ADVANCED WORKSHOP

GRAMMAR OF HIEROGLYPHIC MAYA

Brussels, October 29-31 2013

K1196

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EMC
BRUSSELS 2013

European Association of Mayanists
Asociación Europea de Mayistas

SUMMARY

Thanks to the decipherment of Maya Hieroglyphic writing, studies in Maya grammar have been assuming an ever greater importance from the eighties onward, because grammar constitutes the indispensable foundation for correct interpretation and understanding of Maya inscriptions.

According to the current theory, Classic inscriptions record a prestigious language of Cholan affiliation we call Hieroglyphic Mayan today. Hieroglyphic Mayan was used everywhere in the Maya Lowlands; its use does not correspond to any known linguistic and political entities. Even Postclassic Codices and the celebrated Diego de Landa's "Relación de las cosas de Yucatán" of the 16th century feature Hieroglyphic Mayan. Still, lexical and grammatical isoglosses from vernacular Mayan languages and non-Mayan glosses are attested in the inscriptions. The Advanced Workshop will offer an up-to-date outline of Maya grammar including phonology, morphology, syntax and dialectology. Particular attention will be given to the most recent suggestions and approaches.

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Huastecan
Cholan
Tzeltalan
Chujean
Kanjobalan
Motozintlec
Mamean
Quichean
Kekchian
Yucatecan
0 40 100 200K
0 50 100 150M
YUCATEC
NAHUATL
CHONTAL
CHOL
ZOQUE
TZELTAL
ITZA
MOPAN
TZOTZIL
CHUJ
KEKCHI
MOTOZINTLEC
CHICOMUCELTEC
AGUATEPEC
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CHORTI
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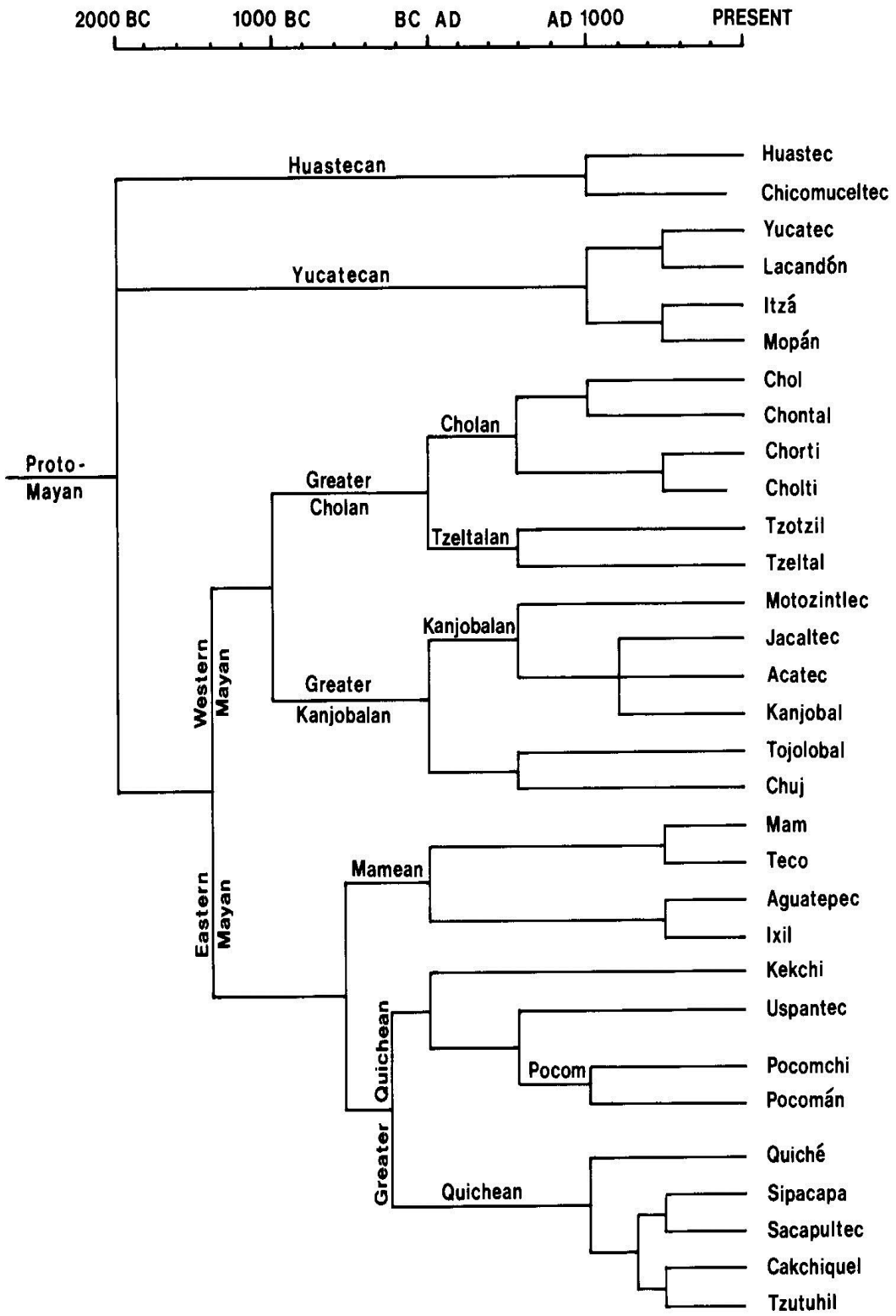
PIPIL
LENCA


2000 BC
1000 BC
BC AD
AD 1000
PRESENT
Proto-Mayan
Huastecan
Yucatecan
Western Mayan
Eastern Mayan
Greater Cholan
Greater Kanjobalan
Greater Quichean
Cholan
Tzeltalan
Kanjobalan
Mamean
Quichean
Pocom
Huastec
Chicomuceltec
Yucatec
Lacandón
Itzá
Mopán
Chol
Chontal
Chorti
Cholti
Tzotzil
Tzeltal
Motozintlec
Jacaltec
Acatec
Kanjobal
Tojolobal
Chuj
Mam
Teco
Aguatepec
Ixil
Kekchi
Uspantec
Pocomchi
Pocomán
Quiché
Sipacapa
Sacapultec
Cakchiquel
Tzutuhil

BASIC GRAMMAR OF HIEROGLYPHIC MAYA[1]

by Alfonso Lacadena

The languages of Maya hieroglyphic texts

At least five Maya languages have been identified in the hieroglyphic texts: hieroglyphic Eastern Ch'olan (related to modern Ch'olti' and Ch'orti'), hieroglyphic Western Ch'olan (related to modern Chontal and Ch'ol), hieroglyphic Tzeltalan (related to modern Tzeltal and Tzotzil), hieroglyphic Yucatecan (probably enclosing two dialectal variants, related to modern Yucatec, Lacandon, Itzaj and Mopan), and a fifth hieroglyphic language farther South, probably related to the major K'ichean group. One of these languages, the one of Eastern Ch'olan affiliation (also called Epigraphic Mayan, Classic Ch'olti'an, or simply Classic or Hieroglyphic Maya), was used as written prestige language throughout the Maya Lowlands, independently of political boundaries and the presence of other local vernaculars, fulfilling the same function that Akkadian or Latin played in the Ancient Near East and Mediaeval Europe, respectively.[2] Since Maya hieroglyphic writing was used for two millennia (from the 4th century BC to the 17th century AD), the written languages experienced changes that affected their phonology and morphology, as well as the graphic system that registered them.

Presented here is a sketch of that Classic or Hieroglyphic Maya in which most of the preserved texts are written, in its more abundant period of documentation, the late Classic Period (600-900 AD).

1. PHONOLOGY AND GRAPHEMICS

History of writing shows a varied picture in which many different degrees of affiliation between language and writing can be found. Not all the writing systems reflect with satisfactory accuracy the languages they register, very often because the users of writing systems did not take part in their invention. Although some times through time scribes did develop new signs in the graphic inventory or established new orthographic conventions in order to improve their writing system, in other cases the weight of tradition prevented improvements or delayed them.

The Maya did not invent writing in Mesoamerica, nor even their own writing system. Some indications suggest that Maya probably borrowed the script from their Mixe-Zoquean neighbors —from Olmec or from Epi-olmec, their successors— in the Late Preclassic, at the beginning of the second half of the first millennium BC, adapting it to their phonological needs. However, such an adaptation was not immediate and probably not complete, and it spanned for several centuries. All this explains certain peculiarities in the Maya script and justify why it is important to talk about phonetics along with graphemics.

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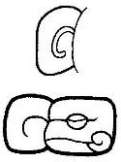
[1] This sketch is an extended version of the grammatical introduction that I wrote in Spanish in 2010 for the 15th European Maya Conference in Madrid. I have included here some more materials, images and explanations for this 2013 Advanced Workshop, trying to improve it with pedagogical purpose. Both are a synopsis of 'Gramática de las lenguas mayas jeroglíficas' ('Grammar of Maya hieroglyphic languages'), a book that I am currently writing. I'm deeply thankful to Harri Kettunen, who corrected the English version and improved it with comments.

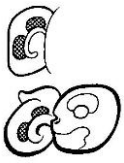
[2] *Vid*. Houston, Robertson and Stuart 2000; Lacadena and Wichmann 2002; Wichmann and Lacadena 2005; Beliaev and Davletshin 2005.

As an example, seemingly (and surprisingly) Maya scribes did not developed phonograms with **b'V** value until at a relatively late date, writing both /b'/ and /m/ with **mV** signs:

Hauberg Stela

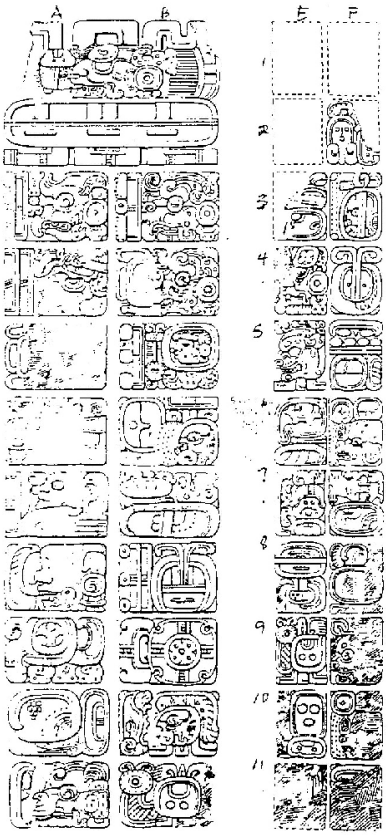


mu

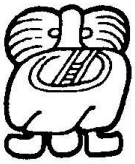


b'u

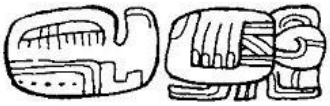
TIK, Stela 31

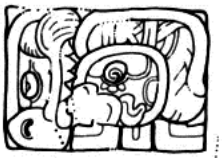


CPN, Stela 9



ma





1.1. Maya phonemes

1.1.1. Classic Maya Consonants

HIEROGLYPHYC MAYA CONSONANTS											
	Bilabial		Alveolar		Palatal		Velar		Uvular		Glottal
	Plain	Impl.	Plain	Ejec	Plain	Ejec..	Plain	Ejec.	Plain	Ejec	Plain
Oral Stops	p’	b’	t	t’			k	k’			ʔ
Affricates			tz	tz’	ch	ch’					
Fricatives			s		x				j		h
Nasals		m	n								
Liquids			l								
Glides					y		w				

1.1.2. The vocalic nucleus

Probably one of the most eagerly debated questions amongst epigraphers and linguists today is the exact nature and inventory of Classic Maya vowels, if there were conventions to represent them in the script, and, if so, which ones were these exactly. We will follow here the main proposal of Houston, Robertson and Stuart (1998; 2004, 2007) —inspired in the brilliant observation made by Stuart in 1997—, with the adjustments suggested by Lacadena and Wichmann (2004; s.f).[3] According to this system, in the Classic period there were five basic vowels expressed in five different ways: short, long, followed by aspiration, followed by a glottal stop, and rearticulated.

V	a, e, i, o u
VV	aa, ee, ii, oo, uu
Vh	ah, eh, ih, oh, uh
Vʔ	aʔ, eʔ, iʔ, oʔ uʔ
VʔV	aʔa, eʔe, iʔi, oʔo, uʔu

Seemingly, the writing system did not represent these peculiarities using different phonograms (for example, one sign for C**a**, and other for *C**aa**, *C**ah**, *C**a’** o *C**a**ʔ**a**),[4] but through certain fixed spelling conventions for some of them, playing with the synharmony or disharmony of the mute vowels of the final sign in relation to the vowel of the preceding phonogram or logogram. Thus, based on observed statistic correspondences, we can infer the following rules:

a) Rule A: Short vowels: (CV_1C/CV_1-CV_1 → CVC)

[3] For other alternatives to this system, see Kaufman and Justeson (2003), and Boot (2009).
[4] But see Wichmann (2002).

C**A**C-C**a** / C**a**-C**a** → *CaC* **K'AN**-**na**, *k'an* 'yellow'; **k'a**-**b'a**, *k'ab'* 'hand'
C**E**C-C**e** / C**e**-C**e** → *CeC* **PET**-**ne**, *pet[e]n* 'island'; **PET**-**te**, *pet* 'round'
C**I**C-C**i** / C**i**-C**i** → *CiC* **IXIK**-**ki**, *ixik* 'woman, lady'; **wi**-**tzi**, *witz* 'hill'
C**O**C-C**o** / C**o**-C**o** → *CoC* **ch'o**-**ko**, *ch'ok* 'tender, young, child'
C**U**C-C**u** / C**u**-C**u** → *CuC* **cha**-**hu**-**ku**, *chahuk* 'lightning'; **ma**-**yu**-**yu**, *mayuy* 'fog'

b) Rule B: Long vowels: (CVC/CV-C**i** {V=**a**, **e**, **o**, **u**}, CVC/CV-C**a** {V=**i**} → CVVC)

C**A**C-C**i** / C**a**-C**i** → *CaaC* **B'AK**-**ki**, *b'aak* 'bone'; **tz'i**-**b'a**-**li**, *tz'i[h]b'aal* 'drawing'
C**E**C-C**i** / C**e**-C**i** → *CeeC* **ke**-**ji**, *keej* 'deer' (Yucatecan)
C**I**C-C**a** / C**i**-C**a** → *CiiC* **AHIN**-**na**, *ahiin* 'crocodile'; **u**-**si**-**ja**, *usiij* 'vulture'
C**O**C-C**i** / C**o**-C**i** → *CooC* **OK**-**ki**, *ook* 'foot'; **o**-**to**-**ti**, *otoot* 'house'
C**U**C-C**i** / C**u**-C**i** → *CuuC* **TUN**-**ni**, *tuun* 'stone'; **su**-**tz'i**, *suutz'* 'bat'.

c) Rule C: Vowels+glottal: (CVC/CV-C**a** → CVʔC {V=**e**, **o**, **u**}, CVC/CV-C**u** →CVʔC {V=**a**, **i**})

C**A**C-C**u** / C**a**-C**u** → *CaʔC* **CHAN**-**nu**, *chaʔn* 'watch, guard'; **b'a**-**tz'u**, *b'aʔtz'* 'monkey'
C**E**C-C**a** / C**e**-C**a** → *CeʔC* **CH'EN**-**na**, *ch'eʔn* 'cave'; **se**-**ka**, *SeʔK* (month, Yuc.)
C**I**C-C**u** / C**i**-C**u** → *CiʔC* **si**-**pu**, *siʔp* 'offense, sin'(?); **chi**-**ku**, *chiʔk* 'agouti'
C**O**C-C**a** / C**o**-C**a** → *CoʔC* -**o**-**b'a**, *-oʔb'* 'plural'; **pi**-**xo**-**la**, *pixoʔl* 'hat'
C**U**C-C**a** / C**u**-C**a** → *CuʔC* **HUN**-**na**, *huʔn* 'book', **b'u**-**la**, *b'uʔl* 'beans'

Another way to indicate a glottal stop was through vowel insertion, doubling the vowel of the preceding sign, as in

mo-**o**, *moʔ* 'macaw'
tz'i-**i**, *tz'iʔ* 'dog'
te-**e**, *teʔ* 'tree'
ko-**o**-**ha**-**wa**, *koʔhaw* 'kind of helmet/headdress'
yo-**o**-**NAL**, *yoʔnal* 'belly'
ya-**a**-**la**-**ni**, *yaʔlaan* 'he/she says it'.

How both conventions are equivalent can be seen in the various ways of writing the name of the ruler Nuʔn Jol Chaahk, of Tikal as mentioned in the inscriptions at Dos Pilas, where /nuʔn/ is written as **nu**, **nu**-**u**, **nu**-**na** and **nu**-**u**-**nu**:

nu JOL CHAK-**ki**
Nu[ʔn] Jol Chaahk

nu-**u JOL CHAK**-**ki**
Nuʔ[n] Jol Chaahk

nu-**u JOL CHAK**-**ki**
Nuʔ[n] Jol Chaahk

nu-**u**-**nu JOL**-[**CHAK**]
Nuʔn Jol Chaahk

nu-**na JOL CHAK**-**ki**
Nuʔn Jol Chaahk

Vowel insertion is also used in phonetic complementation to logograms ending in glottal, as

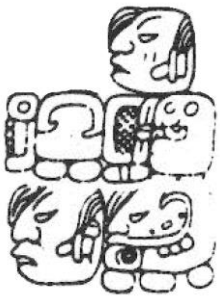
HAʔ-**a**, *ha*ʔ ‘water’
K’AB’Aʔ-**a**, *k’aab’a*ʔ ‘name’
TEʔ-**e**, *te*ʔ ‘tree’

Sometimes both resources, Rule C and vowel insertion, were combined, as in

[2]**o**-**la**, *o*ʔ*l* / *o*ʔ*[h]l?* ‘heart (anymic)’
che-**e**-**na**, *che*ʔ*en* ‘I/he say(s)’
u-**ko**-**o**-**ma**, *Uko*ʔ*m* (anthroponym, of uncertain meaning)

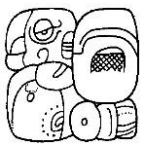
<u>Old controversies</u>:

Some spellings have been specially debated for a long time, giving divergent transcriptions: **a**-**ku**, **a**-**ku**-**la**, and **AK**-**la**, giving *ahk*, *ahkal* (HRS) or *ahku*ʔ*l* (LW); **MUT**-**la**, giving *Mutal* (HRS) or *Mutu*ʔ*l* (LW); or –C**o**-**ma** endings, giving *–oom* (HRS) or *–o*ʔ*m* (LW). In the core of the controversy is the acceptation or not of morphosyllables as a viable category of signs, and the credibility conceded to the different suggested spelling rules.



BNK, Stela 2

BNK, Stela 1



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YAX Lintel 10

1.1.3. The case of preconsonantal /h/

An exception to the preceding rule was, seemingly, the sound /h/ before consonants, which, as the general rule, was not written,[5] having to be reconstructed by the knowledgeable reader. The evidence for reconstructing /h/ in this case comes from historical linguistics. For example,

a-**ka**	*ʔa[h]k* 'turtle'
b'a-**la**-**ma**	*b'a[h]lam* 'jaguar'
b'u-**ku**	*b'u[h]k* 'clothes'
ti-**li**	*ti[h]l* 'tapir'
tz'i-**b'i**	*tz'i[h]b'* 'painting, writing'

The omission of /h/ affects important contexts such as passive derivation or certain classifiers, being restituted by the reader:

mu-**ka**-**ja**	*mu[h]kaj* 'was buried' (from *muk* 'bury', where *–h-…-aj* is the morpheme for passive derivation)
–tz'a-**ka**	*–tz'a[h]k* (classifier for beings placed in sequence, one after another)

Highly interestingly, sometimes the Maya scribe wrote the preconsonantal /h/ as a glottal, probably because it sounded in that way and the scribe thought that this was the way in which it should be written, thus using the conventions corresponding to glottal representation (vowel insertion and/or Rule C). An interesting example is the adverb 'today, in the morning', written at Palenque as **sa**-**mi**-**ya** and **sa**-**a**-**mi**-**ya**.

sa-**mi**-**ya**

sa-**a**-**mi**-**ya**

In the second example, vowel insertion shows that the scribe is clearly writing a glottal. However, comparative linguistics show that this adverb is to be reconstructed as **sa**h**m-*, with preconsonantal /h/, not as **sa**ʔ**m-*, with glottal.[6] Perhaps other examples where the Maya scribe wrote a glottal /'/ but historical linguistics reconstruct preconsonantal /h/ —which constitute another group of the problematic examples in the ongoing bitter academic debate— could be explained in this way.[7] As Robert Wald said some time ago, we must take into account not only how the Maya scribe wrote, but also how the Maya scribe thought that certain forms should be written.

[5] First suggested by John Justeson in the 1980s.

[6] The reconstructed form is **sa**h**mi* and not **sa**ʔ**mi*, as shown by the presence of /aj/ and /ah/ in Ch'ol, Choltí and Ch'orti' (languages that keep the sequence *ahC of proto-Maya), and the form /áa/ in Yucatec (which corresponds to proto-Maya *ah). Thus, Chontal *sami* adv 'hoy (en la mañana, antes del momento)' (Keller & Luciano 1997: 209), *sami* adv t 'hoy (desde que inicia el día hasta este momento)' (Pérez & Cruz 1998: 67); ch'ol *sajmäx* adv 'desde hoy' (Aulie & Aulie 1978: 103), *sajmäl* 'hoy' (Schumann 1973: 92); choltí *çahmi*, *zahmi* 'endenantes' (Morán 1935: Voc. 27), *çacmi* 'oi' (ibid.: 48); ch'ortí *sajmi* adj 'hoy en la mañana (pasado)' (Pérez & *al*. 1996: 177); yucateco *sáamal* 'mañana', *sáansamal* 'cada día, diariamente' (Bastarrachea & al. 1992: 117).

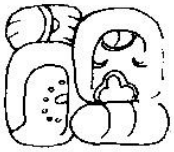
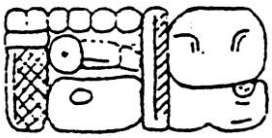
[7] Like (**y)o**-**la**/**OL**-**la**/[2]**o**-**la** 'heart', **ne**-**na** 'mirror', (**y)e**-**b'a**/**e**-**b'u** 'stairway', or **che**-**e**-**b'u** 'quill'.

