

Innovation and Contact in the K'iche'an Mayan Perfect: The case of *-maj*

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1. Summary:

- Several K'iche'an Mayan languages innovated a perfect suffix *-(V)maj*, in contrast with older **-Vm*.
- I argue *-(V)maj* originated in Poqom as **-(V)m* plus the passive suffix **-aj*. Poqom preserves an active/passive distinction between *-(V)m* and *-(V)maj*.
- *-(V)maj* was later borrowed by Sakapultek, Sipakapense, and a few varieties of Mam.
- Sakapultek and Sipakapense borrow the *-maj* form but not the accompanying active/passive pattern. Borrowing the form but not the pattern of aspect markers is typologically unusual.

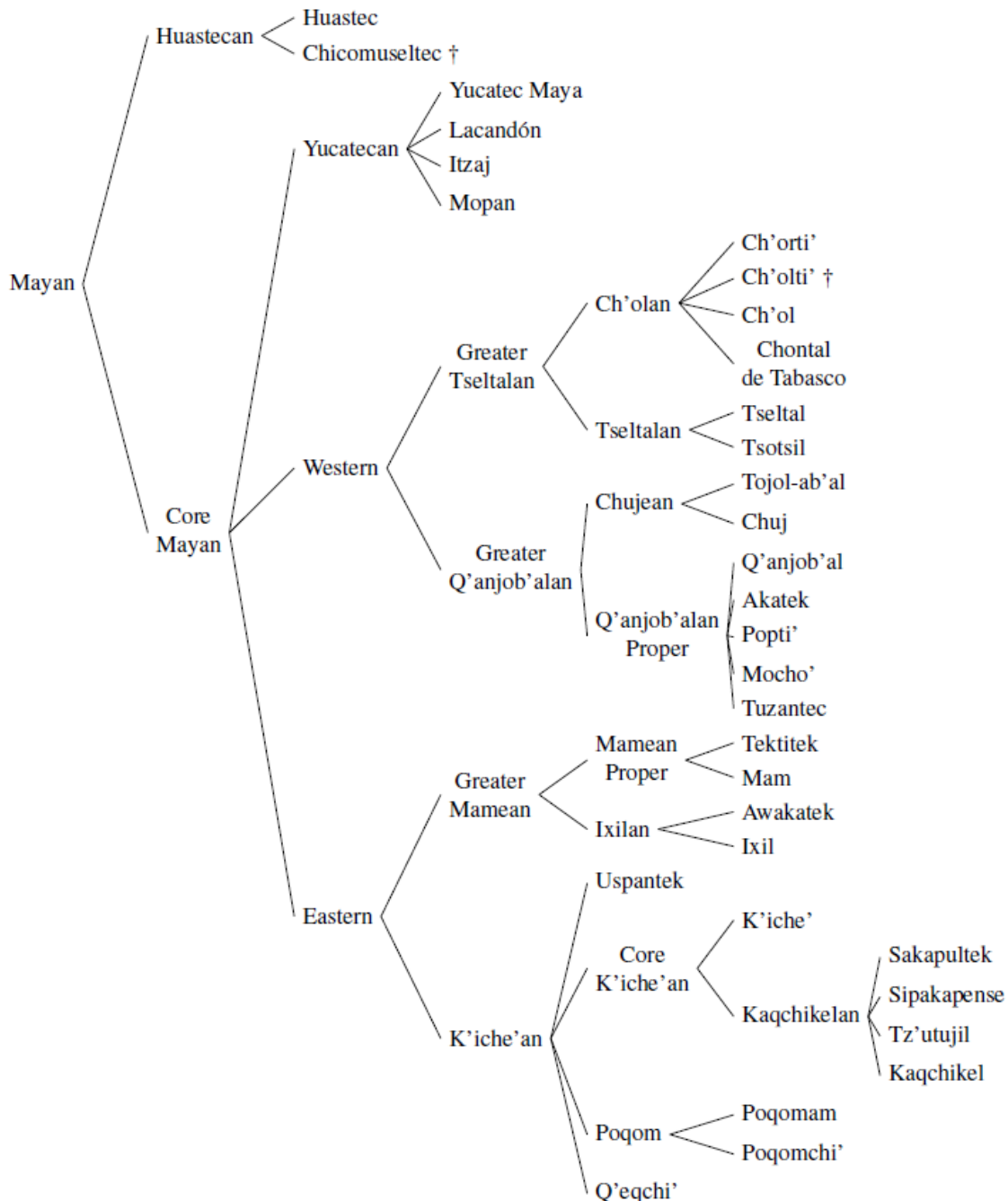


Figure 1: Family tree of Mayan languages, after Campbell (2017), revised to show the Kaqchikelan subgroup per DuBois (1981). Within Kaqchikelan, Sipakapense and Sakapultek are closely related, as are Kaqchikel and Tz'utujil.

