	t t'		k k'	ʔ
Affricate		ts ts'	tʃ tʃ'		
Fricative		s	ʃ	x	(h)
Nasal	m	n		ŋ	
Trill		(r)			
Approximant	w	l	j		

Poqomam consonants (Conguache Coj 2019)

	Bilabial	Alveolar	(Alveo-) palatal	Velar	Uvular	Glottal
Stop	p ɓ p'	t t'		k k'	q q'	ʔ
Affricate		ts ts'	tʃ tʃ'			
Fricative		s	ʃ		χ	h
Nasal	m	n				
Trill		r				
Approximant	w	l	j			

The /p'/ phoneme in Poqom

- ▶ Poqomam and Western Poqomchi'
- ▶ Phonemic split
- ▶ Subsequent phonetic change affected /b/ (Campbell 1978)
 - ▶ /b/ > [ʔm] syllable-finally
 - ▶ /b/ > [ʔw] elsewhere

The /p' / phoneme in Poqom

- ▶ Yucatecan likely the ultimate source (Wichmann 2006)
- ▶ Probably by way of Western Ch'olan
- ▶ But Poqom has very few loanwords from Lowland languages (Vinogradov 2020)
 - ▶ “[i]t must be assumed that /p' / developed in Poqom independently of the *b':p'* contrast in the Lowland Maya languages” (Kaufman and Norman 1984: 85)
- ▶ How was /p' / innovated?

Methodology

- ▶ Consulted three Poqomam dictionaries
 - ▶ Zinn and Zinn (n.d.)
 - ▶ Comunidad Lingüística Poqomam (2003)
 - ▶ Conguache Coj (2019)
- ▶ Western Poqomchi' dictionaries are not extensive; excluded here
- ▶ Listed all words beginning in *p'*

Methodology

- ▶ Compared to dictionaries of Ch'olan and Yucatecan languages
 - ▶ Chol (Aulie and Aulie 2009, Hopkins et al. 2011)
 - ▶ Chontal (Keller and Luciano 1997)
 - ▶ Yucatec (Bricker 1998, Gómez Navarrete 2009)
- ▶ Manually identified plausible and possible loanwords
 - ▶ Plausible loanwords: (near-)identical form and meaning
 - ▶ Possible loanwords: passably similar form, plausible extension of meaning
 - ▶ Not a possible loanword: has phonemes not found in Lowland languages
- ▶ Compared roots to roots, mostly

Methodology

- ▶ Also compared words to (conservative) Eastern Poqomchi'
 - ▶ Comunidad Lingüística Poqomchi' (2001)
 - ▶ Dobbels (2003)
- ▶ Some perceived loanwords could actually be cognates
 - ▶ Effect of contact between (distantly) related languages
 - ▶ Presence of a cognate in Eastern Poqomchi' or other K'iche'an languages suggests a Poqomam-internal sound change, not a loanword

Note on orthography

- ▶ $b' = [b]$
- ▶ $ch = [tʃ]$
- ▶ $j = [ɟ]$
- ▶ $tz = [ts]$
- ▶ $x = [ʃ]$
- ▶ $y = [j]$
- ▶ $' = [ʔ]$
- ▶ $VV = [V:]$

Data

- ▶ 130 headwords across the 3 dictionaries
- ▶ About 52 unique roots
 - ▶ Grouped based on my judgment and any information in the dictionaries
 - ▶ Not always clear which headwords should be considered the same root - vowel variation and inconsistent transcription of *j* or *h*.

Results

- ▶ Two roots were plausible loanwords

- ▶ *p'on* (synonym *b'ol*) 'bulky, swollen'
- ▶ *p'us-* 'to fold, bend'

Yucatec *p'ol* 'swell up'

Yucatec *p'us* 'bend, arch, hump up'

Chontal *p'usu u pat* 'hunched (back)'

- ▶ But equally or more plausible as retentions

- ▶ Poqomchi': *b'onb'on* 'thick, bulky'
- ▶ Poqomchi': *b'us-* 'to fold'

Results

- ▶ 12 more roots were possible (but unlikely) loanwords
 - ▶ *p'oh'-, p'ahb'-* 'to kick' Yucatec *p'oh* 'bend over'
 - ▶ *p'aj-* 'to beat, hammer, make tortillas' Chol *p'aj* 'to insult', *p'ajtel* 'to fall'
 - ▶ *p'uy-, p'ay-* 'weak (watered down); soft' Yucatec *p'ay* 'crumble, shred'
 - ▶ *p'ees* 'crooked, curved, bent' Yucatec *p'é'es* 'to cut, score', Chol *p'asun* 'to cut in slices'
 - ▶ *p'ejek* 'cold, frozen' Yucatec *p'eh* 'to chip, break'
 - ▶ *p'ex'-* 'to bring sth closer' Yucatec *p'ex* 'to diminish, lessen'
 - ▶ *p'ix-* 'to break (long thin object)' Chol *p'ijtel* 'to break (iv.)'