Maybe the important question that we should ask is what we ought to transcribe: what the Maya scribes *actually* wrote —**sa**-**a**-**mi**-**ya**, *saʔmiiy*—, or the corrected form —*sa[h]miiy*— according to what we *know* is the correct historical form? Consider these spellings:

1.1.4. Problematic phonemes and graphemes: /ä/, /p'/, and **wu**

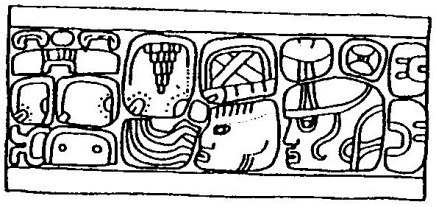
/ä/

At some moment in their development, Western Ch'olan Chontal and Ch'ol, as well as Itzaj and Mopan in the Yucatecan group developed /ä/ *schwa* from former short /a/ vowels. We don't know exactly when or how the new phoneme was represented in the script, if it did indeed. In the colonial era, /ä/ was written simply as **a**, in the Acalan Chontal, or as **u** in the Colonial Ch'ol. The following examples may be related to this question:

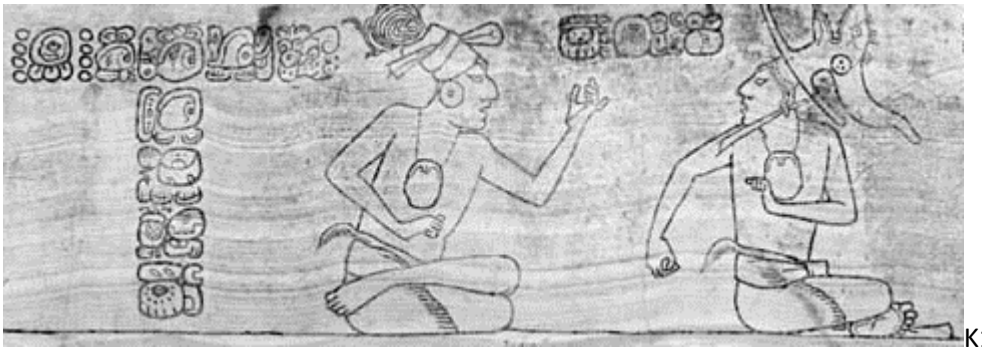



/p'/

Not reconstructable for proto-Maya, /p'/ is, however, present in all the modern Lowland Maya languages. It is not clear when /p'/ appeared. Wichmann (2005) suggested that it was a late development, perhaps not present during the Classic times. By the Spanish Conquest /p'/ was already there, being included in the famous Landa alphabet as **pp**. If indeed /p'/ was present during the Late Classic, the question is if the Maya had **p'V** phonograms for it.



CHN, Casa Colorada



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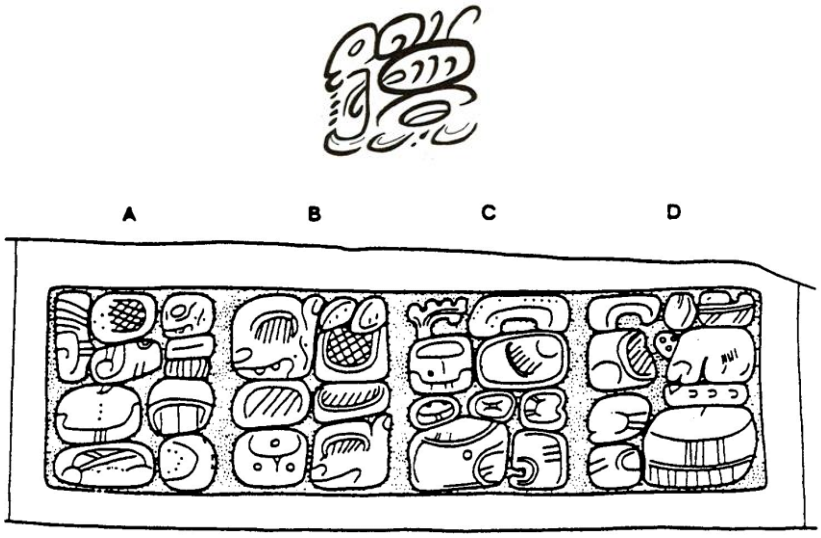
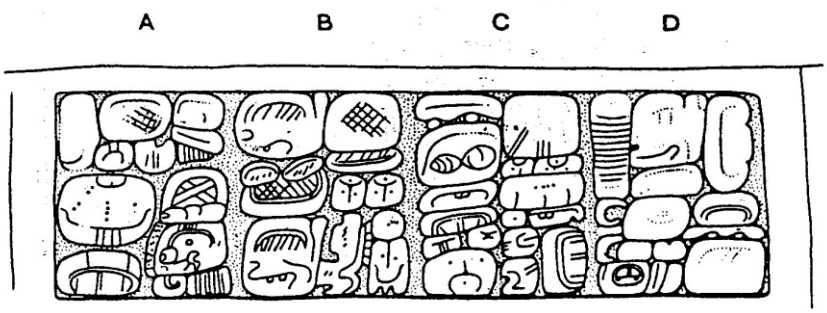
wu

Although not clearly deciphered yet, the syllabic grid has a cell for **wu**. The question is if a phonogram with such a value did exit. Its existence or absence bears directly on the spelling of certain glyphic forms.



CHN Monjas, Lintel 5A (drawing by I. Graham)



CHN Monjas, Lintel 2A (drawing by I. Graham)

1.1.5. Abbreviations

It is common in many writing systems of the world to abbreviate words, mainly in those contexts where there is no ambiguity. Abbreviated spellings are usually names, titles, place names or frequent expressions. More rarely, verbal expressions are spelled in abbreviated form, probably because accuracy (e.g. tense, aspect, person, voice) is more important for their correct understanding. For example, in English, **Mr.**, *M[iste]r*, **Dr**., *d[octo]r*, **Fla**, *Flo[rida]*, **J.**, *J[ohn]*. If we find **Dir.** preceding the name of a person, we will read automatically *Dir[ector] (*without thinking about all the possibilities of /dir/ in English (*dir*ect, *dir*ection, *dir*t, *dir*e…), because the context is semantically controlled.

In Maya writing, signs involving /h, j, l, m, n, ’/ appear as the most underspelled phonemes, usually before consonants and at final position, mostly in contexts of personal names and place names. Thus the adjective *k’uhul* ‘holy’, usually preceding the *ajaw* ‘lord, king’ title was usually written simply as **K’UH**, *k’uh[ul]*, more rarely as **K’UH**-**lu**, *k’uh[u]l*, and exceptionally as **K’UH**-**JUL**, *k’uhul*, or phonetically as **k’u**-**hu**-**lu**,

k'uhul. Place names like *B'akal*, *Mutuʔl* and *Kanuʔl* —three important kingdoms of the Classic Period —can appear written as **B'AK**-**la**, **MUT**-**la**, **ka**-**KAN**-**la**, or merely as **B'AK**, **MUT**, and **ka**-**KAN**.

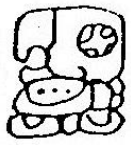
The most common underspellings are the suspension or syncope (ionly the beginning of the word is written), as in these examples of the *sajal* title

sa-**ja**-**la**
sajal

sa-**ja**
saja[l]

sa
sa[jal]

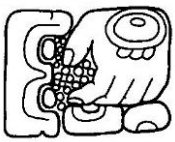
and contraction (the beginning and the end of the word is written, with something missing inside the word), as in the name of the month *K'anasiiy*, usually written as **K'AN**-**a**-**si**-**ya**, but sometimes also as **K'AN**-**a**-**ya**:



K'AN-**a**-**si**-**ya**
K'anasiiy

K'AN-**a**-**ya**
K'ana[sii]y

Underspellings by contraction are frequent when a _C final logogram is followed by a CV syllabic sign, writing a word ending in _VC, thus not being written the last vowel: _C-C(V), _C[V]C. For example,



u-**CHOK**-**wa**

AJAW-**li**

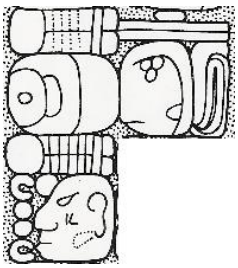
MUT-**la**

Which vowel was the intended one in the various cases is another main problem in Maya epigraphy.

1.1.6. Morphophonemics

Some phonemes can change or be suppressed depending on the phonological environment. These processes explain why certain forms are written as they are, showing that for some Maya scribes Hieroglyphic Maya was a spoken language. However, sometimes analytical forms are preferred, probably showing cases where for certain scribes the written language was more a learnt literary one. Here are some of them:

1. *ta-u-* / *ti-u-* →*tu'-*



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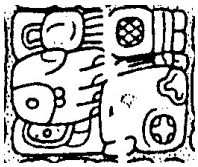
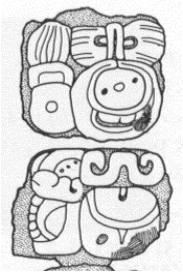
CML Urn 26, Spine 3



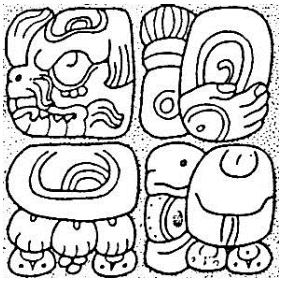
PAL, K'an Tok' Panel

Emiliao Zapata Panel

2. _VC-VC > _(V)CVC

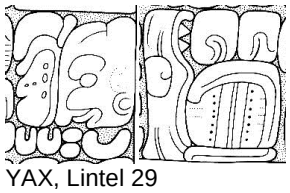


PAL, Bodega



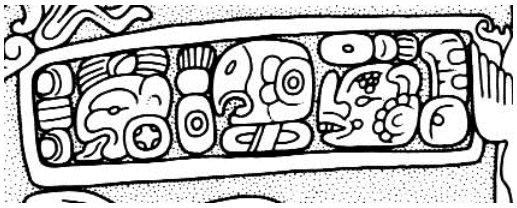
PAL, TI, east

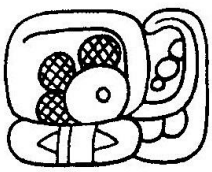
ITN, Stela 17



YAX, Lintel 29

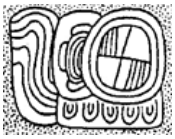
3. h > ʔ (_VhCCV_ > _VʔCCV_) (with exceptions)



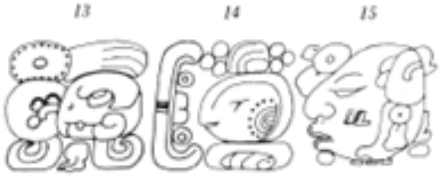


YAX, Lintel 2

4. u-uu > uu



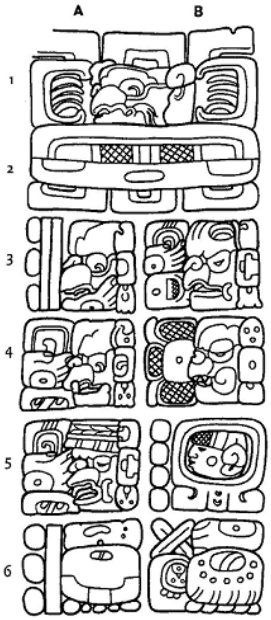
However, u-uuy gives *–u'y* at Palenque:



PAL, Sarcophagus Lid

5. ih-i > i

YUL, Lintel 1



QRG, Stela C

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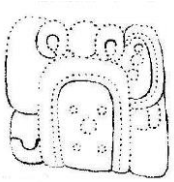
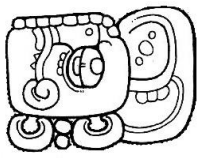
6. ih-ii > ii

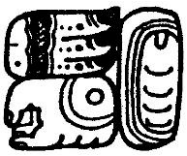
TIK Stela 31

CNC Looted Panel

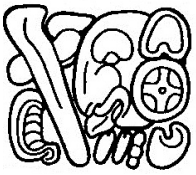

PNG, Altar 1

7. ih-a > iya (also ih-e > iye?)





8. _h/j-j_ > j



9. VV > V (if followed by stressed syllable)

Lady Aligator Panel

PAL, TXXI, Bench

2. PRONOUNS

Pronouns are one of the most important elements in Maya grammar. They are present in verbal compounds as an obligatory feature indicating Subject and Object, as well as in relational expressions and possessive structures. The classification of nouns is based on what can be or cannot be possessed and how.

As a general characteristic, Maya pronouns do not express masculine or feminine. For example, *u-* is both ‘he’ or ‘she’, as well as ‘it’.

There are two classes of pronouns: dependent pronouns that cannot appear alone (being prefixes or suffixes), and independent pronouns that can stand alone.

2.1. Dependent pronouns

Dependent pronouns are divided into two series: the ergative series and the absolutive series:

2.1.1. The ergative series (E)

Ergative pronouns are morphemes prefixed to the word (noun, adjective, verb). Their function is to mark (1) the Subject of transitive constructions, (2) the possessor in possessive constructions, and (3) the person in relational nouns (see below).

There are two allomorphs of ergative pronouns depending on whether the word to which they prefix begins with a consonant or a vowel.

HIEROGLYPHIC MAYA PRONOUNS OF THE ERGATIVE SERIES				
PERSON	BEFORE CONSONANTS	BEFORE VOWELS	(1)TRANSITIVE SUBJECT	(2) POSESSIVE
1ST SINGULAR	*ni-*	*w-*	'I'	'my'
2ND SINGULAR	*a-*	*aw-*	'you'	'your'
3RD SINGULAR	*u-*	*y-*	'he, she, it'	'his, her, its'
1ST PLURAL	*ka-*	—	'we'	'our'
2ND PLURAL	—	—	'you'	'your'
3RD PLURAL	*u-*	*y-*	'they'	'their'

For example,

***u**chokoʔw*	***u**pakal*	*(ti)* ***u**paat*
***u**-chok-oʔw-Ø*	***u**-pakal*	*(ti)* ***u**-paat*
'**he**/**she** throws/threw it'	'**his**/**her** shield'	'behind **him**/**her'**

2.1.2. The Absolutive Series (A)

Absolutive pronouns are morphemes suffixed to the word (noun, adjective, verb). Their function is to mark (1) the Object of transitive verbs, and (2) the Subject of intransitive and stative verbs.

HIEROGLYPHIC MAYA PRONOUNS OF THE ABSOLUTIVE SERIES			
PERSON	MORPHEME	(1) OBJECT	(2) INTRANSITIVE / STATIVE SUBJECT
1ST SINGULAR	*-eʔn*	' me'	'I'
2ND SINGULAR	*-at*	'you'	'you'
3RD SINGULAR	*-Ø*	'him, her, it'	'he, she, it'
1ST PLURAL	*-oʔn*	'us'	'we'
2ND PLURAL	—	'you'	'you'
3RD PLURAL	*-oʔb' > -ob'*	'them'	'they'

For example,

uchokoʔw	*huli*	*uk'aab'aʔ*
*u-chok-oʔw-**Ø***	*hul-i-**Ø***	*u-k'aab'aʔ-**Ø***
'he/she throws/threw **it'**	'**he**/**she** arrived'	'**it** is his name'

It is the equation of the transitive Object and the intransitive Subject what makes Classic or Hieroglyphic Maya an *ergative* language (like Sumerian or Basque).

2.2. Independent pronouns

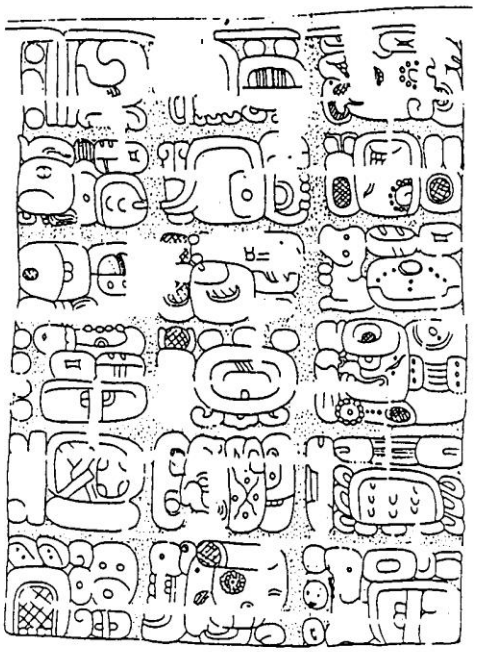
Independent pronouns are built with the particle *haʔ* plus a pronoun of the Absolutive Series, thus *haʔ-en*, *haʔ-at*, *haʔ-Ø*, *haʔ-oʔb'*. The resultant forms, influenced by morphophonemic processes, are not predictable. Thus, *haʔ-oʔb'* gives *haʔoʔb'*, but *haʔ-at* gives *hat* and *haʔ-eʔn* gives seemingly *hiin*.

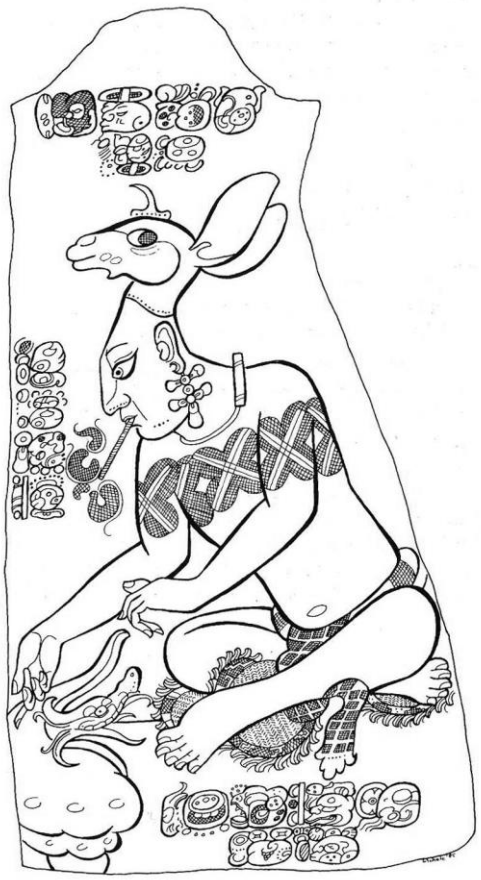
HIEROGLYPHIC MAYA INDEPENDENT PRONOUNS			
PERSON			
1ST SINGULAR	*hiin* > *hin*	**hi**-**na** > **hi**-**ni**	'I'
2ND SINGULAR	*hat*	**ha**-**ta**	'you'
3RD SINGULAR	*haaʔ* > *haʔ*	**ha**-**i** > **ha**-**a**	'he, she'
1ST PLURAL	—		'we'
2ND PLURAL	—		'you'
3RD PLURAL	*haʔoʔb' >haʔob'*	**ha**-**o**-**b'a** > **ha**-**o**-**b'o**	'they'

For example,

> ***haa***ʔ *tzakwiiy Waxaklajuʔn Ub'aah Chan*
> '**he [**was who] conjured Waxaklajuʔn Ub'aah Chan'
>
> *chak patan … ta* ***hat***
> 'much tribute … for **you**'

K1398





COP Tp. 11

3. NOUNS

This is a very rich category. Nouns do not have masculine or feminine gender in Maya languages. In the cases where it is marked, like with certain animals or titles, it is done by the prefixes *aj-* (masculine) and *ix-* (feminine).

3.1. Absolute and possessed forms of nouns

There are two main situations in which a noun can be involved: the absolute form, and the possessed or relational form. Both are distinguished by means of the presence or absence of certain suffixes. There are nouns whose natural form is not being possessed (like *witz* 'hill', *ek'* 'star' o *b'ahlam* 'jaguar'), while other are usually possessed (like parentage expressions). In respect to possessed forms, there is also a distinction between non-permanent or alienable possession, and intimate or inalienable one.

3.2. Classes of nouns

3.2.1. Neutral nouns

These are nouns like *k'in* 'sun', *tuun* 'stone', *witz* 'hill', *tz'iʔ* 'dog', *otoot* 'house' or *k'uh* 'god'. Neutral nouns do not take any special suffix in both their absolute or possessed

forms, except in the intimate possession, where they are suffixed by –*VV$_1$l* o –*il*. For example,

pakal 'shield'
u-pakal 'his/her shield, the shield of'

tuun 'stone'
u-tuun 'his/her stone, the stone of'
u-tuun-il 'his/her stone, the stone of (intimate possession)

k'uh 'god'
u-k'uh-uul 'his/her god, the god of'

Sometimes possession introduces subtle changes in meaning:

uxul 'carving, to carve'
y-uxul-uul 'the inscription of'

3.2.2. Body parts

Body parts constitute a special category of nouns. Two classes of body parts can be distinguished according to the kind of suffixation in the context of possession:

a) Body parts that are inflected without suffix in the absolute form, and –*el* o –*il* in the intimate possessed form:

b'aak 'bone'	*u-b'aak-**el*** 'his/her bone'
ch'ich' 'blood'	*u-ch'ich'-**el*** 'his/her blood'
joʔl 'skull'	*u-joʔl-**il*** 'his/her skull'

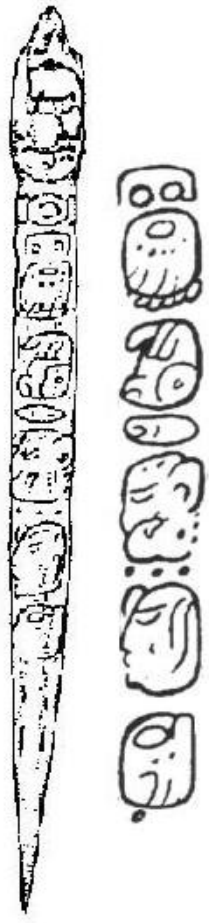
b) Body parts that are inflected by –*is* in the absolute form, leaving the possessed form unmarked (some clothes and personal ornaments, like jewels are included in this class):[8]

*k'ab'-**is*** 'hand'	*u-k'ab'* 'his/her hand'
*tiʔ-**is*** 'mouth'	*u-tiʔ* 'his/her mouth'
*oʔhl-**is*** 'heart'	*y-oʔhl* 'his/her heart'

Traditionally these two kinds of body parts have been interpreted as depending on owners' control (in the first class there is no control, in the second there is). Interestingly, these classes correspond nicely with the two categories of bodies that ethnologist P. Pitarch describes in modern Tzeltal communities, called by him 'cuerpo-carne' and 'cuerpo-presencia'.

[8] In the Western Ch'olan area –*al* is used instead of –*is*.