2. Essential background

- Mayan verbs are split on two major axes: **Transitive/Intransitive** and **Root/Derived**.
- Transitive verbs take an Agent and an Object argument, while intransitive verbs take only a Subject argument. Transitive verb stems may be productively turned into intransitive stems through a Passive or Antipassive derivation (usually a suffix).
- **Root transitive verbs** (usually CVC) and **derived transitive verbs** often take different derivational morphology. These two classes are here abbreviated **RTV** and **DTV**.

Orthographic conventions: I will be using the orthography of the Academia de Lenguas Mayas de Guatemala (Instituto Indigenista Nacional 1988). All values are equivalent to IPA, except the following:

VV = [V:]	ch = [tʃ]	x = [ʃ]
Ṽ = lax equivalent of V	j = [χ~x] ([h] in Yucatecan)	y = [j]
b' = [β]	tz = [t͡s]	' = [ʔ]

Gloss abbreviations:

A = absolutive, CT = completive transitive, E = ergative, PASS = passive, PERF = perfect, S = singular

Source abbreviations used in tables:

B = Barrett 1999	K = Kaufman 1976	BP = Benito Pérez 2007
C = Can Pixabaj 2006	L = Larsen 1988	S&P = Santos Nicolás and Benito Pérez 1998
D = Dayley 1985	M = Mondloch 1978	T = Tzoc 2003.
GR = García Matzar and Rodríguez Guaján 1997	MP = Mó Isém 2006a	
	MS = Mó Isém 2006b	

3. Data

The following table lists the perfect suffixes in K'iche'an languages. Examples of *-maj* are bolded. V_R indicates a vowel that matches the root's vowel (if a RTV), while V_I indicates that the preceding stem vowel is lengthened (if a DTV).

Subgroup	Language	Active		Passive		Source
		RTV	DTV	RTV	DTV	
Core K'iche'an	K'iche'	-oom/-uum	- V_I m	-oom/-uum	- V_I m	L 234, 241
	Sakapultek ¹	- $V_{RM}(aj)$	- $m(aj)$	- $V_{RM}(aj)$	- $m(aj)$	MS 238-9
	Sipakapense	-maj	-maj	-maj	-maj	B 82
	Kaqchikel	-om/-um	-m	-om/-um	-m	GR 174
	Tz'utujil ²	-oon/-uun	- V_I n ~ -oon	-oon/-uun	- V_I n ~ -oon	D 77-79
Poqom	Poqomam	- V_{RM}	-m	-ooj/-uuj	-maj	S&P 94, BP 37-38
	Poqomchi'	- V_{RM} , -om	-m	-ooj/-uuj, -$V_{RM}maj$	-maj	MP 184-7
	Uspanteko	-oom/- VV m	-oom/- VV m	- V_{Rl}	-l	C 241, K 77
	Q'eqchi'	-(o)m	-(o)m	-b'il	-b'il, -mb'il	T 66, K 77

Table 1: Perfect suffixes in K'iche'an.

¹ In Sakapultek, $-(V_R)maj$ is used sentence-finally, while $-(V_R)m$ is used elsewhere.

² Tz'utujil also has an Agent Focus Voice perfect participle, $-oyoon/-uyuun$, not found in other K'iche'an languages.

4. Analysis

4.1. Accepted reconstruction of **-Vm*

- **-Vm* or **-V'm* is accepted to have been the perfect suffix in proto-Mayan and later proto-K'iche'an. *-Vm* appears throughout K'iche'an and other Mayan languages (Law 2014; Kaufman 2015: 288, 626).
- Therefore, the few K'iche'an languages with *-maj* have almost certainly innovated or borrowed it.
- *-ooj/-uuj* as the RTV perfect in Poqomam and Poqomchi' is also an innovation. This was originally an RTV nominalizing suffix, which has reflexes in many Mayan languages (for a partial list of cognates see Kaufman 2015: 311). The timing of this innovation matters to the discussion of *-maj* and will be discussed in the next section.
- *-(V)l* and *-b'il* are unique to Uspanteko and Q'eqchi' respectively and will not be discussed here.