Results

- ▶ 12 more roots were possible (but unlikely) loanwords
 - ▶ *p'irik* 'multicolored' Yucatec *p'iris* 'flick with fingers, thump'
 - ▶ *p'ix-* 'lying down' Chol *p'ixil* 'awake'
 - ▶ *p'ol-* 'to reach, overtake' Chol *p'ol* 'to produce'
 - ▶ *p'uch'-* 'to smash' Yucatec *p'uch* 'to beat, flail, thresh'
 - ▶ *p'u'lan* 'to fart' Yucatec *p'ulú'us* 'inflate'

Results

- ▶ 18 roots could not have been loanwords
- ▶ /q/, /q'/ phonemes not present in Lowlands (where *q,*k > k)
- ▶ /r/ is marginal in Yucatec, absent in Ch'olan (except Ch'orti')
 - ▶ *p'aq-* 'to hang down; throw down (something flat)'
 - ▶ *p'aq-* 'to crush' (if a distinct root from the previous)
 - ▶ *p'ar-* 'to burn'
 - ▶ *p'aramp'an* 'butterfly'
 - ▶ *p'arik* 'type of noise'
 - ▶ *p'ehq-* 'to throw'

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 - ▶ *p'irik* 'multicolored'
 - ▶ *p'irit* 'type of traditional food'
 - ▶ *p'oq-* 'to grind corn on a stone'
 - ▶ *p'oq* 'seated, positioned'
 - ▶ *p'oq-* 'to burst, explode'
 - ▶ *p'oqs* 'species of fish'

Results

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- ▶ /r/ is marginal in Yucatec, absent in Ch'olan (except Ch'orti')
 - ▶ *p'or* 'a bunch, handful, roll'
 - ▶ *p'uq-* 'to split open'
 - ▶ *p'uq-* 'to throw packages to the floor'
 - ▶ *p'uq* 'swollen cheeks'
 - ▶ *p'uq-* 'to leave pieces of meat or masa'
 - ▶ *p'ur-* 'ears back'

Discussion

- ▶ /p'/ in Poqomam follows the pattern of a “stone soup” diffusion
 - ▶ Circumstantially linked to Lowland contact
 - ▶ No clear loanwords
 - ▶ Sound change happened in retained Poqom words
- ▶ In this case, fills a gap in the phoneme inventory
 - ▶ “Class 1” borrowing per Grant et al. (2020: 78)
 - ▶ The place (bilabial) and manner (voiceless ejective) already exist in the language
 - ▶ Easiest class of sound to borrow

Discussion

- ▶ Blevins (2017: 99) gives three conditions on “stone soup” diffusion
 - ▶ Target sound is perceptually salient
 - ▶ Speakers must be sufficiently exposed to the sound
 - ▶ Recipient language must have enough tokens of a similar sound to serve as a source for the change
- ▶ Poqomam:
 - ▶ Perceptual salience not evaluated here - but it’s an ejective
 - ▶ Exposure assumed to be sufficient - Lowland influence on grammar
 - ▶ /b’/ and /p/ both phonetically similar to /p’/ and fairly common

Discussion

- ▶ Sporadic sound change
- ▶ Minimal pairs in W. Poqomchi' (Comunidad Lingüística Poqomchi' 2012: 195-196)
 - ▶ *p'irooj* 'broken (green bean)', *b'irooj* 'calculated'
 - ▶ *p'uuq* 'roadrunner', *b'uuq* 'child'

Ramifications and further work

- ▶ Provides an example of sound change without loanwords per Blevins (2017)
- ▶ Vinogradov (2020) suggests that low lexical borrowing may indicate effort by Poqom speakers to maintain linguistic identity
- ▶ Future work may identify any conditions in Poqom where this sound change was blocked (after Wichmann 2006)
- ▶ How do speakers perceive the marker socially?
- ▶ Part of ongoing research program in Poqom historical dialectology

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Thank you!