NAR Bone



YAX Bone

COM Urn 26, Spine 6

3.2.3. Parentage expressions

Their natural form is to be possessed (one is always a 'mother', 'brother' or 'wife' *of* someone). When they are not possessed they are followed by the word *winik* 'person' or *ch'ok* 'boy, young one'. Thus,

sakuʔn ***winik*** 'elder brother' (lit. 'elder brother-person')
u-sakuʔn 'the elder brother of'

There are many parentage terms identified in the texts:

al	'son/daughter' (of a woman)
mijiiin (*miin*?)	'son/daughter' (of a man)
ichaan	'mother's brother'
atan	'wife'
mam	'father's father'

mim	‘mother’s father’ (Yucatecan)
sakuʔn / *sukuʔn*	‘elder brother’
ihtz’iin	‘younger brother’
unen	‘baby, child’

3.2.4. Derived nouns

Nouns can be derived from other nouns, adjectives and verbs. The main suffixes involved in such derivations are:

3.2.4.1. *Derived from nouns and adjectives*

-aal derives nouns with instantiation meaning from other nouns

tz’ihb’ ‘painting’ *tz’ihb’-aal* ‘drawing, decoration’

-il derives nouns with abstract meaning from other nouns or adjectives

ajaw ‘lord, king’ *ajaw-il* ‘lordship, kingdom’

-lel derives nouns with abstract meaning from other nouns

ajaw ‘lord, king’ *ajaw-lel* ‘lordship, kingdom’

-lil derives nouns with abstract meaning from other nouns (Yuc.)

ajaw ‘lord, king’ *ajaw-lil* ‘lordship, kingdom’

-V_1l derives nouns with collective meaning from other nouns

teʔ ‘tree’ *teʔ-el* ‘wood, forest’

3.2.4.2. *Derived from verbs*

-aj derives nouns from CVC transitives

tek’ ‘to step on’ *tek’-aj* ‘the stepping on’
pas ‘to open’ *pas-aj* ‘opening’

-al derives nouns from motion and change-of-state *–VV_1y* intransitives, passives in *–n-aj* and *–w-aj*, and antipassives in *-ma*

ehm-ey ‘descend’ *ehm-al* ‘descending’
tz’ihb’-n-aj ‘be painted/written’ *tz’ihb’-n-aj-al* ‘painting, writing’
uxul-w-aj ‘be carved’ *uxul-w-aj-al* ‘carving, inscription’
tzutz-ma ‘finish, complete’ *tzutz-ma-al* ‘finishing, completion’

-b’aaj derives nouns from CVC and non-CVC transitive verbs

ch’ak ‘chop’ *ch’ak-b’aaj* ‘chopping, decapitation’

-eʔl derives nouns from root intransitives and derived intransitives in *–Vj* (*-aj ~ -iij*), and passives in *–h-…-aj*

och ‘enter’	*och-eʔl* ‘entering’
joyaj ‘debut, make something for the first time’	*joy-eʔl* ‘debut’
tihmaj ‘be satisfied, pleased’	*tihmaj-e’l* ‘satisfaction, pleasing’

-oʔl derives nouns from CVC transitives

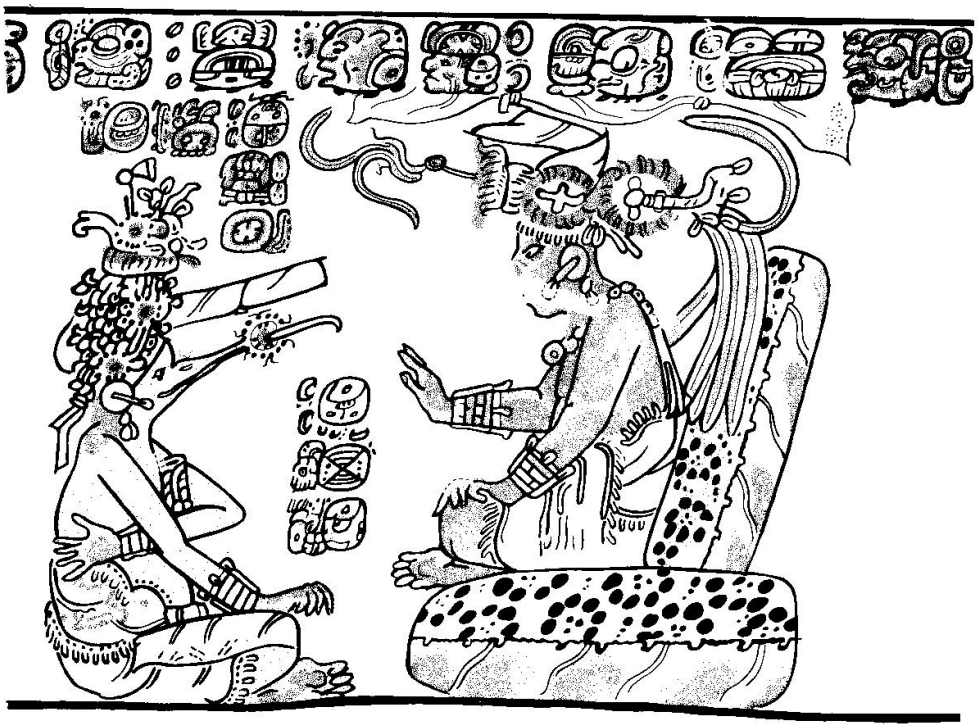
chok ‘throw, cast’	*chok-oʔl* ‘throwing, casting’

-ib’ derives nouns with instrumental meaning from verbs

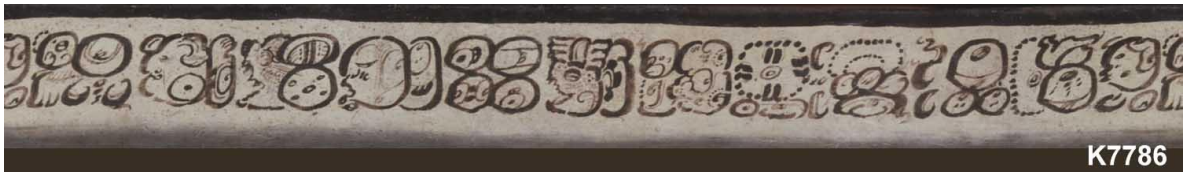
uk’ ‘drink’	*uk’ib’* ‘(drinking) vessel’

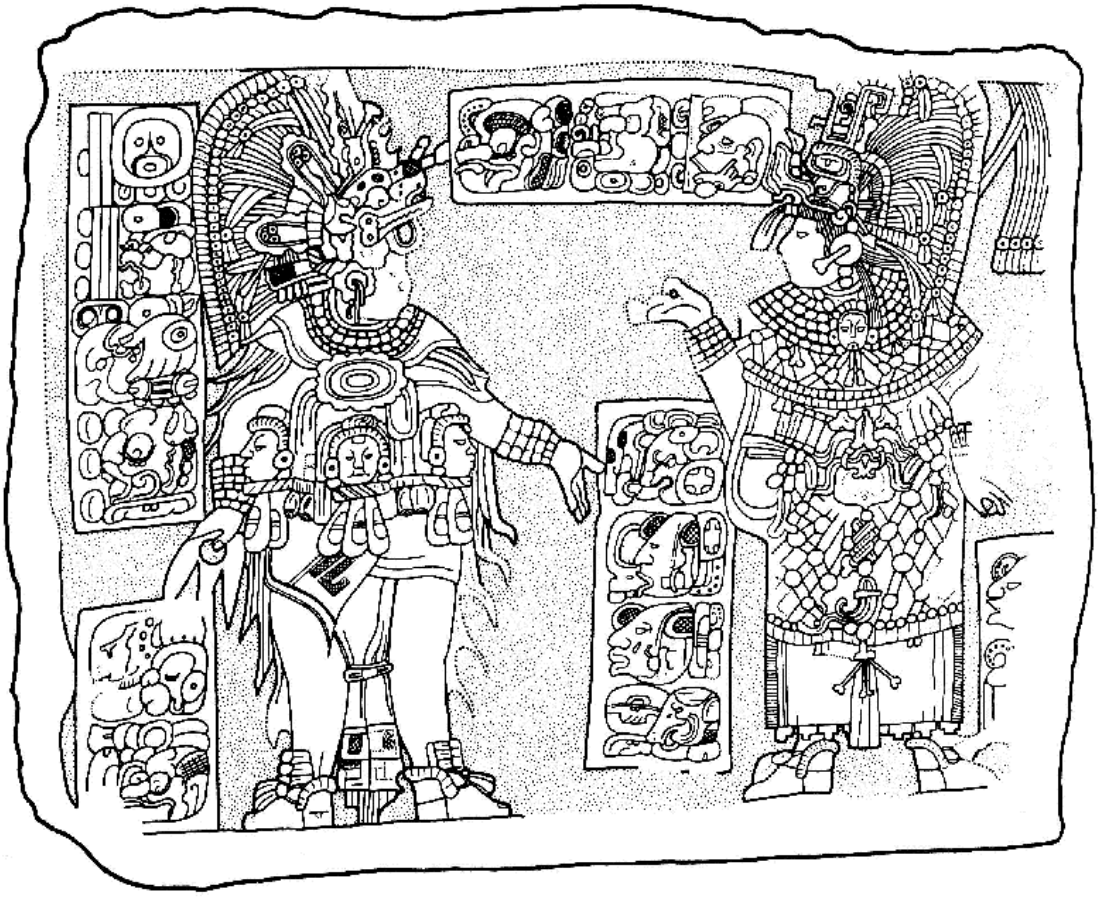
-Vl derives nouns with instrumental meaning from verbs

pok ‘wash’	*pokol* ‘washer’



YAX Lintel 24 (drawing by I. Grajam)





CRN Panel 3 (drawing by N. Grube)

3.2.5. Complex nouns

Complex nouns can be formed by the combination of two nouns, or a verb plus a noun. In some cases they are lexicalized forming an indissoluble unit. For example,

k'intuun 'drought, drought time' (*k'in* 'Sun', *tuun* 'stone')
elk'in 'east' (*el* 'arise', *k'in* 'Sun')
ochk'ahk' 'fire-entering' (*och* 'enter', *k'ahk'* 'fire')
chumtuun 'stone-sitting' (*chum* 'sit', *tuun* 'stone')

3.2.6. Agentives

Agentives denote the possesor of something or the person who performs an action. They are translated as '(s)he/person of …'. The main agentive morphemes are

aj- derives agentives from nouns and verbal nouns, with generic sense of 'person that has or does something'. It does not indicate genre, being both masculine o feminine.

tz'ihb' 'painting, writing'	*aj-tz'ihb'* 'painter, scribe'
mahy 'tobacco'	*aj-mahy* 'tobacco person'
winik b'aak 'twenty captives'	*aj-winik b'aak* 'he of twenty captives'

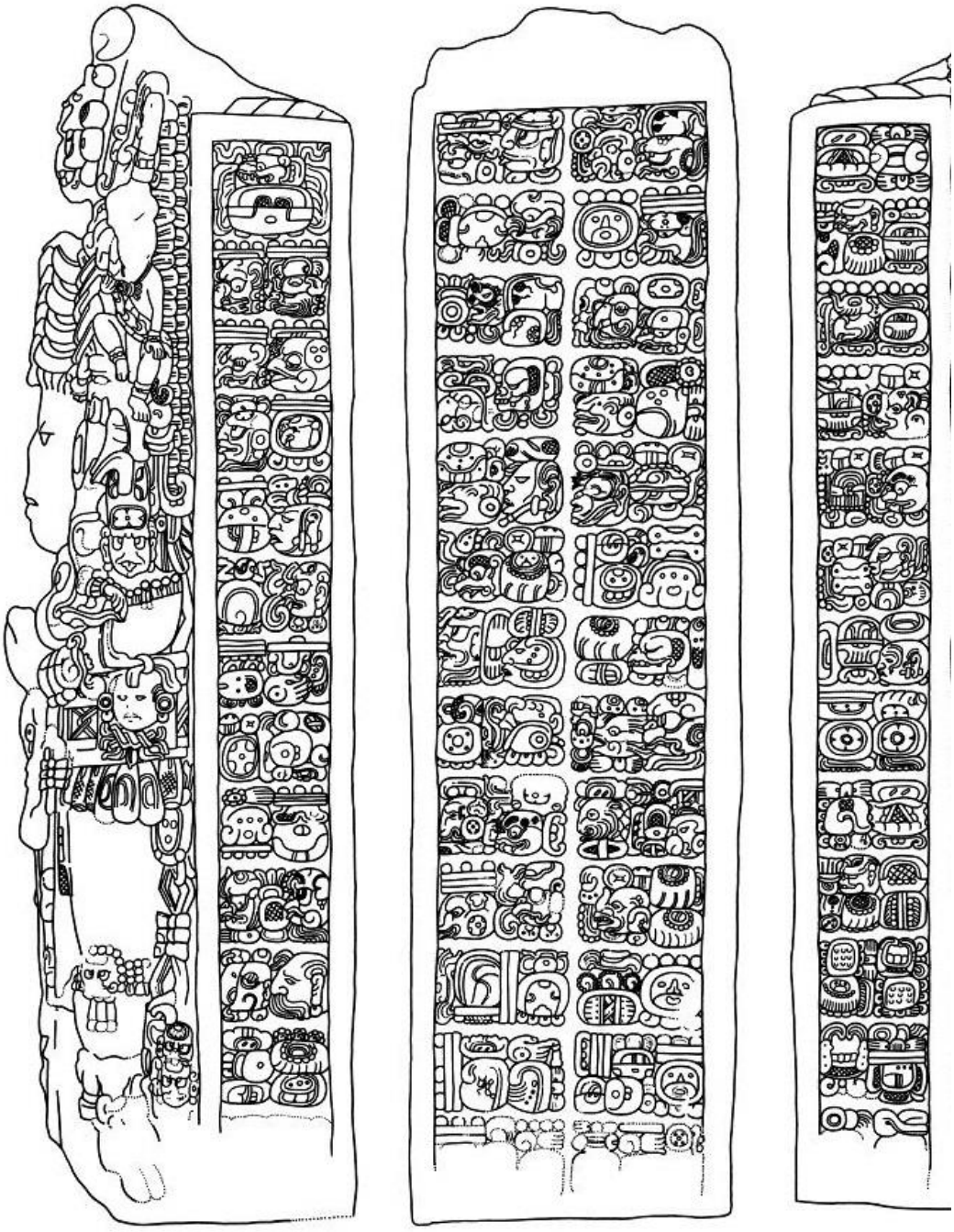
-oʔm derives agentives from nouns, verbal nouns, and both intransitive and transitive verbs. In the case of nouns, verbal nouns and intransitive verbs *–oʔm* is directly suffixed to the root; in the case of transitive verbs, they have to be intransitivized first through antipassivization, using the –(o)n antipassive suffix.

k'a(ʔ)y 'song, announcement'	*k'a(ʔ)y-oʔm* 'singer, announcer'
ahk' 'give'	*ahk'-n-oʔm* 'giver'
mak 'close'	*mak-n-oʔm* 'closer'

Agentives can be inflected for possession, like

ajk'in 'priest'	*y-ajk'in* 'the priest of'

CLK Structure Sub 1-4 (drawings by S. Martin)



CPN Stela A (drawing by L. Schele)

3.2.7. Demonyms

Some morphemes derive nouns with demonymic menaing (‘he of, he from’):

aj- derives demonyms from place names

aj-chakhaʔ ‘he from Chakhaʔ’

-naal derives demonyms from place names, with the meaning of ‘inhabitant of’

Mutuʔl-naal ‘inhabitant of Mutuʔl’

3.2.8. Anthroponyms, titles, theonyms, and place names

Anthroponyms (names of persons), theonyms (names of supernatural beings), titles and toponyms (place names) constitute special categories regarding possession and syntax. For example, anthroponyms, theonyms and toponyms cannot be possessed. In Maya languages you cannot say ‘my Laura’ or ‘mi Buenos Aires querido’ (as in the famous tango). On the contrary, titles can be possessed. Thus, we can say ‘the scribe of’ or ‘the war captain of’.

3.2.8.1. *Anthroponyms*

Many Maya anthroponyms correspond to objects or beings of the natural world ore ven with entire sentences (in the case of appellatives of deities), there is no way to identify Maya personal names besides syntax or context. Some examples of Maya names:

Sak Maax (‘white-monkey’)
Chiliim B’ahlam (‘reclining jaguar’)
Yihch’aak Bahlam (‘jaguar paw’)
Yax Uk’uk’um K’awiil (‘green are the feathers of k’awiil’)

Feminine names are prefixed by *ix* o *ixik* ‘lady, woman’:

Ix K’ab’al Xook (‘Lady Shark Flipper’)
Ix Pakal (‘Lady Shield’)
Ix Uneh B’ahlam (‘Lady Jaguar Tail’)

3,2.8.2. *Theonyms*

Theonyms are words or appellatives that identify or describe an aspect of a god.

K’awiil (god of abundance and royalty)
Ahan (maize god)
Chaahk (god of thunder)
Muyal Chan K’awiil (‘K’awiil is the Cloud of the Sky’)
Ta Xin Chan K’inich (‘K’inich is in the Middle of the Sky’)

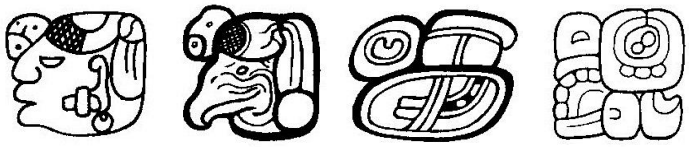
3.2.8.3. *Titles*

Titles, denoting rank, office or activity, work as appositions to the name, although they can also stand alone. It is possible to say *Tiloʔm sajal* ‘the *sajal* Tiloʔm’, or simply *sajal* ‘the *sajal’*. In the context of Hieroglyphic Maya (Ch’olan) ranks or office titles are placed after the personal name (the opposite in Yucatecan). Titles can be possessed (for

example, *y-ajk'uhuʔn* 'the priest of', *u-yajawteʔ* 'the war captain of'). In these cases, the possessor is always higher in rank or hierarchy in respect to the possessed. There are titles bore by women. In those cases, they are preceded by *ix(ik)* 'lady, woman'.

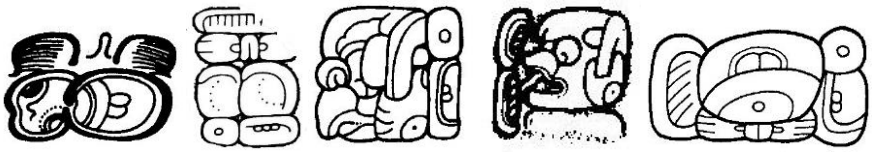
The main titles attested in Classic times are the following:

- Rank or office titles

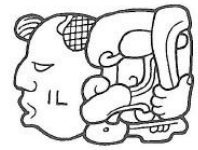


ajaw
'lord, king'

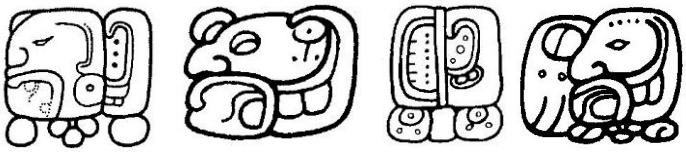
ix(ik) ajaw
'queen, royal princess'



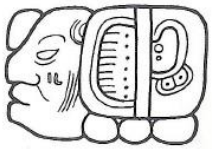
kaloʔmte'
(high political office, uncertain meaning)



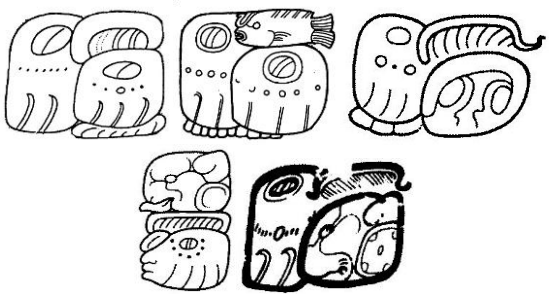
ix(ik) kaloʔmte'



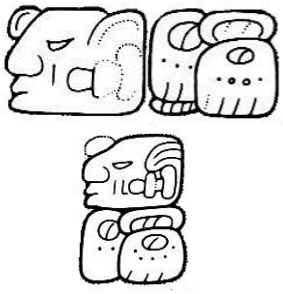
sajal
(noble, principal, governor?)



ix(ik) sajal

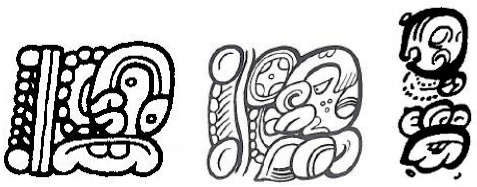


b'aah kab'
'head of the land, first of the land' (prince)



ix(ik) b'aah kab'

- Priestly titles



ajk'uhuʔn
'priest, worshipper'

ix(ik) ajk'uhuʔn
'priestess, worshipper' (?)

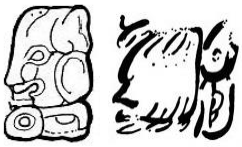
ajk'uh
'priest'
(posible late form of *ajk'uhuʔn*)

ajk'in
'priest, divinator'

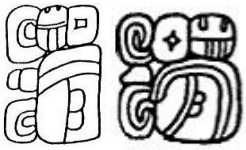
yajaw k'ahk'
'lord of fire'

sak tiʔ huʔn

- Military titles



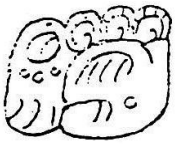
b'aah teʔ
'first spear/baton'
(war captain)



yajawteʔ
'lord of spears'
(war captain)

ch'ahoʔm ajaw
'lord of men'

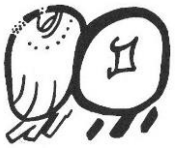
b'aah pakal
'first shield'



b'aah toʔk'
'first flint'

- Other administrative or courtly titles

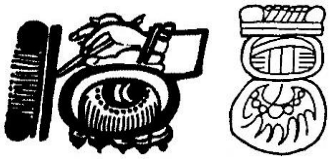
eb'eʔt
'messenger, ambassador'



b'aah tz'am
'first (of the) throne'

anaab'
?

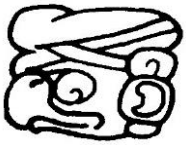
lakam
'banner' ?
(district leader)



ajtz'ihb'
'scribe, painter'

b'aah cheʔb'
'first quill'

ajuxul
'carver'

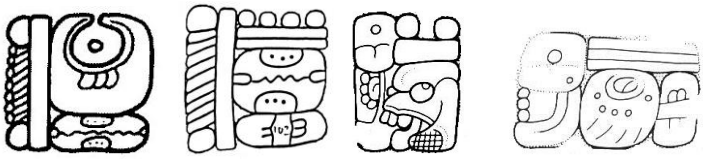


?

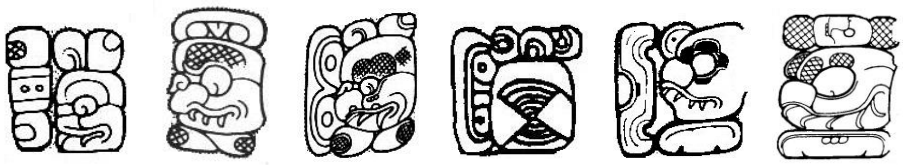
Other titles appear in the hieroglyphic corpus without denoting specific offices or ranks, but indicating the performance of certain activity, like 'announcer' or 'singer',

k'ayoʔm / *k'aʔyoʔm*
'announcer, singer'

or like the military related ones, like the so-called ‘count of captives’, or ‘the guardian of’ expression (from *chaʔn* ‘watch, look after, guard’), which precedes the names of important captives.

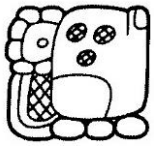


aj-N-*b’aak*
‘he of N captives’



uchaʔn ~ uchan
‘the guardian of’

Other titles are generic or honorific, like those given to elite members, or those that are translated as ‘wise’ or ‘literate person’.

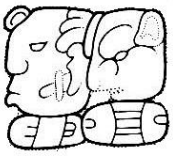


ch’ahoʔm
‘man’

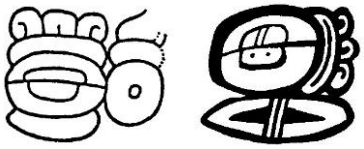
ixik
‘lady’

k’uhul ixik
‘holy lady’

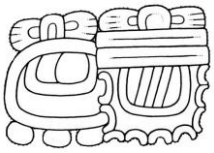
ch’ok
‘boy, infant’



ixik ch’ok
‘girl, infant, maiden’



itz’aat ~ itz’at
‘wise’



matz
‘literate’

3.2.8.4. *Place names*

Place names refer to natural or supernatural locations. They refer to physical or biological features of the landscape, so it is common to find them composed with nouns like *(h)a’* ‘water’ o *witz* ‘hill’:

Tiʔpaʔ	‘(at the) shore of the stream’
Yaxha’	‘clear/blue water’
Hixwitz	‘hill of the jaguar’
K’uhteʔel	‘cedar wood’

…or built places, such as:

Xuhkalnaah	‘cornered house’
Chaahknaah	‘house of Chaahk’ or ‘lightning house’

Some special suffixes are specially involved with place names, such as *–nal* ‘place of’, *–uʔl*, *–uul*, *–il*, *–iil* and *–al*, probably indicating ‘(place of) abundance of’, or ‘(place where) something abounds’.