4.2. Innovation of *-(V)maj*

The derivation of *-maj* is fairly transparent in Poqom. As seen in Table 1 and examples (1-2), perfect aspect is expressed through *-(V)m* in active voice and *-(V)maj* in passive voice.

POQOMCHI'

(1) \emptyset -a-toj-om

A3S-E2S-pay-PERF

'You have paid him/her.'

(2) \emptyset -toj-omaj

A3S-pay-PERF.PASS

'S/he has been paid.' (Mó Isém 2006a: 184, 187)

Poqom, unlike other K'iche'an languages, has a productive *-j* passive suffix (see Table 2).

Subgroup	Language	RTV	DTV	Source
Core K'iche'an	K'iche'	CVC → CVVC, <i>-V_Rtaj</i>	<i>-x</i> , <i>-taj</i>	M 62, 103, 108
	Sakapultek	CVC → CVVC,	<i>-s</i> , <i>-x</i>	MS 232
	Sipakapense	CVC → CVVC, <i>-taj</i>	<i>-x</i> , <i>-taj</i>	B 108-110
	Kaqchikel	CVC → CV _[+tense] C, <i>-V_Rtäj</i>	<i>-Vx</i> , <i>-täj</i>	GR 373
	Tz'utujil	CVC → CVjC ³ , <i>-Vr</i> , <i>-(V)taj</i>	<i>-x</i> , <i>-(V)taj</i>	D 341-342
Poqom	Poqomam	<i>-ar</i> , <i>-taj</i>	<i>-j</i>	BP 68-72
	Poqomchi'	<i>-aar/-ar</i> , <i>-j</i> (uncommon), <i>-mV_Rj</i>	<i>-j</i>	MP 221-222
	Uspanteko	<i>-saj</i> , <i>-maj</i>	?	C 177
	Q'eqchi'	<i>-e'</i>	<i>-V₁</i>	T 64

Table 2: Passive suffixes in K'iche'an languages.

Therefore, *-(V)maj* 'PASSIVE PERFECT' can be simply analyzed as *-(V)m-aj* 'PERFECT + PASSIVE'. I argue that this was its original derivation in Proto-Poqom, for both RTVs and DTVs. When the *-ooj/-uuj* nominalization was repurposed as the RTV perfect, it replaced *-maj*. Poqomam no longer uses *-maj* at all with RTVs, but Poqomchi' apparently uses it sometimes, suggesting that *-ooj/-uuj* had not fully replaced *-maj* in proto-Poqom.

4.3. Spread of *-(V)maj*

Outside of Poqom, the K'iche'an languages with *-maj* include Sakapultek and Sipakapense, as well as Uspanteko which employs it as a completive passive (Table 2). In addition, several northern varieties of Mam have a perfect participle *-n-maj* where the rest have only *-n* (Pérez et al 2000). As far as I know, there is no

³ Exceptions: CVj → CV'j and CV' → CVV' (Dayley 1985:341)

Mam-internal way to analyze *-maj*; it looks as if an original *-n* has in these varieties been augmented by a *-maj* suffix from another source. These languages are spoken in a close area in the Cuchumatán highlands of Guatemala (Figure 2). My hypothesis is that Poqom *-maj* spread to the other languages through contact. Poqom must have been the source, because none of the others has a productive *-j* passive.⁴

Because *-maj* (and not *-ooj*) appears on both RTVs and DTVs in Sakapultek/Sipakapense, the proposed diffusion likely occurred before *-ooj/-uuj* replaced *-maj* as the Poqom RTV perfect.

4.4. Sakapultek/Sipakapense: Borrowing form without pattern

- Matras and Sakel (2007), among others, make a distinction between borrowing “matter” (the forms of words or morphemes) and “pattern” (abstract grammatical structures).
- A pattern may be copied from a source language without the associated phonological material. Instead, the borrowing language repurposes its own morphemes to fit the new pattern. This is also called convergence or calquing and is common with grammatical borrowing.
- “Matter replication of tense/aspect markers is quite rare. Pattern replication, however, is more frequently attested” (Matras and Sakel 2007: 844).
- My analysis of *-(V)maj* presents a potential example of this rare situation: matter borrowing of an aspectual suffix without pattern borrowing.