K’ihnhaʔnal	‘place of the hot water’
K’anwitznal	‘place of the *mesa* hill’
Kanuʔl	‘where serpents abound’
Yaxniil	‘where *yaxuun* abound’

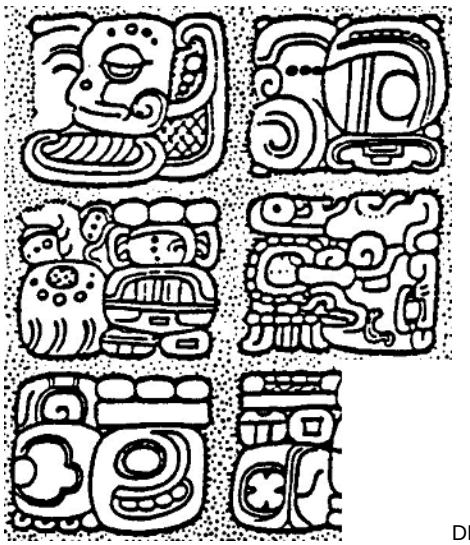
Other locations seem to be formed by suffixing *–n-ib’* (Eastern) and *–l-ib’* (Western Ch’olan) to a noun or a verb.

One of the most important titles are the so-called Emblem Glyphs (EG), which are place names to which the title *ajaw* ‘lord, king’ is attached (‘lord/king of…’), thus naming the kingdoms of the Classic period. This title is sometimes preceded by the adjective *k’uhul* ‘holy’ (‘holy lord/king of…’), considered a variant of the title belonging to the most important and powerful kingdoms.

3.2.9. Plural

Plural markers are not obligatorily marked in Maya nouns, if the general context implies plural or if it has already been indicated in another way (for example, using a number or an adjective of quantity). However, the plural form can be explicitly expressed with the suffix *–taak* (with collective meaning), as in

ajaw ‘lord, king’	*ajaw-taak* ‘lords, kings’
ch’ok ‘boy, infant’	*ch’ok-taak* ‘boys, infants’



DPL Stela 8

4. ADJECTIVES

Just like nouns, Maya adjectives do not mark masculine or feminine gender. Syntactically, adjectives precede the noun which they qualify (as in English, but the reverse in Spanish). In the case of possession, the adjective is placed in between the possessive ergative pronoun and the noun.

4.1. Primary adjectives

Some primary adjectives have been identified in the hieroglyphic texts. For example, *lakam* 'big', *noh* 'big', *oʔn* 'many', *ach'* 'new', *tat* 'thick, dense', or colours, *sak* 'white', *ik'* 'black', *yax* 'green, blue', *chak* 'red', and *k'an* 'yellow'.

lakam tuun
'big stone' (stela) (*lakam* 'big', *tuun* 'stone')

sak maax
'white monkey' (*sak* 'white', *maax* 'monkey')

4.2. Derived adjectives

Adjectives can be derived from nouns and verbs using certain suffixes:

-V_1*l* derives adjectives from nouns

k'ahk' 'fire' *k'ahk'-al* 'fiery'
k'uh 'god' *k'uh-ul* 'holy'

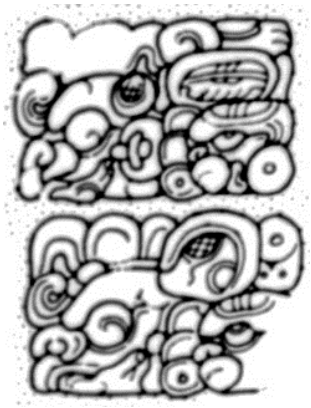
- V_1*ch* derives adjectives from nouns, with the meaning of 'to have the quality of'

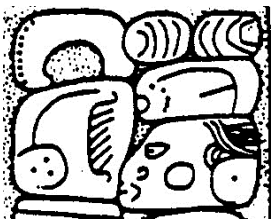
k'ihn 'anger' *k'ihnich* 'angry, brave'

-*Vm* derives adjectives from nouns, other adjectives and verbs

chil 'lay down' *chil-iim* 'lying, reclining'

.


CPN Stela 10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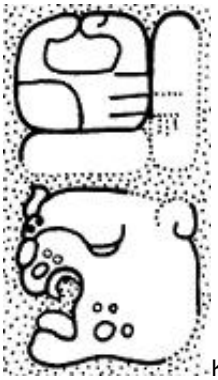

KJT Stela 5

5. NUMBERS

Numbers are not marked for gender. Syntactically they precede the counted object or being.

5.1. Cardinal numbers

Most numbers are written with logograms (bars and dots or head variants), and only exceptionally using syllabic signs. That is why we don't know the exact pronunciation of some of them, having to recur to comparative linguistic reconstructions. Number 'zero', actually meaning 'no, nothing' is the only one that is usually written with phonetic signs, as **mi** or **mi**-**li**, probably *mi[h]* or *mil* (<*mih-il*).

There are basic forms from 'one' to 'eleven':

juʔn	'one'
chaʔ	'two'
uux ~ hux	'three'
chan	'four'
hoʔ	'five'
wak	'six'
uuk ~ wuk	'seven'
waxak	'eight'
b'olon ~ b'alun	'nine'
lajuʔn	'ten'
b'uluch ~ buluk	'eleven'

From 'twelve' to 'nineteen', the number is composed with *laj(uʔn)* 'ten', plus the basic form, with the exception of 'twelve', which is irregular:

lajchan	'twelve'
uuxlajuʔn	'thirteen'
chanlajuʔn	'fourteen'
ho'lajuʔn	'fifteen'
waklajuʔn	'sixteen'
uuklajuʔn	'seventeen'
waxaklajuʔn	'eighteen'

b'olonlajuʔn 'nineteen'

For 'twenty' there are two forms, *winik* (or *winaak*?) and *k'aal*. *Winik* and *k'aal* are used in different contexts: *winik* is used for 'twenty' and numbers between 'twenty' and 'thirty nine'; *k'aal* is used for multiples of 'twenty'. Thus, for example,

uuxwinik 'twenty three' (3 + 20)
hoʔk'aal 'one hundred' (5 x 20)

5.2. Ordinal numbers

There is a suppletive form for 'first', which is *b'aah*. Other ways to indicate 'first' are using the adjectives *naah* and *yax* (as opposed to *wiʔil* 'last'), and are specialized depending on context, not being interchangeable among them (for example, one can say *b'aah uxul* 'first sculptor', but not **naah uxul* or **yax uxul*; or *naah hoʔtuun* 'first *hoʔtuun'*, but not **b'aah hoʔtuun* or **yax hoʔtuun*).

The other ordinal numbers (exceptionally also 'first') are composed by prefixing *u-* to the number. Compare:

hoʔlajuʔn winikhaab' 'fifteen *winikhaab*'s'
u-hoʔlajuʔn winikhaab' 'the fifteenth *winikhaab"*

5.3. Numeral classifiers and mensuratives

Some Maya languages, amongst them the hieroglyphic languages, use numeral classifiers (but not proto-Maya). These classifiers are words that are attached to the number, before the counted noun (they cannot be alone, without a number). Their function is to classify the counted noun within a general category. In modern Maya languages those categories are certainly rich: 'animate', 'inanimate', 'human or supernatural', 'periods of time', 'four-legged animals', 'trees', 'shrubs', 'long objects', 'round objects', 'flat objects', different foodstuffs, and so on.

However, numeral classifiers are not abundant in the hieroglyphic corpus, perhaps suggesting that their inclusion in the written language was a recent phenomenon and a process in progress.

The classifiers that have been identified are the following:

-b'ix	counts of five and seven
-pis	count for years (Yuc.) and units of time (months)
-teʔ	units of time (days in a month)
-tz'ahk	things placed in order or sequence
-tal	things placed in order or sequence
-tikil	human beings

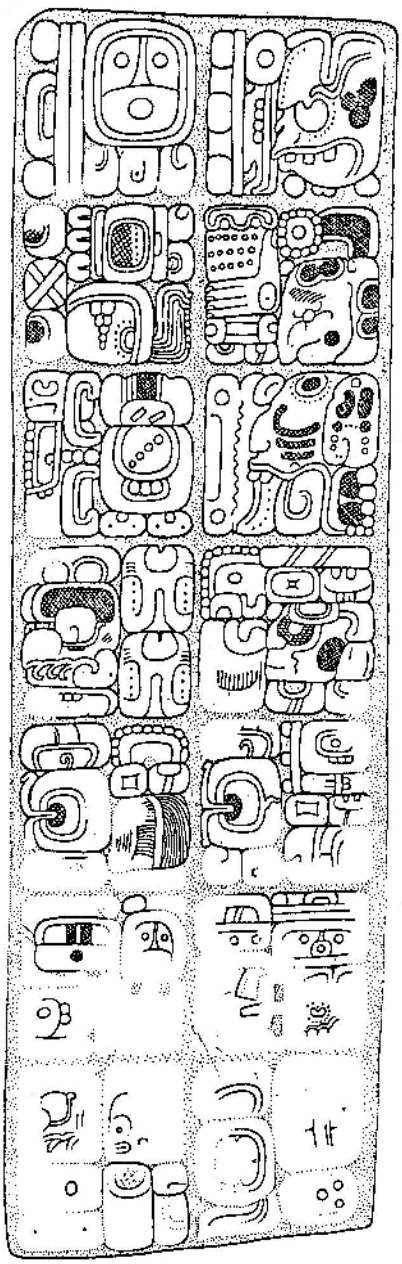
It is very difficult to translate numeral classifiers into a language that lacks them, such as English or Spanish. For example:

*[u]waklajuʔn**tz'ahk** ch'aho'm*
'the sixteenth man' (belonging to a class of things placed in order —like kings in a dynasty)'

Numeral classifiers are sometimes confused with other nouns that usally follow numbers, like mensuratives or units of measurement. For example,

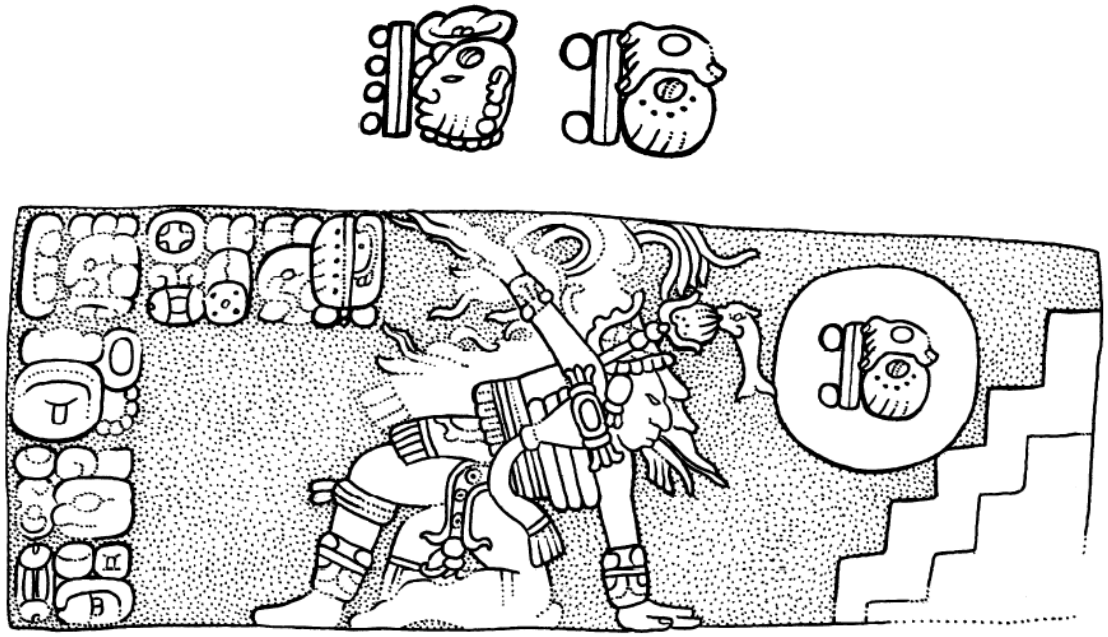
b'olon nahb'
'nine hand-spans'

Note that in this case there is no problem in translating: *nahb'* 'hand-span' is simply a noun, not a category of classification.



IXZ Stela 4 (drawing by L. Schele)

CPN Tp. 11 Bench (drawing by L. Schele)



YAX HS 2, Step X (drawing by I. Graham)

6. VERBS

As in any other language in the world, the first main distinction in the verbal system is between *intransitive* and *transitive*. In intransitive constructions the main two components are the verb and the Subject that performs an action; in transitive constructions besides the verb and the Subject (Agent), there is an Object (Patient) that undergoes the action.

Subject and Object

In Maya verbs the Subject must be clearly expressed, and, in the case of being a transitive verb, also the Object. This is done by dependent pronouns, which are prefixed or suffixed to the verb stem. Since Maya languages are of the ergative type, the pronoun that denotes the Subject in intransitive constructions is not the same one that denotes the Subject in transitive constructions.

The Subject (Agent) of transitive verbs is marked with a pronoun of the Ergative Series (E), which are always prefixes. These ergative pronouns are the same used in possession. That is to say, *ni-* means 'my', but also 'I'; *u-* means 'his/her', but also 'he/she'. The Subject of intransitive verbs is marked with a pronoun of the Absolutive Series (A), which are always suffixes. Since almost all of the hieroglyphic texts are written in third person, the most frequent pronouns will be *u-* or *y-* in the case of transitives, and *–Ø* in the case of intransitives.

In the active voice of the transitive verbs the Object (Patient) has to be indicated in the verbal stem by an absolutive pronoun.

ujuluʔw chij
u-jul-uʔw-Ø chij
3sE-shoot-ACT-3sA deer
'he/she shoots/shot (at) the deer'

huli
hul-i-Ø
llegar-THEM-3sA
'he/she arrived (to a place)'

In the first case, since it is a transitive construction,–*Ø* refers to the Object 'it, the deer'; in the second case, since it is an intransitive construction,–*Ø* refers to the Subject 'he, she'.

Verbal time and aspect

Time refers to *when* an action is performed, whether in the past, present or future. Aspect refers to the *state* of an action, whether it is unfinished (incompletive), finished (completive), or is being done at that moment (progressive).

As in modern Maya languages, Hieroglyphic Maya verbal system focuses on aspect, and it is marked in the verbal stem.[9] Time is expressed by adverbs, by temporal indicators or phrases like dates, or simply understood by context. This characteristic of Maya verbs may cause some problems in translation, because languages such as English or Spanish are systems based on time, not on aspect, and therefore we will, for example, be inclined to translate incompletive for present or completive for past.

Seemingly, some Maya verbal forms are not inflected even for aspect. That is what happens with CVC transitive verbs in the active voice, such as *u-tzutz-uʔw-Ø*, which can be translated both as 'he/she finish*es* it' or as 'he/she finish*ed* it' (like English *I cut* or *you hit*), and also probably with the passive, mediopassive, antipassive and positional forms. However, some non-CVC transitives and some intransitives did mark aspect.

Our insufficient knowledge of the incompletive aspect probably comes from the fact that incompletive actions are rare in the preserved hieroglyphic corpus due to literary genre, which clearly favored, along with third person subjects and objects, the completive aspect.

6.1. Intransitive verbs

Classes of intransitive verbs:

6.1.1. Stative expressions ('to be')

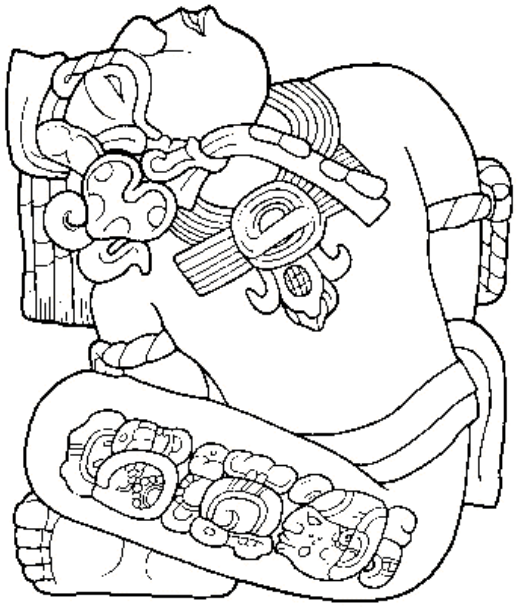
In Maya languages there is no verb equivalent to English 'to be' (or Spanish 'ser, estar'). Predicates implying the verb 'to be' are built suffixing an absolutive pronoun to a noun or adjective expression. Since the absolutive pronoun of the third person singular is –*Ø*, in fact any noun or adjective can potentially be involved in this kind of constructions. For example,

ajaw	*ajaw-Ø*
'the lord'	'he *is* a/the lord'
sak	*sak-Ø*
'white'	'he/she/it *is* white'

[9] For an alternative explanation based on *time*, see Houston 1997.

Notice that these stative expressions can be combined with ergative pronouns:

y-ajaw	*y-ajaw-Ø*
'the lord of'	'he *is* the lord of'



TNA Captive Panel (drawing by S. Martin)

6.1.2. <u>The verb 'to exist, have'</u>

It is probably represented by the verb *aʔn*, whose cognates are well attested in Lowland Maya languages, but poorly documented in the hieroglyphic corpus, where it is restricted to a single context, the so-called *impersonation* verb. In this case, it follows the expression *ub'aahil* 'the image of', in which a personage —usually the ruler or another member of the elite— impersonates a deity or a supernatural being. The construction is as follows:

ub'aahil aʔn — name of a deity/supernatural being — personage's name
'is the existing image' or '*is* the image of'

6.1.3. Root intransitive verbs in *–i*

These are regular intransitives verbs. In the basic form they are inflected with the *–i* thematic suffix:

cham-i	‘die’
hul-i	‘arrive (to)’
tal-i	‘arrive (from)’
och-i	‘enter’

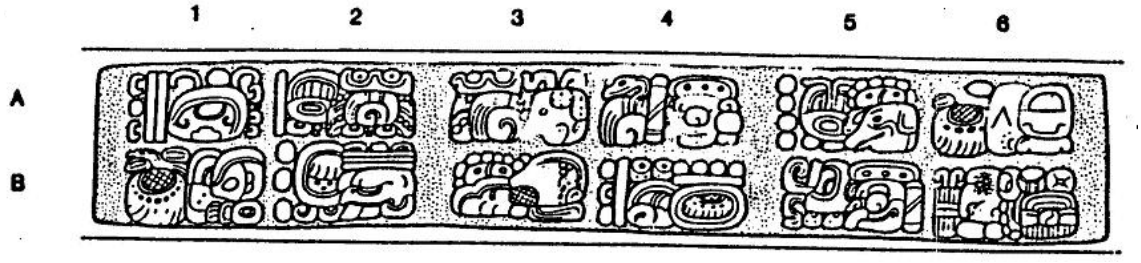
These verbs are inflected with *–eʔl* in the incompletive, and *–Ø* (unmarked) in the completive:

ahn-eʔl ‘go(es), run(s)’	*ahn-i* ‘went, ran’
hul-eʔl ‘arrive(s) to’	*hul-i* ‘arrived to’

6.1.4. Verbs of motion and change of state *–VV$_1$y*

A group of intransitive verbs involved in changes of state or motion has the thematic suffix *–VV$_1$y*. Seemingly, these forms do not distinguish incompletive and completive aspect.

lok’-ooy	‘leave, flee’
k’aʔ-aay	‘finish, rot’
pul-uuy	‘burn’



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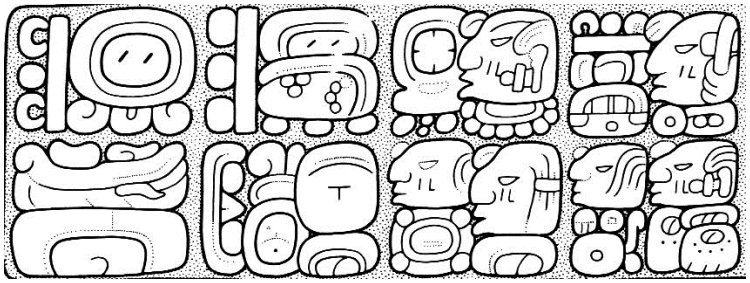


YAX Lintel 27

6.1.5. Positional verbs in *–laj / –waan*

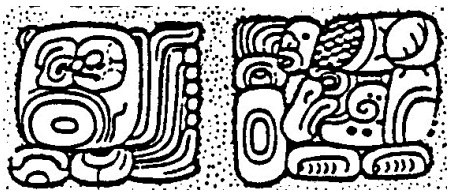
This group is comprised of intransitive verbs that describe the position in which the Subject is. In the Classic Period they were marked by the thematic suffixes *–laj* and *–waan* (formerly Western Ch'olan, later spreading to the Eastern Lowlands), and *–l-(iiy)* (Western Ch'olan). Seemingly, positional verbs do not distinguish between incompletive and completive forms:

chum-laj / -waan	'to sit down'
pak-laj	'to be face down'
waʔ-laj / -waan	'to be standing up'
chum-l-(iiy)	'to sit down' (Western Ch'olan)

Some transitive verbs show both active and positional inflection:

pat-aʔw	'to make'
pat-laj / -waan	'to get made'

In the Classic Period we can find another positional in *–h-…-aj* (*chu-h-m-aj*, instead of *chum-laj* or *chum-waan*) as archaism —in eastern Peten, as in Caracol—, or as evidence of Tzeltalan language —as in Tonina.



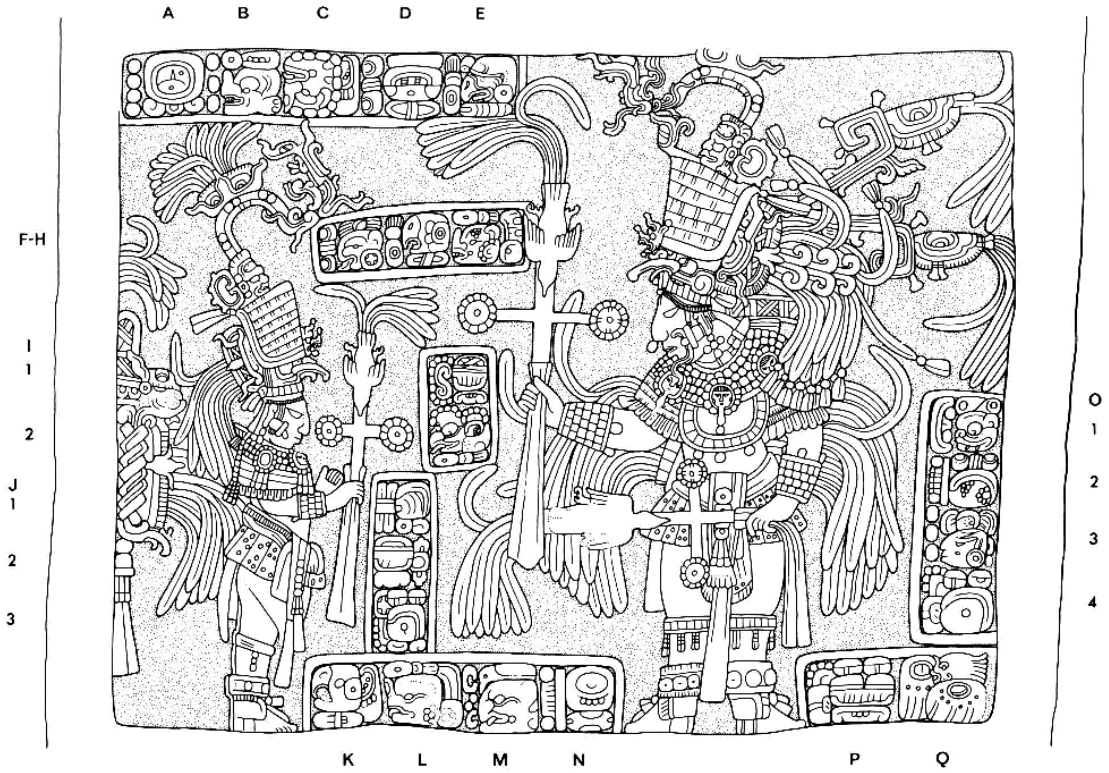
6.1.6. Intransitive verbs derived from nouns and adjectives in *–Vj* (*–aj ~ -iij*)

The suffix *–Vj* (*–aj* or *–iij* depending on the case) derives intransitive verbs from nouns or adjectives with the meaning of 'to do what the root indicates'. The derived verbs are always intransitive:

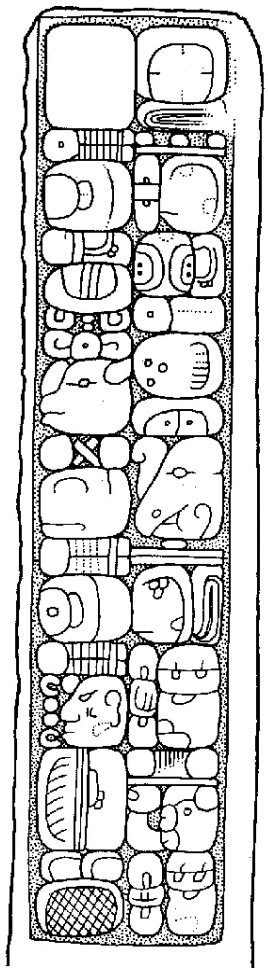
ahk'ot 'dancing, a dance'	*ahk'ot-aj* 'to dance'
joy 'debut'	*joy-aj* 'to debut, make something for the first time'
witz 'mountain'	*witz-iij* 'to (get piled like a) mountain'
uʔh 'necklace'	*uʔh-aj* 'to (be adorned with) necklace'
tak 'dry'	*tak-iij* 'to dry up'

These verbs can also be derived from complex nouns:

k'al 'to tie', *huʔn* 'headband' > *k'alhuʔn* 'headband-tying' ('crowning') > *k'al-huʔn-aj* 'to get crowned'



YAX Lintel 2 (drawing by I. Graham)



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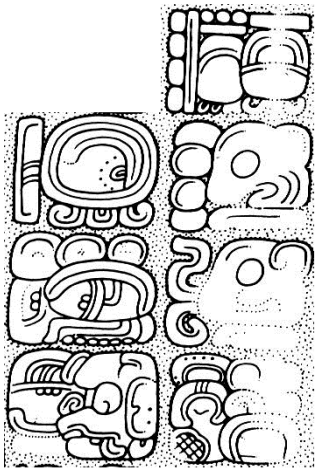
6.1.7. Inchoative verbs in *-aan*

The suffix *–aan* derives intransitive verbs with the meaning of 'becoming or be converted into what the root indicates':

ajaw 'lord, king' *ajaw-aan* 'to become king'



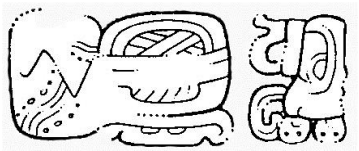
NAR Stela 22

6.1.8. Affective verbs in *–laj*

Affective verbs describe actions involving repeated sounds or actions:

b'aj 'hammer' *b'aj-laj* 'to hammer'
yuhk 'shake' *yuhk-laj* 'tremble, shake (as in an earthquake)'

DPL HS 4



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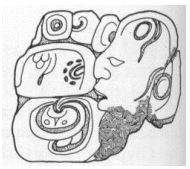


PAL Bodega

6.1.9. The impersonal verb *uht-i*

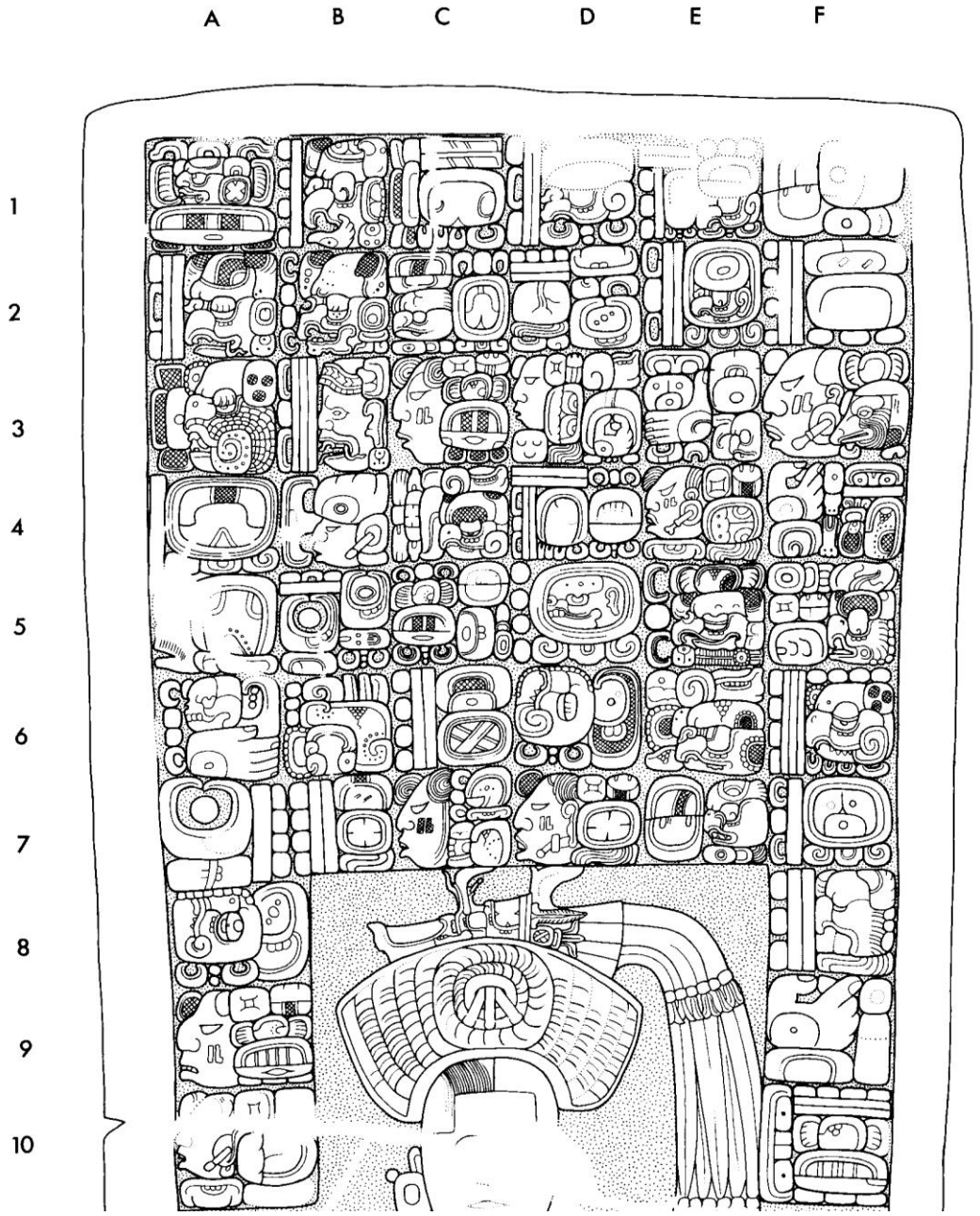
Although the verb *uht* bears the thematic suffix *–i* of root intransitive verbs, it is an impersonal verb that only appears in third person, in its two meanings of (a) 'happen, come to pass', and (b) 'get made'. For example,

*uhti Sakha*ʔ
'it happened (at) Sakhaʔ'

uhti tz'aptuun
'it happened the stone-planting'

uhti uxuul
'the inscription got made'

The verb *uhti* has not always been well understood, as well as the syntax of the sentences in which it participates. In its meaning 'to happen', *uhti* is one of the most important verbs in Maya texts, usually taking the role of main verb in narratives.



PNG Stela 3 (drawing by D. Stuart)

6.1.10. Irregular verbs

Cheʔ 'say', *ab'(i)* 'say', *b'ixiin* 'go', *pakax* 'return, come back'.

6.2. Transitive verbs

6.2.1. Classes of transitive verbs

Like other Maya languages, Hieroglyphic Maya distinguishes between two main classes of transitive verbs, according to their structure: CVC transitives (consonant-vowel-consonant), and non-CVC transitives, that is, any other transitive verb that does

not have CVC structure (for example CVhC, VC, VCVC, etc.), or the ones that are derived from nouns or other intransitive verbs:

- CVC transitives, for example

mak ‘close, cover’
chuk ‘seize, capture’
tz’ap ‘plant, drive into ground’
muk ‘bury’.

- Non-CVC transitives, for example

il(a) ‘see’
aʔl ‘say’
tz’ihb’-a ‘paint, write’ (derived from *tz’ihb’* ‘painting, writing’)

transitive verbs derived from positionals, such as

tz’ak-b’u ‘place in order’ (from positional *tz’ak* ‘to be in order’ and *-b’u* causative)

and verbal nouns like

uxul ‘carving/to carve’.

These two main classes of transitive verbs will be derived in different ways according to the voice.

6.2.2. The voices of transitive verbs

As in modern Maya languages, there are four voices in Hieroglyphic Maya: active, passive, mediopassive and antipassive. Consider these examples in English:

Active (ACT)	*the storm flooded the field*
Passive (PAS)	*the field was flooded (by the storm)*
Mediopassive (MP)	*the field got flooded*
Antipassive (APAS)	*the storm floods*
	it was the storm that flooded the field
	the storm field-floods

In the active voice —*the storm flooded the field*— there is an active verb that describes an action (*flooded*), and two arguments: a Subject/Agent (*the storm*) and an Object/Patient (*the field*), that suffers the action.

In the passive voice —*the field was flooded (by the storm)*— the former Object (the field) is promoted as the Subject of the new intransitive derived verb; the former active Subject/Agent is demoted, being suppressed or moved to an oblique phrase (***by*** *the storm*). The resulting passive verb is intransitive, because it only has one argument, the Subject.

In the mediopassive voice —*the field got flooded*— the former Object becomes the Subject of the sentence. Different from the passive voice, in the mediopassive there is no implicit Agent, as if the Subject acts on itself. This is the typical voice for actions like ‘the door closes’, ‘the roof broke’, where the Subject has at the same time the characteristics of an Agent and a Patient.

Antipassive voice implies a promotion of the active Subject (*the storm*). Such a promotion can be done (a) simply by suppressing the Object (*the storm floods* — without mentioning what it floods), which is called *absolute antipassive*; (b) focusing the Subject (*it was the storm that flooded the field*), which is called *agent focusing antipassive*; or (c) incorporating the Object into the verb (*the storm field-floods*), which is called *object incorporation antipassive*. Since in all the cases the Object is demoted (because it is deleted, because the Subject is in focus or because the Object is incorporated into the verb), for the Maya the final resulting verbal construction is intransitive.

Considering the CVC or non-CVC shape of the transitive verbs, the morphemes involved in the different voices, which are suffixed to the verb, are the following:

HIEROGLYPHIC MAYA VOICE DERIVATION OF TRANSITIVE VERBS				
	ACTIVE	**PASSIVE**	**MEDIOPASSIVE**	**ANTIPASSIVE**
CVC	E-CV_1C-***V_1ʔw***-A	CV-***h***-C-***aj***-A	CV_1C-***VV_1y***-A	CVC-***VV_1w***-A
non-CVC	E-Verb-***V***-(***n***)-A E-Verb-A	Verb-***n-aj***-A Verb-***w-aj***-A	Verb-***VV_1y***- A Verb-***k'-a(j)***-*A*	Verb-***on***-A Verb-***an***-A

For example, with third person Subject and Object,

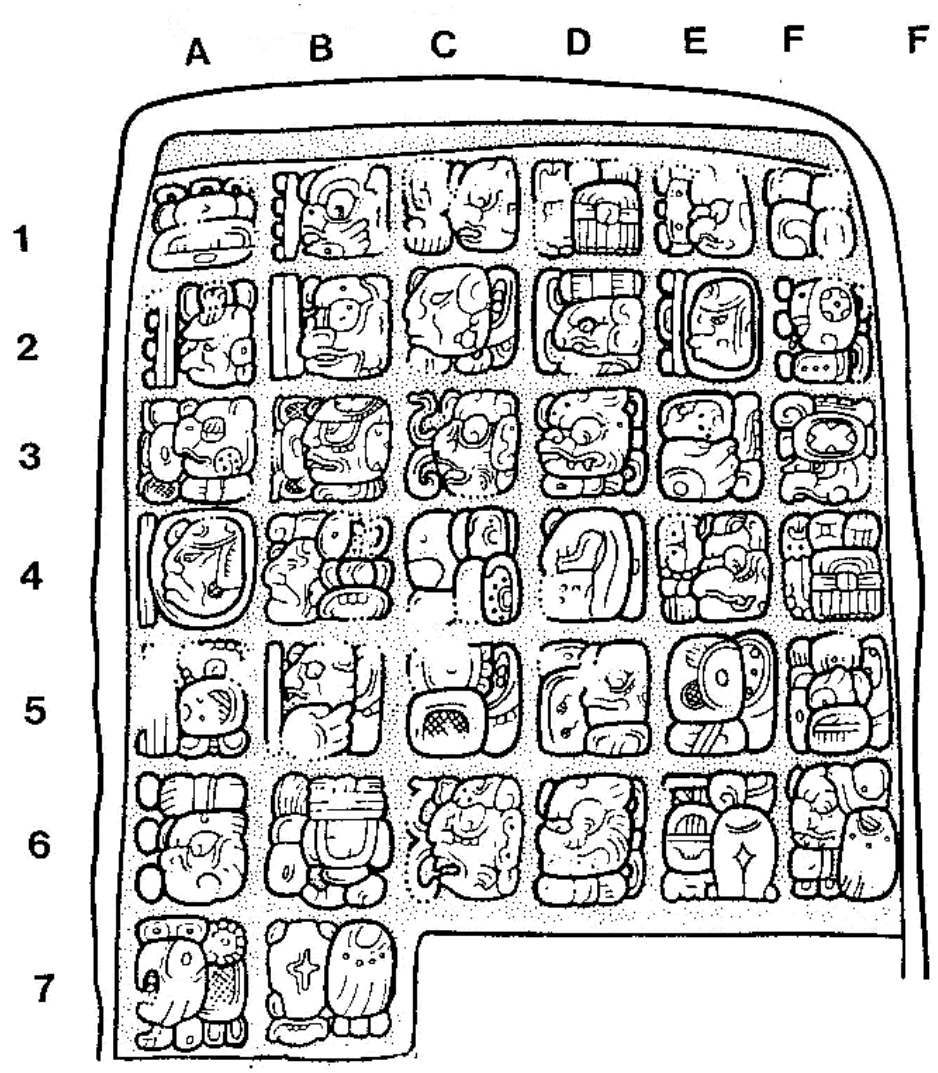
CVC TRANSITIVES				
Example	**ACTIVE**	**PASSIVE**	**MEDIOPASSIVE**	**ANTIPASSIVE**
	E-CV_1C-***V_1ʔw***-A	CV-***h***-C-***aj***-A	CV_1C-***VV_1y***-A	CVC-***VV_1w***-A
Tzutz 'finish'	*u-tzutz-uʔw-Ø* 'he finishes/ed it'	*tzu-h-tz-aj-Ø* 'it is/was finished'	*tzutz-uuy-Ø* 'it gets/got finished'	*tzutz-uuw-Ø* 'he finishes/ed'

non-CVC TRANSITIVES				
Example	**ACTIVE**	**PASSIVE**	**MEDIOPASSIVE**	**ANTIPASSIVE**
	E-Verb-A	Verb-***n-aj***-A	Verb-***VV_1y***- A	Verb-***onl-an***-A
Uxul 'carve'	*y-uxul-Ø* 'he carves/ed it'	*uxul-**n-aj**-Ø* 'it is/was carved'	*uxul-**uuy**-Ø* *uxul-**k'a(j)**-Ø* 'it gets/got carved'	**uxul-**on**-Ø* 'he carves/ed'

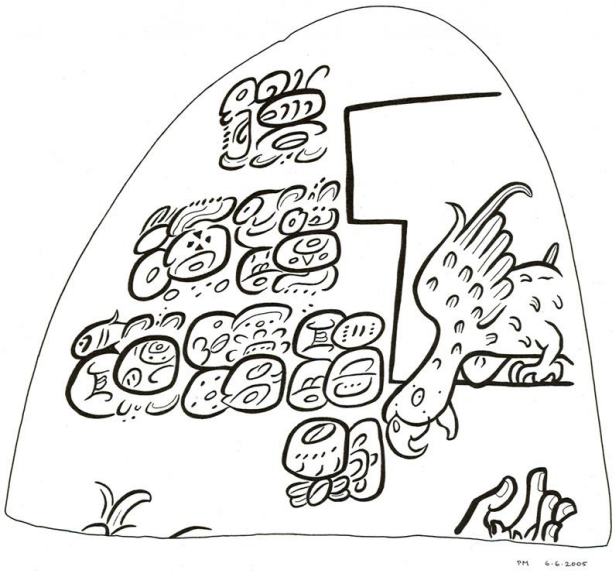
Some verbs are irregular in their derivation, like *ahk'* 'give' who, in spite of being non-CVC, is inflected with *–V_1ʔw* in the active voice,[10] or *ila* 'see' who is derived in the passive voice with *–aj*, not *–n-aj*.[11]

[10] As in modern Chontal.

[11] In the language of the Classic Period and in 17th century Cholti *ila* 'see' is irregular, deriving the passive in *–a(j)*. In modern Ch'orti', however, the passive of *ira* 'see' is regular, thus *ir-n-a* 'be seen'.



DPL Stela 15 (drawing by S. Houston)



Miscellanous Text (drawing by Peter Mathews)

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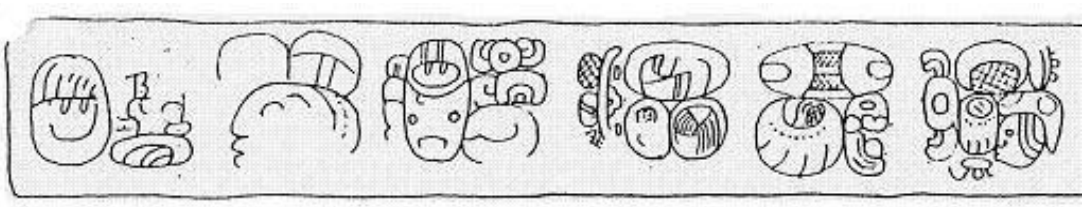
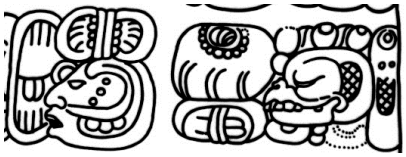
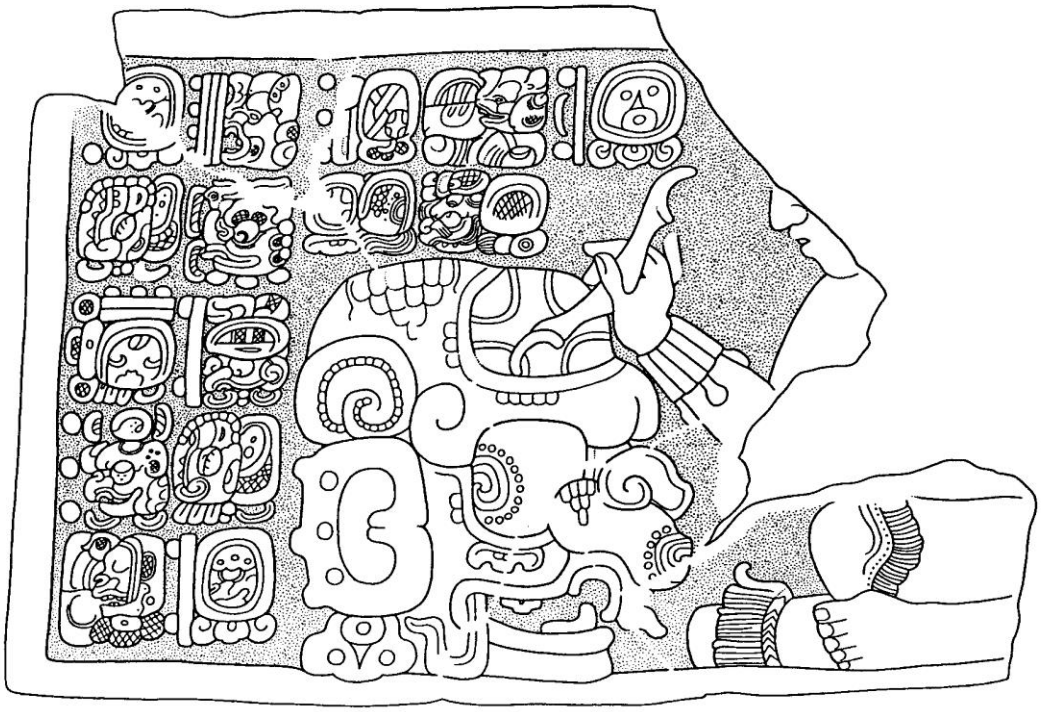


COB Panel C





Emiliano Zapata Panel (drawing by D. Stuart)

6.2.3. Derived transitive verbs

Transitive verbs with causative meaning can be derived from intransitive verbs. If ending in vowel, they mark the incompletive in *–n*.