In the Poqom source, *-(V)m* is used in active voice while *-(V)maj* is used only in passive voice. However, Sakapultek and Sipakapense now use *-(V)maj* in both active and passive voice.

SAKAPULTEK

(3)	<i>Ø-ni-chap-maj</i>	(4)	<i>in chap-maj</i>	
	A3S-E1S-grab-PERF		A1S grab-PERF	
	‘I have grabbed it.’		‘I have been grabbed.’	(Mó Isém 2006b: 239)

In other Core K’iche’an languages, the perfect is identical in active and passive voice (see Table 1). Sakapultek and Sipakapense simply extended *-(V)maj* to fit this pattern, rather than borrowing the *-m/-maj* alternation of Poqom. In fact, there is a clear justification for doing so: unlike Poqom, Sakapultek and Sipakapense lack a *-j* passive, so speakers had no language-internal reason to associate *-(V)maj* with passive voice.

4.5. Geographic plausibility

The geographic distribution of Mayan languages is shown in Figure 2. Languages with *-maj* are shaded dark grey, including the varieties of Mam that use *-nmaj*. I also include Yucatecan languages that have a perfect in *-m-aj* although I believe this to be historically unrelated (see section 5). The highland languages with *-maj*, while not fully contiguous now, were likely in contact at an earlier date.

- According to oral history, speakers of Sipakapense originated in the area of Sacapulas (Ambrosio Zacinto 1995, cited in Barrett 1999: 12).
- The salt flats of Sacapulas were a major locus of trade before and after the Spanish conquest (DuBois 1981: 11-15; Hill and Monaghan 1987: 5, 75).
- The K’iche’ kingdom expanded northward into the Cuchumatán region in the mid-1400s (Lovell 2015: 43), which could have separated groups that were adjacent before.
- Lovell (2015: 67) speaks of an alliance that opposed the Spanish invasion of the Cuchumatanes in 1530, composed of warriors from Uspantán (Uspanteko), Cunén (K’iche’), Cotzal (Ixil), Sacapulas (Sakapultek), and Verapaz (Poqomchi’). This may reflect more longstanding communication between these groups prior to Spanish contact.

⁴ The *-taj* passive found in several Core K’iche’an languages is historically derived from the *-j* passive (Kaufman 2015: 328), but *-j* by itself is not productive in Core K’iche’an.

The Mayan Languages at The Present Day

- | | |
|----------------------------|-----------------|
| 1. Wastek | 17. Popti' |
| 2. Chikomuselték [extinct] | 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 [extinct] | 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 | 32. Achi |