-b'u derives transitive verbs from positional verbs

tz'ak 'placed in order' *tz'a-b'u* 'to place something in orther'

- (e)s derives transitive verbs from intransitive verbs

uk' 'shout, cry' *uk'-es* 'to make something shout'

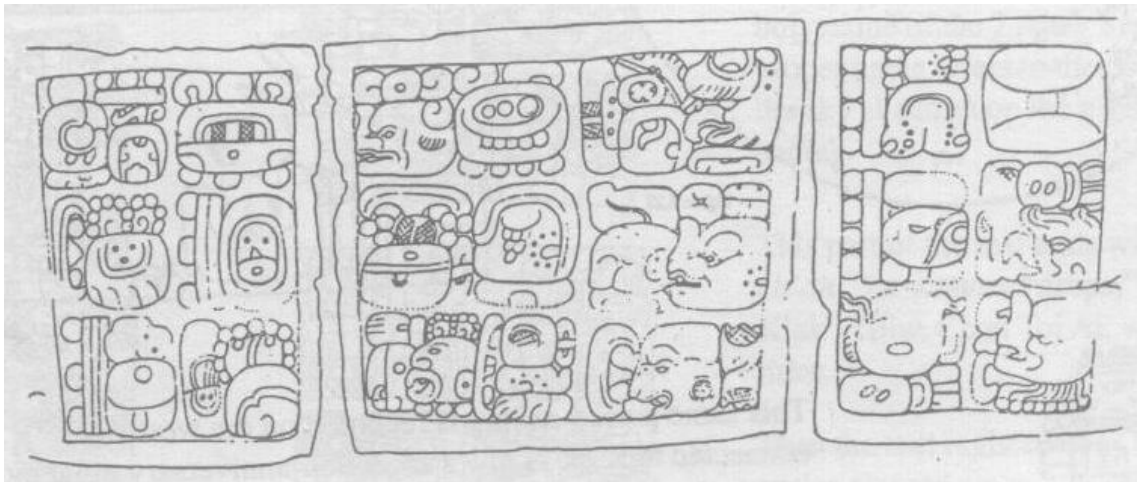
-kun derives transitive verbs from positional and inchoative verbs (Yuc.)

paal 'young' *pal-kun* 'to renew something'

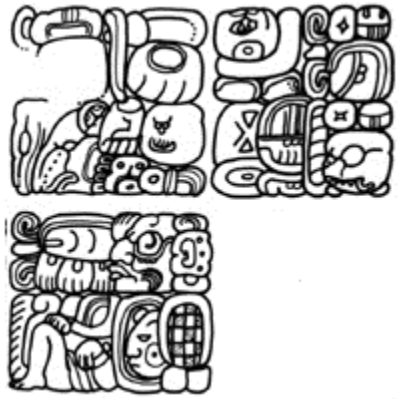
6.2.4. Perfect

Seemingly, verbal expressions with perfect form are derived suffixing *–VV₁j* or *–VVj* (not necessarily synharmonically) to transitive verbs. Also seemingly, in the Western Lowlands, perfect forms are derived suffixing*–ooj* to CVC transitives, and *–ej* to non-CVC ones. All these forms are prefixed by an ergative pronoun to the verb denoting the Subject:

ya-**la**-**ji**	*ya[ʔ]laaj*	*y-aʔl-aaj*	'he has said it'
yi-**la**-**ji**	*yilaaj*	*y-il-aaj*	'he has seen it'
u-**PAT**-**b'u**-**ji**	*upatb'uuj*	*u-pat-b'u-uuj*	'he has placed it in order'
ya-**le**-**je**	*ya[ʔ]lej*	*y-aʔl-ej*	'he has said/ordered it' (Palenque)
u-**CHOK**-**ji**	*uchok[oo]j*	*u-chok-ooj*	'he has thrown/cast it'



CPN Altar Z (drawing by L. Schele)

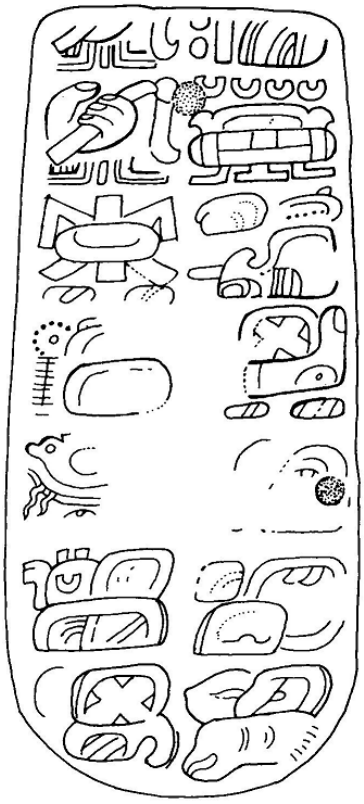


PAL House C, HS

6.3. Participles

Participles derive a predicative adjective form from a verb, but unlike adjectives they cannot be possessed:

- *VV$_1$l*	present participle	*joch'* 'drill'	*joch'-ool* '(is) drilled'
-eʔm	present participle	*tzutz* 'finish '	*tzutz-eʔm* '(is) finished'
-oʔm	future participle	*tzutz* 'finish'	*tzutz-oʔm* '(will be) finished'
-b'il	passive participle	*k'ahk'* 'burn'	*k'ahk-b'il* '(has been) burnt'



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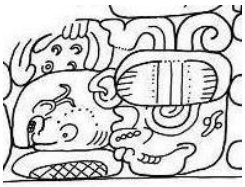

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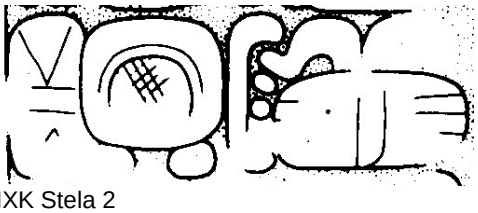

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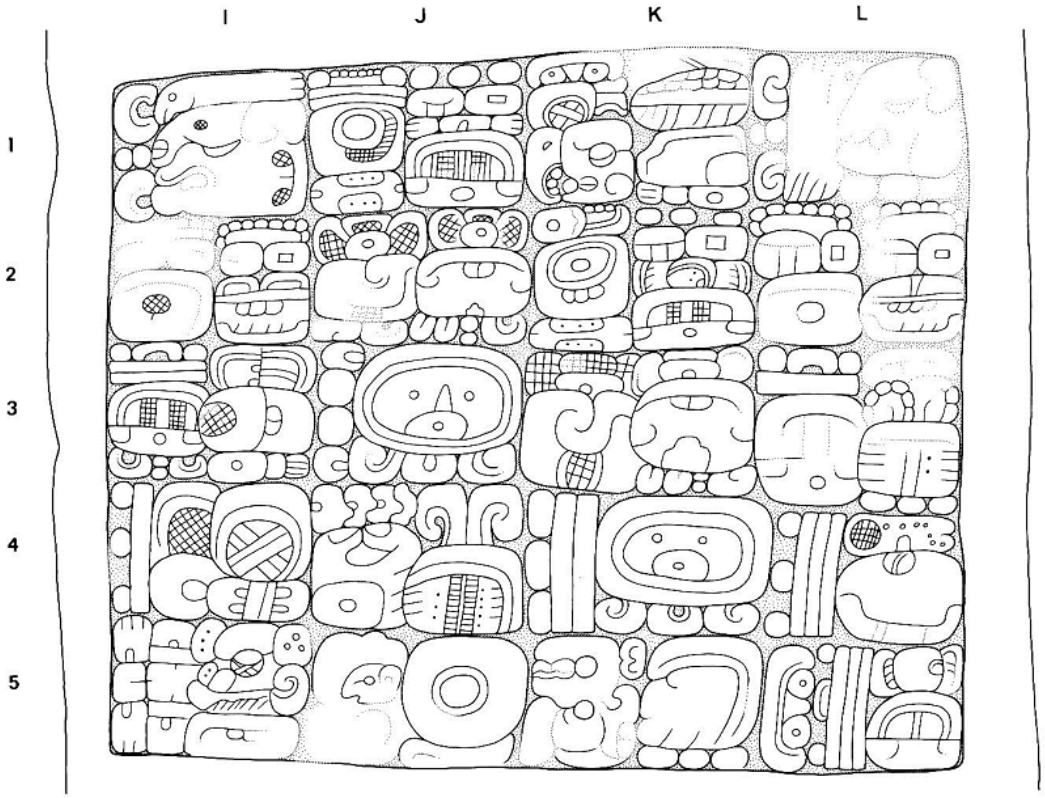
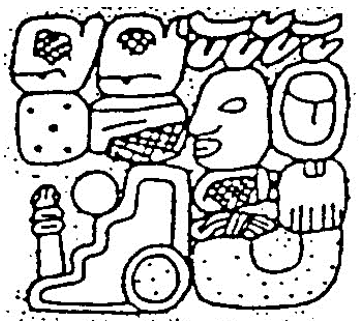


YAX Lintel 31 (drawing by I. Graham)



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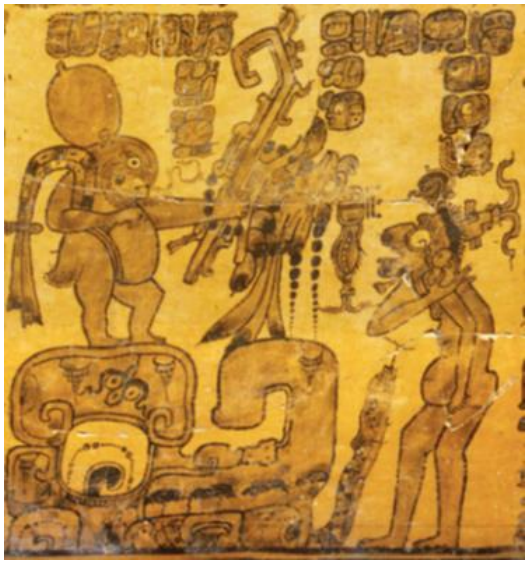
6.4. Imperative

Due to literary genre, imperatives are poorly represented in the preserved Maya corpus. As it seems, the second person imperative is made suffixing *–V_1* to CVC transitives, and *–Vn* to non-CVC transitives:

pu-**lu** *pulu* 'burn!'
u-**tz'u** *u[h]tz'u[n]* 'smell!'

The imperative of other persons than the second is made suffixing *–ik* to the verb, followed by an absolutive pronoun.

cho-**ko**-**na**
cho[ʔ]koʔn
choʔ-ik-oʔn
erase-OPT-1PA
'let us erase it!'



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6.5. Optative

Optative is also poorly attested in the Maya hieroglyphic corpus. It is probably made postposing the adverb *naʔik* 'let's hope' to the verbal form —as attested in Cholti— or suffixing *–ik* to the verb.

7. THE ADPOSITION

Adpositions are particles or expressions that go together with a noun or a nominal syntagm conforming an adpositional syntagm that has a noun as nucleus. We can distinguish *prepositions* and *relational nouns*:

7.1. Prepositions

ta / ti 'to, with, on, in, for' (general preposition) (if followed by *-u-* the form is contracted as *tu'*)
tahn 'in, in the middle of'
chaʔn 'since'
(ta) xin 'in the middle of'
ichiil 'in, inside' (Yuc.)

7.2. Relational nouns

Relational nouns indicate (1) the spatial relationship between two nouns, describing positions such as 'in front of', 'along with', 'over' or 'after', as well as (2) the grammatical case 'by, because of'. They are composed by a preposition (optative), followed by an ergative pronoun (E) prefixing a noun, a verbal noun or a verbal expression in the perfect:

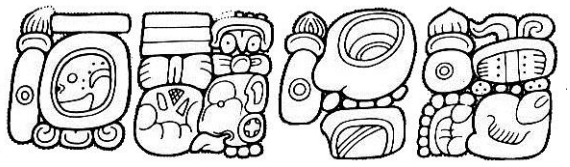
(1) Spatial relationships

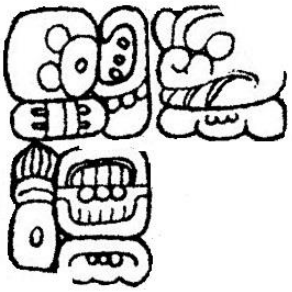
(PREP)-E-*b'aah*	'over' (*b'aah* 'head')
E-*itaaj*	'with, in the company of, along with' (*it* / *et* 'accompany')
E-*ichnal*	'in front of, at the presence of' (*ichVn* 'chest')
(PREP)-E-*paat*	'behind of, after of' (*paat* 'back')

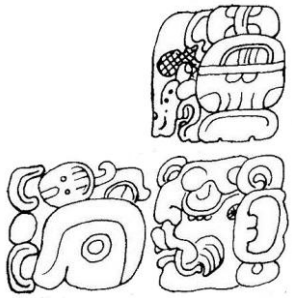
(2) Grammatical case:

E-*eʔt* /*-ejet* / *-eʔtej*	'by, because of the doing of' (*e't* 'work')
E-*kab'aaj*	'by, because of the supervision of' (*kab'* 'supervise'?)

Since Maya texts are customarily written in the third person, we will find as ergative pronouns the allomorphs *u-* and *y-*, depending on whether the word begins with a consonant or a vowel (*ti-u-b'aah* 'over him/her', *y-itaaj* 'with him/her', *y-ichnal* 'at the presence or in front of him/her', *u-kab'aaj* 'by him/her', *y-eʔtej* 'by him/her', *u-paat* 'after him/her/it').







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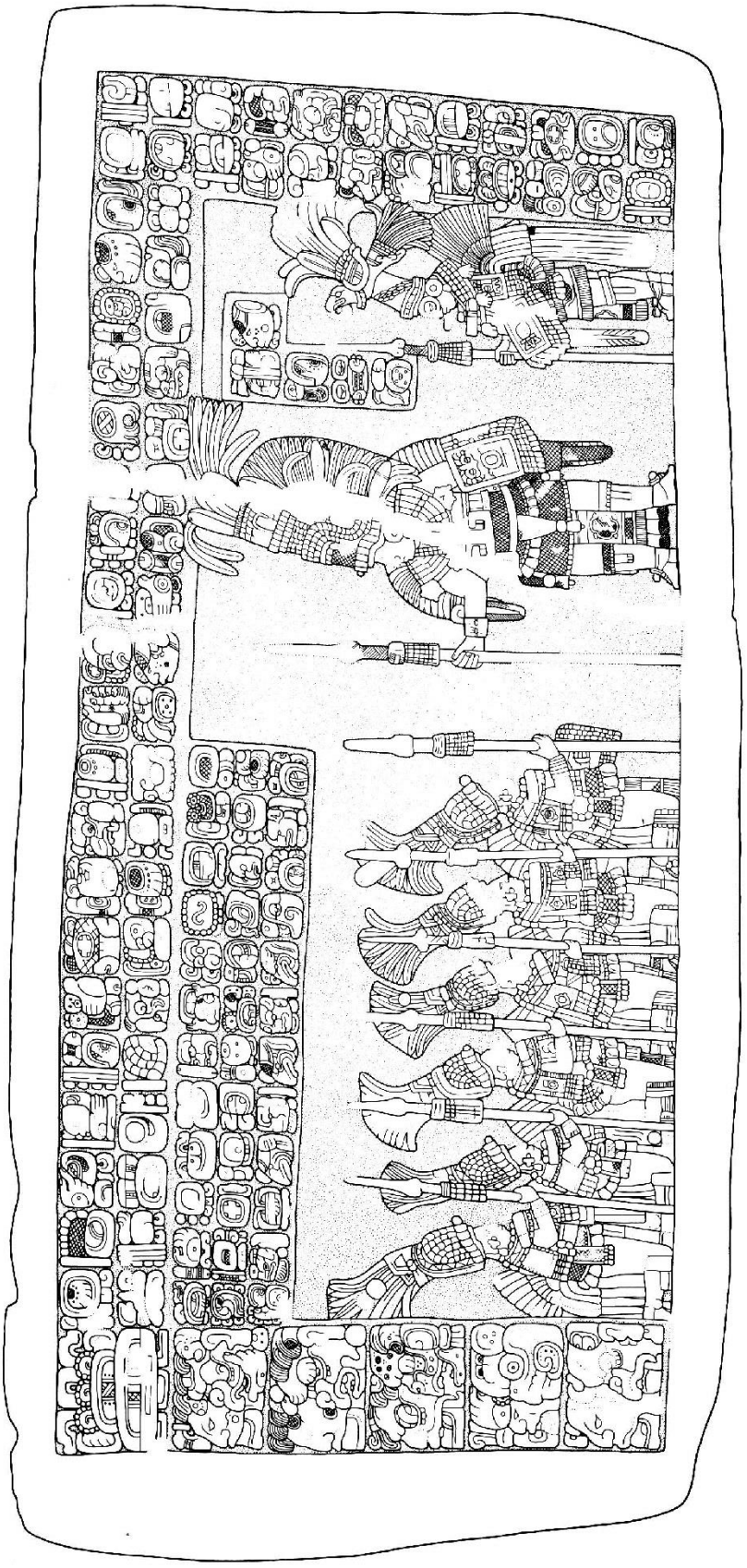


PNG Panel 2 (D. Stuart)

K4996

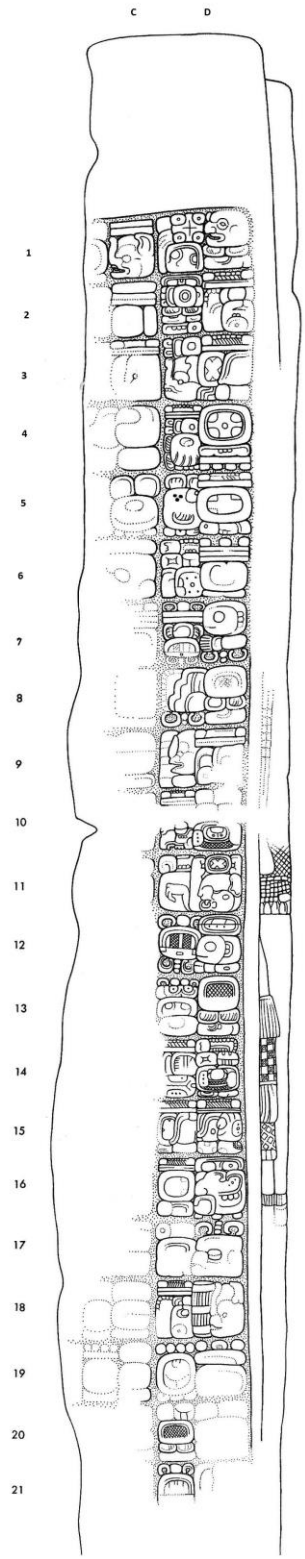
YAX Lintel 16 (drawing by I. Graham)

8. ADVERBS

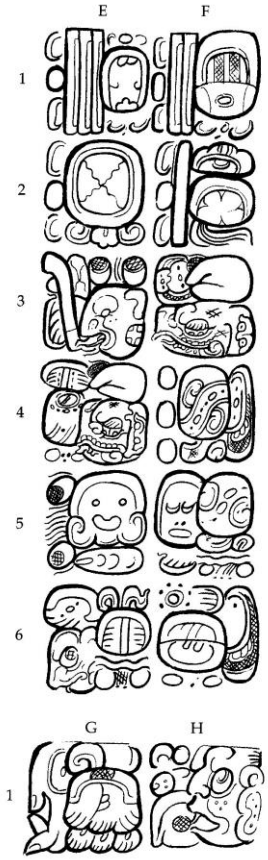
Some adverbs have been identified in the hieroglyphic corpus. Syntactically, they precede the verb.

o'n 'many'
uux / *o(o)x* 'many, abundantly'
cha' 'again, for the second time'
ma', *mach* 'no, not'

ik'al 'next day, tomorrow'
(juʔn) pas 'next day, the other day'
yuwal 'now, then'
wal 'during'



PNG Stela 12 (drawing by D. Stuart)



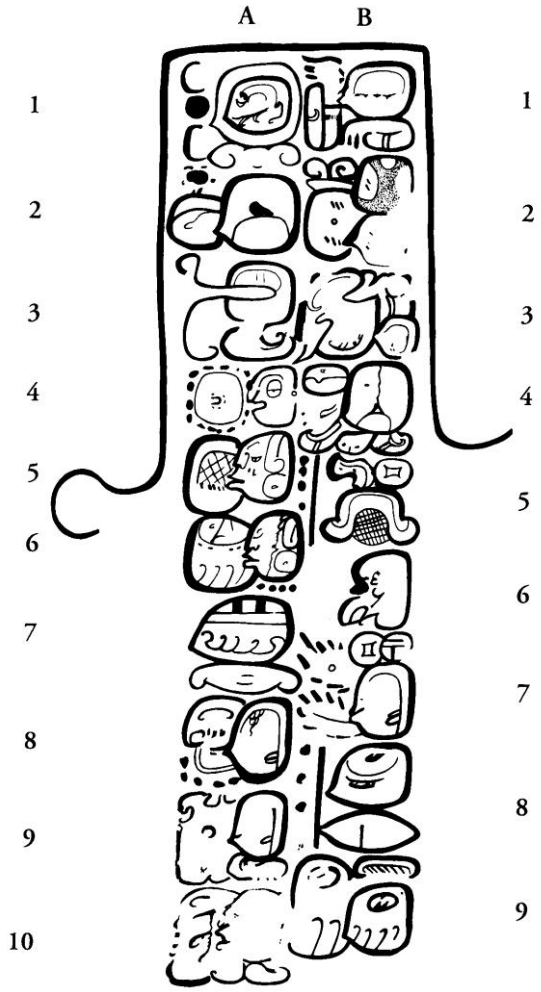
PAL Tp. XIX (drawing by D. Stuart)

9. CLITICS AND PARTICLES

i-	‘then, and then’
che	‘thus’
-iiy	‘already’, ‘in the past’? (full form *-ijiiy*?
-heʔn / *-heʔ-w*	‘in the past’
-ij	‘in the past’
-ij-iiy	‘in the future’
-lat	‘elapsed time’ ?
-aʔ	‘this one’
-eʔ	‘this one’ (Yuc.)