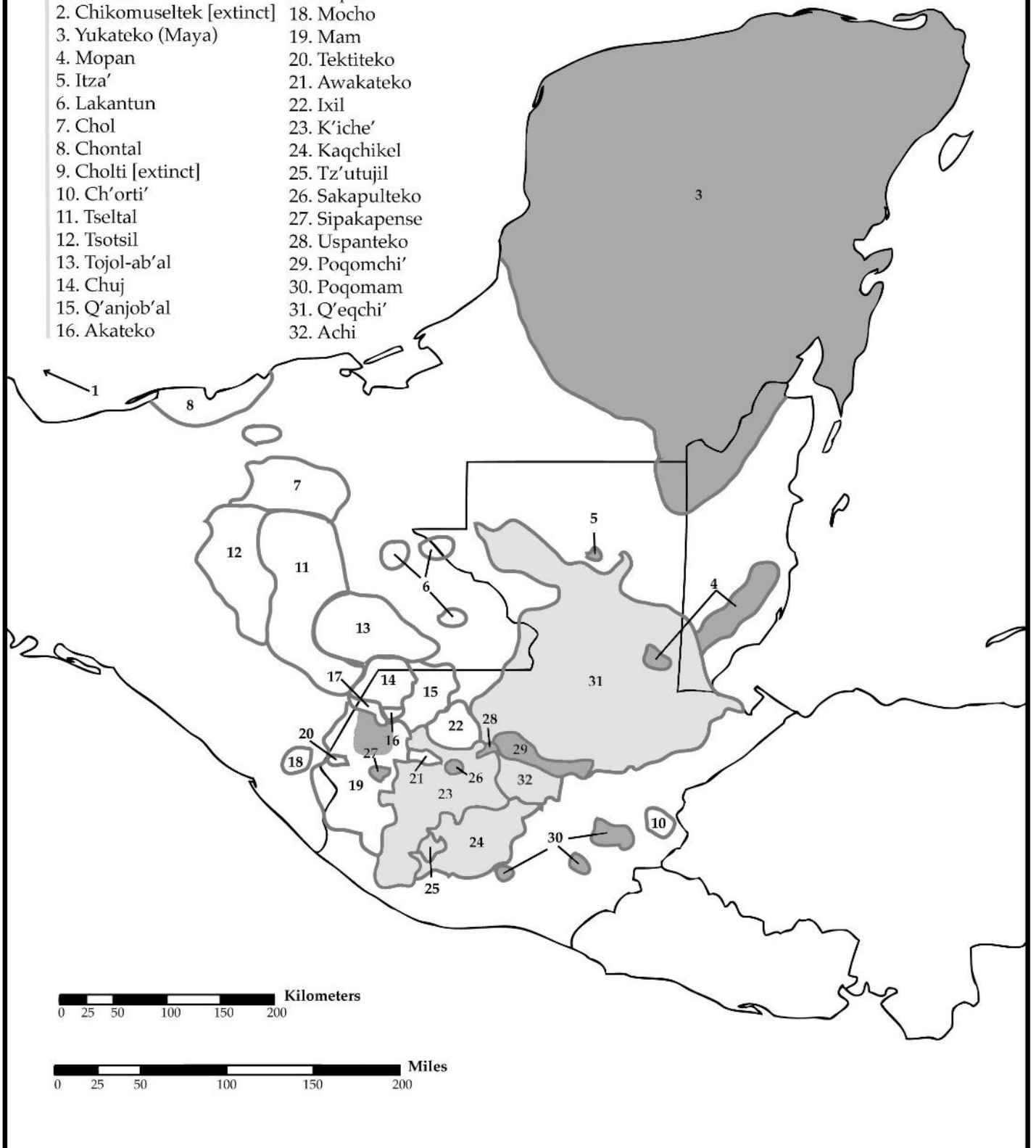


Figure 2: Map of the Mayan languages, after Law (2014), with my shading. Dark gray = languages with -maj; light gray = K'iche'an languages without -maj. Base map courtesy of Danny Law.

4.6. Linguistic plausibility

To my knowledge, there is no literature that discusses cross-Cuchumatán language contact on a large scale. However, smaller subsets of the Cuchumatán languages do show potential contact effects:

- Campbell (1977) among others has noted grammatical similarities between Poqom and Uspanteko.
 - Second person plural = second person singular + *taq* ‘plural’
 - Copula/existential in *wi-*
 - Positional *-VI* suffix is followed by *-k* and then a person marking suffix (other K’iche’an languages have *-VI*, but the person marker precedes the positional stem)
 - He is agnostic as to whether this is a result of shared inheritance, mutual contact, or shared borrowing from a third source such as Ch’olan-Tzeltalan (Campbell 1977: 71-72).
- Barrett (1996) discusses evidence of Ixil, Mam, and K’iche’ influence on Sipakapense.

5. The problem of *-maj* in Yucatecan

Yucatecan languages (other than Lacandon) mark the perfect in *-m-aj* (Hofling 2017: 709). Writing about Itzaj, Hofling analyzes this *-aj* as the Yucatecan completive aspect suffix but leaves room for other interpretations (Hofling with Tesucún 2000: 169, 398).

ITZAJ

(5) *u-po(o)k-m-aj-Ø*

E3S-roast-PERF-CT-A3S

‘s/he has roasted it’ (Hofling with Tesucún 2000: 64)

Kaufman states that the completive suffix *-aj* in Yucatecan and the *-aj* of *-maj* in K’iche’an both come from a late Proto-Mayan adverb **(a)j* meaning ‘already, before,’ which “may be viewed as optionally occurring with completive verb forms” (2015: 195).⁵ This is consistent with a normal use of perfect aspect: describing an event that was completed or state that was attained before something else took place.

This may be the correct derivation in Yucatecan. However, in K’iche’an, I believe the evidence more strongly supports a passive **-aj* origin, as Poqom shows a transparent alternation of active perfect *-m* with passive perfect *-maj*. While it is not fully satisfying to treat K’iche’an *-maj* and Yucatecan *-maj* as independent innovations, it is certainly not out of the question. Both subgroups are geographically distant, ruling out contact.

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⁵ This is contradictory to elsewhere in the same document (Kaufman 2015: 328), where he lists Mopan *-m-aj* among reflexes of passive **-aj*.

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