SOME MORE TEXTS…

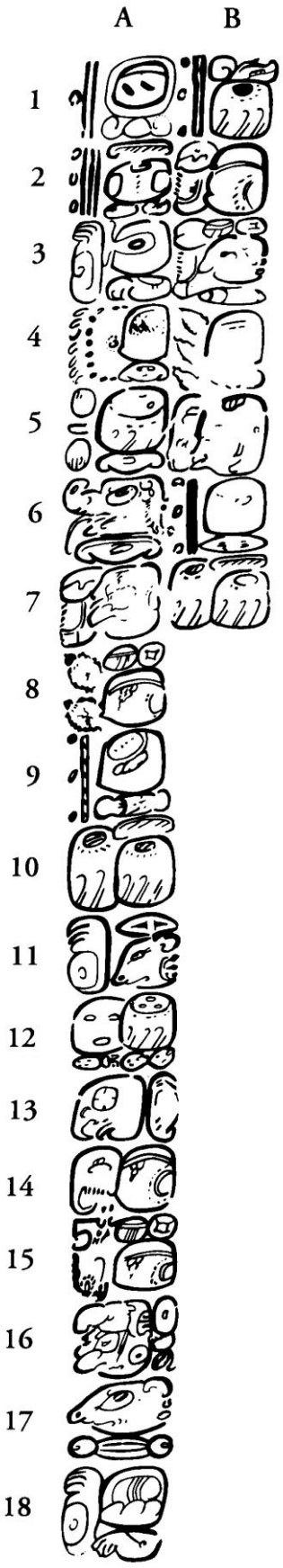
NJT Drawing 23
(Naj Tunich drawings by A. Stone)



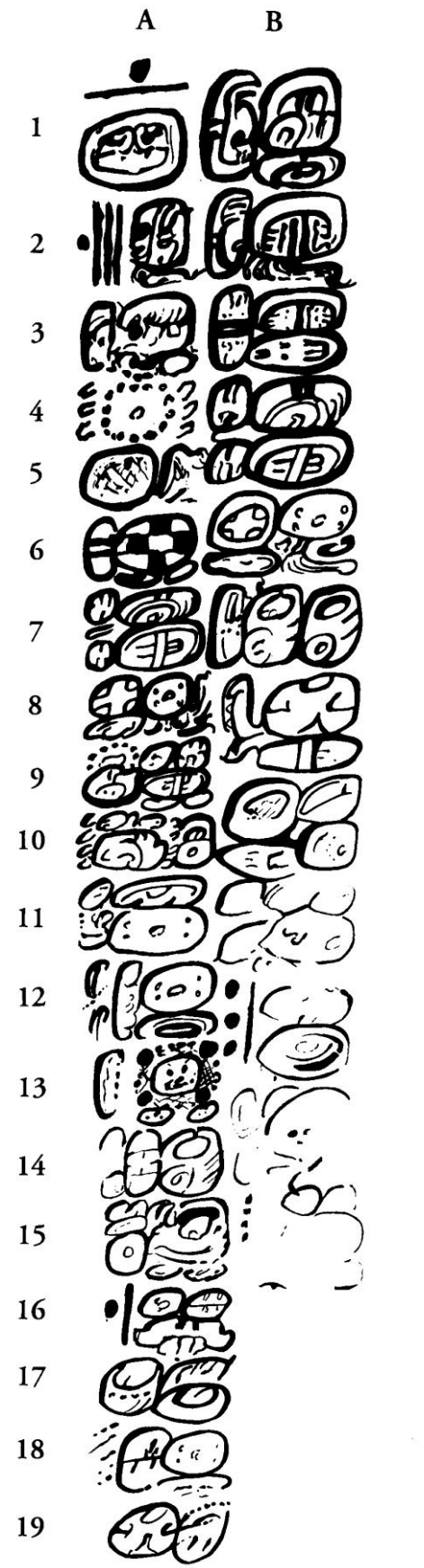
NJT Drawing 25

NJT Drawing 24

NJT Drawing 65



NJT Drawing 28



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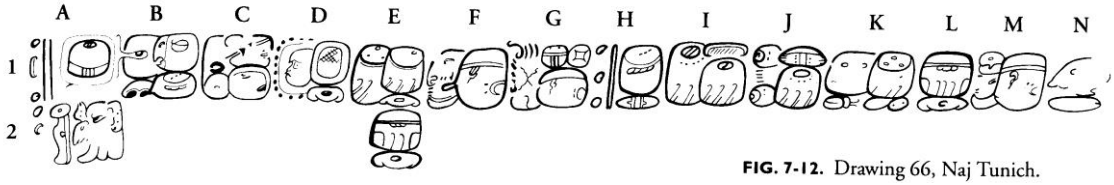
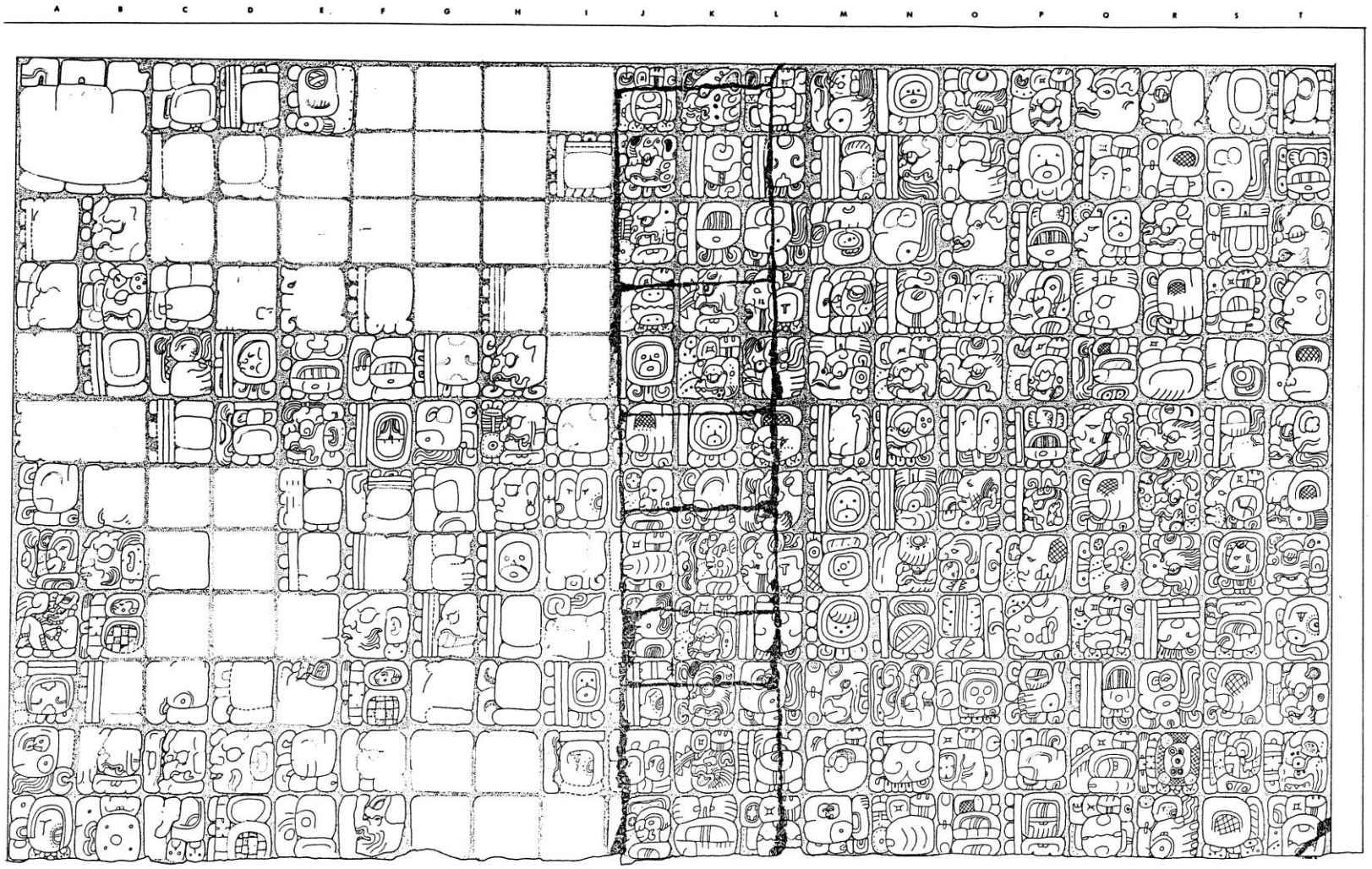
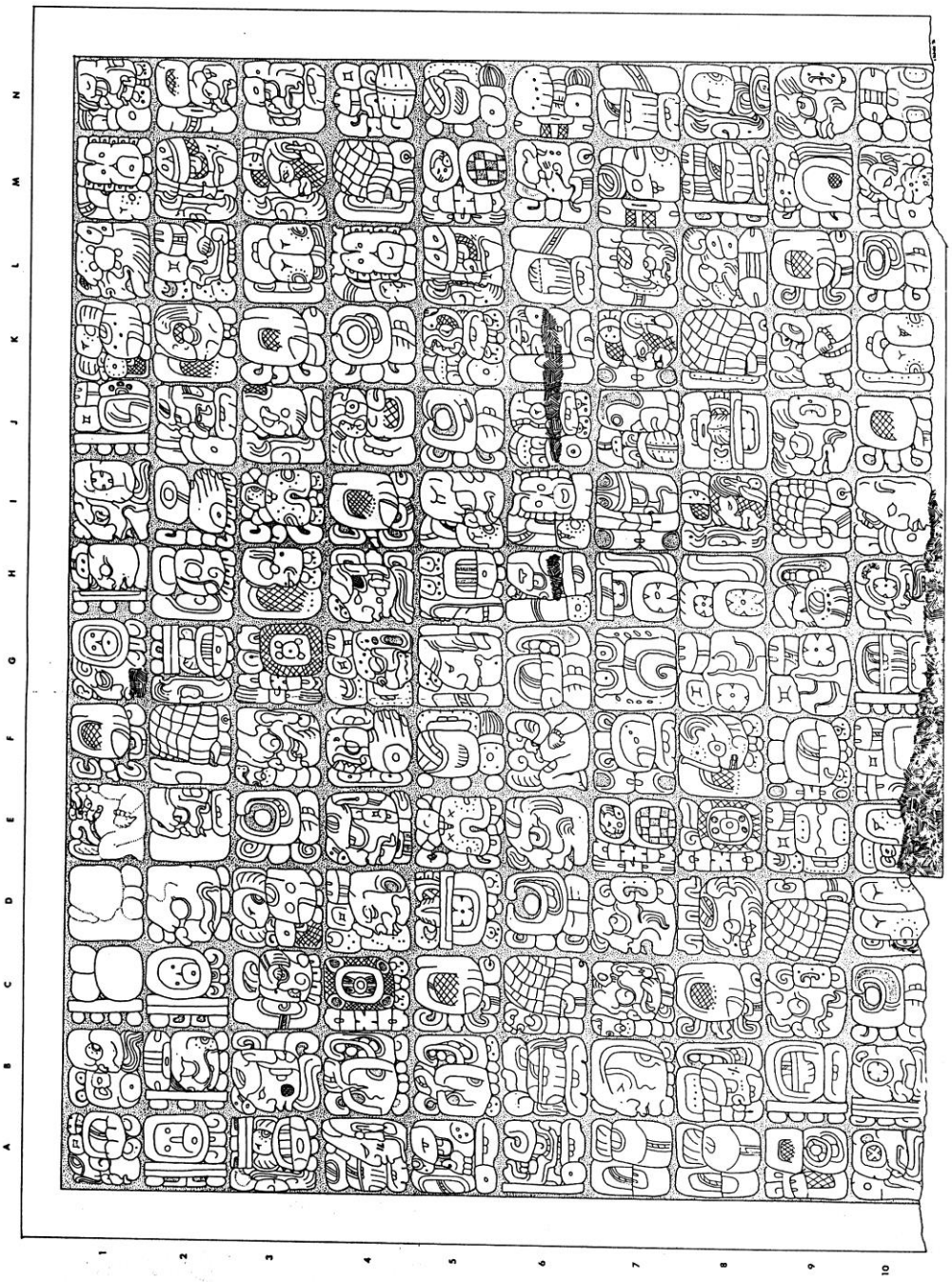


FIG. 7-12. Drawing 66, Naj Tunich.

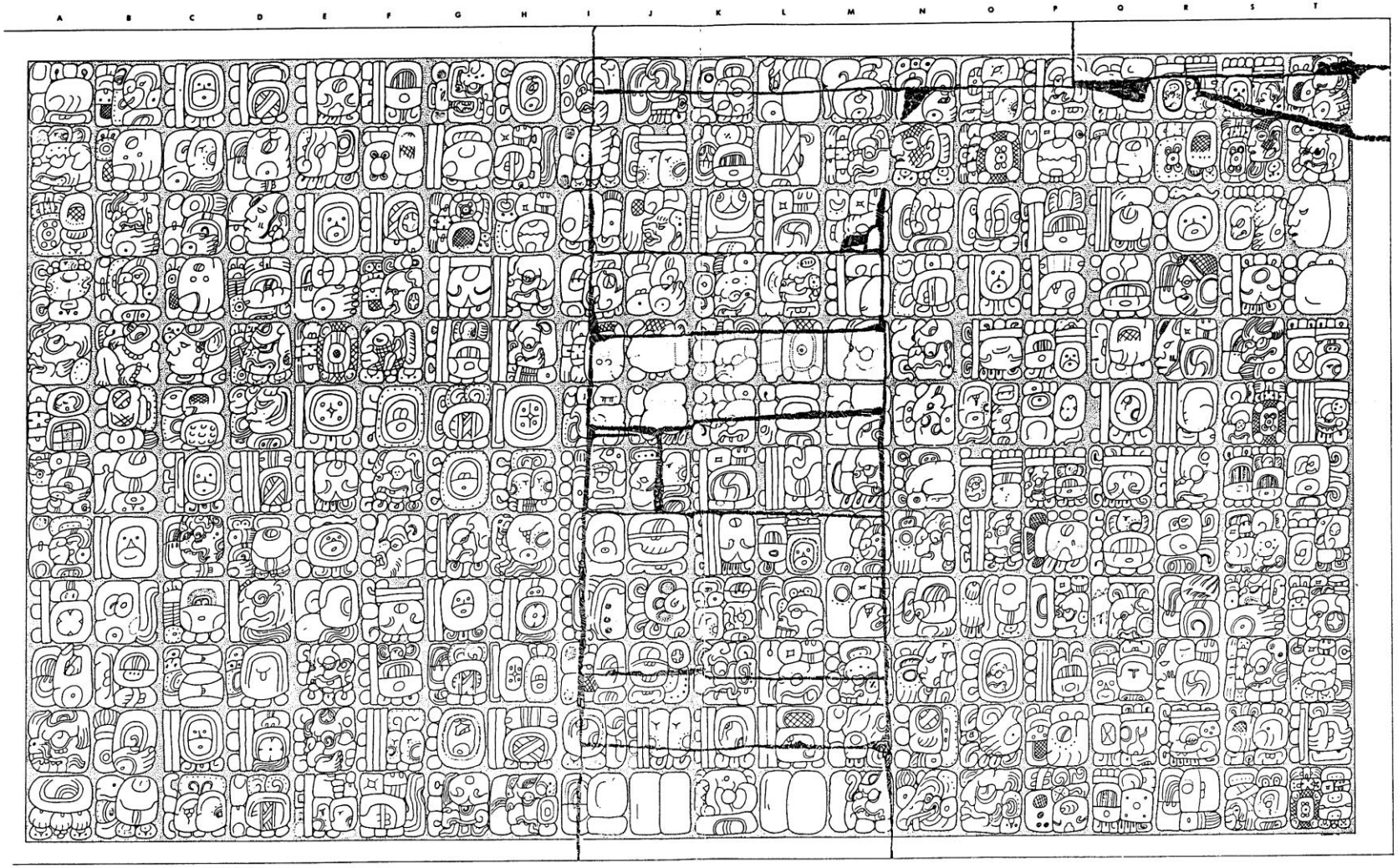
NJT Drawing 66



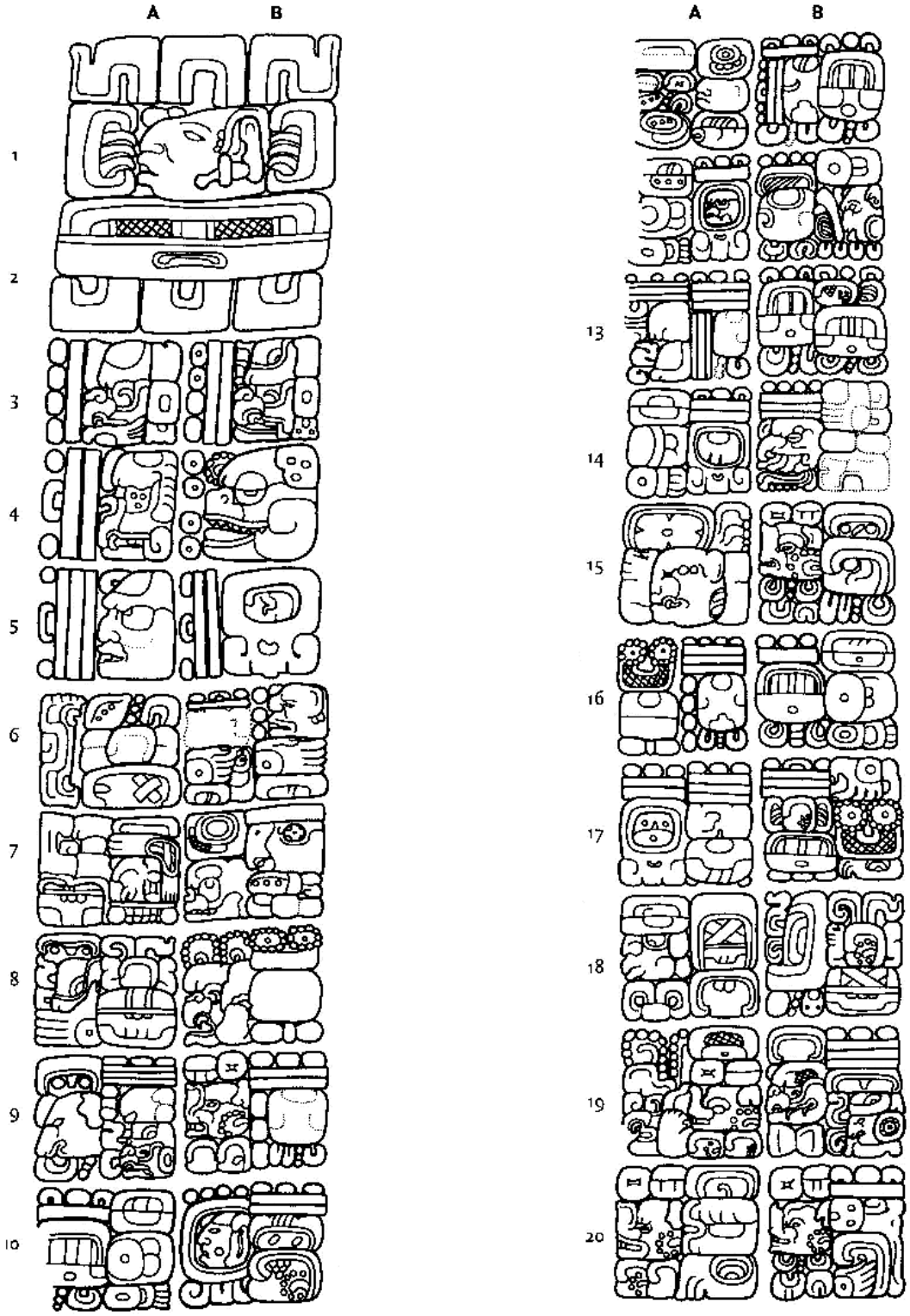
Palenque, Temple of Inscriptions. West Tablet. (Drawing by L. Schele).



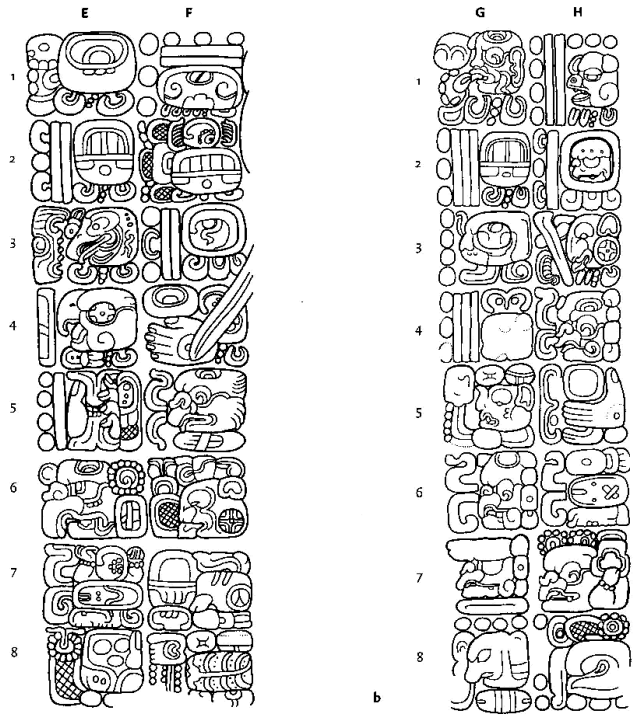
Palenque, Temple of Inscriptions. Center Tablet. (Drawing by L. Schele).



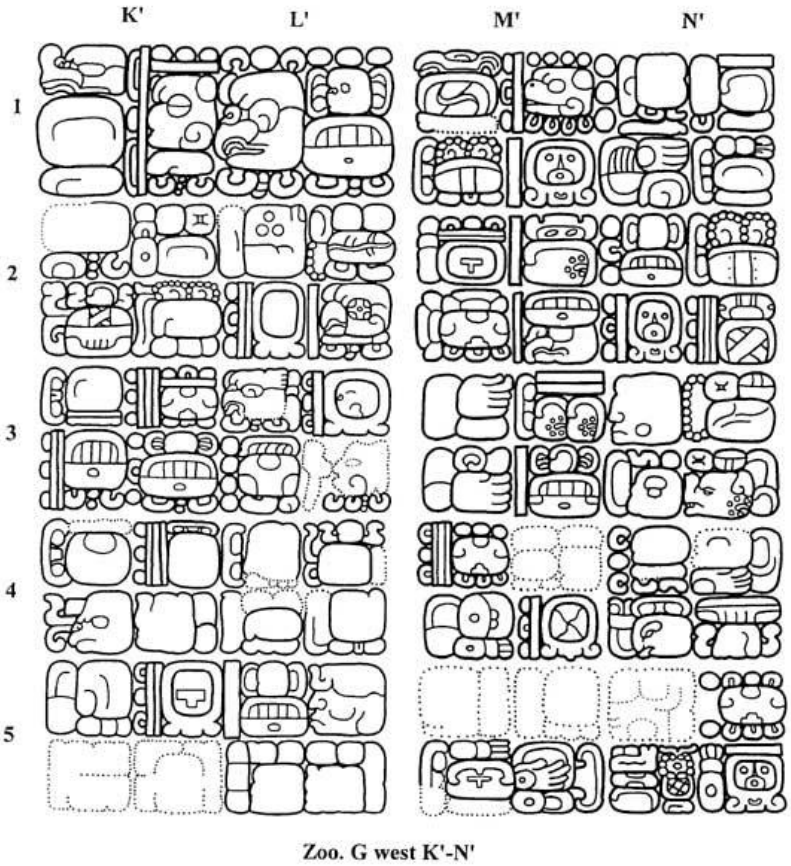
Palenque, Temple of Inscriptions. East Tablet. (Drawing by L. Schele).



QRG Stela E (drawing by M. Looper)



QRG Stela J (drawing by M. Looper)



QRG Zoomorph G (drawing by M. Looper)

HISTORICAL LINGUISTICS HELPS TO READ MAYA GLYPHS

by Albert Davletshin

Historical linguistics (also called comparative linguistics) is the study of language change and language history. Its main concerns are to describe observed changes in particular languages, reconstruct their prehistory and determine their relatedness and also study the history of particular words, i.e. etymology. Mayan languages constitute a language family of considerable time depth which consists of 30 languages still spoken in Mexico, Belize, and Guatemala today. Several Mayan languages are attested in Colonial dictionaries and grammars, sometimes called Classic Mayan languages. Hieroglyphic Mayan is the only ancient Mayan language and it has been shown that it is a Cholan language, possibly related to modern Ch'orti' and Colonial Ch'olti' (Campbell 1984; Justeson, Norman, Campbell, Kaufman 1985; Houston, Robertson, Stuart 2000; Wichmann 2002). All Maya inscriptions are written in Hieroglyphic Mayan even inscriptions found in Yucatan peninsula and three Postclassic Codices survived. However, dialectal spellings and vernacular grammatic forms are found in inscriptions from the periphery of the Maya world (Lacadena 2011, Lacadena, Wichmann 2002, 2005).

Mayan historical linguistics is of great help for epigraphists. First of all, we can use lexical data from modern and colonial dictionary when we encounter with an unknown word in inscriptions. Lexical data from Ch'orti', Ch'olti', Ch'ol and Ch'ontal are of great importance because Hieroglyphic Mayan is in particular close to presently spoken Ch'olan languages. Second, we should resort to the help of Tzeltal de Bajachón, because this language preserves the archaic phoneme velar fricative /j/, lost in other Lowland Mayan languages (Grube 2006), sometimes we should resort to the help of Yukatek, because Yukatek preserves the distinction between short, long and glottalized vowels (Houston, Stuart, Robertson 1988; Lacadena, Wichmann 2006). Yukatek data are also helpful because Colonial Period Yukatek dictionaries are much more extensive compared to dictionaries of Ch'olan languages. It also is of particular significance because velar fricative, long and glottalized vowels are part of the

phonological inventory attested in Hieroglyphic Mayan. Third, thanks to historical linguistics we can identify dialectal glosses in Maya inscriptions.

The following concepts of historical linguistics are crucial for undertaking the above mentioned tasks: regular phonetic correspondences, sound changes in progress, retentions, innovations and language relatedness.

Two languages are considered genetically related if they descent from a common proto-language. From a practical point of view, two languages are related if they show a good deal of shared vocabulary, that is, they have words with similar or identical meaning where sounds of two languages are transformed one into another by means of regular sound correspondences. Such sound correspondences between spoken languages reflect individual sounds of the ancestral proto-language and sometimes sounds in specific phonetic environments. In theory, all sound correspondences are regular; if a word shows a correspondence which seems to be irregular it might be a loanword or, alternatively, a given sound correspondence has not yet been well-understood. Compare the following words containing reflexes of proto-Mayan palatalized dental stop *ty before front vowels[12].

Meaning	Glyphs	Ch'orti'	Ch'ol	Yukatek	K'iche'
Tree	**te-ʔe**	*teʔ*	*tyeʔ*	*cheʔ*	*cheeʔ*
Bench	**te-mu**	*...*	*tyem*	*cheem*	*teem*[13]
step on	**te-k'a-ja**	*tek'-*	*tyek'-*	*chek'-*	*cheeq'-*
Mouth	**ti-ʔi**	*tiʔ*	*tyiʔ*	*chiʔ*	*chiiʔ*
Hot	**?**	*tikaw*	*tyikäw*	*chakaw*	*?*

[12] In historical linguistics, an asterisk indicates that the word or sound is not directly attested, but has been reconstructed by means of comparative method.

[13] The K'iche' cognate *teem* possibly represents a loan from Cholan languages as the irregular *t* correspondence suggests.

It has been suggested that a glyphic spelling **CHAK-wa** may spell the word *chakaw* 'hot', because this word is found in Classic Yukatek dictionaries. However, comparison with words containing reflexes of proto-Mayan *ty demonstrates that the related word 'hot' in Hieroglyphic Mayan would sound as **tikaw*, not as **chakaw*.

Until the date, no **p'V** syllabic signs which could be confirmed by phonetic cross-readings have been identified in Maya writing. This fact implies that p'V syllables are absent in the syllabic grid. The glottalized bilabial stop p' is a consonant found in all modern Lowland Mayan languages except Ch'orti'. It has been shown (Wichmann 2006) that this phoneme represents a later - probably Postclassic - development shared by most Lowland languages: *p and *b' become p' in CVC roots where the other consonant is either a fricative /s, j, h/, a stop /t, ch, k, ʔ/ or a lateral /l/ (and where V may be of any type). In one case a p' word 'sticky, glued' is written with the **b'a** syllable suggesting that the phonetic change didn't take place in Hieroglyphic Mayan. It is the name of a spirit-companion **la-b'a-TEʔ HIIX** *Lab'teʔ-Hiix* 'Glued-to-Wood-Jaguar' (K3395).

Meaning	Glyphs	Ch'ol	Tzeltal	Tzotzil
Sticky	**la-b'a**	*läp'-*	*lap'-*	*lap'-*

This fact means that p' in words in Lowland Mayan languages corresponds to b' or p in words in Maya inscriptions.

Relatedness of languages is relative; some Mayan languages are more related to one another in comparison to other members of the family. They may share more

common traits and they may have an intermediate ancestral language within the family, as for example, Ch'olan languages (Ch'ol, Ch'ontal, Ch'olti' and Ch'orti' which descend from proto-Ch'olan) and Tzeltalan languages (Tzeltal, Tzotzil which descend from proto-Tzeltalan). Only innovative traits can be used for determining specific relatedness of any two languages, because retentions represent their common heritage received from the proto-language. Retentions reflect relatedness to all languages of a family, while innovations reflect common history shared by two or more languages within the family. Long and glottalized vowels found in Hieroglyphic Mayan do not mean that Hieroglyphic Mayan is particularly close to Yukatek or proto-Mayan; they indicate only that such archaic traits as vowel length and glottalization were lost in modern Ch'olan languages. At the same time the sound change *eeh -> *ii is found in all Ch'olan languages, including Hieroglyphic Mayan (Brown, Wichmann 2004). There are no exceptions to this rule attested in Hieroglyphic Mayan.

Meaning	Glyphs	Ch'ol	Tzeltal	Yukatek	K'iche
Broom	**mi-so-**	*mis*	*mes*	*míis*[14]	*mees*
Road	**b'i-ji**	*b'ih*	*b'e*	*b'eh*	*b'eh*
Deer	**chi-ji**	*chih*	*chij*[15]	*kéeh*	*keeh*

Only two exceptions to the rule stated above are attested; both are place-names from Yucatan and represent dialectal glosses: a Chichen Itza place-name *Kalkeejtooʔk'* written as **ka-la-ke-ji-to-TOOʔK'** and ʔAhkankej 'Place of Roaring Stags' written as **ʔAHKAN-na ke-je** on a vessel in Chochola style. Note that the e vowel in the last example is short suggesting a Lacandon dialectal gloss.

A similar change *ooh -> *uu is found in many glyphic spellings and show no exceptions: **mu-chi** *muuch* 'toad', **pu-lu-** *puul-* 'to burn', **su-tz'i** *suutz'* 'bat', **TUUN-ni** *tuun* 'stone', **yu-k'e-** *ʔuuk'-* 'to cry', **ʔu-ni** *ʔuun* 'avocado'. This sound change is restricted to Ch'olan and Huastecan languages.

The sound change *eeh -> *ii is the only solid phonological argument for considering Hieroglyphic Mayan to be a Ch'olan language. To the date Mayan

[14] Probably *míis* is a Ch'olan loan in Yukatek.

[15] Probably *chij* is a Ch'olan loan in Tzeltal.

historical phonology cannot demonstrate that Hieroglyphic language is in particular related to Western Ch'olan (Ch'ol, Ch'ontal) or Eastern Ch'olan (Ch'olti', Ch'orti').

Sometimes, we can see how one sound replaces another so that the same word may be written in different ways in Mayan inscriptions: **JOL-la** *joʔl* ~ **JOL-lo** *jol* 'head' (loss of vowel glottalization), **ch'a-ji** *ch'aaj* ~ **ch'a-ja** *ch'aj* (loss of vowel length), **si-ji** *sij* ~ **si-hi** *sih* 'gift' (loss of verlar fricative), **ka-ya** *kay* ~ **cha-ya** *chay* 'fish' (palatalization of velar stops before back vowels a, o and u). Such sound changes are called sound changes in progress. Sound changes in progress can be used neither for determining relatedness of two languages nor for identifying dialectal glosses.

Palatalization of verlar stop k and k' before front vowels *k -> ch is an independent sound change, and it has been already completed by Classic Period (Dmitriy Beliaev pers. comm., 2004).

Meaning	Glyphs	Ch'ol	Tzeltal	Yukatek	K'iche
Deer	**chi-ji**	*chih*	*chij*	*kéeh*	*keeh*
Maguey	**chi-hi**	*chih*	*chi*	*kih*	*kih*
Quotative	**che-he-na**	*cheʔ*	*xchi*	*kih*	*kih*
earth oven	**chi-ti-ni**	-	-	<*kitin*>[16]	-
Cave	**CH'EEʔN-na**	*ch'en*	*ch'en*	*ch'éʔen*	-

All exceptions to this rule show a morpheme boundary bewteen a velar stop and a front vowel, i.g. **yu-k'i-b'i** 'his drinking vessel', **ʔu-ja-chi-li** 'his engraving'. It seems to be that the morpheme boundary stops the process of palatalization before the front vowels.

The most important for epigraphers correspondence sets for Hieroglyphic Mayan are found in Appendix 1.

[16] Angle brackets <> show that the word is found only in Colonial dictionaries where such important feature as vowel length is unmarked.

Appendix 1. Correspondence sets for Hieroglyphic Mayan.[17] Two reflexes of the same proto-sound imply different development of the same phoneme in different environments.

pM	HM	CHRT	CHLT	CHL	CHN	TZE	TZO	YUK	KCH
*p	P	p	p	p	p	p	p	p	p
			p'	p'	p'	p'	p'	p'	
*b'	b'	b'	b'	b'	b'	b'	b'	b'	b'
			p'	p'	p'	p'	p'	p'	
*t	T	t	t	t	t	t	t	t	t
*t'	t'	t'	t'	t'	t'	t'	t'	t'	t'
*ty	T	t	t	t	t	t	t	t	ch
								ch	
*ty'	t'	t'	t'	t'	t'	t'	t'	t'	ch'
								ch'	
*tz	Tz	tz	tz	tz	tz	tz	tz	tz	tz
*tz'	tz'	tz'	tz'	tz'	tz'	tz'	tz'	tz'	tz'
*ch	Ch	ch	ch	ch	ch	ch	ch	ch	ch
*ch'	ch'	ch'	ch'	ch'	ch'	ch'	ch'	ch'	ch'
*k	k	ch	ch	ch	ch	ch	ch	k	k
	ch								
*k'	k'	ch'	ch'	ch'	ch'	ch'	ch'	k'	k'
	ch'								
?*q	K	k	k	k	k	k	k	k	q
?*q'	k'	k'	k'	k'	k'	k'	k'	k'	q'

[17] The following abbreviations are used: pM – proto-Mayan, HM – Hieroglyphic Mayan, CHRT – Ch'orti', CHLT – Ch'olti', CHL – Ch'ol, CHN – Ch'ontal, TZE – Tzeltal de Bajachón, Tzo Tzotzil, YUK – Yukatek, KCH – K'iche'.

*l	L	r	l	l	l	l	l	l	l
*r	Y	y	y	y	y	y	y	y	r
*m	M	m	m	m	m	m	m	m	m
*n	N	n	n	ñ	n	n	n	n	n
*ŋ	N	n	n	ñ	n	n	n	n	j
*s	S	s	s	s	s	s	s	s	s
*x	X	x	x	x	x	x	x	x	x
*j	j>h	h	h	h	h	j	h	ħ>h	j
*h	H	h	h	h	h	h	h	h	h
*w	W	w	w	w	w	w	w	w	w
*y	Y	y	y	y	y	y	y	y	y

PM	HM	CHRT	CHLT	CHL	CHN	TZE	TZO	YUK	KCH
*i	I	i	i	i	i	i	i	i	i
*e	E	e	e	e	e	e	e	e	e
	I	i	i	i	i				
*a	A	a	a	a	a	a	a	a	a
				ä	ä		o		
*o	O	o	o	o	o	o	o	o	o
	U	u	u	u	u				
*u	U	u	u	u	u	u	u	u	u

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HIEROGLYPHIC MAYAN INTERLINEAR TEXTS

by Albert Davletshin

In linguistics, an interlinear gloss is a series of brief explanations placed between a line of original text and its translation into another language. When glossed, each line of the original text acquires one or more lines of transcription known as an interlinear glossed text. Such glosses help the reader follow the relationship between the source text and its translation, and see the structure of the original language. In its simplest form, an interlinear gloss is simply a literal, word-for-word translation of the source text. A standardized set of parsing conventions and grammatical abbreviations used for glossed texts is explained in the Leipzig Glossing Rules (Conventions for interlinear morpheme-by-morpheme glosses,

http://www.eva.mpg.de/lingua/resources/glossing-rules.php).

An interlinear text for Hieroglyphic Mayan will consists of the following lines assigned to individual sentences:

1. glyp hic sign-by-sign transliteration, where signs within a hieroglyphic block are separated by hyphens,

2. reconstructed phonetic transcription,

3. morphophonemic transliteration, where individual morphemes within a word are separated by hyphens,

4. morpheme-by-morpheme glosses,

5. free translation.

Enclosed below, please, find a list of proposed glosses for Hieroglyphic Mayan and interlinear morpheme-by-morpheme of two texts suggested as an example.

Proposed glosses for Hieroglyphic Mayan

Pronominals:

Set A (Absolutive Case):

-ø	Abs3	3rd person, singular and plural
-eʔn	Abs1Sg	1st person, singular
-at (*ʔ-eʔt*)	Abs2Sg	2nd person, singular
-oʔn	Abs1Pl	1st person, plural

Set B (Ergative Case):

ʔu-	$Erg3_1$	3rd person, singular and plural, consonant initial stems
ni-	$Erg1Sg_1$	1st person, singular, consonant initial stems
ʔa-	$Erg2Sg_1$	2nd person, singular, consonant initial stems
y-	$Erg3_2$	3rd person, singular and plural, glottal stop initial stems
niw-	$Erg1Sg_2$	1st person, singular, glottal stop initial stems
ʔaw-	$Erg2Sg_2$	2nd person, singular, glottal stop initial stems
w-	$?Erg2Pl_2$	?2nd person, plural, glottal stop initial stems

Set C (Independent Emphatic Pronouns):

haʔi	Ind3Sg	3rd person, singular
haʔoʔb'	Ind3Pl	3rd person, plural
haʔat	Ind2Sg	2nd person, singular

neʔn	?Ind1Sg	1st person, singular
hiin	?Dem	?demonstrative pronoun (this?)

Thematic suffixes:

-Vʔw	IPFV.TR	imperfective (?) transitive verbs
-VVn	IPFV.DerTR	imperfective (?) derived transitive verbs
-i	PFV.NTR	perfective (?) intransitive verbs
-el	IPFV.NTR	imperfective (?) intransitive verbs
-aj	IPFV.DerNTR$_1$	imperfective (?) derived intransitive verbs
-iij	IPFV.DerNTR$_2$	imperfective (?) derived intransitive verbs (morphophonetic variant of the suffix –*aj*?)
-laj	POS$_1$	positional verbs
-waan	POS$_2$	positional verbs (dialectal variant)
-laj	AFF	affective verbs
-VVj	PRF	perfect
-Vk	OPT	optative
-V	IMP	imperatives from CVC transitive verbal stems
-oʔm	FUT	unavoidable future (prophetic future)

Verbal clitics:

-iiy	DXS	deictic clitic, mostly referring to events in the past
ʔi-	THEN	then
wa-	PROG	progressive/durative aspect
xa-	ALREADY	already

maʔ	NEG	negative particle

Valency-decreasing and valency-increasing suffixes:

-h-	PAS	infix of passives from CVC transitive verbal stems
-n-	$DerPAS_1$	suffix of passives from derived transitive verbal stems
-w-	$DerPAS_2$	suffix of passives from derived transitive verbal stems (dialectal variant)
-VVy	MID	middle voice (state of change verbs)
-ey	VC.MID	middle voice (state of change verbs) of glottal stop initial verbal stems
-Vw	APAS	antipassives from CVC transitive verbal stems
-oon	VC.APAS	antipassives from non-CVC transitive verbal stems
-ø	DerAPAS	antipassives from derived transitive verbal stems

Verbal derivation:

*-b'u(-*b'a)*	POS.CAUS	causatives from positional verbal stems
-es	CAUS	causatives from other intransitive verbal stems
*-kun(-*kin)*	ADJ.CAUS	causatives from noun and adjectives (Yukatek gloss)
-aj	$INCH_1$	inchoatives from nouns
-VVn	$INCH_2$	inchoatives? from nouns (dialectal variant?)

Adjectival derivation:

-Vl	ADJ_1	adjectives from nouns
-VVl	STAT.PART	stative participles from transitive and positional verbal stems
-b'il	PRF.TR.PART	perfect participles from transitive verbal stems
-eʔm	?PRF.NTR.PART	perfect participles from intransitive verbal stems
-il	ADJ_2	adjectives from compound nouns

Numerals:

-ij	TIME.FUT	counting of time periods (in N days)
-jiiy	TIME.PST	counting of time periods from the past (N days later)
-lat	CL	count of days
-heʔw	CL	count of days
-heʔn	CL	count of days (dialectal variant)
-b'ix	CL	counting of either 5 or 7 days
-tal	CL	count of days
-teʔ	CL	default numeral classifier
-pik	CL	counts of 8000
-tz'ak	CL	count of successors
-pis	CL	count of years
-kob	CL	count of twins

Noun inflection:

-il	$INAL_1$	inalienable possession

-el	$INAL_2$	inalienable possession for some body substances such as blood, bones, skin and hair
-is	ABS	unpossessed form of body parts
ti	$PREP_1$	default marker of oblique case/ preposition
ta	$PREP_2$	default marker of oblique case/ preposition (dialectal variant)

Noun derivation:

-il	$ABST_1$	abstract nouns
-lel	$ABST_2$	abstract nouns (dialectal variant)
-aj	NMZ_1	nominalizer
-il	NMZ_2	nominalizer (compound verbs)
-eʔl	NMZ_3	nominalizer, gerundival nouns
-an	NMZ_4	nominalizer (few nouns only)
-Vl	TOP	place-names from nouns (where "X" abounds)
-aal	NOUN	nouns from nouns
-taak	COL	collective nouns
-aʔ	AG_3	suffix of agentive nouns (from verb and nouns)
ʔaj-	AG_1	prefix of agentive nouns (from verb and nouns)
ʔix-	FEM	female prefix (from verb and nouns)
-oʔm	AG_2	suffix of agentive nouns (from verbs)
-ib'	INSTR	instrumental nouns from verbs (instruments and places)
-VVb'	$?AG_4$	suffix of agentive nouns (from verbs)

+	+	compound nouns and verbs

Examples of Hieroglyphic Mayan Interlinear Glossed Texts.

Text 1. Yaxchilan Lintel 24 (Drawing by I. Graham)

A1-F3 (1) **ti-5-ʔEB'^{DAY} 15-ma-MAK ʔu-b'a-hi ti-CH'AJB'-li ti-K'AHK'-la-hu-lu ʔu-CH'AJB'-chan-WINAAKHAAʔB'-ʔAJAW ʔITZAMNAAH-B'AHLAM-ʔu-cha-CHAN-nu ʔa-NIK?-ki K'UH-PAʔ-CHAN-ʔAJAW-wa**

A1-F3 (2) *ti hoʔ ʔeb' hoʔlajuʔn mak ʔub'aah ti ch'ajb'il ti k'ahk'al hul ʔuch'ajb' chanwinaakhaaʔb' ʔajaw ʔitzamnaahb'ahlam ʔucha'n ʔajnik k'uhul paʔchan ʔajaw*

A1-F3 (3) ti hoʔ ʔeb' hoʔlajuʔn mak ʔu-b'aah-ø ti ch'ajb'-il ti k'ahk'-al hul ʔu-ch'ajb'-ø chan-winaakhaaʔb' ʔajaw ʔitzamnaaj b'ahlam ʔu-cha'n-ø ʔaj-nik k'uh-ul paʔ+chan ʔajaw

A1-F3 (4) $PREP_1$ five *ʔeb'* fifteen *mak* $ERG3_1$-image-ABS3 $PREP_1$ sacrifice-$ABST_1$ $PREP_1$ fire-ADJ_1 spear $ERG3_1$-sacrifice-ABS3 four-twenty.years king *ʔitzamnaaj* jaguar $ERG3_1$-master-ABS3 AG_1-flower? god-ADJ_1 broken+sky king

A1-F3 (5) On the day 11 *ʔEb'*, the 15th day of the month *Mak* it is his image in penitence with the fiery spear, it is the sacrifice of the four-*k'atun* king *ʔItzamnaaj-B'ahlam*, *ʔAj-Nik*'s master, godly *Paʔchan* king.

G1-4 (1) **ʔu-b'a-hi-ti-CH'AJB'-li ʔIX-...N-na-XOOK-ki ʔIX-k'a-b'a-la-XOOK-ki ʔIX-KALOʔM-TEʔ**

G1-4 (2) *ʔub'aah ti ch'ajb'il ʔix...n?xook 'ixk'ab'alxook ʔixkaloʔmteʔ*

G1-4 (3) ʔu-b'aah-ø ti ch'ajb'-il ʔix-... xook 'ix k'ab'-al xook ʔix-kaloʔmteʔ

G1-4 (4) $ERG3_1$-image-ABS3 $PREP_1$ sacrifice-$ABST_1$ FEM-... shark FEM-hand-ADJ_1 shark FEM-overlord

G1-4 (5) It is her image in penitence of *ʔIx-...n-Xook ʔIx-K'ab'al-Xook*, she from the lineage of overlords.

H1-4 (1) **T'AB'-yi yu-xu-lu ʔa-CHAAHK?-li ʔa-na?-la**

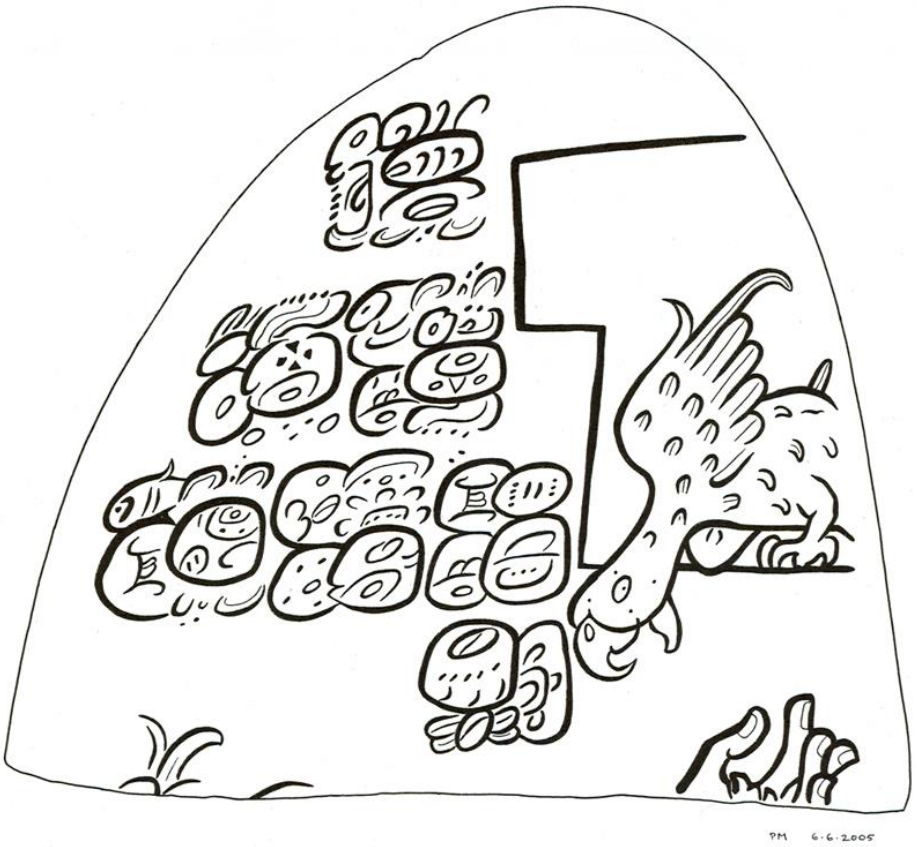
H1-4 (2) *t'ab'aay yuxul ʔa...l ʔa...l*

H1-4 (3) t'ab'-aay-ø y-uxul ʔAj?-...l ʔAj?-...l

H1-4 (4) ascend-MID-ABS3 $ERG3_2$-sculpture AG_1?-... AG_1?-...

H1-4 (5) *ʔA...l ʔA...l*'s sculpture got raised.

Text 2. Incised Shell K8895 (drawing by P. Mathews)



(1) **ʔa-wu-le-li-ya ti-ni-...-la me-te-ya-ʔa-la-ni ʔo-po-ya-ʔa-la-ji-ya hu-b'i-ʔu-hu-chi 2po-lo-tz'i-ʔi b'a-che-b'u**

(2) *ʔawuleliiy ti ni...al met yaʔlaan ʔop yaʔljiiy huub' ʔuhuuch pohpol tz'iʔ b'aah cheʔhb'*

(3) ʔa-hul-el-iiy ti ni-...-al met y-aʔl-aan-ø ʔop y-aʔl-VVj-iiy-ø huub' ʔu-huuch-ø pohp-ol tz'iʔ b'aah cheʔhb'

(4) ERG2Sg$_1$-come-IPFV.NTR-DXS PREP$_1$ ERG1Sg$_1$-?-ADJ$_1$ nest ERG3$_2$-say-IPFV.TR-ABS3 lorikeet ERG3$_2$-say-PRF-DXS-ABS3 shellfish ERG3$_1$-shell-ABS3 mat-ADJ$_1$ dog first quill

(5) Then? you are coming to my (such-and-such) nest, Lorikeet says, as it has been said by Shellfish. It is the shell of Pohpol-Tz'iʔ, the first quill (palace title of chief scribe).